Regional Service Improvement Group
Topic: Vulnerable services

Progress this week:

- Rapid project methodology pack developed and shared with Service Review leads
- Kick off meetings with Regional leads held for most phase 1 priority streams
- Next steps requiring confirmation of and engagement with all named DHB reps

Actions next week:

- Progress according to rapid project methodology
- Service leads engage with identified key parties of each service review

Recommendations:

- Note: Surgical Prioritisation identified in Vulnerable service list to be re-scoped and reframed as "Regional Surgical Capacity Planning" – start up timeframe TBC

Regional Service Improvement Group
Topic: Equity Led Planned Care/Vulnerable Services

	1. Mobilise	2. Gather Info	3. Solution W/shop 1	4. Solution Analysis	5. Solution W/shop 2	6. Finalise & Submit	
ORL	Briefing this week Fri 12/6	Data Requested					Variable readiness to engage
Max Fac	Mobilising Clinicians	Data Requested					
Oral	Key people engaged	Info largely complete	Mon next week 15/06				Largely on track
Eyes	Key people engaged	Info almost complete	Wed next week 17/06				Largely on track
Vascular	Briefing this week Thur 11/6	Info being collected	Tentatively 25/06				Largely on track
Sarcoma	Key leads briefed	Info needs being scoped					Delayed but progressing

NB Spinal & Surgical Prioritisation in Phase 2

25/06/2020

Regional Service Improvement Group
Topic: Equity Led Planned Care/Vulnerable Services

	1. Mobilise	2. Gather Info	3. Solution W/shop 1	4. Solution Analysis	5. Solution W/shop 2	6. Finalise & Submit	
ORL	Key people engaged Brief 12/6	Info being collected	Scheduled for 6 July				Progressing but likely to take longer
Max Fac	Key people engaged	Info being collected	Scheduled for 8 July				
Oral	Key people engaged	Initial Info complete	Held 15/06	Streams starting			Largely on track
Eyes	Key people engaged	Info almost complete	Held 17/06	Streams Starting	Next week, 1 July		Largely on track
Vascular	Briefing held Thurs 11/6	Collecting, some challenges	Scheduled 25/06		Tentative 27 July		Progressing with slight delay
Sarcoma	Key leads briefed	Info being collected	Scheduled for next week				

NB Spinal & Surgical Prioritisation in Phase 2

Regional Service Improvement Group
Topic: Equity Led Planned Care/Vulnerable Services

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Oral	Key people engaged	Initial Info complete	Held 15/06	Streams underway	Scheduled for 7 July	May need 3rd workshop	On track but taking longer ~9-wks
Eyes	Key people engaged	Initial info complete	Held 17/06	Streams underway	Held 1 July, 3rd w/shop 22 July	Being developed	
Vascular	Briefing held Thurs 11/6	Collecting, some challenges	Held 25/06	Streams initiated	Scheduled w/s 27 July		Progressing with slight delay
Sarcoma	Key leads briefed	Info being collected	Date still to be confirmed				Delay confirming membership

NB Spinal & Surgical Prioritisation in Phase 2

16 July 2020

Regional Service Improvement Group
Topic: Equity Led Planned Care/Vulnerable Services

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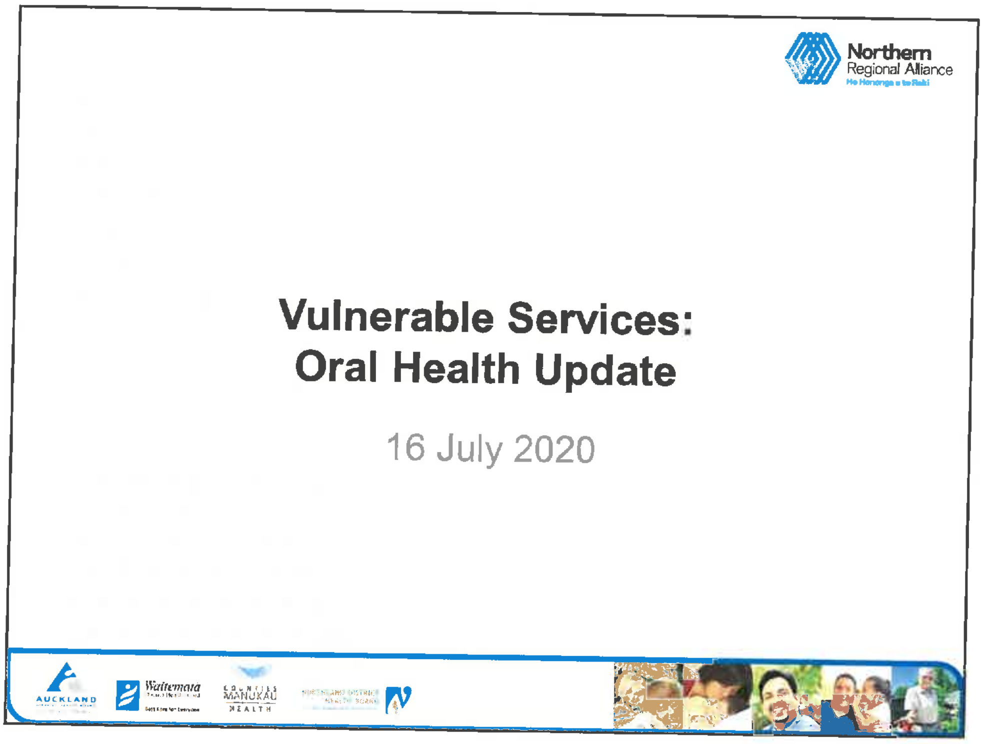
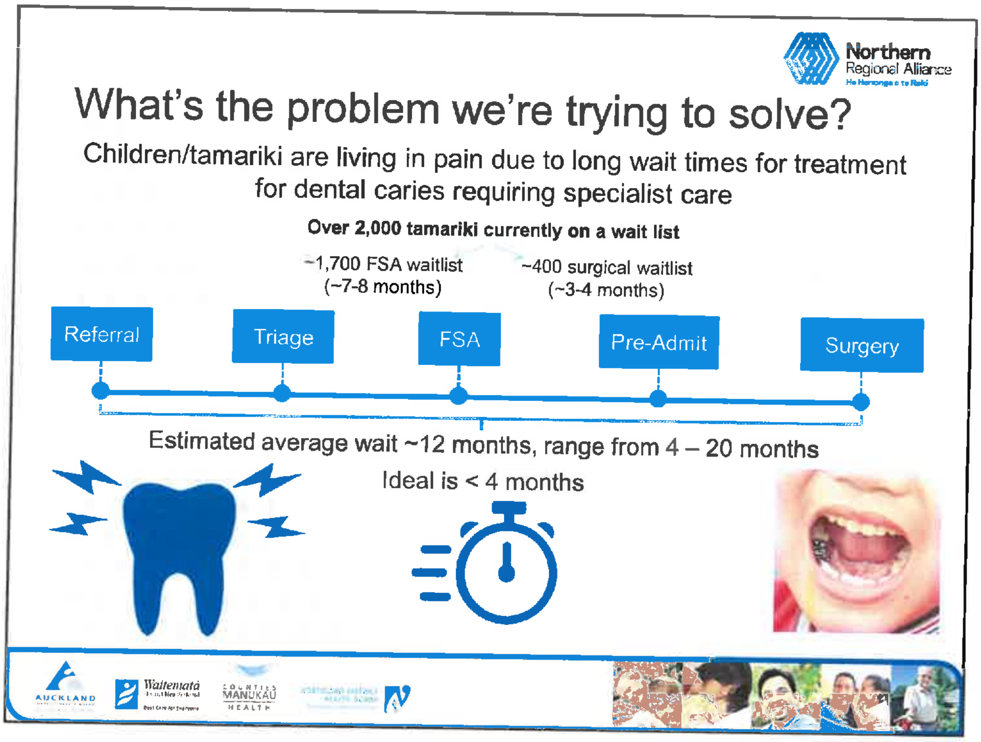
NB Spinal & Surgical Prioritisation in Phase 2



Northern Regional Alliance
He Hononga o te Raki

Vulnerable Services:
Oral Health Update

16 July 2020



Northern Regional Alliance
He Hononga o te Raki

What's the problem we're trying to solve?

Children/tamariki are living in pain due to long wait times for treatment for dental caries requiring specialist care

Over 2,000 tamariki currently on a wait list

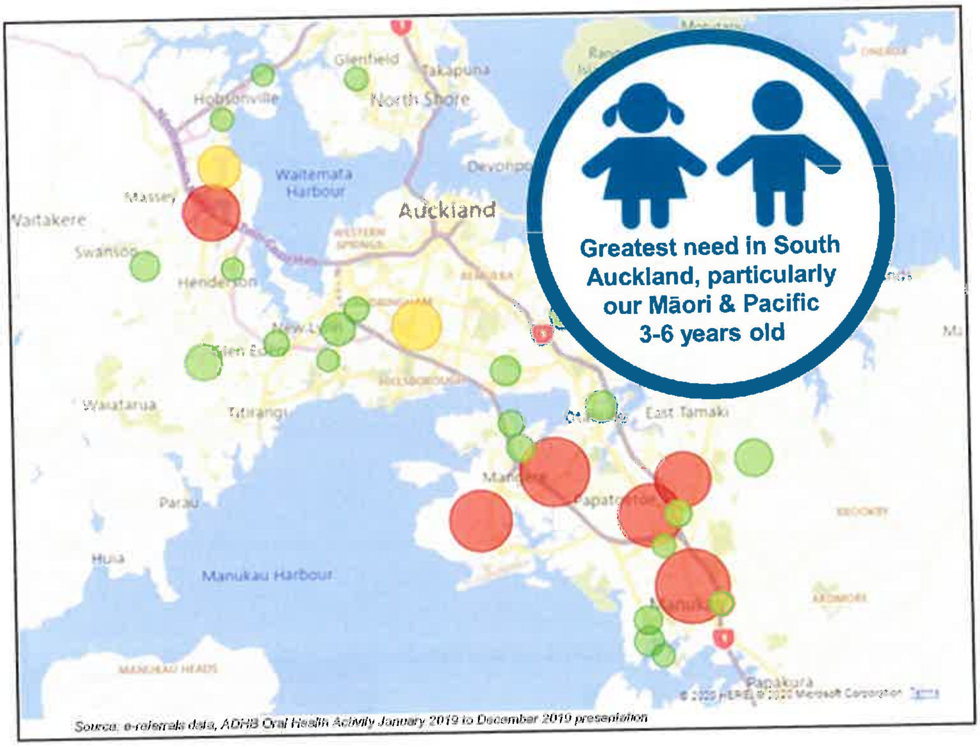
~1,700 FSA waitlist
(~7-8 months)

~400 surgical waitlist
(~3-4 months)

Referral → Triage → FSA → Pre-Admit → Surgery

Estimated average wait ~12 months, range from 4 – 20 months

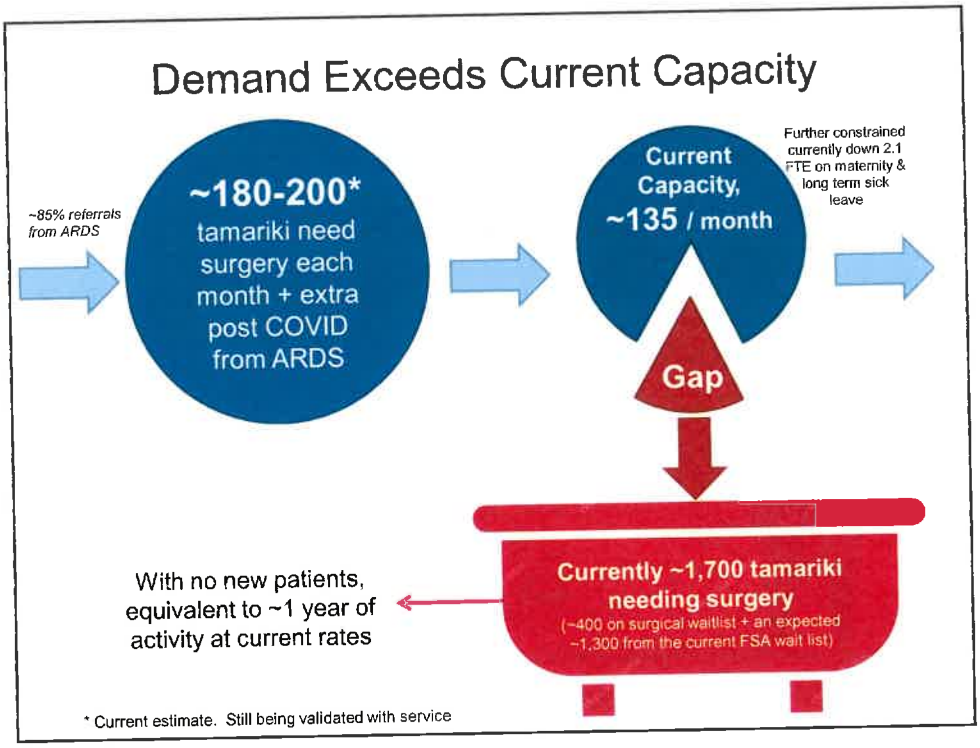
Ideal is < 4 months



Greatest need in South Auckland, particularly our Māori & Pacific 3-6 years old

Source: e-referrals data, ADHB Oral Health Activity January 2019 to December 2019 presentation

Demand Exceeds Current Capacity



~85% referrals from ARDS

~180-200* tamariki need surgery each month + extra post COVID from ARDS

Current Capacity, ~135 / month

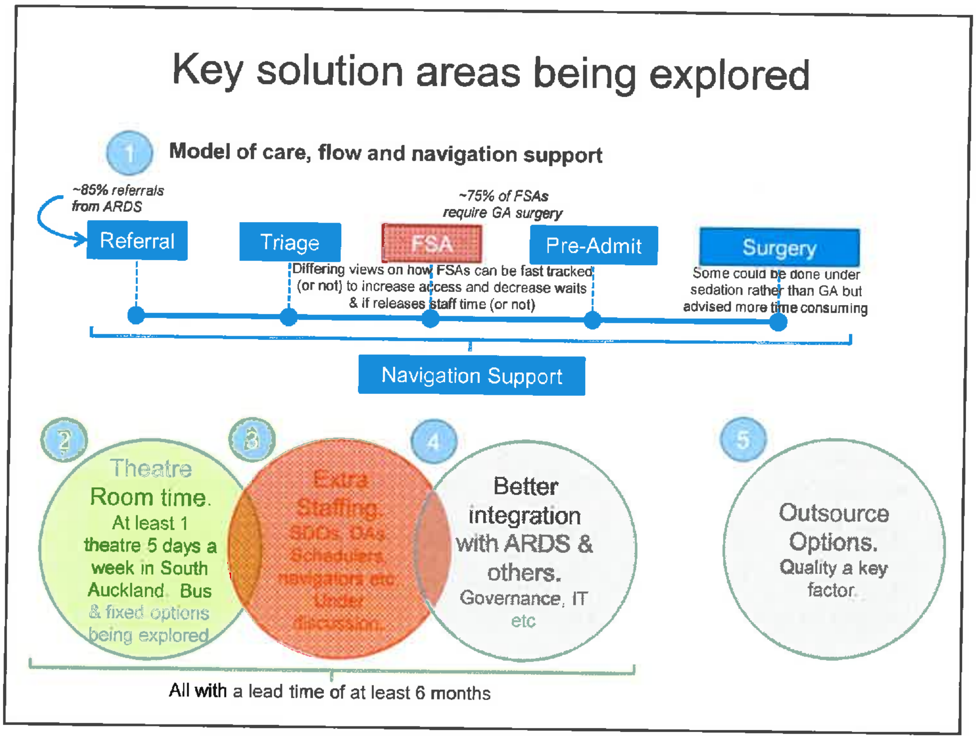
Further constrained currently down 2.1 FTE on maternity & long term sick leave

Gap

Currently ~1,700 tamariki needing surgery
(~400 on surgical waitlist + an expected ~1,300 from the current FSA wait list)

With no new patients, equivalent to ~1 year of activity at current rates

* Current estimate. Still being validated with service



Key solution areas being explored

1 **Model of care, flow and navigation support**

~85% referrals from ARDS

~75% of FSAs require GA surgery

Referral → Triage → FSA → Pre-Admit → Surgery

Differing views on how FSAs can be fast tracked (or not) to increase access and decrease waits & if releases staff time (or not)

Some could be done under sedation rather than GA but advised more time consuming

Navigation Support

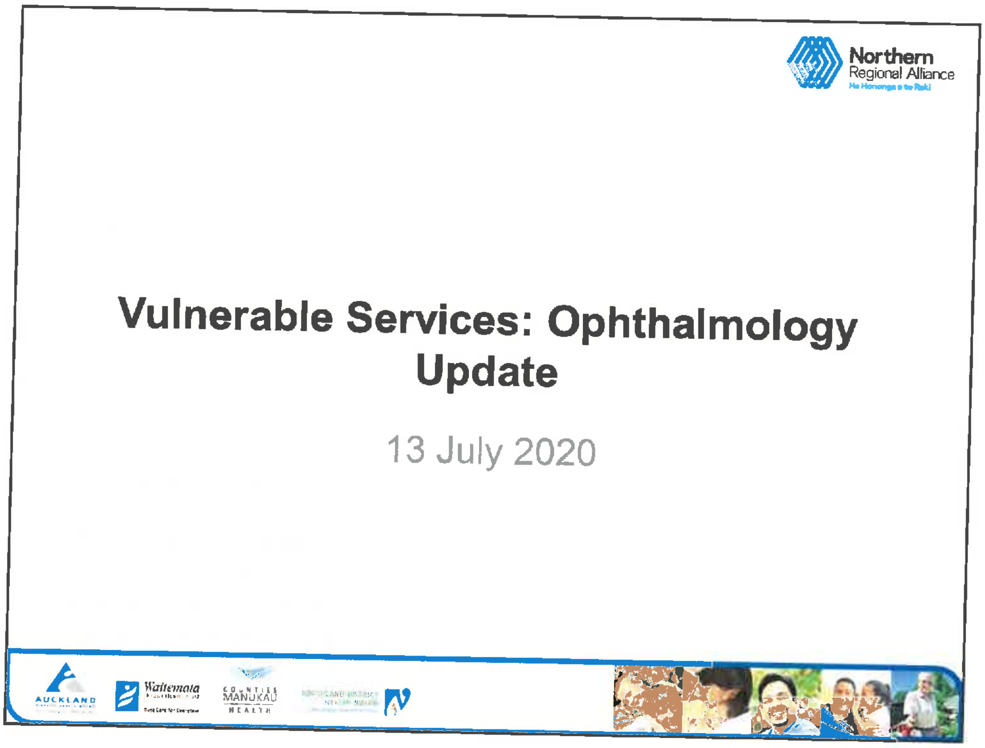
2 Theatre Room time. At least 1 theatre 5 days a week in South Auckland. Bus & fixed options being explored

3 Extra Staffing. SDOs, DAs Schedulers, navigators etc. Under discussion.

4 Better integration with ARDS & others. Governance, IT etc

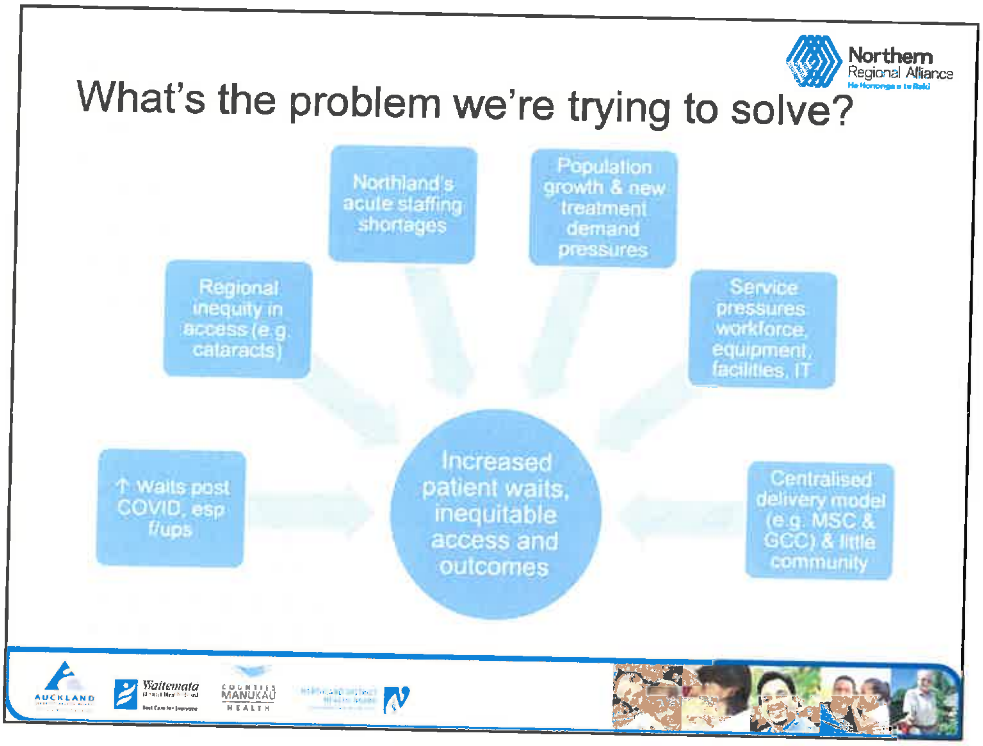
5 Outsource Options. Quality a key factor.

All with a lead time of at least 6 months



Vulnerable Services: Ophthalmology Update

13 July 2020



What's the problem we're trying to solve?

Northland's acute staffing shortages

Population growth & new treatment demand pressures

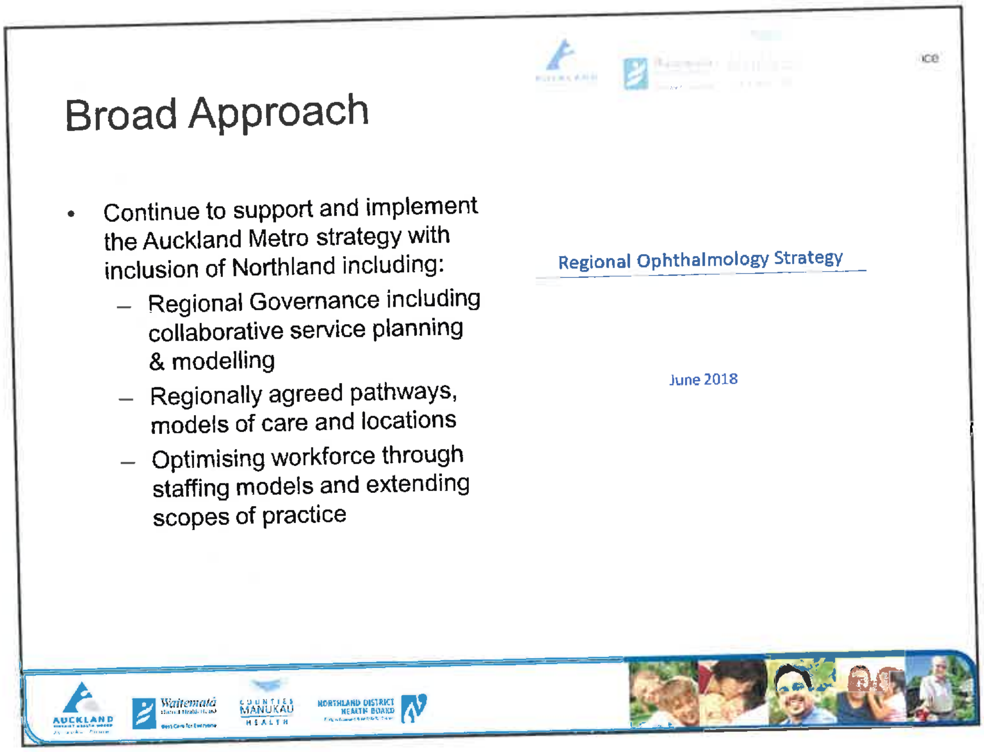
Regional inequity in access (e.g. cataracts)

Service pressures workforce, equipment, facilities, IT

↑ Waits post COVID, esp f/ups

Increased patient waits, inequitable access and outcomes

Centralised delivery model (e.g. MSC & GCC) & little community



Broad Approach

- Continue to support and implement the Auckland Metro strategy with inclusion of Northland including:
  - Regional Governance including collaborative service planning & modelling
  - Regionally agreed pathways, models of care and locations
  - Optimising workforce through staffing models and extending scopes of practice

Regional Ophthalmology Strategy

June 2018

Northern Regional Alliance
He Hononga o te Raki

Specific Actions

Regional response

Northland
Immediate support to cover staffing gaps

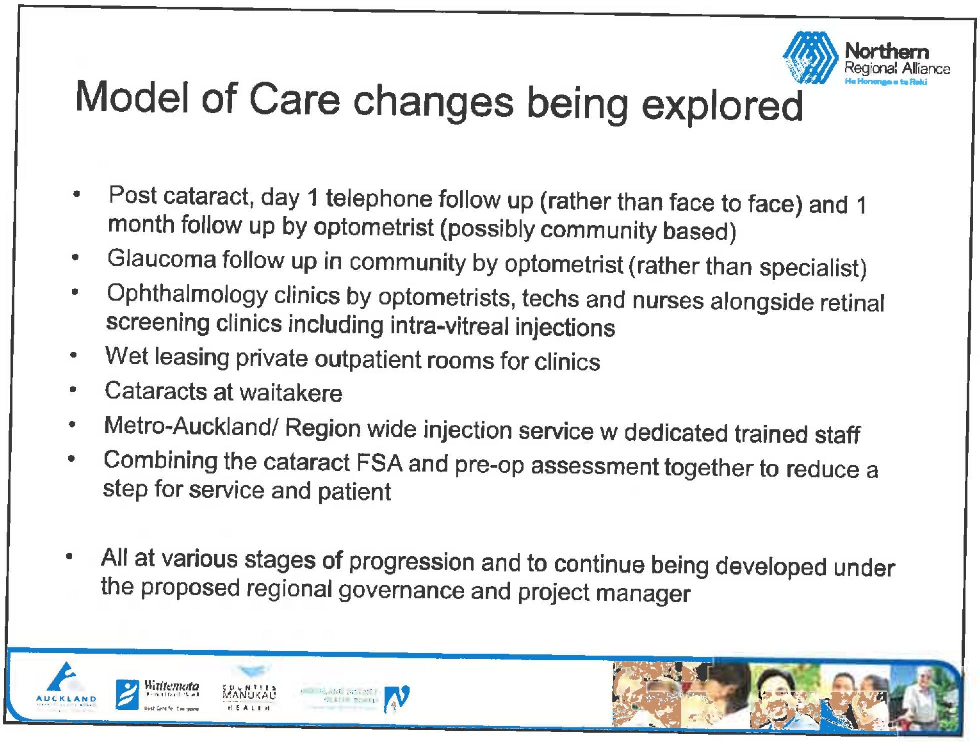
Equity
Quantifying the equity gaps & commitment to equalise thresholds + increased community access

Model of Care
Changes/ development esp. models to ↑ access & lower service need e.g. thru Optoms

Co-ordinated Investment
All DHBs prioritising eyes in 2020/21 & the COVID-19 recovery $

Est. Regional Governance
Focus on equity, pathways & service development

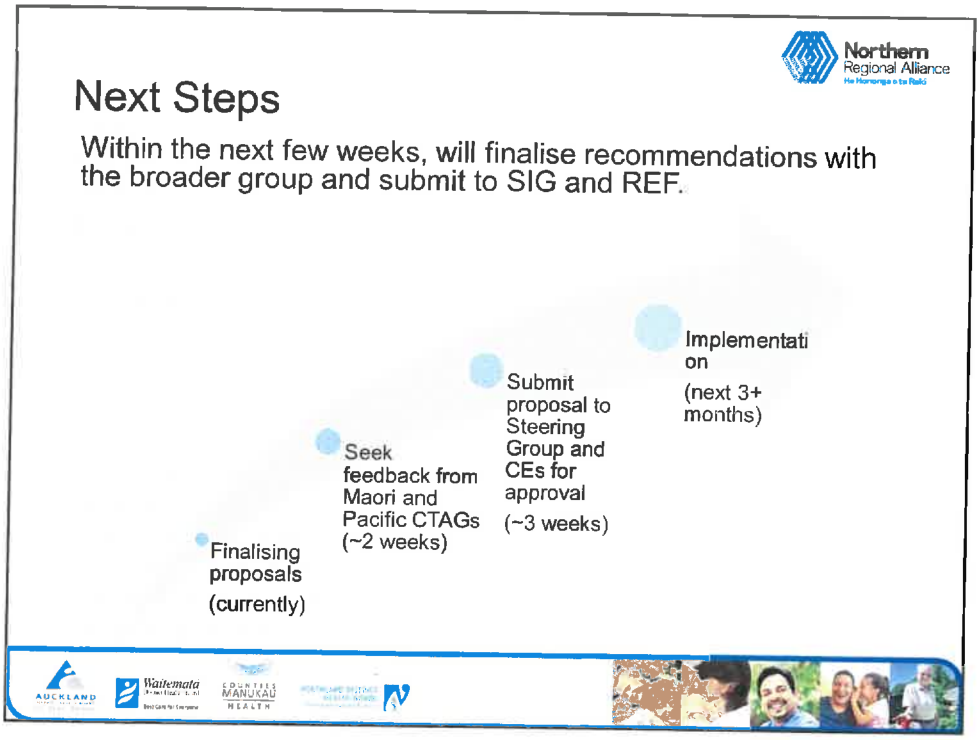
Technical solutions & IT
(e.g. Clinical Portal access & potential pilot of e-referral in ADHB)



Model of Care changes being explored

- Post cataract, day 1 telephone follow up (rather than face to face) and 1 month follow up by optometrist (possibly community based)
- Glaucoma follow up in community by optometrist (rather than specialist)
- Ophthalmology clinics by optometrists, techs and nurses alongside retinal screening clinics including intra-vitreal injections
- Wet leasing private outpatient rooms for clinics
- Cataracts at waitakere
- Metro-Auckland/ Region wide injection service w dedicated trained staff
- Combining the cataract FSA and pre-op assessment together to reduce a step for service and patient

- All at various stages of progression and to continue being developed under the proposed regional governance and project manager



Next Steps

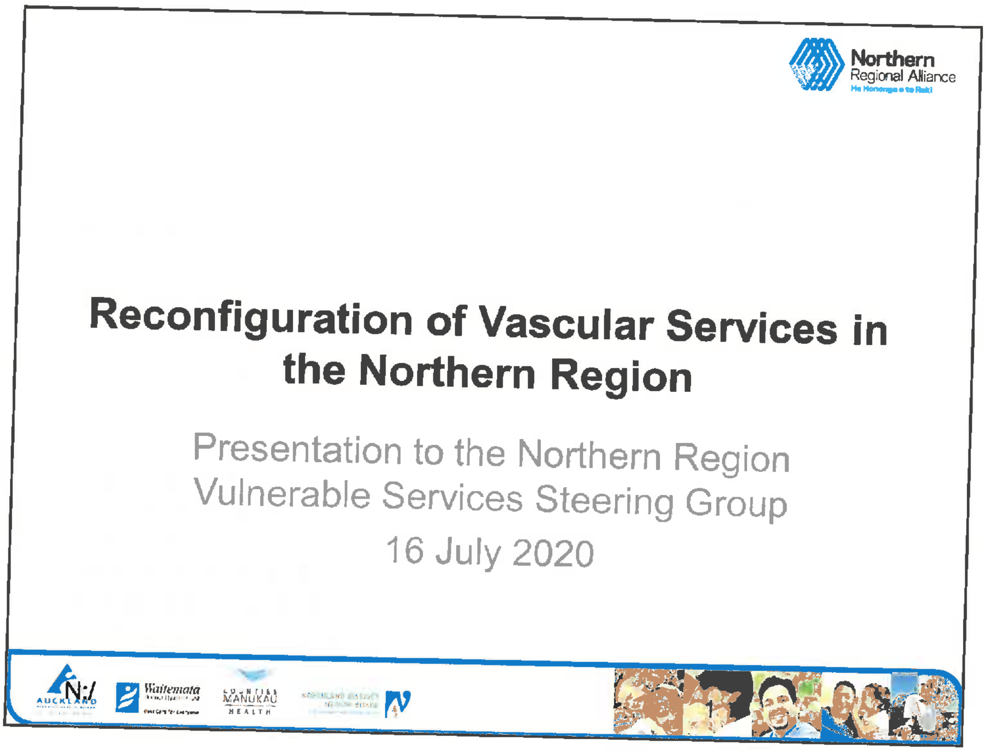
Within the next few weeks, will finalise recommendations with the broader group and submit to SIG and REF.

Finalising proposals
(currently)

Seek feedback from Maori and Pacific CTAGs
(~2 weeks)

Submit proposal to Steering Group and CEs for approval
(~3 weeks)

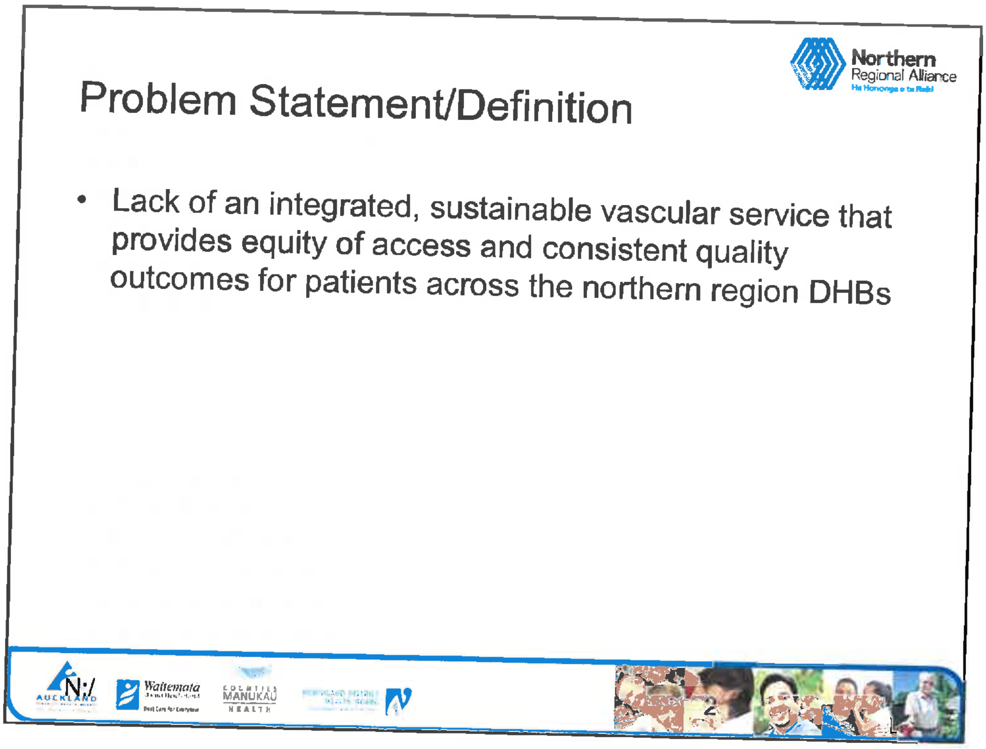
Implementation
(next 3+ months)



Reconfiguration of Vascular Services in the Northern Region

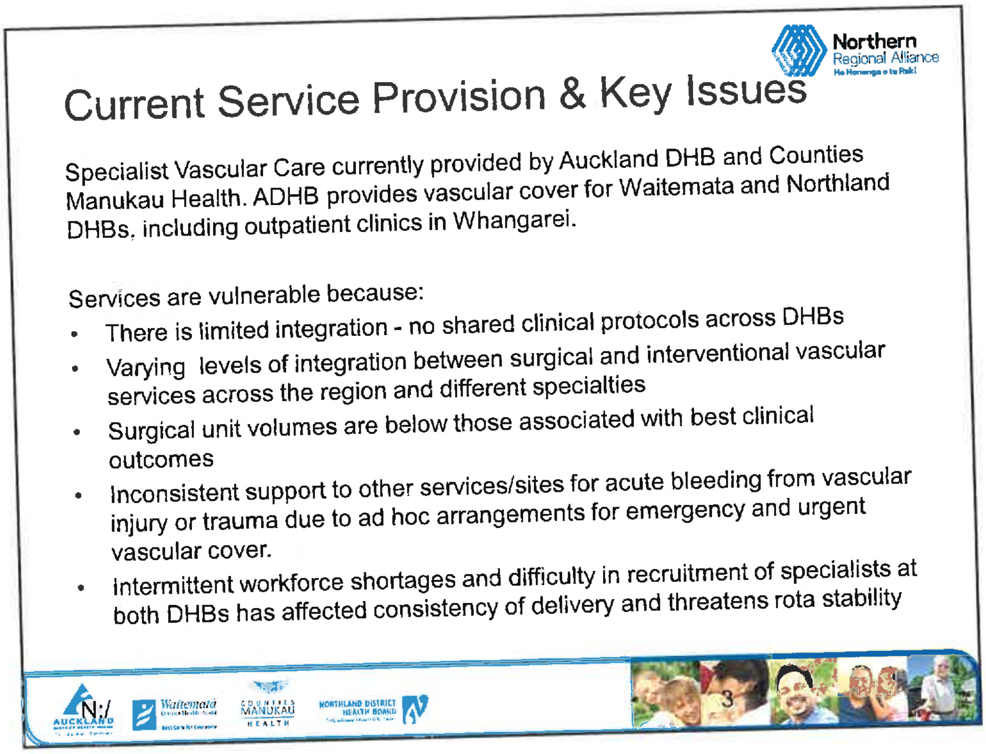
Presentation to the Northern Region Vulnerable Services Steering Group

16 July 2020



Problem Statement/Definition

- Lack of an integrated, sustainable vascular service that provides equity of access and consistent quality outcomes for patients across the northern region DHBs



Current Service Provision & Key Issues

Specialist Vascular Care currently provided by Auckland DHB and Counties Manukau Health. ADHB provides vascular cover for Waitemata and Northland DHBs, including outpatient clinics in Whangarei.

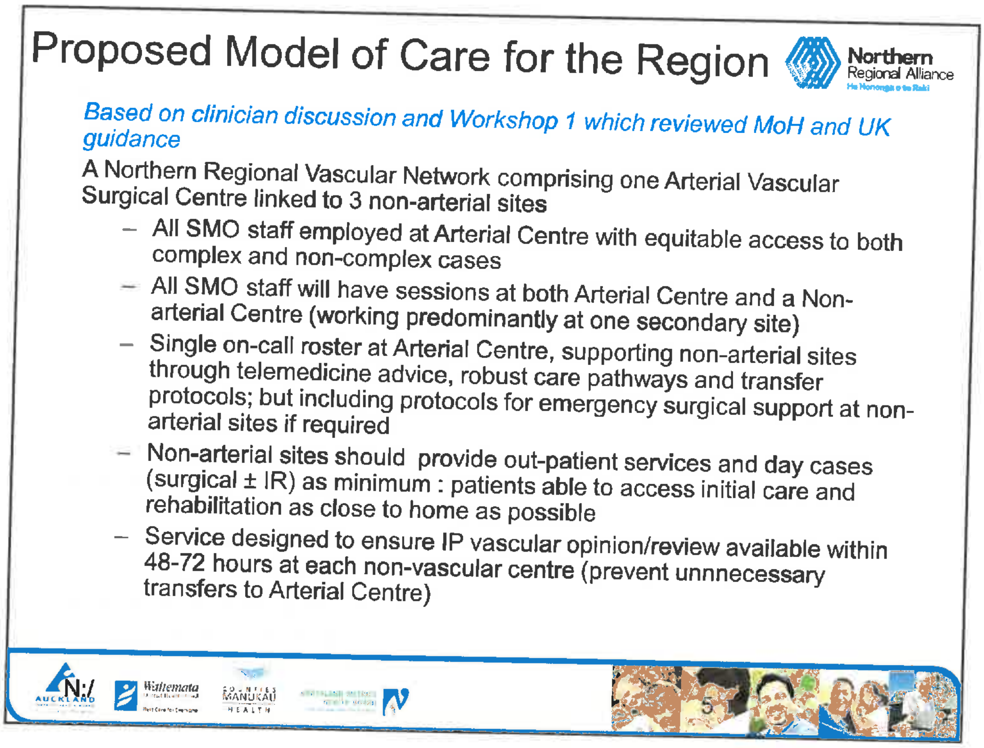
Services are vulnerable because:

- There is limited integration - no shared clinical protocols across DHBs
- Varying levels of integration between surgical and interventional vascular services across the region and different specialties
- Surgical unit volumes are below those associated with best clinical outcomes
- Inconsistent support to other services/sites for acute bleeding from vascular injury or trauma due to ad hoc arrangements for emergency and urgent vascular cover.
- Intermittent workforce shortages and difficulty in recruitment of specialists at both DHBs has affected consistency of delivery and threatens rota stability

NP1

Model of Care Recommendations – NZ & UK

- MoH (2016) recommends a regional model organised around a specialist vascular centre (arterial centre or "Hub") providing comprehensive range of vascular and endovascular services 24/7, supported by non-arterial centres or "Spokes" providing some inpatient and outpatient services. (*Model of Care: Vascular Services 2016, MoH*)
- Similar model has been recommended and is being implemented in UK since 2015 – "lessons learnt" published
- Concentrating arterial surgery and complex endovascular work in one arterial centre has a number of recognised benefits:
  - clinical outcomes are improved with increased volumes;
  - sustainable on call rotas can be achieved, with larger team better able to deliver consistent urgent care; and
  - effective multi-professional training is facilitated
  - economic benefits through optimal use of expensive technology and staff
  - larger teams better placed to deliver consistent urgent care

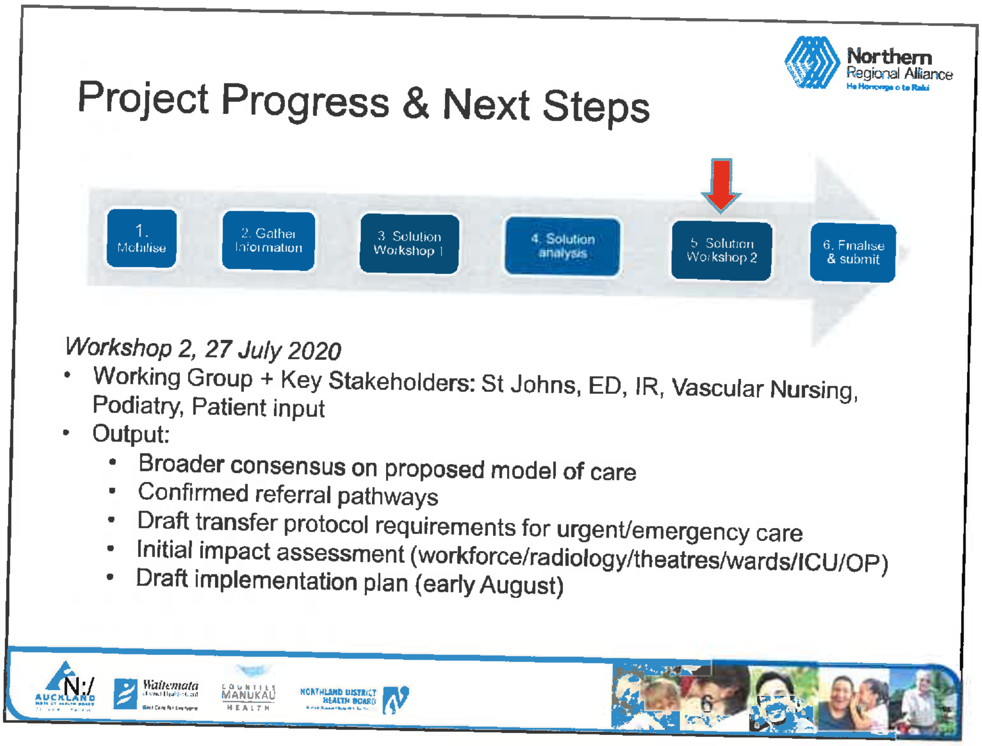


Proposed Model of Care for the Region

Based on clinician discussion and Workshop 1 which reviewed MoH and UK guidance

A Northern Regional Vascular Network comprising one Arterial Vascular Surgical Centre linked to 3 non-arterial sites

- All SMO staff employed at Arterial Centre with equitable access to both complex and non-complex cases
- All SMO staff will have sessions at both Arterial Centre and a Non-arterial Centre (working predominantly at one secondary site)
- Single on-call roster at Arterial Centre, supporting non-arterial sites through telemedicine advice, robust care pathways and transfer protocols; but including protocols for emergency surgical support at non-arterial sites if required
- Non-arterial sites should provide out-patient services and day cases (surgical ± IR) as minimum : patients able to access initial care and rehabilitation as close to home as possible
- Service designed to ensure IP vascular opinion/review available within 48-72 hours at each non-vascular centre (prevent unnnecessary transfers to Arterial Centre)



Project Progress & Next Steps

1. Mobilise
2. Gather Information
3. Solution Workshop 1
4. Solution analysis
5. Solution Workshop 2
6. Finalise & submit

Workshop 2, 27 July 2020

- Working Group + Key Stakeholders: St Johns, ED, IR, Vascular Nursing, Podiatry, Patient input
- Output:
  - Broader consensus on proposed model of care
  - Confirmed referral pathways
  - Draft transfer protocol requirements for urgent/emergency care
  - Initial impact assessment (workforce/radiology/theatres/wards/ICU/OP)
  - Draft implementation plan (early August)

Slide 4

NP1 Suggest taking out this slkide but Michael may want to touch on this when he speaks to the group?

Nicky Plant (WDHB), 15/07/2020

To	NRHCC Hospital Capacity Service Improvement/Planned Care Steering Group Regional Executives Forum
From	Michael Stewart
	Project Lead for Vulnerable Services Vascular Surgery
Date	27 August 2020
Subject	Regional Vulnerable Services Vascular Recommendations and Next Steps
For	**REF Decision / All other groups for review and feedback**
Do recommendations incur financial costs not previously planned /approved?	

Recommendations:

It is recommended that the Planned Care Steering Group:

- **Note** the activities undertaken and the progress made so far in relation to the Regional Vulnerable Services Vascular workstream
- **Note** that there is agreement in principle from key clinical stakeholders to the proposal to establish a regional model for vascular services, with services organised around a specialist vascular centre (r hub) set up to allow for 24/7 specialist service provision to all patients with vascular disease and linked to other hospital sites spokes) which will provide some inpatient and outpatient services.
- **Note** the proposed regional model of care and some of the challenges which will need to be taken into consideration;
- **Note** the proposed recommendations to be taken to Regional Executive Forum for endorsement:
  - That a detailed implementation plan is developed and implemented with support from a regional project group
  - That a regional vascular network is formed, led by a dedicated clinical lead (0.2 FTE) to provide clinical governance for vascular services, with initial terms of reference focussed on the implementation of the regional model of care;
  - That there is dedicated project management FTE to drive the change and lead regional service design.

Purpose

This paper provides an update regarding progress of the Regional Vulnerable Services Vascular workstream and sets out the recommendations from the project group in relation to the establishment of a regional model for vascular services, where services are organised around a specialist vascular centre (the major arterial or hub site) set up to allow for 24/7 specialist service provision to all patients with vascular disease and linked to other hospital sites (spoke sites) which will provide some inpatient, diagnostic and outpatient services.

Background

Vascular services in the Northern Region are vulnerable due to an ongoing lack of integration in services between DHBs and a vulnerable workforce that - at various times in the last few years - has threatened the sustainability of service delivery. This has come at a cost to patients in the form of delayed / limited access to treatment, continued health inequity with, for example, lower limb amputation rates for Māori twice the rate of non-Māori, long and expensive commutes to outpatient clinics for those living in Northland and Waitemata, and potentially poorer patient outcomes for some. Other services which require support from vascular services due to injury or trauma are also affected by the current ad hoc arrangements for emergency and urgent vascular cover, especially in Northland and Waitemata.

A project working group was established in June 2020 to look at what a regional model could look like for the Northern Region, including pathways and afterhours urgent/emergency care, and to understand what the implications of a regional 'hub and spoke' model would mean and what delivery of vascular services at a DHB level would look like compared to the status quo.

Key activities undertaken to date:

11 June 2020	Project Working Group establishment
25 June 2020	Workshop 1 with Project Working Group only
27 July 2020	Workshop 2 with Project Working Group plus key stakeholders [1]
20 August 2020	Brief presented to the Maori Clinical Governance Roopu[2]
21 August 2020	Meeting with Counties Manukau Health clinical leads[3]
25 August 2020	Briefing with the Pacific Clinical and Technical Advisory Group (deferred)

Proposed Regional Model

The proposed regional hub and spoke model will deliver a service more resilient to the vagaries of current workforce recruitment and retention issues and will deliver an integrated regional service which is more equitable and delivers the same high quality vascular services at all DHB sites across the Northern Region.

Key elements of the regional model include:

- A single site undertaking major arterial vascular surgery and endovascular intervention, linked to spoke sites in each Northern Regional DHB
    - Selection of Hub site based on published criteria, including access to ICU, renal, and IR support, and with facilities including a theatre specification (or hybrid) IR suite and a dedicated vascular surgery ward
    - The potential to have a two hub model with growing population requirement acknowledged but not felt to be justified with current surgical volumes
- Consistent and equitable prioritisation based on clinical need regardless of where patient is domiciled;
- Centralised waiting list across Northern Region for OP, diagnostic and surgical activity to ensure optimal scheduling and equitable delivery'
- Re-designing out inequities by ensuring that there is active Maori and Pacific perspectives and engagement in design of care models;
- No destabilisation of vascular surgery support/ IR access for spoke hospitals with model of care changes;
- A 24/7 specialised major arterial Hub unit that will have the surgical volumes to give the best results and be large enough to enable subspecialisation;
- Regionally developed and agreed acute and elective service pathways across the region including primary care pathways and a future role in the promotion of primary prevention initiatives

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[1] Stakeholders included: Primary care, ED, IR (metro-Auckland DHBs), Clinical Nurse Specialist, Podiatry/ Maori clinician, Management. St John invited but a late apology on the day.

[2] Feedback appended

[3] Attendees: Michael Stewart, Andrew Holden, Stuart Caldwell, John Kenealy, Stuart Barnard

- Formalised arrangements for what services are provided inhours and afterhours across all hospital sites and clear protocols which allow for patients to be transferred to the appropriate centre to receive the best care for their condition;
- Elective pathways which facilitate equitable access to vascular care as close to home and where clinically safe to do so, including increased use of telehealth to support remote clinical working;
- Spoke sites should provide out-patient services and day cases (surgical ± IR) as minimum : patients able to access initial care and rehabilitation as close to home as possible;
- IP vascular opinion/review available within 48-72 hours at each non-vascular centre (prevent unnnecessary transfers to Major Arterial Hub)
- Virtual /telehealth MDT meetings for all major vascular cases, accessible from all hospital sites;
- A regional workforce rostered to work across both hub and spoke sites, in and after hours;
    - All SMO staff employed at Major Arterial Hub with equitable access to both complex and non-complex cases
    - All SMO staff will have sessions at both Hub and Spoke sites (working predominantly at one spoke site to develop collegiate working)
    - Single on-call roster at major arterial hub, supporting spoke sites through telemedicine advice, robust care pathways and transfer protocols; but including protocols for emergency surgical support at non-arterial sites if required
- All vascular intervention, whether surgical or endovascular, will be provided by the right people with the best skills for the procedure;
- Robust framework to maintain professional standards in place linked to credentialing of clinicians;
    - This will entail strong collaboration between vascular surgeons and IR teams for endovascular work with joint operating for more complex procedures, both to optimise outcomes and ensure appropriate clinical volumes across both craft groups
- Robust framework of clinical outcome measures and regular audit of outcomes;
- Establishment of a formal regional vascular network to provide structured regional governance.

Challenges to Implementation

	Issues	**Potential mitigation**
Workforce	• Regional workforce located in local DHBs and rostered working across in and after hours services • SMO contracts where SMOs have dual roles	• Workforce management of contract changes
Interventional Radiology	• As more vascular surgeons are trained in endovascular intervention, there may not be enough volumes to justify all individuals continuing to maintain endovascular interventional skills.	• Close collaboration between IR and Vascular surgeons required • Subspecialisation • Clinical outcomes measures and audit of outcomes used for both quality assurance and to help drive appropriate subspecialisation across the workforce
Interventional Radiology (Counties Manukau)	• Potential loss of complex endovascular work - the impact on current staff satisfaction and future staff recruitment • Importance of maintaining services close to home especially for large Pacific and Maori community in South Auckland	• Single waiting list to increase the amount of endovascular work undertaken at Counties Manukau – eg Auckland patients who are geographically closer to Middlemore are scheduled at Counties Manukau

Non-vascular surgery (Couunties Manukau)	- Concern that reducing vascular surgery volumes at Counties Manukau could affect safe delivery of other surgical services.	- Plan to roster some vascular OP, diagnostic or surgical activity at CMH Monday-Friday to ensure continued on-site surgical presence for acute support if needed. - Robust protocol for out of hours vascular surgical support, including potential to attend on site, at all 3 major Auckland metro hospitals in place

Conclusion and next steps

There is broad consensus amongst clinical stakeholders on the proposed regional hub and spoke model of care. However the major challenges to implementation are as stated above. Any undeclared concerns will need to be managed through the implementation stages.

The Project Working Group seeks Regional Executive Forum endorsement to implement the following recommendations in the region:

- That a detailed implementation plan is developed and implemented with support from a regional project group;
- That a regional vascular network is formed, led by a dedicated clinical lead (0.2 FTE) to provide clinical governance for vascular services, with initial terms of reference focussed on the implementation of the regional model of care;
- That there is dedicated project management FTE to drive the change and lead regional service design, prioritising :
    - Engagement with Māori and Pacific health providers to help review and develop pathways of care utilising Māori ways of engagement
    - Working with HR support to develop contracts appropriate for multi-site working
    - Developing proposals for formal staff consultation on proposed change.

Maaori Clinical Governance Roopu Presentation 20th August 2020

Vascular Services

Feedback from Group

The MCG group appreciated the opportunity to provide input to the Vascular Services project. They made it clear that they expect to be a part of a redesign/co-design process and their agreement is essential to make any changes in regional service delivery. Keen to ensure that any services are patient-centred and culturally appropriate.

Equity and Access considerations

- Key to engage Māori health providers (including Māori NGOs and iwi) in agreement of pathways of care pre- nd post- hospital services. Utilise primary care Kaupapa Māori navigator / visiting services and Māori ways of engagement. Engage Māori NGOs and Iwi in NDHB for any service redesign.
- System needs a more holistic view (all HC professionals) and to understand Māori ways of engagement
- Consideration of use of Māori navigators in the community, as well as in the hospital to walk alongside patients/whānau accessing services – successful current ADHB pilot has had positive impact on service uptake. Ethnic specific workforce to engage with patients/ whānau - share research on positive interventions. Workforce representation – how not to provide a 'second class' service.
- Telehealth options - good experience in Northland through Covid. However, need to consider access to community hubs (e.g. GP clinics) for this to take place, where the technology/Wi-Fi and possible health coach are available to provide support and help facilitate consultation.
- Outreach options - current vascular outreach service to NDHB good but 'siloed' from other services including radiology / surgical services, need to strengthen links and have more collaboration/integration with other local services (e.g. endocrine/diabetes/renal).
- Use of community-based clinics and provincial hospital facilities to provide care (e.g. NDHB rural hospitals currently under-utilised). Options for basing equipment and providing services in 'satellite' sites.
- Multi disciplinary approach including community providers – utilising above community facilities to base equipment/clinics
- Investment in prevention services and wellness/primary care pathways - need a prevention lens and effort to prevent people requiring hospital services for end stage vascular disease (i.e. target obesity, renal disease, diabetes in high risk population, esp. Māori) – comprehensive clinical pathways that reflect local GP primary care knowledge.
- Data – Need to tease out reasons to explain inpatient statistics? Also look at OP attendance and pre-hospital pathways. Data by DOD including clinic presentations and non attendance.
- How will the service measure success and quality of service for Māori?

Regional Service Improvement Group
Topic: Equity Led Planned Care/Vulnerable Services

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ORL/H&N	Key people engaged Brief 12/6	Initial info collected	Held 6 July	Streams underway	Held 7 August follow up 9 September	Being developed	Progressing following delays
Max Fac	Key people engaged	Initial info collected, some delay	Held 8 July	Streams initiated	12 August w/shop cancelled		Paused
Oral	Key people engaged	Initial Info complete	Held 15 June	Key pressures identified	Held 7 July	On hold	On hold, being progressed within ADHB
Eyes	Key people engaged	Initial info complete	Held 17 June	Streams complete	Held 1 Jul, 19 Aug & 1 Sept	Presented to Maori/Pacific. To SG 10/9	Final Stages. SG on 10 Sept
Vascular	Briefing held Thurs 11/6	Initial Info complete	Held 25 June	Streams underway	Held 27 July	Presented to Maori, Pacific & SG	Final Stages. To REF 17 Sept
Sarcoma	Key leads briefed	Initial info completed	Held 4 Sept	Work underway	Scheduled 25 September		Progressing after initial delays

NB Spinal & Surgical Prioritisation in Phase 2

AUCKLAND DISTRICT HEALTH BOARD Te Toka Tumai
Waitematā District Health Board Best Care for Everyone
COUNTIES MANUKAU HEALTH
NORTHLAND DISTRICT HEALTH BOARD

To	NRHCC Hospital Capacity Service Improvement/Planned Care Steering Group (and subsequently an updated version to the Regional Executives Forum (REF))	
From	Jo Gibbs Executive Lead for Vulnerable Services Ophthalmology	
Date	9 September 2020	
Subject	Regional Ophthalmology Vulnerable Service Recommendations and Next Steps	
For	**REF Decision / All other groups for review and feedback**	
Do recommendations incur financial costs not previously planned /approved?		**Yes**

Summary Recommendations:

It is recommended the NRHCC Planned Care Steering Group:

- **Provide feedback** on this paper as the initial set of findings and recommendations of the Vulnerable Services Ophthalmology workstream
- **Note** that the recommendations are to inform the Planned Care Recovery Expansion and Service Improvement Funding Proposals due 14 September and that a finalised paper incorporating feedback will be taken to REF later in September
- **Note** the key challenges for ophthalmology services and resulting impacts on regional inequities are; large increases in waits post COVID, significant demand growth driven by age and diabetes, regional inequities in access (differing CPAC thresholds) and wait times (particularly for Māori in Northland), patient challenges in navigating services and on going difficulties regionally in funding, staffing, facilities and equipment to remain sustainable and promote equity
- **Endorse** the proposed approach outlined in this paper which includes:
    1. Reaffirming the 2018 Regional Ophthalmology Strategy, inclusive of Northland, with the intent to establish a more regional multisite service to; i) help achieve equitable access to, and quality of, services across the region, ii) implement enhanced models of care, iii) make services more resilient to staffing challenges, and iv) more efficient use of resources
    2. To establish an initial Regional Ophthalmology Oversight Group (that reports to REF and with strong equity input) to progress the recommendations in this paper and co-design the implementation of the regional service, particularly the governance/service oversight, staffing, facilities, funding arrangements.
    3. Provide additional support where possible to Northland to help improve equity regionally,
    4. Commit to equalisation of CPAC thresholds for cataract surgery across the region which at a maximum of 48 is estimated to be up to 687 cataracts or ~$2,000,000 regionally, where a portion will be one off as some will be done earlier in the disease progression and not later,
    5. To start systematically measuring and tracking equity of service quality and outcomes, and
    6. For DHBs to prioritise funds, including the Planned Care Recovery funds to progress equalisation, implement model of care changes and reduce waitlists within 12 months
- **Request** REF to nominate an executive sponsor for the initial Regional Ophthalmology Service Oversight Group and **note** that the terms of reference will be brought to REF for it to progress
- **Agree** to fund the NRA $195,000 per annum to operationalise the Regional Ophthalmology Service Oversight Group by underwriting a bid to the Planned Care Recovery Service Improvement Fund
- **Note** the intention to submit regional Planned Care Recovery Funding Service Improvement bids for i) the Regional Ophthalmology Oversight Group ii) piloting a community model to take pressure of clinics, and see patients closer to home, and iii) pilot an e-referral and outcome tracking tool for cataracts.

Issues and Implications:

Background/Context

In response to the COVID-19 outbreak, the Northern Region Health Coordination Centre (NRHCC) was stood up as the regional incident management response. As the outbreak was coming under control, attention was drawn to planned care given a large portion was delayed under the COVID-19 lockdown period. The NRHCC formed an Equity-led Planned Care Recovery work programme and a Service Improvement Steering Group to facilitate and support services' response and 'catch up' with a significant focus on equity as a priority. The work programme leads have identified several activities including 'vulnerable services' workstream with a focus on supporting services to be more resilient in the wake of COVID-19 that have a significant regional component.

Ophthalmology was identified as one of seven potentially 'vulnerable services' post lockdown, particularly given significant demand pressures across the region and services challenges in responding, regional inequities to access (e.g. different thresholds to access cataract surgery), the location of services and access to facilities relative to need, and ongoing challenges retaining specialists and technical staff. Good progress was been made regionally pre COVID with the development and agreement of a Regional Ophthalmology Strategy in 2018 but as yet, has not been fully resourced or implemented.

A small regional group was established to rapidly develop an approach to building a more equitable and resilient Ophthalmology Service in a short 6-8 week process. Input was also sought from the Māori Clinical Governance Roopu and the Pacific Clinical Technical Advisory Group. This paper outlines the conclusions and recommendations of that group and ultimately the executive lead for this work.

What's the key problems we're trying to solve?

The group summarised the key challenges in the following table building on the prior Regional Ophthalmology Strategy.

Key Challenge	Evidence
Overall	
Significant service demand pressures related to population growth, diabetes and new treatments.	Age driven demand where those **aged 65+** are expected to **increase by over 40%** in the next 10 years (compared to little growth in children/youth). **Diabetes**, with high rates in the Northern Region, particularly within Pacifica populations, especially in CMDHB (see Appendix 1) **New treatments** such as intra-ocular injections which were not readily available 10 years ago but now standard practice with many needing regular injections every 1-3 months. The Northern Region has seen a 131% increase in the last 5 years. **As such, service growth is currently averaging ~4.6% annually,** almost 3x population growth (see Appendix 2).
Equity of Access and Waits	
Increased waitlists in the wake of COVID (particularly for follow ups) and on top of existing waits for some DHBs.	Ophthalmology services were significantly impacted by COVID where only acute or urgent/priority patients were seen over Level 4. Overdue FSAs increased by about 1,000 patients regionally post COVID. However, follow up appointments were the most affected with an increase of 4,000 overdue to be followed up on top of the roughly 9,000 overdue pre-COVID.
Barriers to accessing services which is often via referral from private optometrists with none or very few in high need areas (see Appendix 3).	This is somewhat mitigated through publicly funded retinal screening and GPs but limited in scope. More could be done earlier in the process to with improved community access to take the load off specialist clinics in a cost effective way.

Key Challenge	Evidence
Geographic inequity in service access and waits across the region	Thresholds to access cataract surgery are 45 and 48 in ADHB and WDHB respectively with 52 and 55 in NDHB and CMDHB. Nationally, thresholds range from 45 to 61 and an average of 52 (see Appendix 4). CMDHB is looking to reduce its threshold and has increased its cataract volumes by 75% in the last 5 years (see Appendix 2). Prior to COVID, CMDHB was due to start reducing thresholds in the next 1-2 years.
The Northland service particularly vulnerable due to significant specialist workforce challenges	Northland has only had one of its four specialists available for most of 2020 placing significant pressure on the remaining staff and service with increased waits for patients. This appears to be a large contributor to the longer waits faced by Māori across the region where statistically, the 'DHB of Service' is the greatest driver of wait times (more so than ethnicity or other variables) – see Appendix 5. Northland have recruited two specialists to start in 3 and 9 months respectively but shortages remain a key risk being a relatively small service.
High volume outpatient services delivered from large centralised locations	Clinic/outpatient services which require the most frequent travel for patients and whanau, predominantly delivered from Whangarei Hospital, Greenlane Clinical Centre and Manukau Super Clinic which are difficult to access and costly for some.
Equity of Quality and Outcomes	
Standards and protocols can vary and information on equity of service quality and outcomes is very limited.	Most services conduct periodic audits and research but currently no systematic quantification or tracking of service quality or outcomes including those from an equity perspective. Changes in models of care have slowed uptake and many are not standard practice resulting in multiple protocols for similar activities.
Equity of Experience	
Emergent feedback from sources such as Māori and Pacific navigators and administrators are identifying key challenges for patients	Navigators have identified common themes around communicating expectations and style as well as other systems and processes (which have been improved). Some patients finding it difficult to navigate between services (see the patient story in Appendix 4).
Service Challenges	
Ongoing workforce challenges and access to equipment, theatres & facilities to meet demands	Difficulties recruiting and retaining staff and access to facilities (especially clinics). All services have grown beyond current facilities but large amounts of private capacity. Many either outsource a portion of surgery or wet lease those facilities. About 40% of all DHB funded cataracts are now done in private across the Northern Region. Main pressure points in public facilities is clinic space for outpatient activity. Planned additional capacity at the Manukau Health Park/Super Clinic in 2-3 years. Lots of equipment used in clinics with opportunities to share resources across the region.

Recommendations and Request:

In establishing the group's recommendations the Regional Vulnerable Services Ophthalmology Group identified the following desired future state which is drawn from the 2018 Northern Region Ophthalmology Strategy and expanded in parts, particularly to include Northland and a greater focus on equity:

Desired Future State

(adapted from Northern Region Ophthalmology Strategy)

- Greater levels of service equity across the region in terms of access, wait times, quality, outcomes and experience
- Greater levels of regional working with a single Regional Governance/Oversight Group and in principle a single regional service delivered through an extended network of centres providing different levels of service from multiple sites to shore up regional equity, implement enhanced models of care and share resources more efficiently
- Models of care and optimisation of workforce and locations through extended scopes of practice (in collaboration with UoA)
- Regionally integrated specialist and technical workforce, training, facilities, equipment and IT to support enhanced models, equity and sustainability

The Regional Vulnerable Services Ophthalmology Group recommend the following actions, status and next steps:

Recommendations		**Current Status**	**Next Steps**
Strategy and Service Model			
1.	To reaffirm the Northern Regional Ophthalmology Strategy with the more explicit inclusion of Northland DHB (ie beyond metro Auckland) with the intent to establish an overarching regional Service Oversight Group and develop a more regional multi-site service through a co-design process.	Strategy reaffirmed by group. ADHB very supportive of a regional service model. Northland and CMDHB interested in principle with: a) a desire to better understand the detail of the approach, particularly around workforce, local services provided, funding arrangements and governance/oversight, and b) for it to be developed through a co-design best of services approach. The Māori Clinical Governance Roopu advocated for components of co-governance to be included in the design.	To establish an initial Regional Ophthalmology Service Oversight Group through the leadership of an Executive Lead. The group's purpose will be to progress the recommendations in this paper and co-design the implementation of a regional service, particularly the oversight, staffing, facilities, funding and others. Secure funding ($195,000 per annum) for a project manager and clinical lead, develop and agree Terms of Reference.
Northland/ Regional equity for Māori			
2.	Provide some immediate support to Northland to address current specialist staffing gaps	Metro-Auckland DHBs put Northland in touch with potential locums which have been taken up. Various types of other support has been offered.	Develop a more sustainable and resilient workforce model for Northland with support from Auckland through the initial Oversight Group.
Waitlist Recovery from pre and post COVID			
3.	To catch up on all overdue patients from both pre COVID as well as those that were unable to be seen during	All DHBs have prepared ESPI recovery plans and submitted to the Ministry of Health and some have increased clinics already as well as changing models of care in some areas (e.g. combining	To collectively develop and share Planned Care Recovery Plan Funding and continue to develop new models of care and shared resources while also submitting

Recommendations		Current Status	Next Steps
	COVID	FSAs and pre-admits and increased telephone follow ups post surgery). ESPI Recovery Plans shared between DHBs. However, most dependent on additional resources being sought from the Planned Care Recovery Expansion Funding which is currently being worked through.	regional Planned Care Service Improvement bids for the proposed community models and the e-referral initiative.
Equity			
4.	Improve equity through targeted service improvements, increased number of community locations for lower complexity and enhanced models of care[1].	Several different model of care enhancements have been identified and being worked on (see Appendix 7). While private optometrists have potential, few in high need areas such as Mangere, Manurewa or Glen Innes. Retinal Screening sites seen as an opportunity for expanded services to take the load off specialist clinics staffed by optometrists, nurses and technicians.	Continue to progress via initial regional oversight group with inputs from Māori and Pacific clinical governance and advisory groups.
5.	Commit to regional equity of access to services starting with equalising access to cataract surgery[1].	Some initial analysis completed on various equalisation options (see Appendix 8). To equalise at a maximum CPAC of 48 it would require up to 687 cataracts regionally (~$2.0 million) of which a portion will be one off as done earlier in the disease progression and won't be needed later. Alongside the CPAC work, ADHB has also been progressing a prioritisation tool that augments the clinical prioritisation with wait times and ethnicity. To be piloted in ADHB Ophthalmology and already shared with CMDHB.	Finalise analysis to inform Planned Care Recovery Funding decisions. For new regional oversight group to confirm equalisation threshold.
6.	Develop a set of regional access, quality and outcome indicators identifying any key equity gaps[2].	Currently this is mainly at a DHB service level and quality and outcome measures largely ad hoc audits	Develop a set of regional indicators that are more systematically produced, reviewed and tracked including areas such as access to new treatments such as intra-ocular injections.
7.	Share learnings on barriers and models that work e.g. ADHB Navigator insights and CMDHB Pacific Retinal Screening and surgical journey initiative	Early findings and feedback from ADHB Navigators to the Ophthalmology service has resulted in changes already. CMDHB has made good progress on DNA rates associated with retinal screening through a Pacific administrator initiative.	Continue to share experiences across services and agree best practice.

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[1] Highly supported by the Pacific CTAG

[2] Highly supported by the Māori Clinical Governance Roopu

Recommendations		Current Status	Next Steps
Investment – Recovery & Future Growth			
8.	For all DHBs to commit to Ophthalmology as a regional funding priority. Move to a more regionally co-ordinated approach to service development and investment given the significant increase in growth predicted at ~4-5% per annum compared with population growth of ~1.3% per annum.	DHBs have shared their COVID-19 ESPI recovery plans and 2020/21 PVS/PCI plans for ophthalmology where ADHB/WDHB is signalling a ~4% uplift in their 2020/21 patient volumes. CMDHB confirming uplift but have committed to an increase of 200 extra cataracts. All are signalling further investment in Ophthalmology volumes in the Planned Care Recovery Plan funding volumes due to the MoH on 14 Sept.	To continue to share plans via the regional governance process with the immediate focus on Planned Care Recovery Funding submissions but with the intent to increasingly use regional plans and funding.
Workforce			
9.	Optimising workforce through staffing models and extending scopes of practice	Shared recruitment of Ophthalmologists across Metro-Auckland already and close links with Auckland University.	Continue to progress in response to changing models and initiatives through regional governance and links to Auckland University. To develop greater links with Northland.

Interdependencies with other Functions: (Ensure recommendation is agreed by other Function team prior to submission)	DHB Funders/Planners, Ophthalmology services, DHB Surgical Services
Equity considerations of recommendations:	See equity recommendations above numbered 4-7
How recommendations align with Treaty responsibilities:	Aligns to regional service design principles including: - **Partnership** where these proposals have been reviewed by the Māori Clinical Governance Group and Pacific CTAG in early September and explicit input from Māori will be built into the initial Regional Ophthalmology Service Oversight Group. - **Equity** as per above - **Options** where the community models to be developed will consider hauora options such as the potential use of existing sites already at some marae and others to expand range of conditions seen in the community to better serve patients and whanau. - **Active Protection** of Māori taonga, culture and knowledge as per the Regional Service Design Principles.

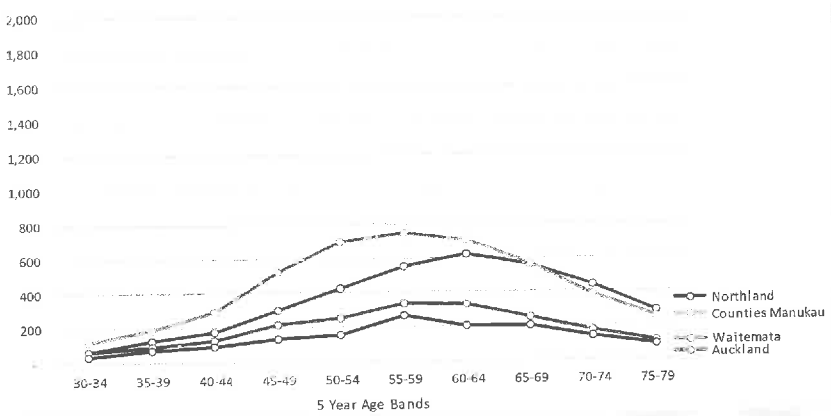
Cost estimate summary for recommendations with financial impact:				
One-off costs:	Capex:	As per individual DHB plans and regional bid to Planned Care Recovery Service Improvement Bids.	Opex:	As per individual DHB Planned Care Recovery Plans submitted to MoH.
Recurrent costs (full year effect):	Capex:		Opex:	For services as per existing PVS. Will come back to REF if any recommended changes from regional group. For regional governance, $195,000 per annum for 1.0 FTE project manager + 0.2 FTE Clinical Lead
Source of funding, if approved: For oversight group, will submit a Planned Care Recovery Service Improvement bid but to be underwritten and supported by DHBs if unsuccessful using standard DHB contribution formula.				
Provider cost within existing provider revenue allocation:	Will be from one of these depending on how individual DHB's have earmarked it.			
DHB funder cost pressure 2020/21:				
Pre-commitment to funding round 2021/22+:				
Alternate source of funds (please specify details):	Some from Planned Care Recovery Funds			
Basis for DHB cost split:				
Additional comments (please specify):				

Appendix 1 – Diabetes profile across the Northern Region

- In absolute numbers, the additional diabetic population for Maori and Pacific population in CMDHB is substantially higher than other DHBs, e.g. >2,000 Pacific diabetic population in age band 55-59 compared to other DHBs with less than 800.

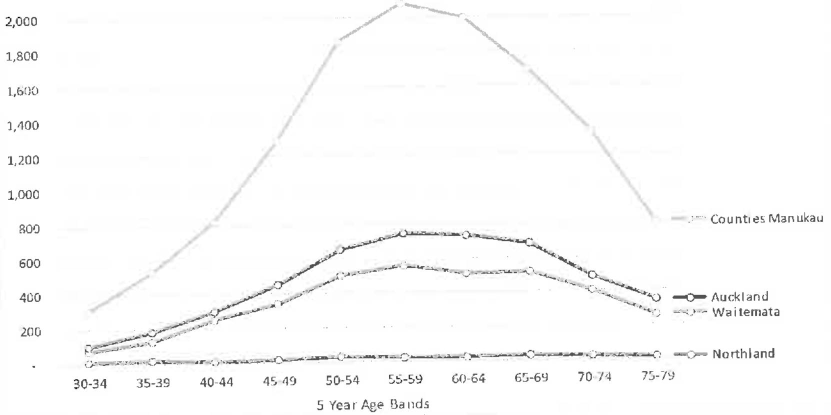
Maori

Number of Maori PHO Enrolees That Are Flagged Diabetes In CVD Risk Assessments To Mar-19 By Age Band And DHB of Domicile



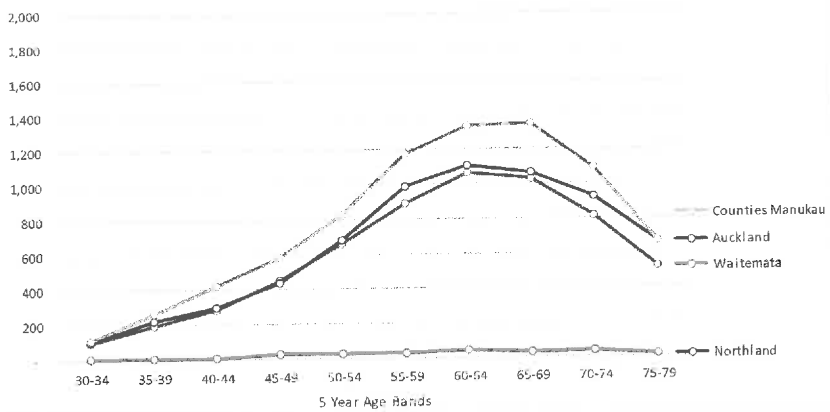
Pacific

Number of Pacific PHO Enrolees That Are Flagged Diabetes In CVD Risk Assessments To Mar-19 By Age Band And DHB of Domicile



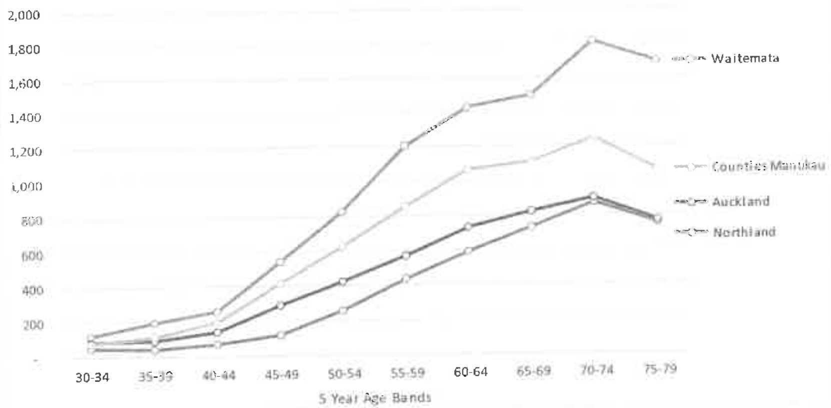
Asian (Including Indian)

Number of Asian PHO Enrolees That Are Flagged Diabetes In CVD Risk Assessments To Mar-19 By Age Band And DHB of Domicile



All Other

Number of Other PHO Enrolees That Are Flagged Diabetes In CVD Risk Assessments To Mar-19 By Age Band And DHB of Domicile



Appendix 2 – Historic service growth in Ophthalmology Services (DHB of Domicile)

Northern Region	Actuals		2019 from 2015	
	2015	2019	Change	Avg Annual
FSA	19,732	20,671	4.8%	1.2%
FUP	63,236	76,977	21.7%	5.0%
Intraocular injections(1)	8,455	19,600	131.8%	23.4%
Orthoptist	12,297	11,901	-3.2%	-0.8%
Laser	3,324	3,647	9.7%	2.3%
Eye Procedures	1,056	1,207	14.3%	3.4%
Nurse Clinics	8,364	8,693	3.9%	1.0%
Diabetes Screening	33,039	35,375	7.1%	1.7%
Cataract	5,571	8,137	46.1%	9.9%
Other Inpatient	5,596	6,186	10.5%	2.5%
All Services	**160,670**	**192,394**	**19.7%**	**4.6%**

Population Projection Changes 7.0% 1.7%

Northland	Actuals		2019 from 2015	
	2015	2019	Change	Avg Annual
FSA	1,476	1,499	1.6%	0.4%
FUP	5,310	6,894	29.8%	6.7%
Intraocular injections	758	1,982	161.5%	27.2%
Orthoptist	29	16	-44.8%	-13.8%
Laser	266	176	-33.8%	-9.8%
Eye Procedures	19	31	63.2%	13.0%
Nurse Clinics	2,022	2,624	29.8%	6.7%
Diabetes Screening	4,286	4,186	-2.3%	-0.6%
Cataract	898	886	-1.3%	-0.3%
Other Inpatient	468	485	3.6%	0.9%
All Services	**15,532**	**18,779**	**20.9%**	**4.9%**

Population Projection Changes 10.3% 2.5%

Metro Auckland	Actuals		2019 from 2015	
	2015	2019	Change	Avg Annual
FSA	18,256	19,172	5.0%	1.2%
FUP	57,926	70,083	21.0%	4.9%
Intraocular injections	7,697	17,618	128.9%	23.0%
Orthoptist	12,268	11,885	-3.1%	-0.8%
Laser	3,058	3,471	13.5%	3.2%
Eye Procedures	1,037	1,176	13.4%	3.2%
Nurse Clinics	6,342	6,069	-4.3%	-1.1%
Diabetes Screening	28,753	31,189	8.5%	2.1%
Cataract	4,673	7,251	55.2%	11.6%
Other Inpatient	5,128	5,701	11.2%	2.7%
All Services	**145,138**	**173,615**	**19.6%**	**4.6%**

Population Projection Changes 6.7% 1.6%

Waitemata	Actuals		2019 from 2015	
	2015	2019	Change	Avg Annual
FSA	6,310	6,355	0.7%	0.2%
FUP	21,284	27,346	28.5%	6.5%
Intraocular injections	2,249	6,724	199.0%	31.5%
Orthoptist	2,629	2,140	-18.6%	-5.0%
Laser	829	933	12.5%	3.0%
Eye Procedures	515	449	-12.8%	-3.4%
Nurse Clinics	1,982	2,059	3.9%	1.0%
Diabetes Screening	8,453	9,078	7.4%	1.8%
Cataract	1,642	2,546	55.1%	11.6%
Other Inpatient	1,917	2,248	17.3%	4.1%
All Services	**47,810**	**59,878**	**25.2%**	**5.8%**

Population Projection Changes 7.5% 1.8%

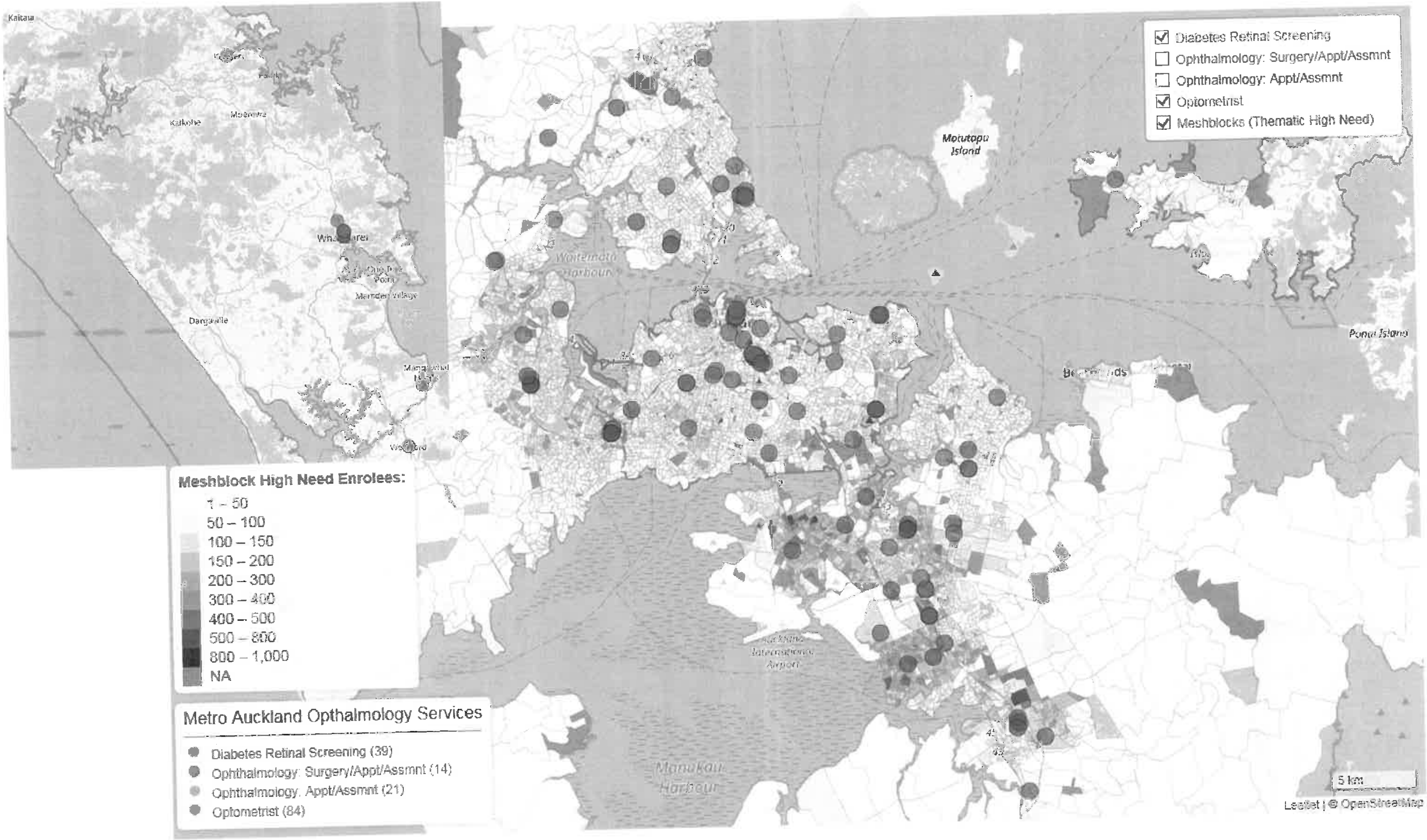
Auckland	Actuals		2019 from 2015	
	2015	2019	Change	Avg Annual
FSA	5,560	5,658	1.8%	0.4%
FUP	18,089	21,053	16.4%	3.9%
Intraocular injections	1,713	4,299	151.0%	25.9%
Orthoptist	2,079	1,740	-16.3%	-4.4%
Laser	759	810	6.7%	1.6%
Eye Procedures	402	418	4.0%	1.0%
Nurse Clinics	2,034	2,316	13.9%	3.3%
Diabetes Screening	8,522	9,629	13.0%	3.1%
Cataract	1,454	1,936	33.1%	7.4%
Other Inpatient	1,566	1,727	10.3%	2.5%
All Services	**42,178**	**49,586**	**17.6%**	**4.1%**

Population Projection Changes 3.1% 0.8%

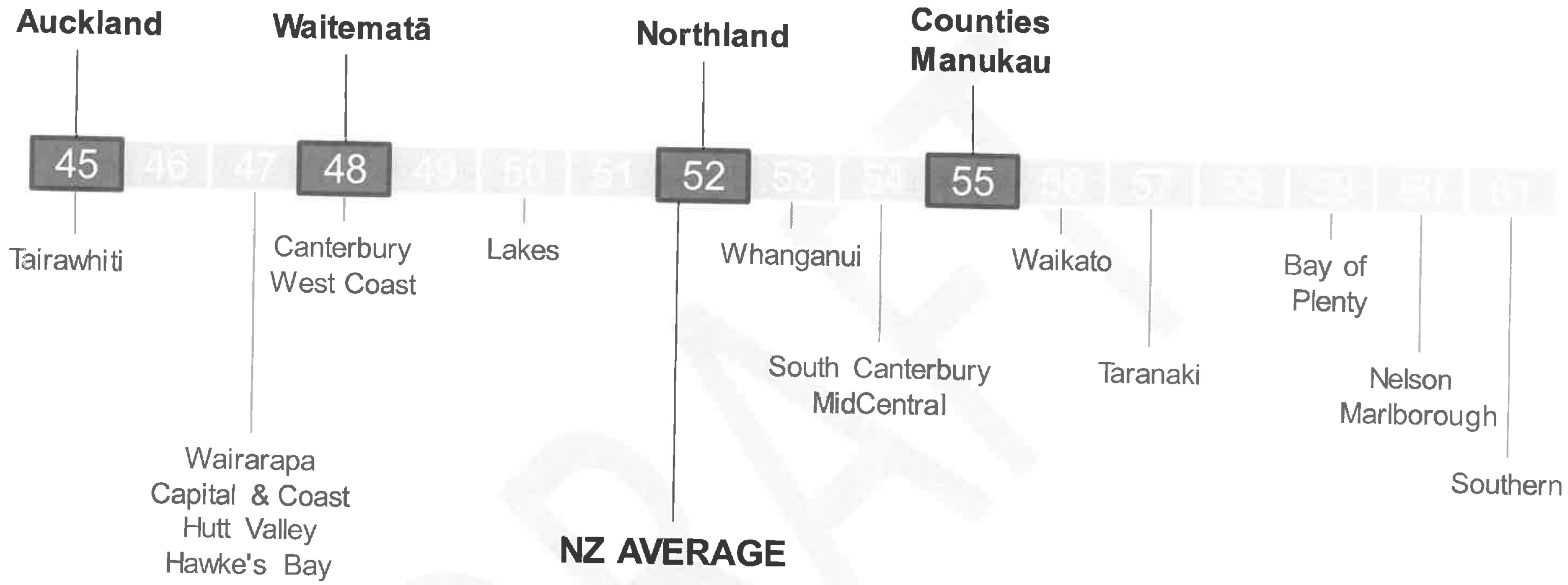
Counties Manukau	Actuals		2019 from 2015	
	2015	2019	Change	Avg Annual
FSA	6,386	7,159	12.1%	2.9%
FUP	18,553	21,684	16.9%	4.0%
Intraocular injections	3,735	6,595	76.6%	15.3%
Orthoptist	7,560	8,005	5.9%	1.4%
Laser	1,470	1,728	17.6%	4.1%
Eye Procedures	120	309	157.5%	26.7%
Nurse Clinics	2,326	1,694	-27.2%	-7.6%
Diabetes Screening	11,778	12,482	6.0%	1.5%
Cataract	1,577	2,769	75.6%	15.1%
Other Inpatient	1,645	1,726	4.9%	1.2%
All Services	**55,150**	**64,151**	**16.3%**	**3.9%**

Population Projection Changes 8.9% 2.2%

Appendix 3 – Geomap of community Retinal Screening and Private Optometrist services



Appendix 4 – Distribution of CPAC scores nationally

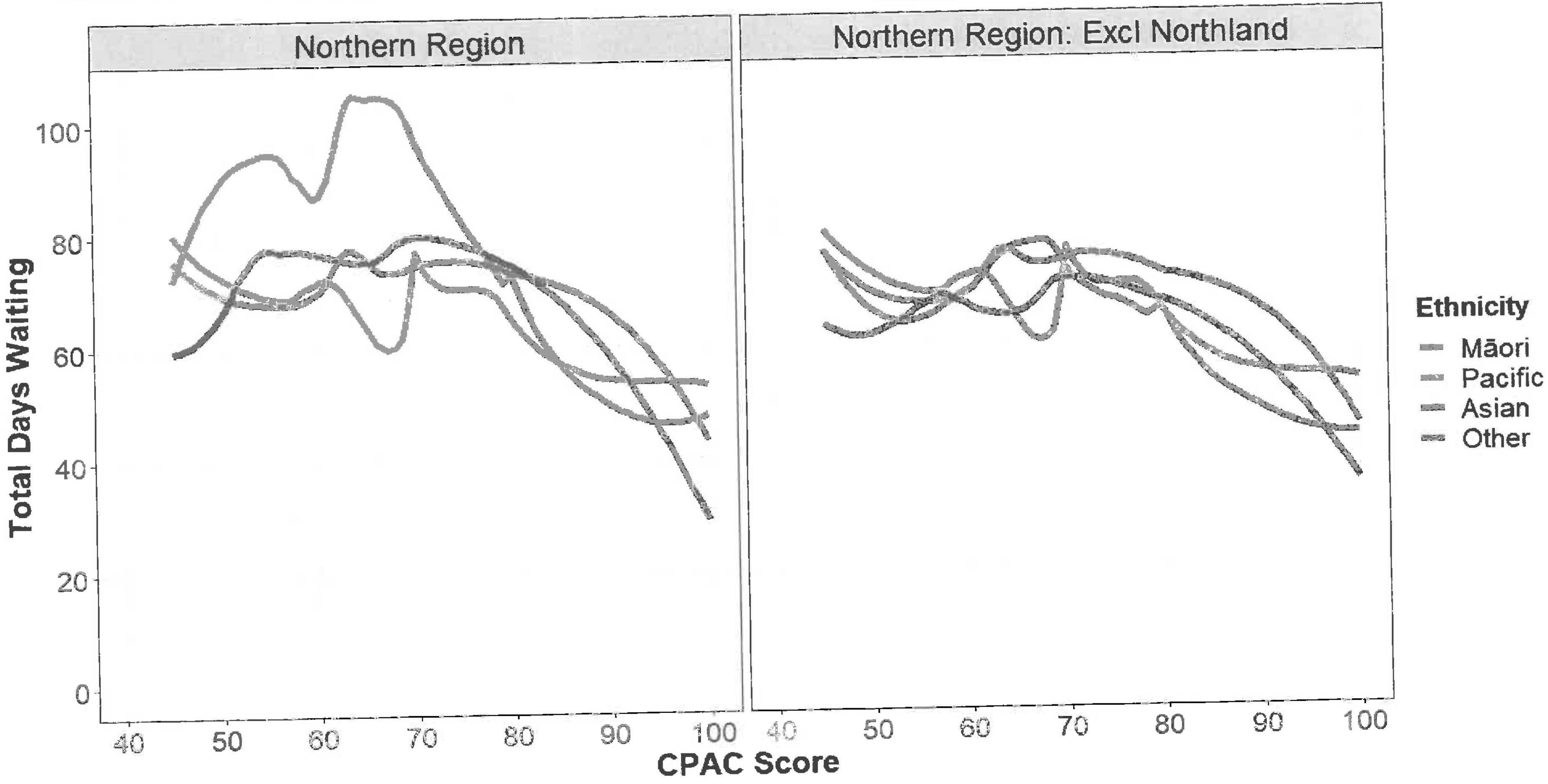


Data source: *https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12219285, 9 April 2019 + Confirmation from Northern DHBs*

Appendix 5 – Drivers of Wait times regionally

Looking at Total Days Waiting vs CPAC score, for each ethnicity

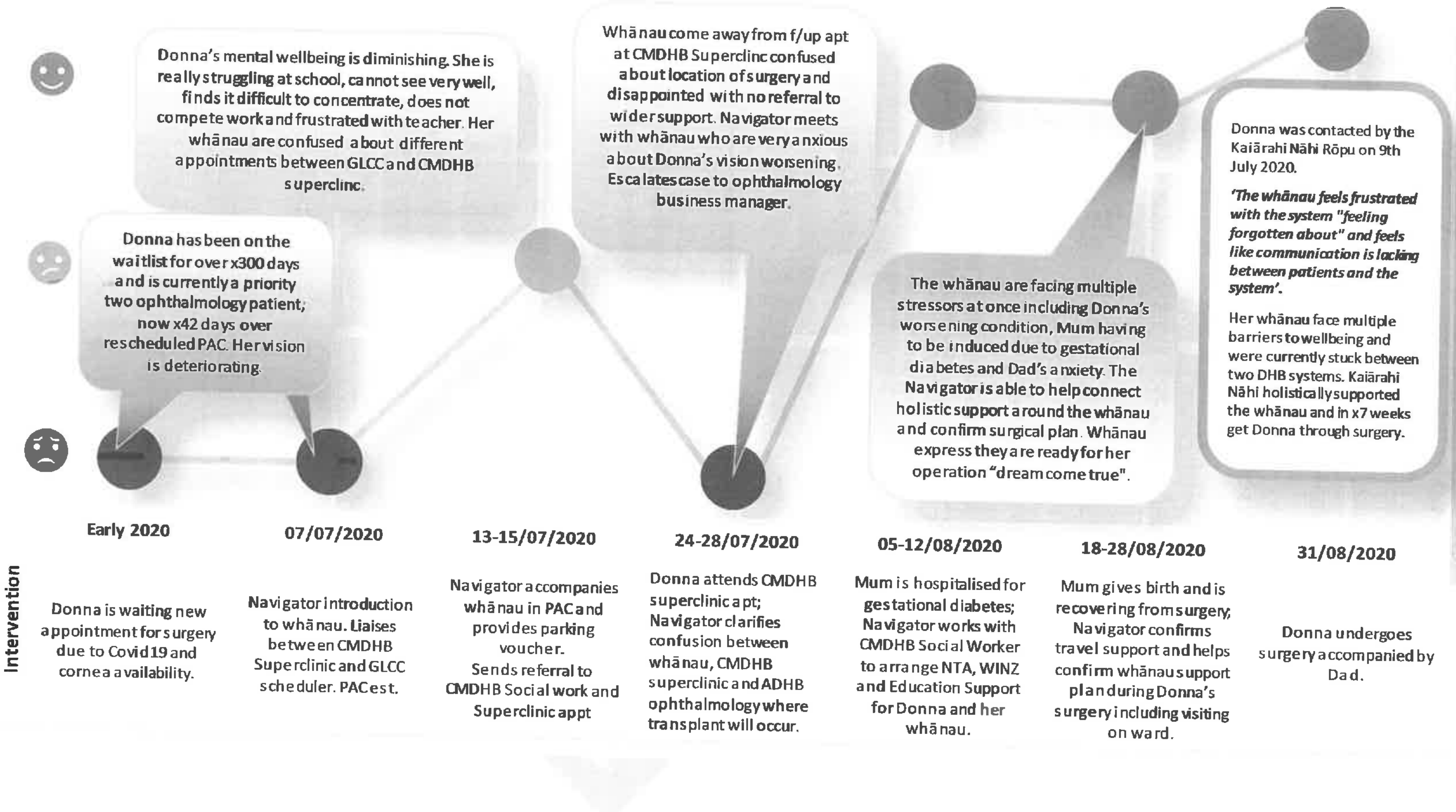
- **It may appear that Maori wait longer for lower CPAC scores**
- **However, root cause analysis identifies DHB of Service to be the driver**



Appendix 6 – Patient case study navigating between services

A Patient Journey: Donna

Donna, is a young Māori teenage female awaiting full thickness corneal transplant. She is of Waikato- Tainui descent and from a family with Dad, Mum and other x4 siblings. Dad is unable to work currently because of epilepsy, Mum is expecting new born and the whānau is struggling with suitable housing and limited transport options. Her condition is deteriorating, creating severe depression and anxiety for Donna's own and whānau wellbeing.



Donna's mental wellbeing is diminishing. She is really struggling at school, cannot see very well, finds it difficult to concentrate, does not compete work and frustrated with teacher. Her whānau are confused about different appointments between GLCC and CMDHB superclinc.

Donna has been on the waitlist for over x300 days and is currently a priority two ophthalmology patient; now x42 days over rescheduled PAC. Her vision is deteriorating.

Whānau come away from f/up apt at CMDHB Superclinc confused about location of surgery and disappointed with no referral to wider support. Navigator meets with whānau who are very anxious about Donna's vision worsening. Escalates case to ophthalmology business manager.

The whānau are facing multiple stressors at once including Donna's worsening condition, Mum having to be induced due to gestational diabetes and Dad's anxiety. The Navigator is able to help connect holistic support around the whānau and confirm surgical plan. Whānau express they are ready for her operation "dream come true".

Donna was contacted by the Kaiārahi Nāhi Rōpu on 9th July 2020.

'The whānau feels frustrated with the system "feeling forgotten about" and feels like communication is lacking between patients and the system'.

Her whānau face multiple barriers to wellbeing and were currently stuck between two DHB systems. Kaiārahi Nāhi holistically supported the whānau and in x7 weeks get Donna through surgery.

Intervention

Early 2020
Donna is waiting new appointment for surgery due to Covid 19 and cornea availability.

07/07/2020
Navigator introduction to whānau. Liaises between CMDHB Superclinic and GLCC scheduler. PAC est.

13-15/07/2020
Navigator accompanies whānau in PAC and provides parking voucher.
Sends referral to CMDHB Social work and Superclinic appt

24-28/07/2020
Donna attends CMDHB superclinic apt; Navigator clarifies confusion between whānau, CMDHB superclinic and ADHB ophthalmology where transplant will occur.

05-12/08/2020
Mum is hospitalised for gestational diabetes; Navigator works with CMDHB Social Worker to arrange NTA, WINZ and Education Support for Donna and her whānau.

18-28/08/2020
Mum gives birth and is recovering from surgery, Navigator confirms travel support and helps confirm whānau support plan during Donna's surgery including visiting on ward.

31/08/2020
Donna undergoes surgery accompanied by Dad.

OPPORTUNITIES

- Navigator enables holistic whānau engagement by being a single consistent system touch point for whānau that is personal and relational.
- There is opportunity to strengthen the ophthalmology coordination of care between CMDHB and ADHB in order to support better patient/whānau centred outcomes.
- Navigator provides crucial system navigation, connection and integration between DHBs and services.

Appendix 7 – Regional Model of Care Enhancements being progressed

- Post cataract, day 1 telephone follow up (rather than face to face) and 1 month follow up by optometrist (possibly community based)
- Glaucoma follow up in community by optometrist (rather than specialist)
- Ophthalmology clinics incorporating retinal screening, glaucoma and follow up after itravitreal injections run by optometrists, technicians and nurses
- For all community initiatives to ensure high need areas are targeted first and that hauora and kaupapa Māori options are explored and/or developed e.g. marae based centres
- Wet leasing private outpatient rooms for clinics and coordinating locations regionally to best for patient access
- Cataracts to be performed at Waitakere
- Metro-Auckland/ Region wide injection service with dedicated trained staff
- Combining the cataract FSA and pre-op assessment together to reduce a step for service and patient
- Ongoing service process and policy improvements using the insights from Māori and Pacific navigator teams
- Regional coordination in moving to permanent 6-7 day weeks to maximise use of facilities.
- Development of virtual clinics where measurements and imaging are performed by technicians then reviewed by an SMO at a different time or place for glaucoma, neuro-ophthalmology, diabetes and post intravitreal injections

Appendix 8 – CPAC regional equalisation options for cataract surgery

Overall, to align the threshold to:

- 45: an additional 1,092 cataract would be required across the region, with the majority (700 extra) for CMDHB, followed by NDHB (255 extra)
- 48: an additional 687 cataract would be required across the region (for CMDHB and NDHB), offset by a reduction of 114 for ADHB to raise the threshold from 45 to 48.
- 52: a reduction of 607 cataract across the region
- Or any combination of threshold for DHBs could be chosen

		Additional Cataracts Required			% Increase by DHB/Region		
DHB of Domicile	No of 2019 Cataract Procedures (incl outsourced)	Threshold Aligned to 45	Threshold Aligned to 48	Threshold Aligned to 52	Threshold Aligned to 45	Threshold Aligned to 48	Threshold Aligned to 52
Northland	886	255 ▲	159 ▲	0 –	28.8%	18.0%	0.0%
Waitemata	2,546	137 ▲	0 –	403 ▼	5.4%	0.0%	-15.8%
Auckland	1,936	0 –	114 ▼	427 ▼	0.0%	-5.9%	-22.1%
Counties Manukau	2,769	700 ▲	528 ▲	223 ▲	25.3%	19.1%	8.1%
Metro Auckland	**7,251**	837 ▲	414 ▲	607 ▼	**11.5%**	**5.7%**	-8.4%
Northern Region	**8,137**	1,092 ▲	573 ▲	607 ▼	**13.4%**	**7.0%**	-7.5%

Northern
Regional Alliance
He Hononga o te Raki

To	Hospital Capacity Service Improvement/Planned Care Steering
From	Richard Sullivan
	Exec Lead Vulnerable Services ORL
Date	8 October 2020
Subject	Paediatric ORL Vulnerable Services Recommendation and Next Steps
For	**Feedback**
Do recommendations incur financial costs not previously planned /approved?	No

Recommendations and Request:

It is recommended that the Regional Executives Forum:

1. **Note** principles have been agreed across ORL-HNS for adults and paediatrics and this paper outlines the process, solutions and next steps for paediatrics.
2. **Note** from undergoing this process it has been agreed that greater co-ordination of secondary Paediatric ORL across the 3 Metro Auckland DHB would provide equitable access and sustainability
3. **Note** Northland do not see themselves as vulnerable following an internal service plan being put in place and would work with Metro- Auckland on a regional solution.
4. **Note** a regional process needs to be led for ORL to develop an equity led strategy across the region to sustain Starship as a tertiary provider whilst ensuring secondary care services can be delivered closer to home.
5. **Note** that there is support for a regional approach with measurable gains for paediatric ORL patients and their whanau. However, we are at an early point in the regional discussion and that there will need to be a developmental approach to regional solutions, including further data analysis.
6. **Note** the recommendations were agreed by the Māori Clinical Governance Group and Pacific C-TAG, with the recognition that more work needed to be done to understand the epidemiology, access to treatment and outcomes for Māori and Pacific. Models of care in place in South Island DHBs were recommended to be explored as to what ‘good’ looks like in addition to patient experience.
7. **Request** funding for a Project Manager, Clinical Lead and a Pathway Project Manager which has been submitted through the Planned Care Funding Bids to lead the development of a model of care across the region through further data analysis into pathways and further understanding on inequities which need to be addressed.

Background/Context:

- Post lockdown, the Northern Region’s COVID-19 response turned to recovery. A key focus on the recovery was on planned care. The NRHCC established the Hospital Capacity Service Improvement Steering group to lead an equity focused recovery program for planned care which included a particular focus on seven potentially vulnerable services to help them a) recover from the impacts of the COVID-19 lockdown and b) be more resilient with a particular focus on equity.

- Paediatric ORL was identified as a vulnerable service with no regional consistency in levels of access for children. Three of the DHBs provide a combined adult and paediatric service with challenges to provide consistency of secondary care services and adequate cover 52 weeks of the year. Infrastructure remains a challenge with children often needing to be transferred to Starship due to capacity, equipment, co-morbidities and requirement for specialist workforce skills.
- This 'vulnerable services' work was initiated as a rapid process with key regional leads leveraging the rapid progress gained under COVID while incorporating some of the longer term goals articulated in the LTIP and elective deep dive.

Paediatric ORL

It was agreed by the steering group on 6 July 2020 this was an opportunity to make a change across the system to address vulnerabilities, particularly with regard to sustainability and impact of equity and patient experience) and principles agreed (Appendix 1). The paediatric discussion has progressed to agree that success will involve:

- Equitable outcomes for Māori and Pacific patients
- Appropriate intervention rates, delivered in a timely and sustainable way
- Regional model / approach which supports this

Key problem

1. Equity of access and service provision within secondary care.

It is recognised that there are vulnerabilities within the system for Paediatric ORL in the Northern Region with inequities in access to secondary care treatment, particularly in Metro-Auckland with different thresholds in place. Within Metro-Auckland all DHBs provide FSA outpatients to secondary care patients, however there is variation in access to surgery due to long wait times within some DHBs and variable admission and patient oversight practices.

WDHB contracts ADHB to carry out tonsillectomies, whilst CMDHB is able to undertake this with an admission to Kidz First if necessary. There is recognition that tertiary services, high complexity or patients under multiple tertiary subspecialties will currently need to be carried out at Starship for Paediatrics. This is due to service requirements such as prolonged care, infrastructure such as theatre, equipment, ICU, and access to a range of subspecialties.

Delivery of tertiary care at Starship has been identified as necessary to maintain safe care for complex paediatric ORL patients. The model of secondary care by local DHBs will be considered with the full range of options worked through. Guidelines or updated Models of Care need to be put in place for secondary level care including age, BMI and co-morbidities to define what would require a referral to Starship. Further work also needs to be undertaken for greater clarity as to what constitutes secondary care or tertiary referral for FSA. Where patients are referred for tertiary services, the referring DHBs are unable to have a real time view of the patients waiting for assessment or treatment.

High volumes of patients were waiting >4months for an FSA in June NDHB (n=141), WDHB (n=271) ADHB (n=183) and CMDHB (n=75). Patient waiting >4 months for treatment in June has increased in, in NDHB (n=62), WDHB (n=229) and ADHB (n=211) and reduced in CMDHB to one patient[1].

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[1] MoH Planned Care Measure ESPI's Ear Nose and Throat June 2020 (Adults and Paediatrics Combined)

Currently there are high levels of paediatric inpatient and follow up activity happening at Auckland for FUP and Inpatients in Paediatrics, which is to be expected in light of Starship being the Tertiary Provider. Additionally Waitematā patients are seen at Starship for tonsillectomies. Starship have also provided additional support to WDHB due to reduced capacity owing to leave and recruitment issues. Data is reflective of patients being transferred to ADHB from WDHB and CMDHB which is particularly evident for inpatient and follow ups.

Table1 outlines that there is statistical difference in volumes of high need (Māori/Pacific or Deprivation Quintile 5) patients against non-high need for FSAs, Auckland and Counties Manukau are providing large coverage for their DHB of Domicile per 10,000 in comparison to other DHB's.

There is statistical difference in volumes of high need patients against non-high need for FUPs, Auckland is providing large coverage for their DHB of Domicile per 10,000 in comparison to other DHB's.

Table 1: Direct Aged Standardised Rates per 10,000 by High Need (Māori/Pacific or Deprivation Quintile 5) and Non High Need by DHB of Domicile[2]

	FSA		FUP		ENT Minor Ops		Inpatient	
DHB	**High need**	**Non High Need**	**High need**	**Non High Need**	**High need**	**Non High Need**	**High need**	**Non High Need**
NDHB	98.7	84.7	189.9	138.8	6.4	7.4	90.8	62.4
WDHB	87.1	79.1	114.7	98.1	4.2	4.5	69.8	52.5
ADHB	143.1	91.2	297.3	163.7	3.9	2.9	103.8	60.7
CMDHB	138.9	89.9	179.7	114.3	0.6	0.6	60.6	43.1
Northern Region	**119.5**	**85.2**	**190.3**	**121.8**	**3.2**	**3.4**	**76.1**	**53.3**

There is no significant difference between the volumes of patients for high need and non-high need being seen for ORL minor ops, there is high coverage in Northland compared to the Auckland Metro DHB's

There is statistical difference in volumes of high need patients against non-high need for inpatients, Auckland and Northland are providing large coverage for their DHB of Domicile, with lower volumes being seen per 10,000 for Counties and Waitematā.

Figure 1 demonstrates high levels of FSA to FUP for Māori and Pacific in Northland and Auckland. Counties Manukau have high levels of FSA in comparison to FUP. Across the Northern Region Volumes of Māori accessing ORL services is high in comparison to other ethnicities.

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[2] Please be aware that an age-standardised rate (ASR) has no absolute meaning; it is an artificial number based on a hypothetical population (adults and paediatrics) and is only useful for comparing with other rates calculated in the same manner. The ASR presented here is calculated by the direct method per 10,000. WHO world standard population is used as standard.

Table 2: Paediatric FSA and FUP Volumes 2019 Northern Region

	Asian	Māori	Other	Pacific
FSA	1,142	1,134	2,033	960
FUP	1,418	1,806	2,723	1,415
% of population	24%	14%	50%	12%

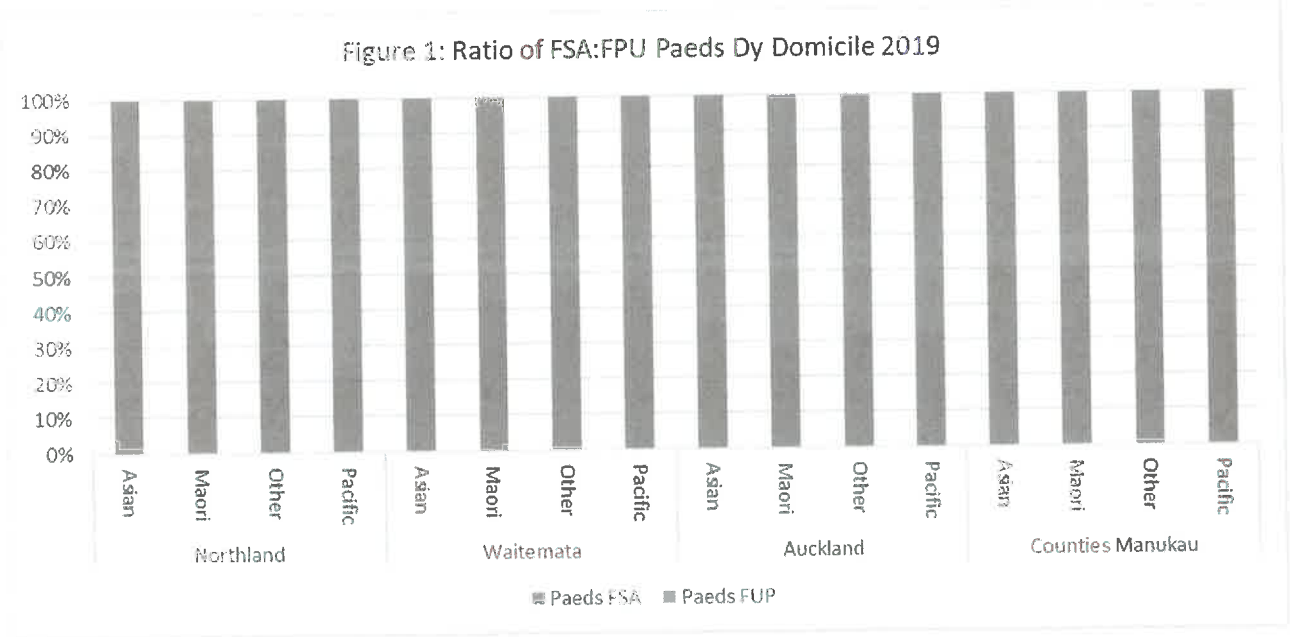


Figure 1: Ratio of FSA:FPU Paeds Dy Domicile 2019

Recommended Solutions:

Through the vulnerable services process it has been agreed that a regional approach for secondary care services would provide measurable gains for paediatric ORL patients and their whānau. It is acknowledged that we are at an early point in the regional discussion and that there will need to be a developmental approach to regional solutions.

The agreed next steps are:

1. Explore the development of a regional waitlist for paediatric ORL patients
2. Explore the development of a regional paediatric ORL pathway
3. Consider options for improved equity of access and outcomes for paediatric ORL patients and specifically Māori and Pacific

Options that have been identified through regional discussion have been detailed in table 2, it is anticipated that some of the options such a regional waitlist could be achieved to address inequities in access to treatment. Further work needs to be carried out to complete data analysis to provide better insight into unwarranted variation and the impact for Māori and Pacific and secondly to further understand these options to determine what a regional model of care would look like and how it could be funded and delivered going forward.

Table 2: Options for improved equity of access and outcomes for the region population

	Advantages	Disadvantages	For resolution
1. Status quo - each DHB delivers to own population, complex tertiary cases to Starship	no change or implementation requirements	Inequities of thresholds, timeliness and outcomes remain. Workforce vulnerabilities remain	Data to identify inequities across the population
2. Regional waitlist	Visibility of all patients and any inequitable waiting times	Will not result in any direct change regionally for patients or services Management of the waitlist and the associated ESPIs within one DHB would need to be resourced. Is this a service change?	The feasibility of a regional waitlist, determining what this would include, how patients would be allocated and who would own this.
3. Joint SMO appointment	Access to surgical expertise across DHBs Provides care closer to home for patients through the majority of services being provided within the DHB Maintains and builds on local DHB services	Less attractive to surgeons, complexities around managing leave, professional development, cover etc.	Models of joint appointments elsewhere across the region or nationally, determine full employment issues
4. Starship delivers regional tertiary ORL with s secondary activity delivered by local DHBs for DHB populations - local theatre teams	Retains anaesthetic and theatre nursing competency Provides care closer to home for patients More sustainable ORL medical workforce	Costly to deliver for employing DHB Limitations around overnight stay for patients Variable inpatient ORL medical presence	Full work-up of change requirements and feasibility including Waitematā providing tonsillectomy
5. Starship delivers regional ORL with some offsite activity for local DHB populations - surgeon and theatre team	Provides care closer to home for patients More sustainable ORL medical workforce	Reduces anaesthesia and OR nurse competency for children in CMH, WDHB	Full work-up of change requirements and feasibility

6. Starship delivers regional ORL at Starship and Greenlane	Full suite of ORL sub-specialty expertise, inpatient and daystay cover and nursing expertise. More sustainable ORL medical workforce	Loss of anaesthesia and OR nurse competency for children in CMH, WDHB	Full work-up of change requirements and feasibility

This programme of work will form a sustainable model of care for secondary care paediatric ORL services across the region. This will be monitored and overseen by Starship and with potential to scale across other specialties or population groups over time.

Measurements of success.

- Reduction in waiting times for FSA across the region
- Reduction in waiting times for treatment across the region
- Patient experience
- Patient outcomes

Recommendation

It is recommended a Project Manager (0.25), Clinical Lead (0.1) lead the process through ADHB with an addition Pathway Project Manager for pathway development (0.5 for 6 months) which has been submitted through the Planned Care Bids. This will lead the development of a regional Model of Care across the region through further data analysis into pathways and further understanding on inequities for Māori and Pacific which need to be addressed.

Proposed Timeline

A high-level timeframe for this project is as follows:

Commencement of Project Manager, Clinical Lead and pathway Project Manager	October 2020
Commencement of project team ensuring equity led leadership	October 2020
Detailed analysis of options outlined in Table 1	October – November 2020
Preferred option agreed	November 2020
Identify cost associated with agreed option	December 2020
Business case and implementation plan developed	December - January 2021
Implementation of model of care across the region to commence.	January 2021
Complete implementation plan	May 2021
Review and evaluate pathway approach and model of care	May 2021

The Project Managers and Clinical Lead will report through to ORL Clinical Director of Starship Hospital and General Manager. Reporting will be provided through to the Vulnerable Services group ORL steering group.

Risk and issues.

If there is not project management and clinical leadership to support this programme of work the service vulnerabilities will endure. If this was not agreed this would require the on-going commitment of GM's and CD's to lead the process resulting in delays and insufficient resource to complete some of the work programme.

Unmet need if there is not robust data analysis on the pathways and projected forecasts and inequities within paediatric ORL resulting in a revised model of care not being sustainable or adequately addressing inequities across the population.

Robust leadership and management will be required to ensure the programme of work is not delayed and any future change processes are supported.

Interdependencies with other Functions:	The recommendations will need to work in tandem with the Head and Neck Cancer Accreditation recommendations for Paediatric ORL and Head and Neck.
Equity considerations of recommendations:	This process has been equity driven and informed by service data and clinical expertise with recognised gaps in capturing wider population needs such as social determinants of health. Further engagement will be sought in the development of the recommendations from Māori and Pacific.
How recommendations align with Treaty responsibilities:	Aligns to regional service design principles including: - **Partnership** where these proposals have been reviewed by the Māori Clinical Governance Group and Pacific CTAG in late September recommendations have be incorporated into the report. - **Equity** as per above **Active Protection** of Māori taonga, culture and knowledge as per the Regional Service Design Principles are to be factored into any work moving forward

Cost estimate summary for recommendations with financial impact:				
One-off costs:	Capex:	-	Opex:	-$95,615
Recurrent costs (full year effect):	Capex:	-	Opex:	-
Source of funding, if approved:				
Provider cost within existing provider revenue allocation:				

DHB funder cost pressure 2020/21:	$65,000
Pre-commitment to funding round 2021/22+:	
Alternate source of funds (please specify details):	Funding applied through the planned care recovery bid for Project Manager and Clinical Lead was submitted by ADHB for $30,615
Basis for DHB cost split:	
Additional comments (please specify):	Additional resource is needed for a pathway project manager across the region to support with pathways which should be allocated within existing resource.

Appendix 1: ORL-HNS Principles Adults and Paediatrics.

1. COVID and our regional response to this illuminated a number of service vulnerabilities including paediatric and adult ORL
2. Vulnerabilities may include service, workforce and sub-speciality volumes and may vary over time
3. There is current variability in equity of access and outcomes regionally which there is a commitment to addressing
4. Regional solutions for paediatric and adult ORL-HNS will seek to improve patient safety, quality and health equity
5. Decisions about any future changes will be data informed and regionally agreed
6. Issues and solutions may be different for adult and paediatric populations and will be considered separately

Appendix 2: ORL Paediatric snapshot.

Current Utilisation Profile by DHB of Patient Domicile 2019

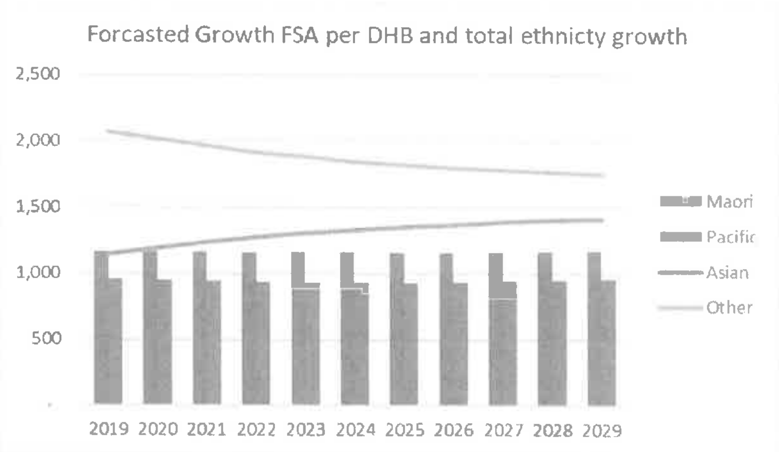
	DHB of Patient Domicile (Paeds)							DHB of Patient Domicile (Paeds) % Of Northern Region				
	Northland	Waitemata	Auckland	Counties Manukau	Northern Region	Outside Northern Region	Total	Northland	Waitemata	Auckland	Counties Manukau	Total
FSA	517	1445	1338	1969	5269	82	5351	9.8%	27.4%	25.4%	37.4%	100.0%
FUP	927	1724	2812	1899	7362	149	7511	12.6%	23.4%	38.2%	25.8%	100.0%
Other Inpatient	490	1368	1160	980	3998	185	4183	12.3%	34.2%	29.0%	24.5%	100.0%
Skin Lesions	2	3	1	1	7	0	7	28.6%	42.9%	14.3%	14.3%	100.0%
ENT Minor Ops	13	83	98	18	212	18	230	6.1%	39.2%	46.2%	8.5%	100.0%
FSA Dizzy clinic	0	76	28	2183	2287	5	2292	0.0%	3.3%	1.2%	[illegible]	100.0%
Nurse Clinics FUP	955	745	30	34	1764	3	1767	54.1%	42.2%	1.7%	1.9%	100.0%
Speech Therapy	0	3	4	15	22	0	22	0.0%	13.6%	18.2%	68.2%	100.0%
All Services	2904	5447	5471	7099	20921	442	21363	13.9%	26.0%	26.2%	33.9%	100.0%

Note:

- High number of Patient referred for ORL treatment at CMDHB
- High volumes of patients seen at CMDHB and ADHB
- High number of FSA in ADHB and CMDHB
- High FUP in ADHB
- High number of inpatients at ADHB which is to be expected
- High number of Nurse Clinics FUP at WDHB and NDHB
- High number of FSA Dizzy Clinics in CMDHB
- The largest growth across ORL services will be in the Asian population followed by other

Current Utilisation Profile by DHB Service 2019

	DHB of Patient Service (Paeds)					DHB of Patient Service (Paeds) % Of Northern Region				
	Northland	Waitemata	Auckland	Counties Manukau	Total	Northland	Waitemata	Auckland	Counties Manukau	Total
FSA	495	1,073	1,930	1,853	5,351	9.3%	20.1%	36.1%	34.6%	100.0%
FUP	907	677	4,434	1,493	7,511	12.1%	9.0%	59.0%	19.9%	100.0%
Other Inpatient	440	475	2,680	588	4,183	10.5%	11.4%	64.1%	14.1%	100.0%
Skin Lesions	2	3	1	1	7	28.6%	42.9%	14.3%	14.3%	100.0%
ENT Minor Ops	5	15	210	-	230	2.2%	6.5%	91.3%	0.0%	100.0%
FSA Dizzy clinic	-	75	-	2,217	2,292	0.0%	3.3%	0.0%	[illegible]	100.0%
Nurse Clinics FUP	963	748	28	28	1,767	54.5%	42.3%	1.6%	1.6%	100.0%
Speech Therapy	-	-	9	13	22	0.0%	0.0%	40.9%	59.1%	100.0%
All Services	2812	3066	9292	6193	21363	13.2%	14.4%	43.5%	29.0%	100.0%



Appendix 3: Reported Current Position 6 July 2020 for Adults and Paeds

WDHB	CMDHB
• Equity of access to services – 45% of patients are declined and referred back to the GP. • Not seeing any P3 • Growth has caused the biggest challenge. • Started as an elective service which outgrew resulting in SMO doing work outside of their JD's. • Resources are limited – physical and FTE, no house surgeon, limited SMO due to clinic capacity and no inpatient beds. • Ability to see patients and operate is hard due to the above • Support to intensive care and emergency depart • Cover H&N, paediatrics emergency and aftercare • Lack of Theatre capacity for ORL Paeds (2 September 2020) • FSA OP secondary patients • Minimal paediatric audiology • Inpatient Grommets and adenoids [also a few more complex Daystay cases – ie. myringoplasty] • No inpatient tonsils – all contracted to ADHB	• ORL-HNS based at MSC and set up as an elective day case service. • Infrastructure makes it challenging to provide an acute service • Service is small, with ageing workforce, limits to on call provision and recruitment issues • Issues working across two sites, no beds at Middlemore for ORL-HNS rely on plastics and ADHB • Intervention rates for paediatrics is not good, with increasing waiting lists and waiting a long time in comparison to Starship. Starship would not be able cope the current volumes coming through to CMDHB. Paeds (2 September 2020) • FSA OP secondary patients • 1x Paed ORL SMO shared with ADHB- selected tertiary OP • Inpatient Grommets and adenoids [At CMDHB we do quite a lot of other ORL Paeds Surgery (in older children mainly >10 yrs or so) - some nasal and limited FESS surgery, Myringoplasties, a few mastoidectomies, some limited head and neck - ie. FNA or node biopsy, skin tags or lesions, pre-auricular sinuses etc.] • Inpatient tonsillectomies – admission Kidz First if required(under Paeds Med) • Longer waiting times than ADHB (& by default WDHB) • Regular outsourcing to private
ADHB	NDHB (12 June 2020)
• Issues with patient care with different intervention rates between DHB's, aftercare and inpatient care • Metro Auckland access to emergency theatre is restricted resulting in elective patients being cancelled or acute presentation waiting until the end of	• Functioning differently in NDHB • Vulnerable with staffing but in a better position following service plan including peripheral hospital in place and to outsource for recent issues in Private • Working well in resources but could do better.

the list. • On call roster is problematic across the region due to clinicians opting out. This is made up of clinicians from each DHB. • ADHB does not have any SLA's in place with the other DHB's confirming what ADHB should deliver. • Support required for clinicians across the region • Two theatres which ORL-HNS do not have access to all of the time. Would be hard to find theatre space if anymore SMO were recruited. Potentially space in CTU but would result in split service. Paeds (2 September 2020) • FSA all ADHB patients and tertiary WDHB/CMDHB • Inpatient care all ADHB, WDHB tonsils and tertiary WDHB/CMDHB • Shorter waiting times than CMDHB but • Regular intra DHB additional lists to manage volumes	• Regional networks for complex and tertiary care and paediatrics are important and could be strengthened • On-call is different to Metro Auckland • Intervention rates provide a broad service from paediatrics to extensive H&N and in line with national intervention rates; however, some cases are turned away • More work could be done on quality of life cases. • Theatre provision is good with two new theatres being built.

Northern
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To	Hospital Capacity Service Improvement/Planned Care Steering Group
From	Richard Sullivan
	Exec Lead Vulnerable Services ORL and Head and Neck Surgery (HNS).
Date	8 October 2020
Subject	ORL-HNS Adult Vulnerable Services Recommendation and Next Steps
For	**Feedback**
Do recommendations incur financial costs not previously planned /approved?	**No**

Recommendations and Request:

It is recommended that:

1. **Note** principles (detailed in appendix 3) have been agreed across ORL-HNS for adults and paediatrics but the process and solutions have been separated and this paper outlines the next steps for Adults only and Paediatrics will be presented separately.

2. **Note** from undergoing this process, which has included two workshops and further clinical lead discussion the Adult ORL-HNS group at this stage is unable to draw to a conclusion what a regional solution would be. There is recognition from the Clinical Leads that four DHB services in their present state will continue to be vulnerable across the region.

3. **Note** there is agreement that the following vulnerabilities in Adult ORL-HNS can be addressed **in Phase 1 to** include:
    - The Metro-Auckland acute on-call roster through an HR review of contractual requirements and the establishment of robust processes attached to the recruitment process going forward.
    - SLA's to be established between ADHB as the Regional/Tertiary Provider and the DHB's defining expected service delivery in the Northern Region.
    - Streamlining processes, protocols and models of care where there is regionalisation currently in place for free flap reconstruction.
    - Paediatrics

4. **Note** it is recommended that **Phase 2** undertakes a regional process on ORL-HNS to develop an equity led strategy across the region including further in-depth analysis, prioritisation frameworks and the required investment using assessment against a Role Delineation Model (RDM) for the non-cancer components.

5. **Note** Northland do not see themselves as vulnerable following an internal service plan being put in place and would work with Metro- Auckland on a regional solution.

6. **Note** that both the Māori Clinical Governance Group and Pacific Clinical TAG raised concern on the ability to lever an adequate solution and change through this process for ORL-HNS and risk to patient outcomes. If change across the region in unable to be obtained through Phase 2 this should be escalated and a different approach undertaken.

7. **Request** that option 4 is agreed and taken forward and led by the ADHB Service Management with designated responsibility to ensure phase 1 issues are mitigated and to develop a model of care to ensure equity of access and sustainability of provision.

Background/Context:

Post lockdown, the Northern Region's COVID-19 response turned to recovery. A key part of that recovery was on planned care. The NRHCC established the Hospital Capacity Service Improvement Steering group to lead an equity focused recovery program for Planned Care. The ORL- HNS Services a (Adults and Paediatrics) was identified as one of the seven vulnerable services who would benefit from a structured recovery programme. The programme is to assist with the recovery from the impacts of the COVID-19 lockdown and the delays to be seen and treated which was an issue pre COVID-19 and to establish a more resilient service within the region with a particular focus on equity.

ORL- HNS is a vulnerable service due to common themes of subspecialisation with little integration across the regions DHBs, inequity of provision of service with different levels of access and prioritisation across the Northern Region. This has caused patient delays to FSA and treatment which leads to poor patient experience. Leadership and management across the region to maintain a sustainable workforce to meet population need has not been effective resulting in capacity constraints and patients been transferred to other DHBs for treatment. This has caused an unsustainable service across the region unable to provide adequate cover 52 weeks of the year.

This 'vulnerable services' work was initiated as a rapid process with a small regional group established including key regional leads so to develop an approach to build a more equitable and resilient service across the region. This includes incorporating some of the longer term goals articulated in the LTIP and elective deep dive. In addition to this there is the acknowledgement of the work has been undertaken through the HNCOG for Head and Neck Cancer a subspecialty of ORL-HNS where an RDM accreditation has been completed identifying gaps in workforce across the pathway and infrastructure in meeting the service level proposed.

Issues and Implications

ORL and Head and Neck Surgery (HNS)

It was agreed by the steering group on 6 July 2020 this was an opportunity to make a change across the system to address vulnerabilities particularly with regard to sustainability and impact of equity and patient experience (documented in Appendix 1 and 2). ORL-HNS Adults and Paediatrics agreed principles (Appendix 3) and areas to be addressed in 2 stages:

Phase 1

1. Acute on call roster
2. Secondary and tertiary service delivery and streamlining regional process
3. Establishment of SLA's between ADHB and the Regional DHB's
4. Paediatrics (submitted separately)

Phase 2

5. ORL-HNS 5- year strategy local and regional delivery including thresholds.
6. Recruitment and workforce planning.

Key problems agreed to addressed.

1. Sustainability of the on-call roster for acute care in and after hours

The on call roster for acute care is regionally staffed by SMOs from all 3 Auckland Metro DHBs. There are two rosters to cover Adult ORL-HNS issues: one for General ORL and one for H&N. The on-call roster has been identified as vulnerable and not sustainable due to the number of clinicians exempt (11 out of 29) and no cover for maternity or long term SMO absences. Table 1 outlines the FTE and population supported by the General ORL and H&N on call rosters.

Table 1: FTE and population supported by the General ORL and H&N on call rosters per DHB

	SMO's On Roster			SMO:100:000 Population			
DHB	**H&N**	**General ORL**	**Total**	**Adults (15> years**	**Total Pop**	**Exempt from Roster***	**Total including exempt**
WDHB	2	3	5	1.0	0.8	4	9
ADHB	4	3	7	1.7	1.4	3	10
CMDHB	3	2	5	1.1	0.7	4	9
Vacancy		1	1				1
Total	**9**	**10**	**18**			**11**	**29**

*reasons for exemption vary

The rosters are currently 1 in 9 frequency of call. This is despite one WDHB SMO coming off the General ORL roster in the past year which has been covered by various SMOs as additional duties, with no replacement even though recruitment processes were undertaken.

Several issues have been raised by SMOs regarding the roster, including:

- Non-participation in the roster by a significant proportion of SMOs.
- Older SMOs wish to leave roster at age of 60 years (as has been the tradition), but this is no longer possible owing to an ageing workforce, with limited succession planning.
- Increasing SMO workload owing to reduced RMO experience.
- ADHB SMOs take on the majority of care of acutely admitted patients as all patients admitted by a non ADHB SMO are transferred to the care of an ADHB SMO the next day.
- No cover provided for SMO maternity leave or long term SMO absences for various reasons including the lack of ability to recruit to fixed term contracts
- Leave granted to SMOs by WDHB and CMDHB without due consideration to regional roster
- Consultation on changes in the frequency of on call requirements need to be better communicated with SMO's by CD and Service Manager.

It has been identified that there is no consistency with regard to a process on recruitment of SMO's, the requirement to be on the regional on-call roster varies in detail in position description and contract of the SMO's. There is no regionally agreed process for an SMO becoming exempt from participating on the acute on call roster, this is currently carried out at a DHB level between the SMO and CD.

There is no agreed documentation defining which conditions warrant attendance of an ORL SMO for either the Head and Neck or General On Call Roster across Metro Auckland. The only documentation that has been

sighted was never formally agreed. Requirement of attendance on-call needs to be agreed by GM's and CD's across the region and documented regionally.

2. Equity of access and service provision within secondary care.

It is recognised that due to vulnerabilities within the Northern Region for ORL-HNS this has resulted in inequities in access to treatment, particularly in Metro-Auckland with different thresholds in place (Appendix 1 provides an ORL snapshot and Appendix 2 perceived current position). High volumes of patients waiting >4months for an FSA in June NDHB (n=141), WDHB (n=271) and ADHB (n=183). Patient waiting >4 months for treatment in June has increased in NDHB (n=62), WDHB (n=229) and ADHB (n=211)[1]. Note improvement plans should be reflecting improved positions against the numbers of patients waiting.

Data is reflective of patients being transferred to ADHB from WDHB and CMDHB which is particularly evident for inpatient and follow ups where patients would have been treated.

Twenty eight per cent of patients are aged 0 -14 years across all DHB's for FSA's (NR=5,144 / 18,353) and 41% over the age 50 (50+ NR =7,605/18,353) in 2019[2].

Table 2 outlines that there is statistical difference in volumes of high need (Māori/Pacific or Deprivation Quintile 5) patients against non-high need for FSAs. Auckland and Counties Manukau are providing large coverage for their DHB of Domicile patients per 10,000 in comparison to other DHB's.

There is statistical difference in volumes of high need patients against non-high need for FUPs, Auckland is providing large coverage for their DHB of Domicile per 10,000 in comparison to other WDHB and NDHB.

There is no significant difference between the volumes of patients for high need and non-high need being seen for ENT minor ops, there is high coverage in Northland compared to the Metro DHB's.

There is statistical difference in volumes of high need patients against non-high need for inpatients, Auckland and Northland are providing large coverage for their DHB of Domicile patients, with lower volumes being seen per 10,000 for Counties and Waitematā.

Table 2: Direct Aged Standardised Rates per 10,000 by High Need (Māori/Pacific or Deprivation Quintile 5) and Non High Need by DHB of Domicile[3]

	FSA		FUP		ENT Minor Ops		Inpatient	
DHB	**High need**	**Non High Need**	**High need**	**Non High Need**	**High need**	**Non High Need**	**High need**	**Non High Need**
NDHB	98.7	84.7	189.9	138.8	6.4	7.4	90.8	62.4
WDHB	87.1	79.1	114.7	98.1	4.2	4.5	69.8	52.5
ADHB	143.1	91.2	297.3	163.7	3.9	2.9	103.8	60.7
CMDHB	138.9	89.9	179.7	114.3	0.6	0.6	60.6	43.1
Northern Region	**119.5**	**85.2**	**190.3**	**121.8**	**3.2**	**3.4**	**76.1**	**53.3**

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[1] MoH Planned Care Measure ESPI's Ear Nose and Throat June 2020 (Adults and Paediatrics Combined)

[2] Outpatient data is sourced from MoH's National Non-admitted Patient Collection (NNPAC) as of 10-Jun-20 for service dates from 01-Jan-15 to 31-Dec-19; Inpatient data is sourced from MoH's National Minimum DataSet (NMDS) as of 10-Jun-20 for date of discharge between 01-Jan-15 to 31-Dec-19.

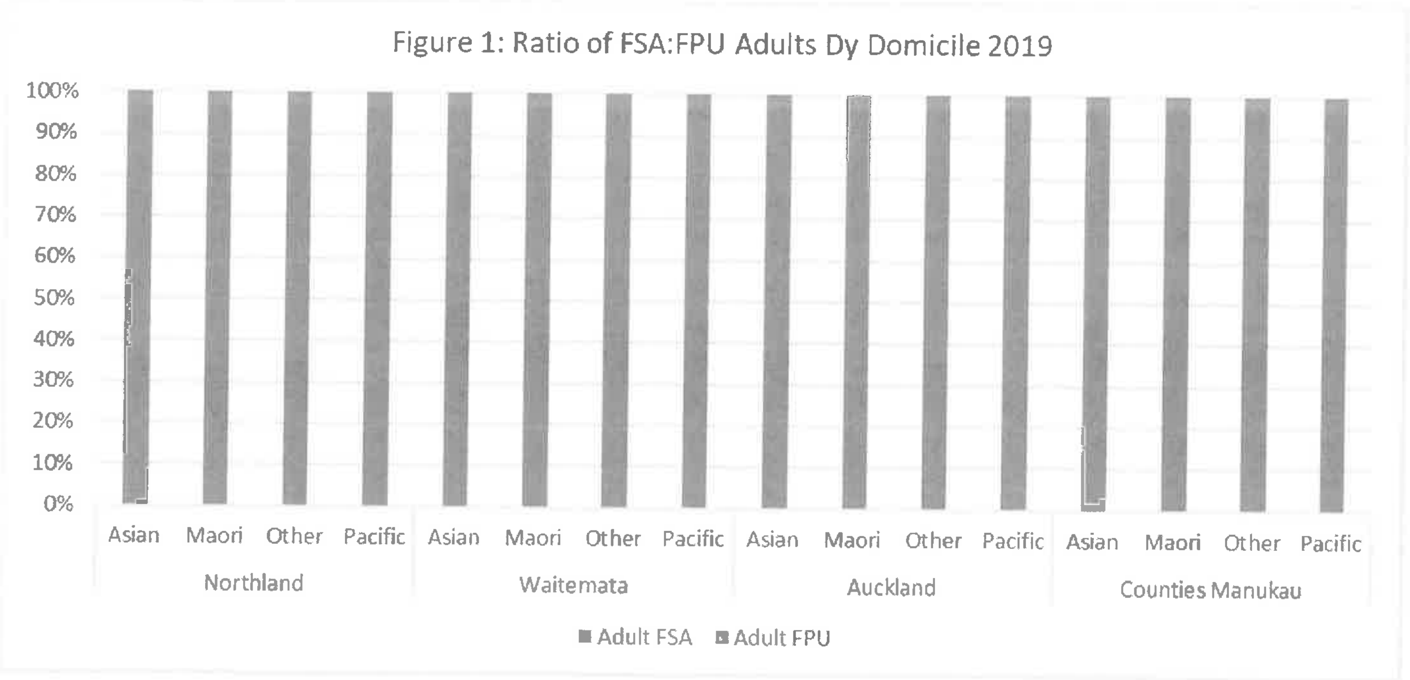
[3] Please be aware that an age-standardised rate (ASR) has no absolute meaning; it is an artificial number based on a hypothetical population (adults and paediatrics) and is only useful for comparing with other rates calculated in the same manner. The ASR presented here is calculated by the direct method per 10,000. WHO world standard population is used as standard.

Table 3 highlights the total volumes per 10,000 by ethnicity, this highlights high numbers of activity in Pacific, followed by Asian, Māori and Other for 2019.

Table 3: Total volumes by ethnicity per 10,000 population

	Number per 10,000 population			
	Māori	**Pacific**	**Asian**	**Other**
FSA	33.2	74.8	51.3	31.2
FUP	55.2	120.2	68.5	49.4
ENT Minor Ops	0.9	1.3	1.2	1.4
Other Inpatient	25.4	48.9	22.3	18.5
Total	**115**	**245**	**143**	**101**
% of Northern egion Population	**14%**	**12%**	**24%**	**50%**

Figure 1 demonstrates variation in the FSA to FUP ratios per DHB of Domicile with high FUP's in Northland and Auckland. There are smaller FSA:FUP ratio's for Māori across the Northern Region.



Across the northern region growth is anticipated to be 15.1% over 10 years from 2019 – 2029 or 1.4% per annum in FSA's. Follow ups are anticipated to grow by 14.3% and inpatients by 8.7% in this period. This predicated growth is highlighting the need for sustainable services across the region with the vulnerabilities addressed in the system.[4]

The largest growth across ORL services will be in the Asian population (41.2%) followed by Māori (16.3%), Pacific (14.5%) and then other (4%).

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[4] Forecast modelling is consistent with that of LTIP inpatient bed modelling

There is recognition that tertiary services, high complexity or high co-morbidity[5] will currently need to be carried out at ADHB for Adults and Paediatrics. This is due service requirements such as prolonged care, infrastructure such as theatre, equipment, ICU, staffing as subspecialties within the tertiary provider. Delivery of tertiary care is clearly defined as well as secondary care procedures that could be delivered by local DHB's, however, the issue that has become evident is that services are currently defined by SMO skill set rather than the requirement of equity of access for the Northern population. This has resulted in thresholds varying across the region with patients referred to where the infrastructure is and skill set to support the clinical need of the patient. More complex cases could be completed in other DHB's where the surgical skill mix is available however due to the size of departments and lack of infrastructure this is not able to occur. There is also risk where there is low volume / high complexity on patient outcomes if SMO's do not get enough practical opportunities to maintain skills and experience which could provide poor patient outcomes.

Recommendations

- From undergoing this process, the regional working group at this stage is unable to draw to a conclusion what a regional solution would look like despite recognition that the system in its present state will continue to be vulnerable.
- However, it has been acknowledged that there remains a requirement for 4 centres delivering accessible and timely secondary care which is consistent across the region.
- There is further agreement that work needed to be undertaken to develop what a regional solution or model of care would look like. This should be equity led, with further data analysis to determine levels of unwarranted variation in the system with a focus on prioritisation for Māori and Pacific.

Phase 1

1. Acute On-Call Roster Metro-Auckland

The acute on call roster can be addressed in phase 1 through a review of contracted requirements through a robust HR process. This will need to led by the CD and GM of the ADHB Service with advice and support from HR to review current exemptions and change in contracts to reflect on-call requirements across the region.

Moving forward there needs to be an agreement to ensure the recruitment processes include an expectation of participation on the on call roster. Due to a third of the eligible SMO's being exempt from the acute on-call roster has highlighted the vulnerability of having an aging workforce. This will require careful succession planning particularly at CMDHB where a high number of SMO are aged 60+ within OR-HNS department[6].

Recommendations

1. For all services, applicable wording in PDs and contracts need to align across Metro Auckland by the GMs with HR.
2. GMs need to agree with the CDs the documented requirements of the on-call roster across Metro-Auckland.
3. A clearly defined process in recruitment to ensure the on call roster is part of the discussion and employment contract across Metro-Auckland.
4. The development of a Metro-Auckland process for SMOs coming off the roster and what defines an exemption for participation.
5. An SLA needs to be established between ADHB and WDHB and CMDHB detailing the acute on call roster requirements.

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[5] This includes complex head and neck cancers and their surgery, neuroOtolgic problems (vestbular schwannomas, CSF leaks), non-cancer upper airway and neck surgery (orbital, inacranial, recurrent), complex endoscopic sinus surgery for complex disease as well as patients requiring prolonged admission for complexity co-mobility where there Is not the right infrastructure in the domicile DHB

[6] Over 7 of the SMO at CMDHB are over 60.

2. Secondary and tertiary service delivery and streamlining regional processes

Secondary and Tertiary care needs to clearly defined across the region and formally documented in the form of a protocol between DHB's. This would establish unwarranted variation across the system and provide consistent access to care across DHB's.

Streamlining of processes and protocols regionally

The streamlined treatment of complex head and neck cancer patients that need free flap reconstruction needs to be formalised as a regional process and is part of the Regional HNC implementation plan.

This is currently in place for HNC patients discussed at the regional MDM at ADHB where patients are allocated to the appropriate DHB where they can receive their resection/reconstruction. There is a system in place at ADHB for HNC where patients are processed and booked for surgery following the MDM.

The process for co-ordinating complex metastatic skin cancer patients that need free flap reconstruction at CMDHB plastic surgical and ORL department is less defined. NDHB have experienced delays with securing a theatre date in CMDHB, pre-assessing patients and providing a smooth patient journey.

Recommendations

1. SLA's to be established between ADHB as the Regional/Tertiary Provider and the DHB's defining expected service delivery in the Northern Region.
2. Streamlining processes, protocols and models of care where there is regionalisation currently in place for free flap reconstruction. This work is incorporated within the Regional HNC implementation plan.

Phase 2

1.Providing equity of access within ORL-HNS secondary care across the Northern Region; particularly Metro-Auckland.

It has been recognised across the working group that a process needs to be undertaken to define what level of service should be provided to enable maturity of services including workforce and infrastructure. Using the Role Delineation Model would create an intention of how services are delivered. This would be for non-cancer components of the service[7]. An equity led 5-year strategy using NRLTIP forecasting detailing expected demand, current capacity and individual service plans should be developed. This would include further in-depth analysis into Māori and Pacific inequities experienced within the system through access to DNA rates, procedures, day cases, inpatient activity elective and non-elective, LOS and associated support services, to enable an informed decision to be made on addressing long term vulnerabilities and a model of care. Work would also need to be undertaken to review waitlist times for treatment. Māori Clinical Governance Group and Pacific Clinical TAG would like to review this data and understand what prioritisation may be put in place to address inequities.

Patient experience and outcomes should inform the strategy on system level improvements. This will be Māori and Pacific focused.

Recommendation

A regional programme of work needs to be equity led on Adult ORL-HNS to using RDM across the region to be led by ADHB Service Management with a Project Manager and Clinical Lead assigned to provide a stocktake on current provision and service plans and models of care to ensure a sustainable service across the region. This is so to ensure consistent regional triaging, access and waitlists to provide the same level and access to care across the Northern Region It is recommended that a 5-year strategy across the region taking into account the

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[7] A RDM has been undertaken for Head and Neck Cancer with recommendations submitted to REF.

HNC RDM and recommendations to determine the model of care and investment required across the health system.

Recommended Options

Options going forward to ensure a sustainable and equitable service across the region.

- Option one: status quo which would result in continued risk of vulnerability in the system.
- Option two: address issues that can be achieved in phase 1 to improve sustainability e.g. acute on call roster, streamlining regional process, agreeing secondary care thresholds. This is likely to have cost implication to DHB's
- Option three: revised model of care across the region for adults to be delivered in phase 2 using the RDM and 5-year strategy to inform. This will determine gaps in the systems which will identify immediate or long term gaps and risks which will need to be addressed.
- Option four: option two and three combined are taken forward to ensure phase 1 issues are mitigated and to develop a model of care to ensure equity of access and sustainability of provision.

It is recommended that option four is taken forward and led by the ADHB Service Management with designated responsibility (0.25FTE) and Clinical lead support through existing resource.

Actions and Progress

Action	Progress	Next steps
Metro Auckland Acute On Call Roster	- PD and contracts across DHBs demonstrates variation - SLA being developed by ADHB to be put in place with WDHB and CMDHB on Regional On-Call Requirements.	- Protocol for exemptions to come off the on-call roaster to be developed and agreed across Metro-Auckland. - Agreement to align PD on call roster requirements - Agreement to provide cover of long term absences - Engagement with SCD, GM and HR.
Strengthening Regional Pathways - Free Flap reconstruction through HNC implementation plan - Paeds	- Process at ADHB documented	- JK to work on CMDHB Plastic surgery and ORL pathway for free flap reconstruction
Secondary Care Thresholds	- Agreed what procedures happen at secondary care.	- Agree referral thresholds across secondary care and reflecting the required equity needed to improve patient outcomes for

		Māori and Pacific.
RDM Appraisal - RDM Framework agreed - RDM DHB Assessment - RDM ambition		FTE to be assigned from within the ADHB service management to lead RDM process
ORL-HNS 5 year strategy - Capacity and demand projections across the region - RDM assessment - Secondary care thresholds - Recommended model of care across the region taking into account primary and community care		FTE to be assigned from within the ADHB service management to lead RDM process

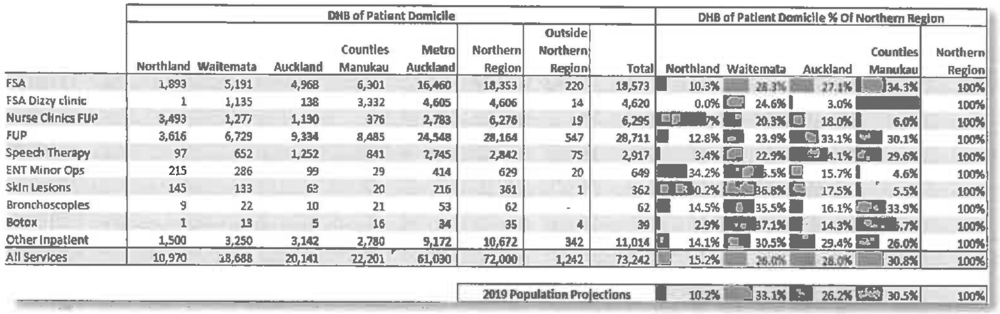
Interdependencies with other Functions:	The recommendations will need to acknowledge the Head and Neck Cancer Accreditation recommendations and investment.
Equity considerations of recommendations:	This process has been equity driven and informed by service data and clinical experience with recognised gaps in capturing wider population needs such as social determinants of health. Further advice and collaboration will be sought in the development of the recommendations.
How recommendations align with Treaty responsibilities:	Aligns to regional service design principles including: - **Partnership** where these proposals have been reviewed by the Māori Clinical Governance Group and Pacific CTAG in late September. Recommendations have been built into the report. - **Equity** as per above **Active Protection** of Māori taonga, culture and knowledge as per the Regional Service Design Principles are to be factored into any work moving forward

Cost estimate summary for recommendations with financial impact:				
One-off costs:	Capex:	-	Opex:	-
Recurrent costs (full year effect):	Capex:	-	Opex:	

Source of funding, if approved:	
Provider cost within existing provider revenue allocation:	
DHB funder cost pressure 2020/21:	
Pre-commitment to funding round 2021/22+:	
Alternate source of funds (please specify details):	
Basis for DHB cost split:	
Additional comments (please specify):	Resource should come from existing FTE within ADHB to lead this programme of work.

Appendix 1: ORL snapshot.

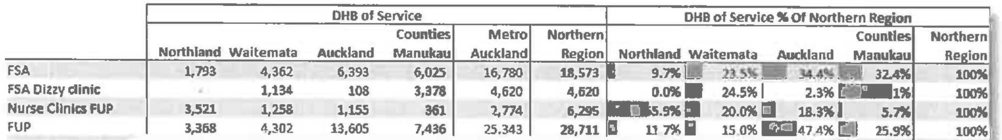
Current Utilisation Profile by DHB of Patient Domicile 2019



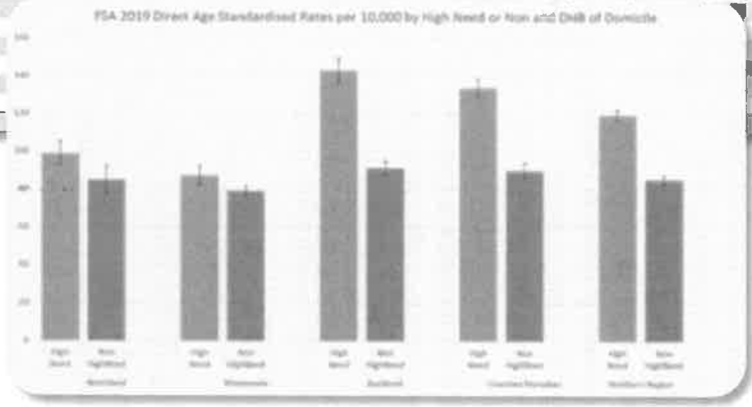
	DHB of Patient Domicile								DHB of Patient Domicile % Of Northern Region				
	Northland	Waitemata	Auckland	Counties Manukau	Metro Auckland	Northern Region	Outside Northern Region	Total	Northland	Waitemata	Auckland	Counties Manukau	Northern Region
FSA	1,893	5,191	4,968	6,301	16,460	18,353	220	18,573	10.3%	28.3%	27.1%	34.3%	100%
FSA Dizzy clinic	1	1,135	138	3,332	4,605	4,606	14	4,620	0.0%	24.6%	3.0%		100%
Nurse Clinics FUP	3,493	1,277	1,130	376	2,783	6,276	19	6,295	7%	20.3%	18.0%	6.0%	100%
FUP	3,616	6,729	9,334	8,485	24,548	28,164	547	28,711	12.8%	23.9%	33.1%	30.1%	100%
Speech Therapy	97	652	1,252	841	2,745	2,842	75	2,917	3.4%	22.9%	4.1%	29.6%	100%
ENT Minor Ops	215	286	99	29	414	629	20	649	34.2%	.5%	15.7%	4.6%	100%
Skin Lesions	145	133	62	20	216	361	1	362	0.2%	6.8%	17.5%	5.5%	100%
Bronchoscopies	9	22	10	21	53	62	-	62	14.5%	35.5%	16.1%	33.9%	100%
Botox	1	13	5	16	34	35	4	39	2.9%	7.1%	14.3%	.7%	100%
Other Inpatient	1,500	3,250	3,142	2,780	9,172	10,672	342	11,014	14.1%	30.5%	29.4%	26.0%	100%
All Services	10,970	18,688	20,141	22,201	61,030	72,000	1,242	73,242	15.2%	26.0%	28.0%	30.8%	100%

2019 Population Projections	10.2%	33.1%	26.2%	30.5%	100%

Utilisation Profile by DHB Service 2019

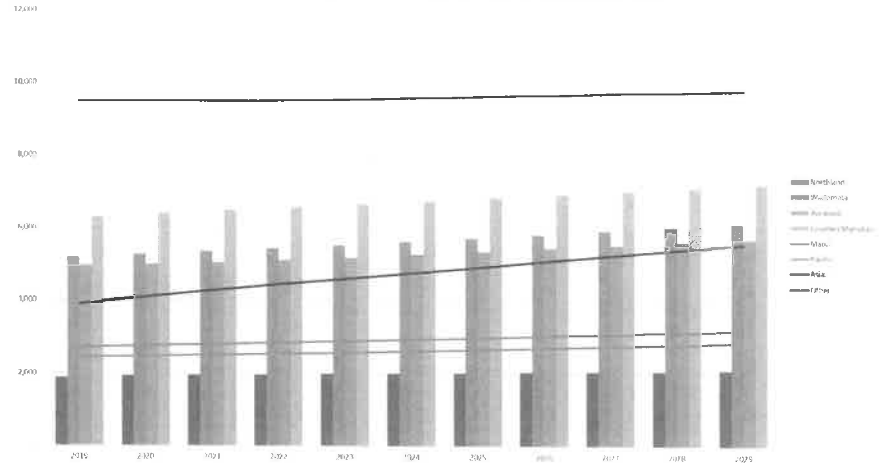


	DHB of Service						DHB of Service % Of Northern Region				
	Northland	Waitemata	Auckland	Counties Manukau	Metro Auckland	Northern Region	Northland	Waitemata	Auckland	Counties Manukau	Northern Region
FSA	1,793	4,362	6,393	6,025	16,780	18,573	9.7%	23.5%	34.4%	32.4%	100%
FSA Dizzy clinic	-	1,134	108	3,378	4,620	4,620	0.0%	24.5%	2.3%	1%	100%
Nurse Clinics FUP	3,521	1,258	1,155	361	2,774	6,295	5.9%	20.0%	18.3%	5.7%	100%
FUP	3,368	4,302	13,605	7,436	25.343	28,711	11.7%	15.0%	47.4%	25.9%	100%
Speech Therapy										20.6%	100%
ENT Minor Ops										1.4%	100%
Skin Lesions										5.2%	100%
Bronchoscopies										32.3%	100%
Botox										0.0%	100%
Other Inpatient										17.1%	100%
All Services										26.9%	100%


FSA 2019 Direct Age Standardised Rates per 10,000 by High Need or Non and DHB of Domicile

Current

Forecasted Growth of ORL FSA per DHB and total ethnicity growth



Note:

- Only FSA, FUP and Other Inpatient ORL activities are close to the expected % of Patients by DHB of Domicile
- High numbers of FUP in ADHB and CMDHB
- Low number of Nurse Clinics FUP at CMDHB
- Low number of Dizzy Clinics in Northland
- Low numbers of ENT minor Ops in CMDHB
- ADHB provides SLT provision for WDHB patients
- Significant difference in FSA activity between high need and non-high need in Auckland and Counties Manukau DHB and as a Northern Region.
- Significant difference in FUP activity between high need and non-high need in all DHB of domicile other than WDHB.
- Across the northern region growth is anticipated to be 15.1% from 2019 – 29 1.4% per annum in FSA's, FUP is anticipated to grow by 14.3% and inpatients by 8.7% in this period.
- The largest growth is seen in Bronhoscopies over this period of 19.9% (63 in 2020 – 74 in 2029 per annum).
- The largest growth across ORL services will be in the Asian population (41.2%) followed by Māori (16.3%), Pacific (14.5%) and then other (4%)

Appendix 2: Reported Current Position 6 July 2020 for Adults and Paeds

WDHB	CMDHB
• Equity of access to services – 45% of patients are declined and referred back to the GP. • Not seeing any P3 • Growth has caused the biggest challenge. • Started as an elective service which outgrew resulting in SMO doing work outside of their JD's. • Resources are limited – physical and FTE, no house surgeon, limited SMO due to clinic capacity and no inpatient beds. • Ability to see patients and operate is hard due to the above • Support to intensive care and emergency depart • Cover H&N, paediatrics emergency and aftercare • Lack of Theatre capacity for ORL	• ORL-HNS based at MSC and set up as an elective day case service. • Infrastructure makes it challenging to provide an acute service • Service is small, with ageing workforce, limits to on call provision and recruitment issues • Issues working across two sites, no beds at Middlemore for ORL-HNS rely on plastics and ADHB • Intervention rates for paediatrics is not good, with increasing waiting lists and waiting a long time in comparison to Starship. Starship would not be able cope the current volumes coming through to CMDHB.
ADHB	NDHB (12 June 2020)
• Issues with patient care with different intervention rates between DHB's, aftercare and inpatient care • Metro Auckland access to emergency theatre is restricted resulting in elective patients being cancelled or acute presentation waiting until the end of the list. • On call roster is problematic across the region due to clinicians opting out. This is made up of clinicians from each DHB. • ADHB does not have any SLA's in place with the other DHB's confirming what ADHB should deliver. • Support required for clinicians across the region • Two theatres which ORL-HNS do not have access to all of the time. Would be hard to find theatre space if anymore SMO were recruited. Potentially space in CTU but would result in split service.	• Functioning differently in NDHB • Vulnerable with staffing but in a better position following service plan including peripheral hospital in place and to outsource for recent issues in Private • Working well in resources but could do better. • Regional networks for complex and tertiary care and paediatrics are important and could be strengthened • On-call is different to Metro Auckland • Intervention rates provide a broad service from paediatrics to extensive H&N and in line with national intervention rates; however, some cases are turned away • More work could be done on quality of life cases. • Theatre provision is good with two new theatres being built.

Appendix 3: ORL-HNS Principles Adults and Paediatrics.

1. COVID and our regional response to this illuminated a number of service vulnerabilities including paediatric and adult ORL
2. Vulnerabilities may include service, workforce and sub-speciality volumes and may vary over time
3. There is current variability in equity of access and outcomes regionally which there is a commitment to addressing
4. Regional solutions for paediatric and adult ORL-HNS will seek to improve patient safety, quality and health equity
5. Decisions about any future changes will be data informed and regionally agreed
6. Issues and solutions may be different for adult and paediatric populations and will be considered separately

8·10·2020

Northern Regional Alliance
He Hononga o te Raki

Vulnerable Services Progress Update

	1. Mobilise	2. Gather Info	3. Problem & Solution W/shop	4. Solution Analysis	5. Solution W/shops	6. Finalise & Submit	
Eyes	Key people engaged	Initial info complete	Held 17 June	Streams complete	Held 1 Jul, 19 Aug & 1 Sept	Maori/ Pacific & SG done	√ Completed. REF 17 Sept. Impl. starting
Vascular	Briefing held Thurs 11/6	Initial Info complete	Held 25 June	Streams complete	Held 27 Jul + extra CMH w/shop late Oct	Maori, Pacific & SG done	Finalising w CMH. To REF Nov.
ORL/H&N	Key people engaged	Info collected	Held 6 July	Streams complete	Held 7 Aug & 9 Sept	Pacific & Maori SG done	Progressing, REF Mid Oct
Oral	Key people engaged	Initial Info complete	Held 15 June	Key pressures identified	Held 7 July		Being progressed within ADHB
Sarcoma	Key leads briefed	Initial info completed	Held 4 Sept	Work underway	Held 25 Sept + scheduled for 9 Oct		Progressing after initial delays.
Max Fac	Key people engaged	Initial info collected	Held 8 July	Streams initiated	Ongoing w/shop challenges		Postponed until 2021

NB Spinal & Surgical Prioritisation in Phase 2

AUCKLAND DISTRICT HEALTH BOARD Te Toka Tumai
Waitematā District Health Board Best Care for Everyone
COUNTIES MANUKAU HEALTH
NORTHLAND DISTRICT HEALTH BOARD

16 September 2020

To	NRHCC Hospital Capacity Service Improvement/Planned Care Steering Group Regional Executives Forum
From	Michael Stewart
	Project Lead for Vulnerable Services Vascular Surgery
Date	16 September 2020
Subject	Regional Vulnerable Services Vascular Recommendations and Next Steps
For	**REF Decision / All other groups for review and feedback**
Do recommendations incur financial costs not previously planned /approved?	

Recommendations:

It is recommended that the Regional Executive Forum:

- **Note** the recommendation from the project to establish a regional model for Vascular Surgery which is reflective of New Zealand and international standards to improve quality and outcomes for patients. The proposal is for a single specialist Vascular Surgery centre or "Hub" providing 24/7 specialist service to all patients with vascular disease and linked to multi-sties or "Spoke" hospitals which will provide some inpatient and outpatient services;
- **Note** this approach implements the Northern Region Long Term Investment Plan's future care models for hospital services, consolidating services where this can improve the quality and outcomes of care, and localise services where increased access will improve equity and population health;
- **Note** this is consistent with the Ministry of Health's recommendations and service specifications for vascular surgery that services be re-configured regionally to enable clinical volumes for the most complex arterial procedures known to be associated with optimal clinical outcomes;
- **Note** this is an opportunity for the region to resolve some of the long standing issues around service vulnerability which regional executives have identified as needing a longer term solution. In particular, persistent workforce recruitment and retention issues, the lack of integration between providers, the limited services currently available in Northland and Waitemata DHBs, and the lack of robust consistent out-of-hours cover to all regional DHBs;
- **Note** the quality and patient benefits seen in the UK, USA and Germany from centralisation and/or concentration of complex arterial surgical volumes, such as the reduction in mortality rates in the UK for AAA procedures from 7% in 2008 to 2.4% in 2012/13 (cf. NZ mortality rate is 6.7% for elective repair), fewer complications and shorter lengths of stay;
- **Note** the proposed regional model of care and some of the challenges which will need to be taken into consideration if there is approval to proceed with implementation;
- **Endorse** the reconfiguration of existing vascular surgical services in the region into a unified regional service in the form of a multi-site delivery model (major vascular hub with multiple spokes), including support of the following steps to initiate project implementation:
  - Establish appropriate regional clinical governance to guide service improvement and ensure reconfigured services are monitored for equity and key quality indices around outcomes, safety, timeliness, efficiency;
  - Resource dedicated project management FTE to drive the change and lead regional service design, prioritising:
    - Engagement with Māori and Pacific health providers and service users to help review and develop pathways of care utilising Māori ways of engagement;
    - Working with HR support to develop contracts appropriate for multi-site working;

  - Developing proposals for formal staff consultation on proposed change.

Purpose

This paper recommends that the Northern Region establishes a regional model for Vascular Surgery, where services are organised around a specialist vascular centre (the major arterial or hub site) set up to allow for 24/7 specialist service provision to all patients with vascular disease and linked to other hospital sites (spoke sites) which will provide some inpatient, diagnostic and outpatient services.

Background

The original driver for this review was the publication of *Model of Care: Vascular Services, by Ministry of Health* in December 2016, which recommended a regional model of care and service delivery centred on a specialist vascular centre supported other centres providing some vascular services. The goal of this model is to improve the quality of care for patients though four strategies:

- Optimise prevention and detection
- Reduce clinical variation
- Enhance the intervention pathway
- Integrate services effectively.

The need to progress this work in Northern Region has been highlighted by three main factors:

1. Persistent workforce recruitment and retention issues across both of the main providers of vascular surgical services in the region – Auckland DHB and Counties Manukau Health - resulting in service frailty and heightened risk of services not being able to maintain quality of services or develop capacity. With an ageing workforce and the potential need to recruit a minimum of 5-6 SMOs over the next few years, this problem will become more pressing without action.
2. Linked to that, maintaining an out-of-hours on call roster has been dependent on use of locum staff and at times fragile. Moreover, there are no formal on call arrangement for vascular surgery in 2 of the 4 regional DHBs (Northland and Waitemata), causing a significant patient safety risk with limited support to other surgical services and only ad hoc arrangements for emergency vascular cover.
3. Evidence of delayed / limited access to treatment, continued health inequity with, for example, lower limb amputation rates for Māori twice the rate of non-Māori, long and expensive commutes to outpatient clinics for those living in Northland and Waitemata, and potentially poorer patient outcomes for some.

In addition, vascular surgery must work closely with Interventional Radiology and the recent development of an integrated IR service across ADHB and WDHB, and planned to include Northland DHB, has demonstrated the potential to develop greater integration of services with joint working and common protocols at the core. Although Counties Manukau DHB is not part of this initial development, the ability to further develop a full regional service has been explored and will be considered further in future. The imperative for any change to the Vascular Surgery Model of Care to also strengthen joint working with IR at all sites, maintaining and developing those services, is recognised as key to this proposal.

Covid-19 has given DHBs reason to pause and consider how vulnerable services in the region could be strengthened, and in June 2020, CEs and CMOs mandated senior clinicians and managers to work with experts across the DHB to develop proposals for improving service resilience and regional integration of clinical service delivery in six service areas, including Vascular Surgery

For Vascular Surgery, the region has two unique opportunities:

- The opportunity to re-design disparate services into one cohesive service that ensures patients receive consistently good quality, culturally safe, equitable care regardless of where they present in the region, in hours or afterhours. This will include the interface with primary care and community services.
- The opportunity to re-organise the workforce into a singular regional workforce which will be more resilient to challenges around the recruitment and retention of a highly specialised workforce.

Process

A project working group was established in June 2020 to review options for a regional model for the Northern Region, including pathways and afterhours urgent/emergency care, and to understand what the implications of a regional 'hub and spoke' model would mean and what delivery of vascular services at a DHB level would look like compared to the status quo.

Two workshops have been held to develop the regional model: the first one with project working group members and the second with a wider group of stakeholders including Primary Care, Podiatry, Emergency Department, General Surgery, Nursing, and Interventional Radiology.

The draft model was tested with the Regional Steering Group with multidisciplinary review by CEO, CMO, COO, Public Health, Funder, Māori and Pacific Health leads from across the region. Their feedback is incorporated in this paper.

Proposed Regional Model

The proposed regional hub and spoke model will deliver an integrated regional service which is more equitable and delivers the same high quality vascular services at all DHB sites across the Northern Region. And which is also more resilient to the vagaries of current workforce recruitment and retention issues.

Key elements of the regional model include:

- A single site undertaking major arterial vascular surgery and endovascular intervention, linked to spoke sites in each Northern Regional DHB
    - Selection of Hub site based on published criteria, including access to ICU, renal, and IR support, and with facilities including a theatre specification (or hybrid) IR suite and a dedicated vascular surgery ward
    - The potential to have a two hub model with growing population requirement acknowledged but not felt to be justified with current surgical volumes
- Consistent and equitable prioritisation based on clinical need regardless of where patient is domiciled;
- Centralised waiting list across Northern Region for OP, diagnostic and surgical activity to ensure optimal scheduling and equitable delivery;
- Re-designing out inequities by ensuring that there is active Māori and Pacific perspectives and engagement in design of care models;
- No destabilisation of vascular surgery support/ IR access for spoke hospitals with model of care changes;
- A 24/7 specialised major arterial Hub unit that will have the surgical volumes to give the best results and be large enough to enable subspecialisation;
- Regionally developed and agreed acute and elective service pathways across the region including primary care pathways and a future role in the promotion of primary prevention initiatives;

- Formalised arrangements for what services are provided in-hours and after-hours across all hospital sites and clear protocols which allow for patients to be transferred to the appropriate centre to receive the best care for their condition;
- Elective pathways which facilitate equitable access to vascular care as close to home and where clinically safe to do so, including increased use of telehealth to support remote clinical working;
- Spoke sites should provide out-patient services and day cases (surgical ± IR) as minimum : patients able to access initial care and rehabilitation as close to home as possible;
- Inpatient vascular opinion/review available within 48-72 hours at each non-vascular centre (prevent unnnecessary transfers to Major Arterial Hub);
- Virtual /telehealth MDT meetings for all major vascular cases, accessible from all hospital sites;
- A regional workforce rostered to work across both hub and spoke sites, in and after hours;
    - All SMO staff employed at Major Arterial Hub with equitable access to both complex and non-complex cases;
    - All SMO staff will have sessions at both Hub and Spoke sites (working predominantly at one spoke site to develop collegiate working);
    - Single on-call roster at major arterial hub, supporting spoke sites through telemedicine advice, robust care pathways and transfer protocols; but including protocols for emergency surgical support at non-arterial sites if required;
- All vascular intervention, whether surgical or endovascular, will be provided by the right people with the best skills for the procedure;
- Robust framework to maintain professional standards in place linked to credentialing of clinicians;
    - This will entail strong collaboration between vascular surgeons and IR teams for endovascular work with joint operating for more complex procedures, both to optimise outcomes and ensure appropriate clinical volumes across both craft groups;
- Robust framework of clinical outcome measures and regular audit of outcomes;
- Establishment of a formal regional vascular clinical collaborative to provide structured regional governance, covering both vascular surgery and interventional radiology practice.

Proposed Benefits

There is good evidence to support the concentration of specialist vascular services in centres serving populations of at least 800,000, with surgeons doing minimum volumes of activity and centres with good critical care, radiological and surgical support services. [1]

Quality

- There is evidence that the centralisation of vascular services in the United Kingdom is resulting in better outcomes . UK-wide mortality rates following elective AAA procedures fell from 7 per cent in 2008 to 2.4 per cent in 2012/13[2]. The operative mortality rate for elective repair in NZ is 6.7%[3]
- Annual caseload of 75 – 100 elective cases of AAA repair associated with the lowest mortality. High hospital volume also associated with shorter lengths of stay, decreased use of blood products and lower complication rates.[4]

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[1] Imison C, Sonola L, Honeyman M, Ross S The reconfiguration of clinical services: What is the evidence?. *The Kings Fund.* Published November 2014.

[2] Earnshaw JJ, Mitchell DC, Wyatt MG, Lamont PM, Naylor AR (2012). 'Remodelling of vascular (surgical) services in the UK'. *European Journal of Vascular and Endovascular Surgery*, vol 44, no 5, pp 465–7.

[3] Nair N, Shaw C, Sarfati D, Stanley J. Abdominal aortic aneurysm disease in New Zealand: epidemiology and burden between 2002 and 2006. *N Z Med J.* 2012;125(1350):10-20. Published 2012 Feb 24.

[4] Trenner M, Kuehnl A, Salvermoser M, et al. Editor's Choice - High Annual Hospital Volume is Associated with Decreased in Hospital Mortality and Complication Rates Following Treatment of Abdominal Aortic Aneurysms: Secondary Data Analysis of the Nationwide German DRG Statistics from 2005 to 2013. *Eur J Vasc Endovasc Surg.* 2018;55(2):185-194. doi:10.1016/j.ejvs.2017.11.016

- Hospitals in the UK and North America providing a higher annual caseload have lower in-hospital mortality, irrespective of surgical modality used. Outcomes of ruptured AAA repairs were better when care was delivered from hospitals performing high volumes of elective aneurysm repairs, irrespective of surgical modality[5, 6, 7]
- The effects of centralisation on spoke hospitals has not impacted on overall efficiency of the CEA pathway but demonstrated a decrease in service variation seen between different spoke hospitals[8]

Workforce

- High-volume surgeons with specialist vascular surgical training deliver AAA repair with lower perioperative mortality than lower volume surgeons or those without specialist vascular practice[9]

Caveat

We recognise that the benefits outlined above are based on volume and quality indices which may not always align with patients' preference and perspectives on what is important to them.

To that end, it will be important to ensure that what patients have fed back about care closer to home, including convenience, proximity to personal support systems and continuity of care need to be taken into account in this proposal.

Issues and Risks

The following are issues and/or risks which have been identified that will need to be considered in a reconfiguration of vascular surgery in the region. It is worth nothing that some of the challenges around ensuring ongoing recruitment and retention in spoke services for Vascular and IR have been considered and successfully resolved in other health systems adopting this model. There are case studies from the UK vascular networks where these type of arrangements have been considered and from which the region can draw.

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[5] Holt, P.J.E., Karthikesalingam, A., Hofman, D., Poloniecki, J.D., Hinchliffe, R.J., Loftus, I.M. and Thompson, M.M. (2012), Provider volume and long-term outcome after elective abdominal aortic aneurysm repair. *Br J Surg*, 99: 666-672. doi:10.1002/bjs.8696

[6] Dimick JB, Upchurch GR Jr: Endovascular technology, hospital volume, and mortality with abdominal aortic aneurysm surgery. *J. Vasc. Surg.* 47(6), 1150–1154 (2008).

[7] Holt PJ, Karthikesalingam A, Hinchliffe R, Poloniecki JD, Loftus IM, Thompson BG: Ruptured aneurysms in England: a propensity scored analysis of outcomes. *Brit. J. Surg.*(2010)

[8] Partridge, E., Brooks, M., Curd, C., Davis, V., Oates, C., & McGeeney, D. (2017). The effects of centralisation of vascular surgical services in the Bath, Bristol and Weston area on the carotid endarterectomy pathway. *Annals of the Royal College of Surgeons of England, 99*(8), 617–623. https://doi.org/10.1308/rcsann.2017.0087

[9] Dimick JB, Cowan JA Jr, Stanley JC *et al.*: Surgeon specialty and provider volumes are related to outcome of intact abdominal aortic aneurysm repair in the United States. *J. Vasc. Surg.* 38(4), 739–744 (2003).

	Issue/ Risk	**Potential mitigation**
Equity *Refer Appendix 3*	• Importance of maintaining services close to home especially for Māori and Pacific and rural communities • Delivering care closer to home for Waitemata and Northland patients • "Postcode care " – different thresholds and access depending on where patient lives in the region	• Close working with and guidance from the Māori Clinical Governance Ropu and the Pacific Clinical and Technical Advisory Group on service design • Co-design with key patient groups and Māori and Pacific providers to ensure service design addresses barriers to access and inequities instead of exacerbating them. • Spoke hospitals will, at a minimum, provide out-patient services, vascular labs and day cases (surgical ± IR) with: patients able to access initial care and rehabilitation as close to home as possible. • Improve access to consultant vascular surgeon at spoke sites, for in-hours and after-hours: outpatient clinics, day case lists, ward referrals, vascular emergencies in non-vascular operating theatres recognising that some spokes are also a part of the major trauma network • Clear pathways and guidelines for emergency vascular cover • Invest in telehealth technologies to support outreach clinics and care closer to home • Establish cross regional monitoring by ethnicity and geography to track and demonstrate the impact on equity and outcomes
Workforce	• Regional workforce located in local DHBs and rostered working across in and after hours services • SMO contracts where SMOs have dual roles	• Workforce management of contract changes via a formal HR process of consultation with staff of proposed changes
Interventional Radiology	• As more vascular surgeons are trained in endovascular intervention, there may not be enough volumes to justify all individuals continuing to maintain endovascular interventional skills.	• Close collaboration between IR and Vascular surgeons required • Subspecialisation • Clinical outcomes measures and audit of outcomes used for both quality assurance and to help drive appropriate subspecialisation across the workforce
Interventional Radiology (Counties Manukau)	• Potential loss of complex endovascular work - the impact on current staff satisfaction and future staff recruitment •	• Single waiting list to increase the amount of endovascular work undertaken at Counties Manukau – currently only a small number of complex vascular procedures are completed at CMH, e.g. in 2019, a

		total of 20 AAA repairs were carried out of which 8 were endovascular repairs[10]. Moving to a regional model could increase opportunities for interventionists in spoke hospitals to be involved in more complex cases in the hub to maintain or develop their skills, whilst ensuring patient care in hospital site with the volume required to optimise outcomes. • Agree guidelines and engage in MDT for case selection and quality control • Auckland patients who are geographically closer to Middlemore to be scheduled at Counties Manukau to increase access for vulnerable Māori and Pacific communities
Non-vascular surgery (Counties Manukau)	• Concern that reducing vascular surgery volumes at Counties Manukau could affect safe delivery of other surgical services.	• Plan to roster some vascular outpatient, diagnostic or surgical activity at CMH Monday-Friday to ensure continued on-site surgical presence for acute support if needed. • Robust protocol for out of hours vascular surgical support, including potential to attend on site, at all 3 major Auckland metro hospitals in place

Conclusion and next steps

There is broad consensus amongst clinical stakeholders on the proposed regional hub and spoke model of care. However the major challenges to implementation are as stated above. Any undeclared concerns will need to be managed through the implementation stages.

The Project asks that REF approves the establishment of a multi-site regional Vascular Surgery service, noting that the project will require further support from REF to undertake the following steps:

- Establish appropriate regional clinical governance to guide service improvement and ensure reconfigured services are monitored for equity and key quality indices around outcomes, safety, timeliness, efficiency;
- Resource dedicated project management FTE to drive the change and lead regional service design, prioritising:
    - Engagement with Māori and Pacific health providers and service users to help review and develop pathways of care utilising Māori ways of engagement;
    - Working with HR support to develop contracts appropriate for multi-site working;
    - Developing proposals for formal staff consultation on proposed change.

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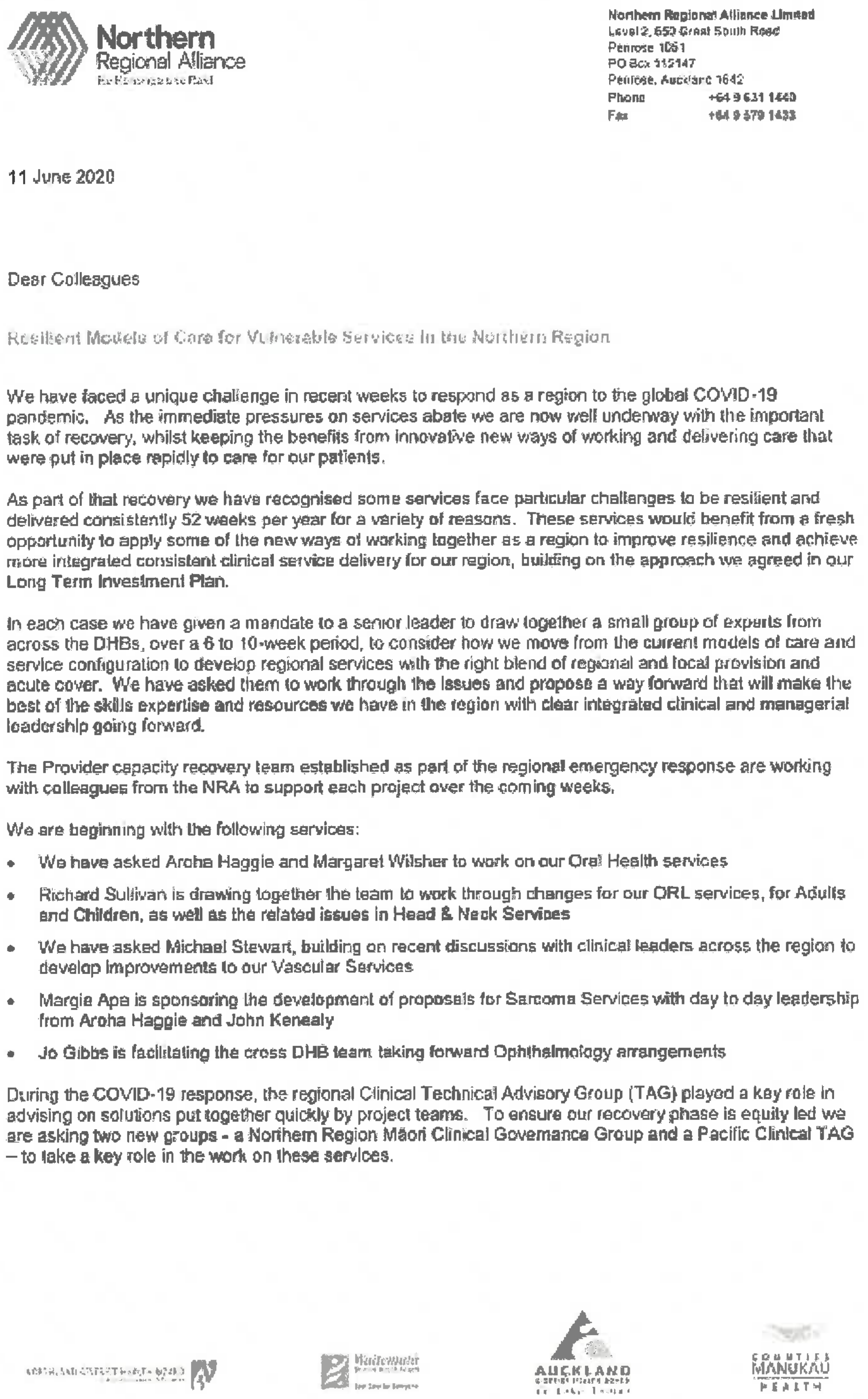
[10] Total AAA repairs for the Northern Region in 2019 was 135 (96 endovascular + 39 surgical)

Appendix 1 – CEs Letter



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11 June 2020

Dear Colleagues

Resilient Models of Care for Vulnerable Services in the Northern Region

We have faced a unique challenge in recent weeks to respond as a region to the global COVID-19 pandemic. As the immediate pressures on services abate we are now well underway with the important task of recovery, whilst keeping the benefits from innovative new ways of working and delivering care that were put in place rapidly to care for our patients.

As part of that recovery we have recognised some services face particular challenges to be resilient and delivered consistently 52 weeks per year for a variety of reasons. These services would benefit from a fresh opportunity to apply some of the new ways of working together as a region to improve resilience and achieve more integrated consistent clinical service delivery for our region, building on the approach we agreed in our Long Term Investment Plan.

In each case we have given a mandate to a senior leader to draw together a small group of experts from across the DHBs, over a 6 to 10-week period, to consider how we move from the current models of care and service configuration to develop regional services with the right blend of regional and local provision and acute cover. We have asked them to work through the issues and propose a way forward that will make the best of the skills expertise and resources we have in the region with clear integrated clinical and managerial leadership going forward.

The Provider capacity recovery team established as part of the regional emergency response are working with colleagues from the NRA to support each project over the coming weeks.

We are beginning with the following services:

- We have asked Aroha Haggie and Margaret Wilsher to work on our Oral Health services
- Richard Sullivan is drawing together the team to work through changes for our ORL services, for Adults and Children, as well as the related issues in Head & Neck Services
- We have asked Michael Stewart, building on recent discussions with clinical leaders across the region to develop improvements to our Vascular Services
- Margie Ape is sponsoring the development of proposals for Sarcoma Services with day to day leadership from Aroha Haggie and John Kenealy
- Jo Gibbs is facilitating the cross DHB team taking forward Ophthalmology arrangements

During the COVID-19 response, the regional Clinical Technical Advisory Group (TAG) played a key role in advising on solutions put together quickly by project teams. To ensure our recovery phase is equity led we are asking two new groups - a Northern Region Māori Clinical Governance Group and a Pacific Clinical TAG – to take a key role in the work on these services.

Those of you who are approached to contribute your expertise to these five projects over the next 3 months can expect a more detailed briefing. Achieving real change in these services is a key priority for our region and we recognise it will need us to continue with the same flexible positive approach so in evidence during the emergency response.

We will consider carefully the findings of these projects and provide a clear mandate to implement changes that will benefit patients, and will keep you updated as the work progresses.

Ngā mihi

Ailsa Claire
Chief Executive Officer
Auckland District Health Board

Margaret Wilsher
Chief Medical Officer
Auckland District Health Board

Margie Apa
Chief Executive Officer
Counties Manukau Health

Peter Watson
Chief Medical Officer
Counties Manukau Health

Dale Bramley
Chief Executive Officer
Waitematā District Health Board

Jonathan Christiansen
Chief Medical Officer
Waitematā District Health Board

Nick Chamberlain
Chief Medical Officer
Northland District Health Board

M Roberts

Mike Roberts
Chief Medical Officer
Northland District Health Board

Appendix 2 - Equity in regional vascular surgical services

Introduction

This has been prepared in response to a request from members of the steering group, the Māori Clinical Governance Rōpū and Pacific Clinical and Technical Advisory Group, for more equity data to provide a view of what the current issues are for Vascular Surgery services in the region.

Limitations

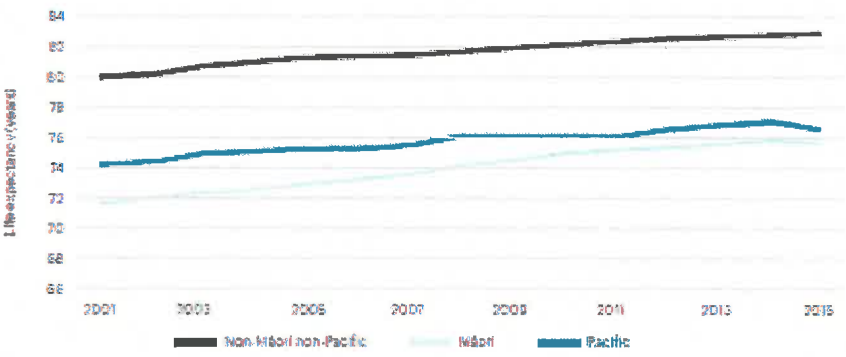
We have done a scan of service delivery data for vascular surgical services across the two main providers – Auckland DHB and Counties Manukau Health. Getting good quality data has been challenging in particular for Counties Manukau Health. The Counties Vascular Surgery service is a part of General Surgery and do not have elective services patient flow indicators captured and reported as a matter of routine. CMH were unable to provide data on what their current waiting lists for vascular services were for ESPIs 2 (time to FSA) and 5 (time to treatment) but were able to provide some DNA information and retrospective data on resolved ESPI2 breaches.

Summary of current picture in the Northern Region

Outcomes

- There is a life expectancy gap of approximately 6 to 8 years for Māori and Pacific compared to non- Māori / non-Pacific.
- Vascular disease is an important contributor to health inequities for Māori and Pacific peoples[11, 12]

FIGURE 1: LIFE EXPECTANCY FOR PACIFIC, MĀORI AND NON-MĀORI NON-PACIFIC PEOPLE IN NZ, 2001-15



SOURCE: MORTALITY COLLECTION (MICHAEL WALSH, EPIDEMIOLOGIST, AUCKLAND DHB AND WAITEMATĀ DHB).

- Mortality from cardiovascular disease is more than 2.5 times higher for Māori than non-Māori/non-Pacific[1]

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[11] Ministry of Health. 2015. *Tatau Kahukura: Māori Health Chart Book 2015 (3rd edition)*. Wellington: Ministry of Health.

[12] Gray S., Garrett M. 2019.*Audit of Diabetes Related Lower Limb Amputations in the Northern Region 2013 – 2016.* Prepared for the Northern Region Diabetes Foot Advisory Group

- Cardiovascular disease is the leading cause of death for Pacific people with affecting 1 in 3 Pacific people[13]
- People of Pacific ethnicity have a 12 times higher, and Māori six times higher, rate of starting treatment for end-stage renal disease than people of European ethnicity. Population rates of those starting dialysis with concurrent diabetes: 74% in Pacific and 68% in Māori compared to 24% in European.[14]
- Rates of lower limb amputations in the Māori diabetic population are at more than twice the rate of non-Māori/non-Pacific diabetic population; and the average age of Māori LLA candidates at least 10 years younger than non-Māori[2]
- Rates of lower lower limb amputations in the Pacific diabetic population are also at more than twice the rate of non-Māori/non-Pacific diabetic population

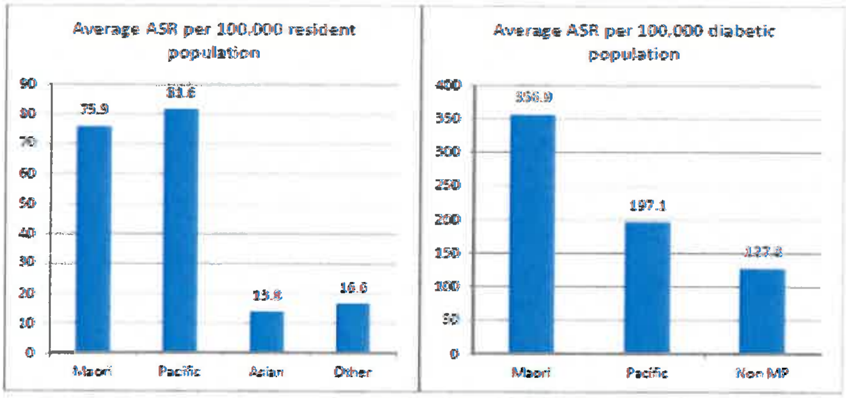

Figure 4 Average ASR per 100,000 resident / diabetic populations for admissions for diabetes related LLAs July 2013 – June 2016 by ethnicity for the Northern Region

Access

CPAC thresholds are not used for vascular surgical services in the region but access is based on clinical presentation. Any delay to clinical presentation could potentially mean worse outcomes for patients. Limited clinic capacity can mean that patients are sometimes not seen in a timely manner, and Covid-19 has exacerbated matters for planned care services in this respect.

- Data from ADHB's Planned Care Equity Value Stream shows that in 2018/19 there are actually no significant inequities once people were in the vascular surgical services pathway. See Table 1.
- In terms of timeliness of access to vascular surgery:
    - Māori had slightly longer waits than non-Māori/ non-Pacific (mean of 64 days compared to 58 days) but all groups received an FSA within the targeted 4 month wait times.
- FSA outcomes
    - 59% vs 52% given a follow up; 3% vs 3% added to surgical wait list
    - Waiting list data appears to indicate no issues with any patients waiting longer than 4 months for surgery once on the surgical waiting list
    - Some patients appear to be waiting longer from referral to FSA, and this appears to be more significant for Māori and Pacific patients as a percentage of overall referrals

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[13] *Mortality Tables.* Ministry of Health. Published April 2020

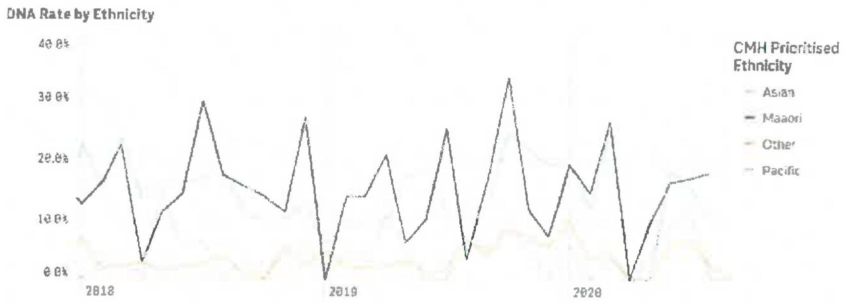
[14] *Australia and New Zealand Dialysis and Transplant Registry,* National Renal Advisory Board. Aotearoa New Zealand Nephrology 12th Annual Report. 2017.

  - Deep dives shows that these delays are due to access to diagnostics for vascular (i.e. blood flow tests – angiography etc.)
- Counties Manukau data shows that in 2018/19 only 1 patient waited > 120 days for a FSA. All others received an FSA within the targeted 4 months' wait times.[15]
  - In 2019/20, of the 154 patients who waited > 120 days for a FSA, 17% were Māori compared to 21% Pacific and 62% Others.
  - Mean waiting times for Māori waiting < 120 days for a FSA was 78 days compared to 81 for Pacific and 76 days for Others
  - Mean waiting times for Māori waiting > 120 days for a FSA was 142 days; similar to Others (141 days) and Pacific (140 days).

Patient Experience of Care

- DNA rates for Vascular outpatient clinics – both FSA and Follow Ups - for Māori and Pacific at the two main vascular surgery sites (ADHB and CMH) are consistently higher than non-Māori/non-Pacific, and further work needs to be done if services are being re-configured.
- For ADHB the planned care equity value stream work found the following for vascular surgical services:
  - Māori DNA rate for FSAs was 5x higher than for non-Māori/non-Pacific
  - Māori DNA rate for Follow Ups almost 3 times higher than for non-Māori/ non-Pacific

Counties Manukau – DNA rates by ethnicity



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[15] Retrospective 2019/20 data from the service showing only resolved ESPI 2 breaches. No data on current waiting list for vascular surgical services was available.

Table 1: ADHB Planned Care Equity Value Stream - 2018/2019 service utilisation data

Vascular – Planned Care Equity Overview

	Māori	Pacific	European	Asian	Other	Māori	Pacific	European	Asian	Other	Māori	Pacific	European	Asian	Other
	Referrals					*Referrals Rejected*					*Proportion of Referrals Rejected*				
Referrals	204	204	1436	227	89	19	23	95	21	10	9%	11%	7%	9%	11%
	Patient Count					*Mean Days Waiting*									
Waiting for FSA	94	136	900	163	57	64	51	58	60	63					
	Waiting <= 4 months					*Waiting > 4 months*					*% Waiting > 4 months*				
ESPI2 Compliance	95	136	900	163	57						0%	0%	0%	0%	0%
	Follow Up Appointment					*Waitlist for Surgery*					*Discharge to GP*				
FSA Outcome	55	72	465	86	29	3	5	26	3	2	36	59	409	74	26
	59%	53%	52%	53%	51%	3%	4%	3%	2%	4%	38%	43%	45%	45%	46%
	FSA DNAS					*FSA Attended*					*Ratio of FSA to 1 DNA*				
FSA Attendance	36	30	83			103	147	1,209			3	5	15		
	FSA					*FU*					*Ratio of FU to 1 FSA*				
FSA to Follow Up															
	Follow Up DNA					*Follow Up Attended*					*Ratio of FU to 1 DNA*				
F/U Attendance	36	72	126			246	281	2,407			7	4	19		
	DNA Procedure / Other					*Procedure / Other Attended*					*Ratio of Procedure to 1 DNA*				
Procedure Attendance	14	0	31			220	57	1,148			16	-	37		
	Surgery Completed					*Surgery Deferred*					*Surgery Suspended*				
Waitlist Outcome	150	139	600	132	21	27	35	93	13	4	6	5	39	5	3
	82%	78%	82%	88%	75%	5%	6%	4%	3%	10%	1%	1%	2%	1%	8%
	Deferred by Hospital					*Deferred for Medical Reasons*					*Deferred by Patient*				
Deferral Reason	16	22	58	8	2	6	2	16			5	11	19	5	2
	59%	63%	62%	62%	50%	22%	6%	17%	0%	0%	19%	31%	20%	38%	50%
	Suspended for Medical Reasons					*Suspended by Patient*									
Suspend Reason	3	2	27	2	1	3	3	12	3	2					
	50%	40%	69%	40%	33%	50%	60%	31%	60%	67%					

Proposed priorities for designing an equitable regional vascular surgery service

At a very high level, these are the three main areas the Project proposes to focus on but will work with and take direction from the Northern Region Māori Clinical Governance Rōpū and the Pacific Clinical and Technical Advisory Group to review and confirm direction if implementation proceeds.

- *Improve access and quality along the care pathway*

Whilst the reconfiguration of vascular surgical services is to ensure that there is high quality vascular care to deal with the consequences of vascular disease caused by diabetes, renal or cardiovascular conditions, what our data is telling us is that the region needs to look more closely at the front end of pathways of care.

To do that the Project recognises that better integration with primary care pathways, community services, diabetes and cardiology pathways etc. need to be a part of discussions around the pathways of care, so, that patients are accessing care much earlier in their pathway. There is also a need to target preventative care earlier for Māori and Pacific given the average age of Māori and Pacific for conditions like stroke, diabetes and cardiovascular disease is at least 10 years younger than non-Māori/non-Pacific.

This work needs to include further detailed analysis of patient journeys, specifically:

1. Time from primary care referral to FSA, including diagnostics pathways
2. Time from joining surgical waiting list to undergoing surgery
3. Total time from primary care referral to completed surgery (acknowledging that this is different to 1+2)
4. Proportion of vascular surgical procedures done as urgent/emergency vs elective,
5. Tracking DNA rates and understanding the reasons for patients not attending clinics

All of the.above broken down by Māori /Pacific/other groups, and analysed both as a whole and at a DHB level (both DHB of Domicile and DHB of Service).

- *Understand the Māori and Pacific worldview of health*

> " *Our framework suggests that what you need to do is find people who are impacted by this condition, and make sure that they are at the table when figuring out what needs to be done and how it should be done. It's not just the DHB saying 'Here's what we need to do, based on international best practice'. We actually need to go to the community and say 'here's what we've learned from international best practice. How does it resonate with you? What do you want to be done differently? Would this work? Would it not? Why?' ".*
>
> *Professor John Oetzel, Lead Researcher,*
> *He Pikinga Waiora*

The high DNA rates for Māori and Pacific across ADHB and CMH vascular services have been persistent and show no sign of abating. Understanding how Māori and Pacific patients and their whanau/fanau are experiencing services will be key to any re-configuration of services.

A trawl of the ADHB patient survey portal feedback found that there were only 13 Māori and 6 Pacific respondents to the vascular services inpatient survey from 1 January 2018 to 30 June 2020. There were no responses returned for outpatient services for the same period for Māori nor Pacific.

Electronic-based patient surveys are not optimal tools for services to gain an understanding of how Māori and Pacific patients are experiencing their care. The insight from navigator teams or the Whanau Ora/ Fanau Ola teams will be key to supporting co-design with Māori and Pacific patients and their whaanau/ fanau.

There are also existing pieces of published research like the series authored by Fiona Cram, and Hotu et al which can provide an excellent secondary source of data as a starting point to understand what are some of the barriers to health services for Māori patients and their whaanau, and physician-related barriers.[16, 17, 18]

- *Measuring equity*

Measuring and tracking progress is needed to reduce inequities and the re-configuration of vascular surgical services will ensure that patient flow indicators, quality and clinical outcome measures are reported by ethnicity and geography

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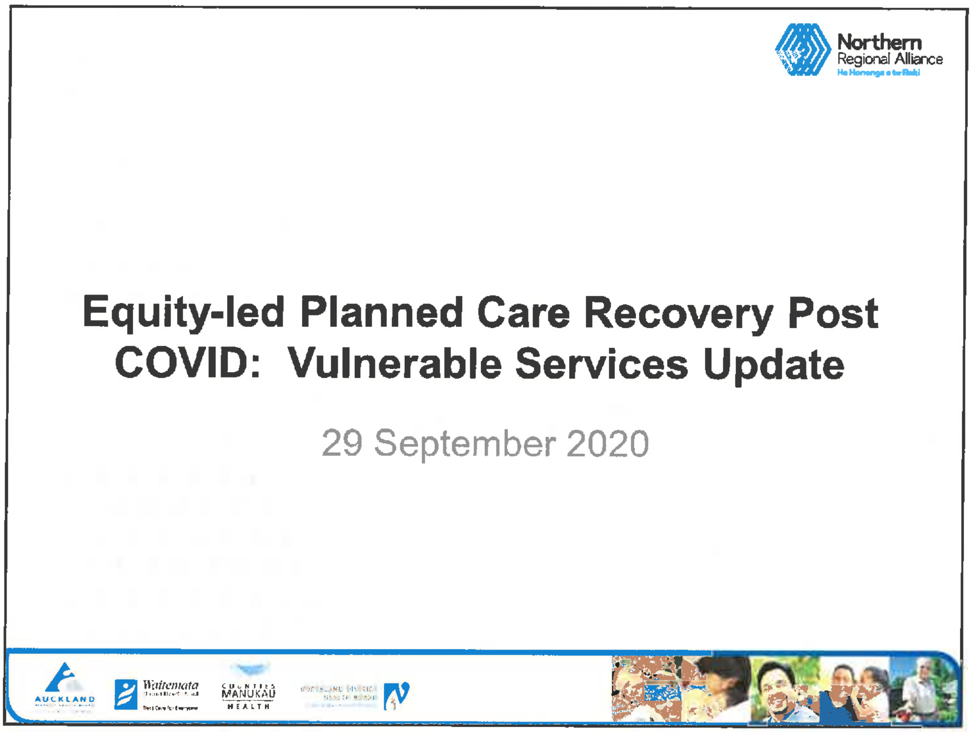
[16] Cram F. 2014. *Improving Māori access to health care: Research report.* Auckland: Katoa Ltd.

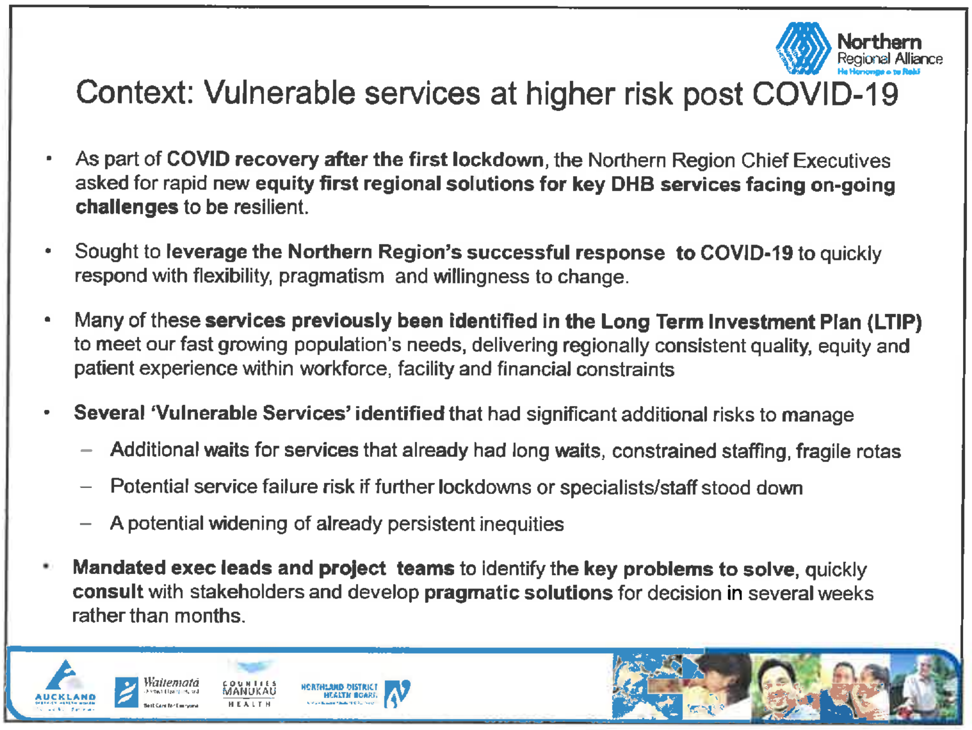
[17] Cram F. 2014. *Improving Māori access to cancer, diabetes and cardiovascular health care: Key informant interviews.* Auckland: Katoa Ltd.

[18] Hotu C, Bagg W, Collins J, et al. 2010. A community-based model of care improves blood pressure control and delays progression of proteinuria, left ventricular hypertrophy and diastolic dysfunction in Māori and Pacific patients with type 2 diabetes and chronic kidney disease: a randomized controlled trial. *Nephrology Dialysis Transplantation*25: 3260-3266.



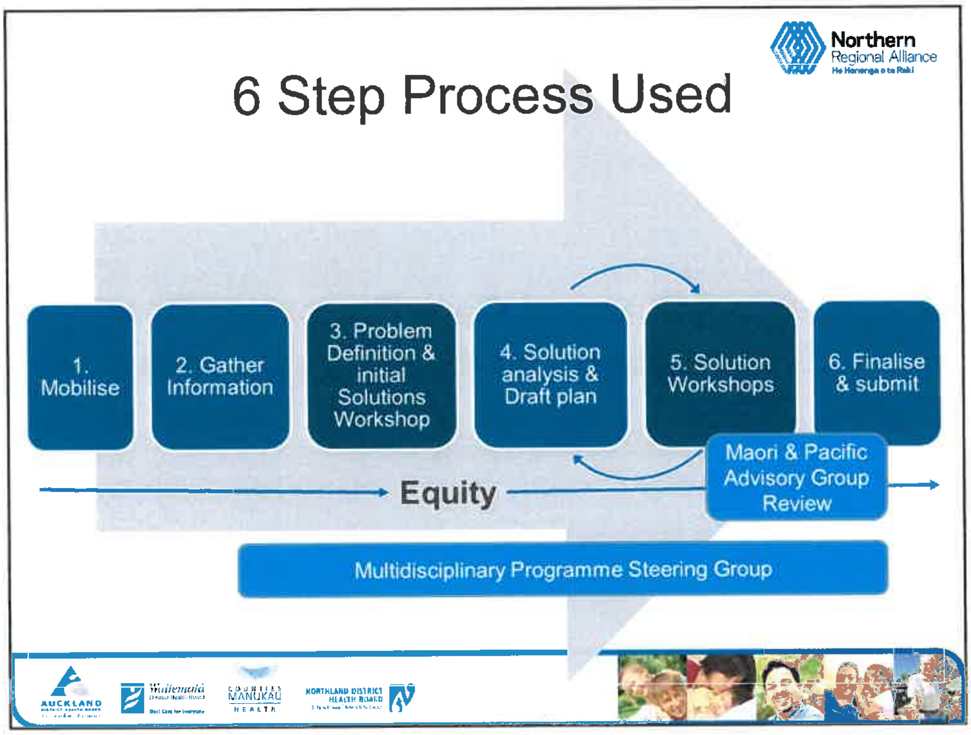
Equity-led Planned Care Recovery Post COVID: Vulnerable Services Update

29 September 2020



Context: Vulnerable services at higher risk post COVID-19

- As part of **COVID recovery after the first lockdown**, the Northern Region Chief Executives asked for rapid new **equity first regional solutions for key DHB services facing on-going challenges** to be resilient.
- Sought to **leverage the Northern Region's successful response to COVID-19** to quickly respond with flexibility, pragmatism and willingness to change.
- Many of these **services previously been identified in the Long Term Investment Plan (LTIP)** to meet our fast growing population's needs, delivering regionally consistent quality, equity and patient experience within workforce, facility and financial constraints
- **Several 'Vulnerable Services' identified** that had significant additional risks to manage
  - Additional waits for services that already had long waits, constrained staffing, fragile rotas
  - Potential service failure risk if further lockdowns or specialists/staff stood down
  - A potential widening of already persistent inequities
- **Mandated exec leads and project teams** to identify the **key problems to solve**, quickly **consult** with stakeholders and develop **pragmatic solutions** for decision in several weeks rather than months.



6 Step Process Used

Northern Regional Alliance
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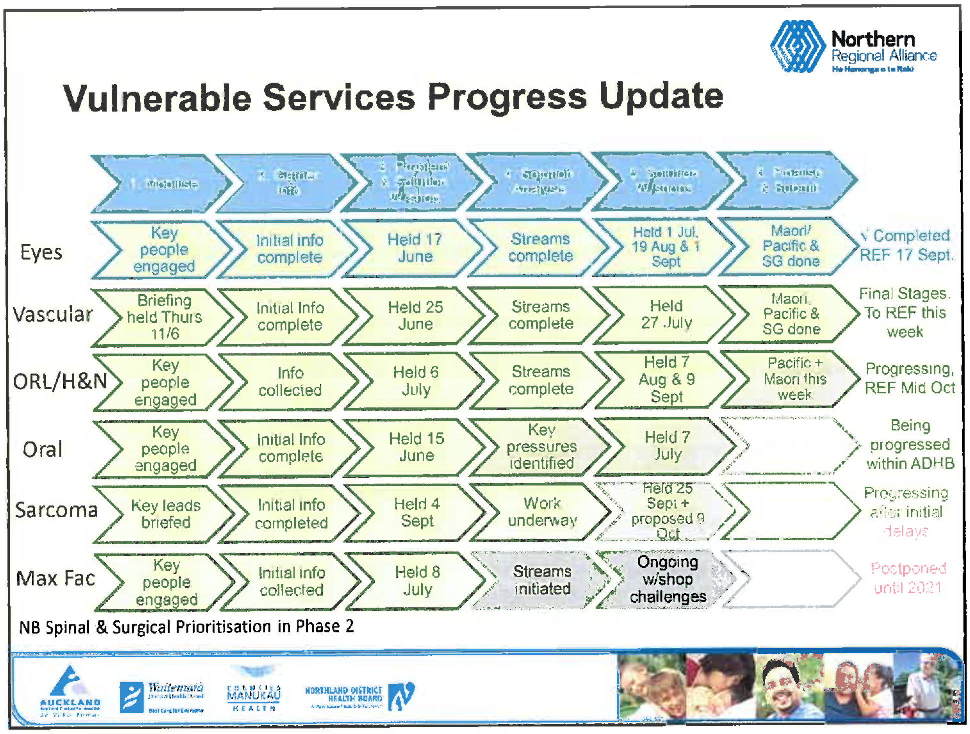
1. Mobilise
2. Gather Information
3. Problem Definition & initial Solutions Workshop
4. Solution analysis & Draft plan
5. Solution Workshops
6. Finalise & submit

Maori & Pacific Advisory Group Review

Equity

Multidisciplinary Programme Steering Group



Vulnerable Services Progress Update

Northern Regional Alliance
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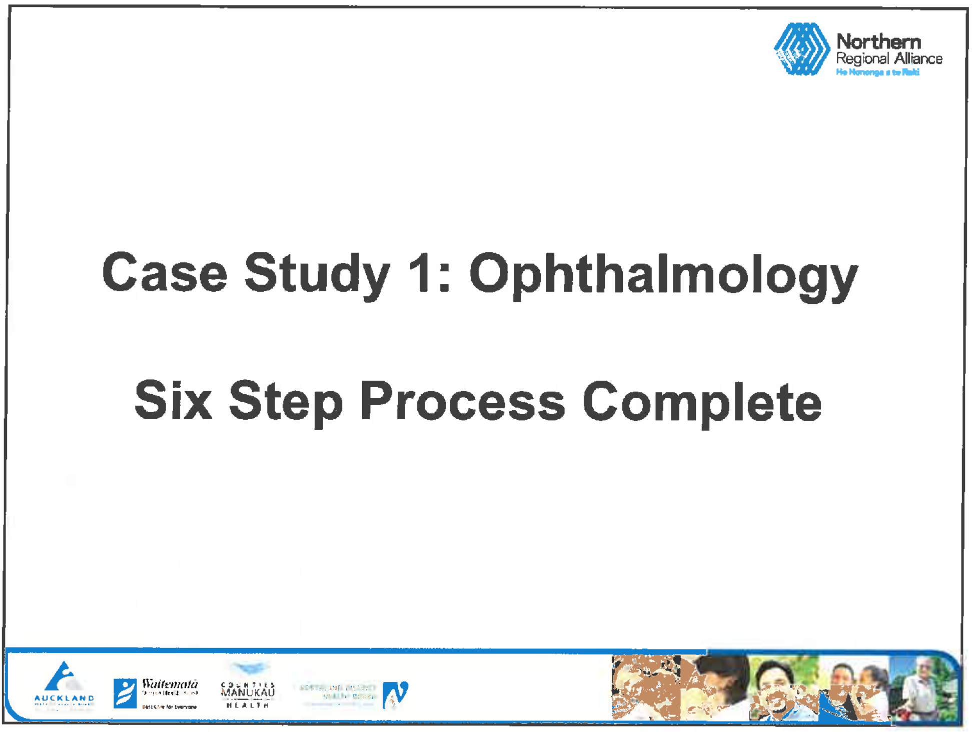
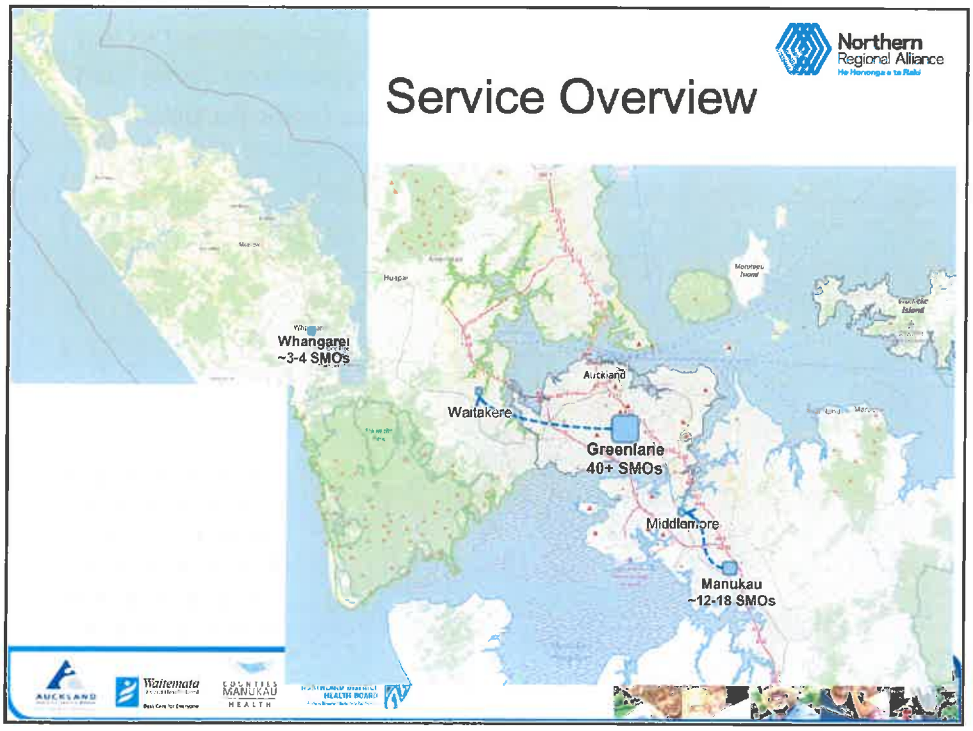
	1. Mobilise	2. Gather Info	3. Problem & Solution W/shop	4. Solution Analysis	5. Solution W/shops	6. Finalise & Submit	
Eyes	Key people engaged	Initial info complete	Held 17 June	Streams complete	Held 1 Jul, 19 Aug & 1 Sept	Maori/ Pacific & SG done	√ Completed REF 17 Sept.
Vascular	Briefing held Thurs 11/6	Initial Info complete	Held 25 June	Streams complete	Held 27 July	Maori, Pacific & SG done	Final Stages. To REF this week
ORL/H&N	Key people engaged	Info collected	Held 6 July	Streams complete	Held 7 Aug & 9 Sept	Pacific + Maori this week	Progressing, REF Mid Oct
Oral	Key people engaged	Initial Info complete	Held 15 June	Key pressures identified	Held 7 July		Being progressed within ADHB
Sarcoma	Key leads briefed	Initial info completed	Held 4 Sept	Work underway	Held 25 Sept + proposed 9 Oct		Progressing after initial delays
Max Fac	Key people engaged	Initial info collected	Held 8 July	Streams initiated	Ongoing w/shop challenges		Postponed until 2021

NB Spinal & Surgical Prioritisation in Phase 2

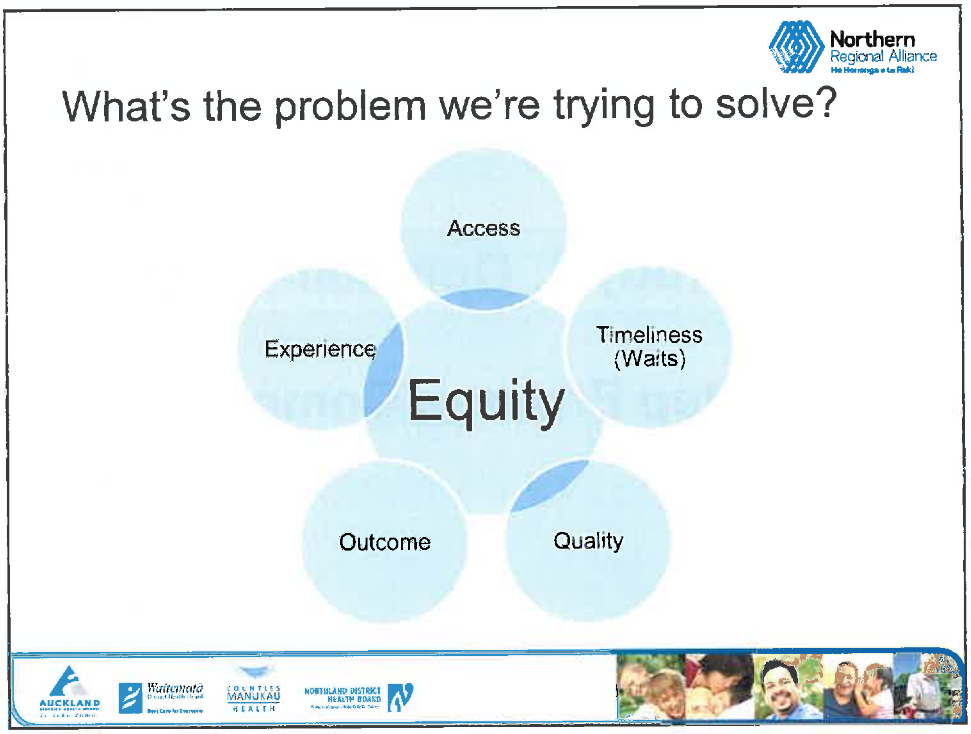


Case Study 1: Ophthalmology

Six Step Process Complete



Service Overview



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What's the problem we're trying to solve?

Equity

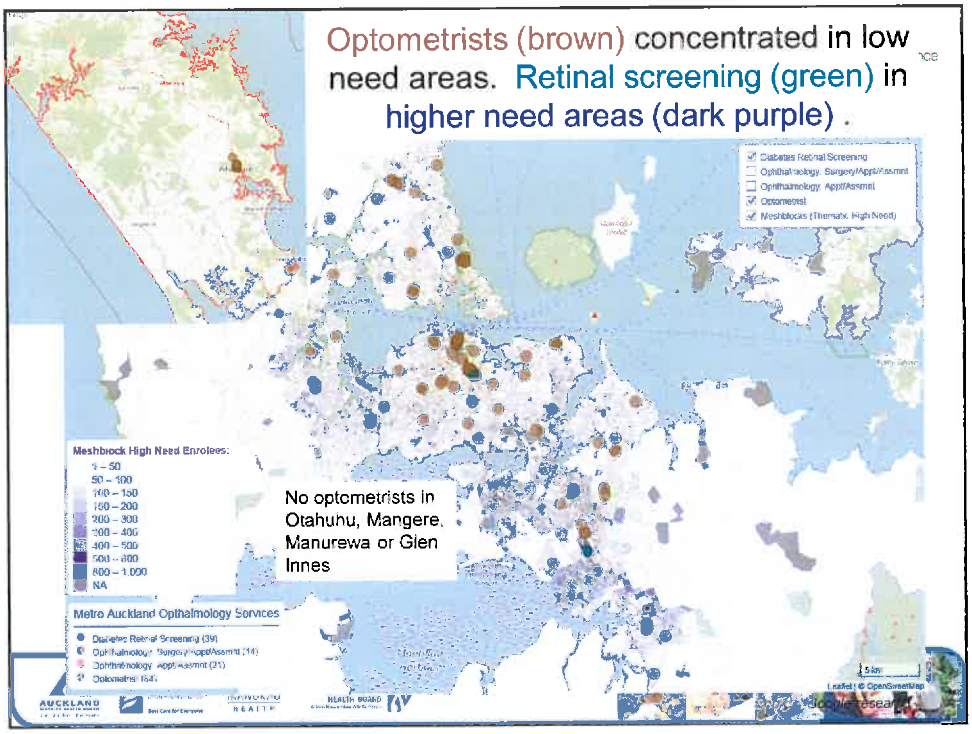
Access

Timeliness (Waits)

Quality

Outcome

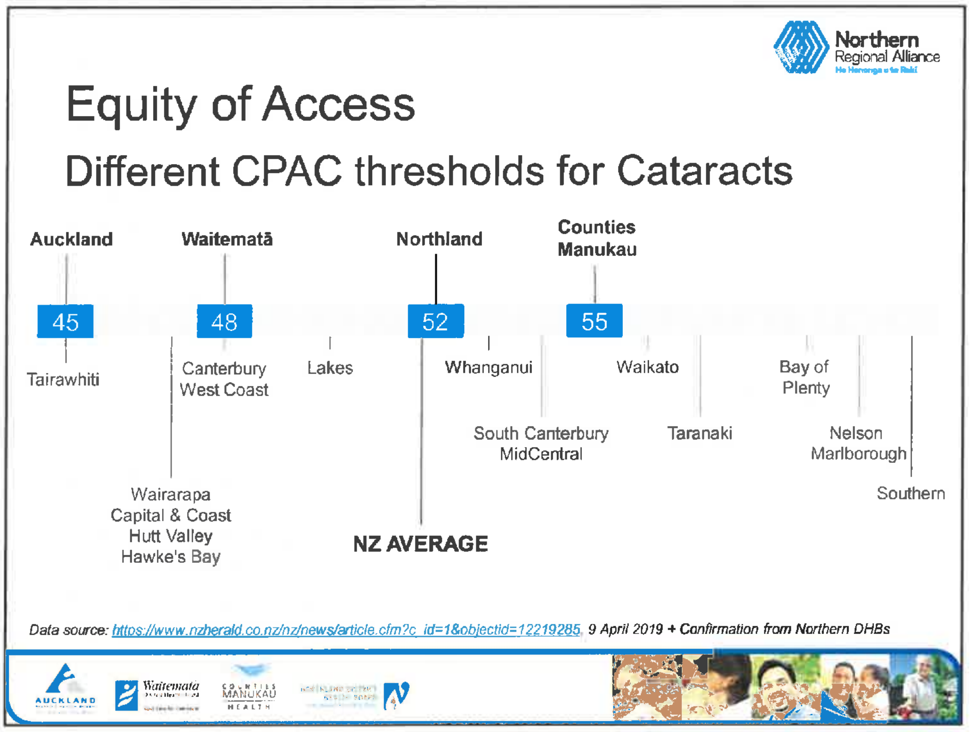
Experience



Optometrists (brown) concentrated in low need areas. Retinal screening (green) in higher need areas (dark purple) .

☑ Diabetes Retinal Screening
☐ Ophthalmology: Surgery/Appt/Assmnt
☐ Ophthalmology: Appt/Assmnt
☑ Optometrist
☑ Meshblocks (Thematic High Need)

No optometrists in Otahuhu, Mangere, Manurewa or Glen Innes



Equity of Access

Different CPAC thresholds for Cataracts

Auckland 45 – Tairawhiti

Waitematā 48 – Canterbury West Coast; Wairarapa, Capital & Coast, Hutt Valley, Hawke's Bay

Lakes

Northland 52 – **NZ AVERAGE**

Whanganui

South Canterbury, MidCentral

Counties Manukau 55

Waikato

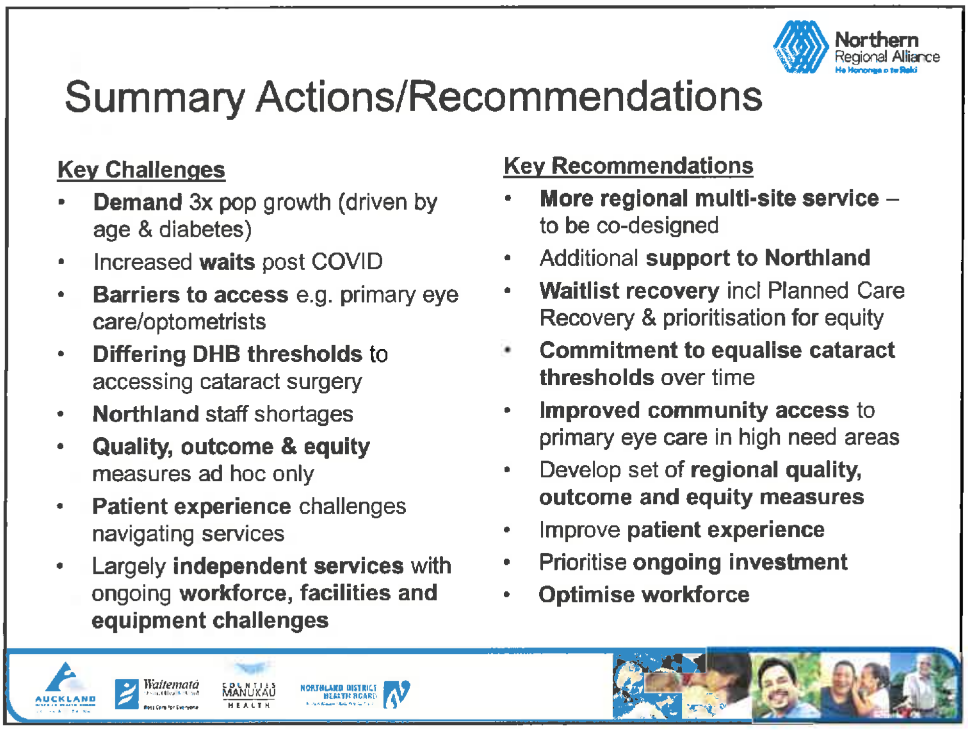
Taranaki

Bay of Plenty

Nelson Marlborough

Southern

Data source: https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12219285, 9 April 2019 + Confirmation from Northern DHBs



Summary Actions/Recommendations

Key Challenges

- **Demand** 3x pop growth (driven by age & diabetes)
- Increased **waits** post COVID
- **Barriers to access** e.g. primary eye care/optometrists
- **Differing DHB thresholds** to accessing cataract surgery
- **Northland** staff shortages
- **Quality, outcome & equity** measures ad hoc only
- **Patient experience** challenges navigating services
- Largely **independent services** with ongoing **workforce, facilities and equipment challenges**

Key Recommendations

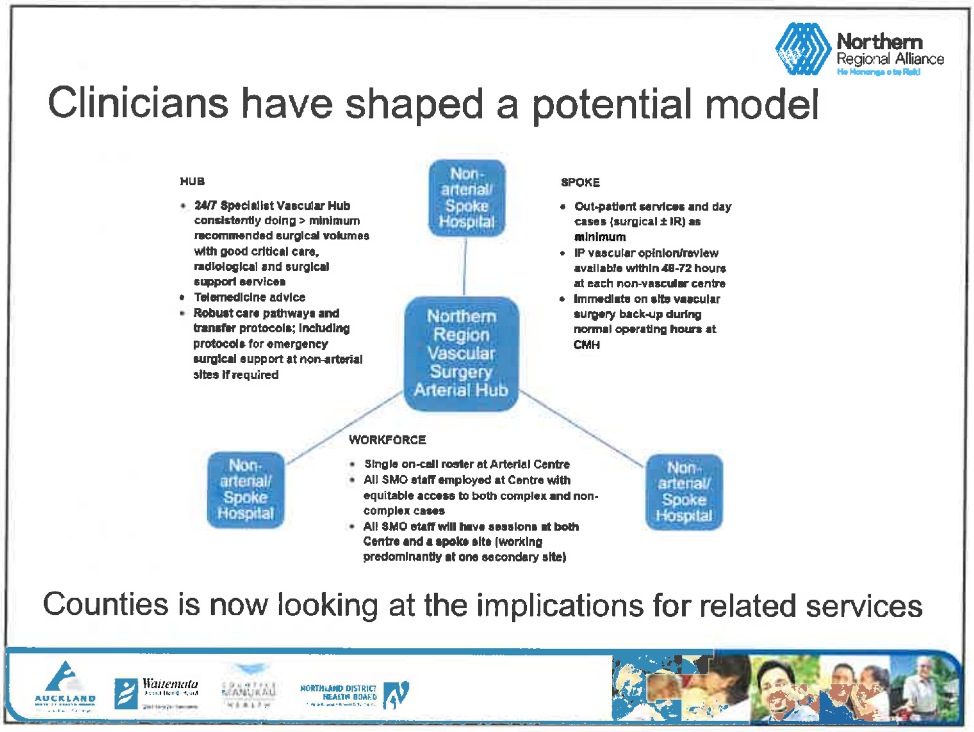
- **More regional multi-site service** – to be co-designed
- Additional **support to Northland**
- **Waitlist recovery** incl Planned Care Recovery & prioritisation for equity
- **Commitment to equalise cataract thresholds** over time
- **Improved community access** to primary eye care in high need areas
- Develop set of **regional quality, outcome and equity measures**
- Improve **patient experience**
- Prioritise **ongoing investment**
- **Optimise workforce**

Case Study 2 : Vascular

Six Step Process in Progress

Why reconfigure vascular surgery in the Northern Region?

- **To strengthen the region's access to vascular surgery**
  - Concern re sustainability of the specialist vascular surgical workforce
  - No integration across the two providers Auckland and Counties Manukau DHBs
  - Limited/ad hoc service to Waitemata and Northland DHBs
- **To implement MoH model of care for vascular services (2016)**
  - Recommended development of specialist Vascular Surgery centres (arterial centre or "Hub") providing comprehensive vascular and endovascular services 24/7.
  - Non-arterial centres (or "Spokes") provide some inpatient & outpatient care.
- **Strong International evidence that concentrating arterial surgery and complex endovascular optimises outcomes for highest risk patients**
  - reduced mortality for AAA patients, fewer complications, lower length of stay
- **To apply our region's service design principles in line with LTIP**
  - reduced inequities, enhanced patient outcomes and experience
  - patients receive consistently good quality, culturally safe, equitable care regardless of where they present in the region.



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Clinicians have shaped a potential model

HUB

- **24/7 Specialist Vascular Hub consistently doing > minimum recommended surgical volumes with good critical care, radiological and surgical support services**
- **Telemedicine advice**
- **Robust care pathways and transfer protocols; including protocols for emergency surgical support at non-arterial sites if required**

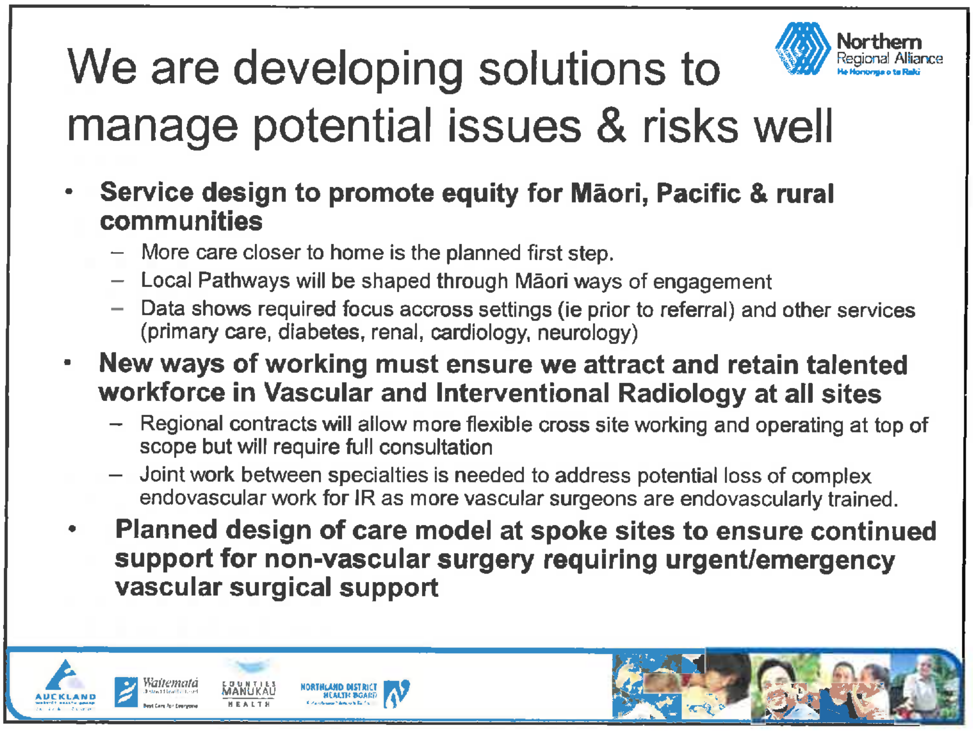
SPOKE

- **Out-patient services and day cases (surgical ± IR) as minimum**
- **IP vascular opinion/review available within 48-72 hours at each non-vascular centre**
- **Immediate on site vascular surgery back-up during normal operating hours at CMH**

WORKFORCE

- **Single on-call roster at Arterial Centre**
- **All SMO staff employed at Centre with equitable access to both complex and non-complex cases**
- **All SMO staff will have sessions at both Centre and a spoke site (working predominantly at one secondary site)**

Counties is now looking at the implications for related services



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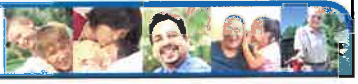
We are developing solutions to manage potential issues & risks well

- **Service design to promote equity for Māori, Pacific & rural communities**
  - More care closer to home is the planned first step.
  - Local Pathways will be shaped through Māori ways of engagement
  - Data shows required focus accross settings (ie prior to referral) and other services (primary care, diabetes, renal, cardiology, neurology)
- **New ways of working must ensure we attract and retain talented workforce in Vascular and Interventional Radiology at all sites**
  - Regional contracts will allow more flexible cross site working and operating at top of scope but will require full consultation
  - Joint work between specialties is needed to address potential loss of complex endovascular work for IR as more vascular surgeons are endovascularly trained.
- **Planned design of care model at spoke sites to ensure continued support for non-vascular surgery requiring urgent/emergency vascular surgical support**

Programme Reflections

Reflections So Far

- The written CEO and CMO mandate letter empowering exec leads has been key
- The application of COVID learning to work differently pace has not always been comfortable for wider stakeholders drawn into the work
- The level of work by the support teams has been intensive and critical to the quality of conversations
- The data has uncovered some stark differences in equity of access and outcomes that need to be addressed with urgency
- The remit of the new Māori Clinical Governance Group and Pacific CTAG in the process is constructively sharpening focus and enhancing solutions
- We do seem to be achieving real momentum on some (not all) longstanding challenges in a relatively short time
- Leadership with the time and capacity to lead clinical dialogue between organisations is vital



5/11/2020

Northern Regional Alliance
He Hononga o te Raki

Vulnerable Services Progress Update

	1. Mobilise	2. Gather Info	3. Problem & Solution W/shop	4. Solution Analysis	5. Solution W/shops	6. Finalise & Submit	
Eyes	Key people engaged	Initial info complete	Held 17 June	Streams complete	Held 1 Jul, 19 Aug & 1 Sept	Maori/ Pacific & SG done	√ Completed. REF 17 Sept. Impl. starting
Vascular	Briefing held Thurs 11/6	Initial Info complete	Held 25 June	Streams complete	Held 27 Jul + extra CMH 29 Oct + Last 12 Nov	Maori, Pacific & SG done	Finalising w CMH. To REF late Nov.
ORL/H&N	Key people engaged	Info collected	Held 6 July	Streams complete	Held 7 Aug & 9 Sept	Pacific & Maori SG done	Progressing, to REF Nov
Oral	Key people engaged	Initial Info complete	Held 15 June	Key pressures identified	Held 7 July		Being progressed within ADHB
Sarcoma	Key leads briefed	Initial info completed	Held 4 Sept	Work underway	Held 25 Sept + 9 Oct		Progressing after initial delays.
Max Fac	Key people engaged	Initial info collected	Held 8 July	Streams initiated	Ongoing w/shop challenges		Postponed until 2021

NB Spinal & Surgical Prioritisation in Phase 2

AUCKLAND DISTRICT HEALTH BOARD Te Toka Tumai
Waitematā District Health Board Best Care for Everyone
COUNTIES MANUKAU HEALTH
NORTHLAND DISTRICT HEALTH BOARD

Northern Regional Alliance
He Hononga o te Raki

To	Hospital Capacity Service Improvement/Planned Care Steering Group
From	Richard Sullivan, Executive Lead ORL-HNS
	Vulnerable Services ORL
Date	5 November 2020
Subject	Vulnerable Services Adult ORL-HNS Recommended Approach
For	**Feedback**
Do recommendations incur financial costs not previously planned /approved?	No

Recommendations and Request:

It is recommended that the Planned Care Steering Group

1. **Note** the six step vulnerable services process for Adult ORL yielded agreement to address the unsustainable acute rota, but it was not possible to secure agreement among clinical service leads to a clear process or outcome for the pattern of service / employment / model of care, which was parked by the group for a phase two consideration and a Role Delineation model approach proposed for consideration.

2. **Note** that both the Te Kāhui Arataki and Pacific CTAG raised concern on the ability to lever an adequate solution and change through this process for ORL-HNS and the risk to patient outcomes (Appendix 1). If change across the region is unable to be obtained through Phase 2 this should be escalated and a different approach undertaken.

3. **Note** The Planned Care Steering Group responded to these recommendations, and the feedback of the Māori and Pacific leadership groups, noting in addition the long timescale and extensive resource taken on RDM for ORL HNS Cancer had not landed the optimum configuration. The group asked that, before Phase 2 of work be commissioned, a view be taken as to whether an alternative approach to defining regionalised service with multiple sites could be recommended at a senior level by Metro-Auckland DHB's ahead of a recommendation going to REF to secure change in the absence of consensus.

4. **Note** that there is general consensus for secondary care provision to be delivered at DHB of Domicile and complex and tertiary services to be provided at a dedicated DHB.

5. **Note** Northland currently do not view themselves as vulnerable with regard to staffing and patient access to secondary care provision and are reliant on Metro-Auckland services for tertiary and complex care. Vulnerabilities within Metro-Auckland impact on patient pathways and timeliness of treatment for Northland patients and the Northland Service have agreed to work with Metro-Auckland on a regional solution to address vulnerabilities in the system.

6. **Note** agreement that work needs to be undertaken to develop what a regional solution or model of care would look like. This should be equity led, based on best practice of models of care in New Zealand or internationally with further data analysis to determine levels of unwarranted variation in the system with a focus on prioritisation for Māori and Pacific.

7. **Note** a RDM undertaken in Head and Neck Cancer Service providing a stocktake of the current situation and outlines 'gaps' in provision. Service Levels have been endorsed by REF with service improvement plan requested to meet minimum service level requirements. The RDM was based on the New South Wales and the New Zealand Role Delineation Models.

8. **Recommendation** that a gap analysis is undertaken across the region using a patient pathway approach to determine the recommended model of care to REF. This should not repeat what is already known from the HNC RDM stocktake, and should determine where change is required to reduce vulnerabilities and improve patient outcomes and experience.

9. **Request** that an external subject matter expert supports this programme of work providing a recommendation on what good would look like for the region and addressing vulnerabilities. This should include evidence base practice as well as patient experience.

Identified problem: Equity of access and service provision within ORL-HNS secondary care.

It is recognised that due to vulnerabilities within the Northern Region for ORL-HNS this has resulted in inequities in access to treatment, particularly in Metro-Auckland.

Delivery of tertiary care[1] is clearly defined as well as secondary care procedures that could be delivered by local DHB's, however, the issue that has become evident is that services are currently defined by SMO skill set rather than the requirement of equity of access for the Northern population.

This has resulted in thresholds varying across the region with patients referred to where the infrastructure is and skill set to support the clinical need of the patient.

More complex cases[2] could be completed in other DHB's where the surgical skill mix is available however due to the size of departments and lack of infrastructure this is not able to occur. There is also risk where there is low volume / high complexity on patient outcomes if SMO's do not get enough practical opportunities to maintain skills and experience which could provide poor patient outcomes.

The Head and Neck Cancer Role Delineation Model identified that there are gaps in capacity to varying degrees across the region impacting on theatre capacity, clinic capacity and staffing levels. This is particularly evident within Metro-Auckland.

Northland currently do not view themselves as vulnerable with regard to staffing and patient access and threshold to secondary care provision and are reliant on Metro-Auckland services for tertiary and complex care.

Vulnerabilities within Metro-Auckland impact on patient pathways and timeliness of treatment for Northland patients. The HNC RDM identified Northland substantially meets the requirements of a level 4 service and performs well at this level.

This analysis has not to date taken account of the costs to deliver more complex care outside a single centre relative to the WEIS revenue, so there is no sense as to whether DHB specific service complexity aspirations

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[1] There is recognition that tertiary services, high complexity or high co-morbidity will currently need to be carried out at ADHB for Adults and Paediatrics. This is due service requirements such as prolonged care, infrastructure such as theatre, equipment, ICU, staffing as subspecialties within the tertiary provider.

[2] This includes complex head and neck cancers and their surgery, neuroOtolgic problems (vestbular schwannomas, CSF leaks), non-cancer upper airway and neck surgery (orbital, inacranial, recurrent), complex endoscopic sinus surgery for complex disease as well as patients requiring prolonged admission for complexity co-mobility where there is not the right infrastructure in the domicile DHB

are financially viable, or whether the addition cost involved in more localised complex care is justified by benefits, by comparison to centralising any care where the local DHB does not have both the staffing skillset and the back-up infrastructure and facilities to avoid the cost and quality impact of unplanned transfers of care.

Proposed next steps

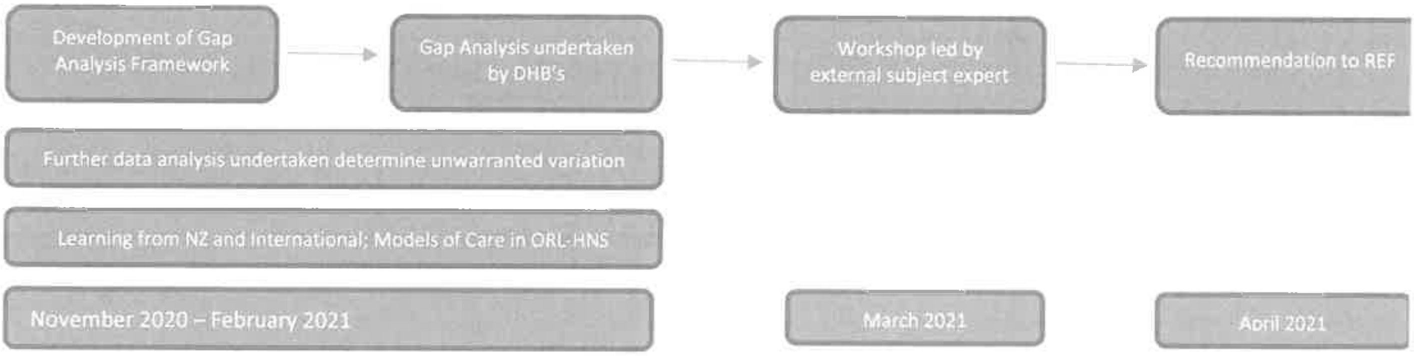
It is recommended a gap analysis framework is developed using the patient pathway for non-malignant ORL-HNS. It envisaged that this could be a rapid piece of work over a six-month period as detailed in figure 1.

It is requested that an independent subject expert supports this programme of work with local clinical engagement. This should include models of secondary care for ORL-HNS which successfully work in other areas of New Zealand and internationally[3] to determine the recommended model of care for the region.

In addition to this, further data analysis would need to be undertaken to determine levels of unwarranted variation in the system with a focus on prioritisation for Māori and Pacific. This would include further in-depth analysis into Māori and Pacific inequities experienced within the system. This would be through access to DNA rates, procedures, day cases, inpatient activity elective and non-elective, LOS and associated support services with forecasted demand to enable an informed decision to be made on addressing long term vulnerabilities and a model of care. This would provide a matrix to determine where investments as well as efficiencies are required to provide sustainable secondary care provision and what should be prioritised.

Work rapidly needs to be undertaken to explore the capacity implications of all clinical activity where there is not BOTH the skill and the back-up infrastructure resulting in a transfer to ACH and that each DHB CMO oversee a case note audit for any procedures that lead to an unplanned transfer.

Figure 1: Approach and timeline of gap analysis and recommended model of care to REF.



Objectives

The objective of the gap analysis would be to:

1. Ensure all patients have access to ORL-HNS secondary care at DHB of domicile
2. Addressing inequities in the patient pathway specifically for Māori and Pacific.
3. Identify gaps in the level of service provision aligned to the patient pathways and in particular the required support services post surgery
4. Identify what change is required across the region
5. Prioritisation to address gaps to provide an equitable and sustainable service

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[3] For example, Getting it Right First Time – Ear Nose and Throat Surgery November 2019, Transforming Elective Care Services ENT, April 2019, New South Wales Role Delineation Model of Clinical Services 2019.

6. Confirm the impact on costs, clinical and equity outcomes of the revised model to ensure it is financially sustainable within the funding envelope that the clinical activity warrants.

Outcomes

1. Reduction in identified inequities.
2. Improved quality of outcomes
3. Improved patient experience and outcomes
4. Sustainable service provision
5. Improved efficiency
6. Greater staff satisfaction and retention

Risk and issues.

There will need to be time limited managed clinical engagement across the region to feedback on the gap analysis framework, however it is felt that this should be led by an external subject matter expert. Christchurch ORL-HNS was recommended by Te Kāhui Arataki and Pacific CTAG as delivering an accessible, high quality model of care and specifically referenced Dr Rachelle Love's input.

A recommended expert subject or revised model of care may not be welcomed by SCD across the region, this could be mitigated against by using international experts in the field to provide feedback on the proposed model alongside regional clinical leads.

Continued unmet need or greater inequalities if there is not robust data analysis on pathways, projected forecasts and inequities within ORL-HNS resulting in a revised model of care not being sustainable or adequately addressing inequities across the population. This is in particular reference to improved outcomes for Māori and Pacific.

Robust leadership and management will be required to ensure the programme of work is not delayed and any future change processes are supported by SCD's.

By undertaking this rapid piece will enable an informed decision to be made on the future direction of ORL-HNS across the region. It is also anticipated that through SCD engagement change will be driven to address vulnerabilities and new ways of working.

Appendix 1: Feedback from Pacific Clinical -TAG and Te Kāhui Arataki

Feedback Adults	**What has been done/ will be done**
Further work to understand if there is inequity for Pacific in adult pathways – point out where things are broken in order to make the case to fix them.	This was proposed to be part of phase 2 and through further data analysis. The Planned Care Steering Group have requested a revised process is undertaken with an explicit paper going to REF detailing 1. Objectives 2. Current state and momentum behind this 3. Proposed regional plan and risks associated.
Use the families to pivot change – have families on the front end/at centre of the model. Have the clinicians look at it from family point of view, outcome basis, rather than looking at it from clinician point of view. Capture family stories, data, and critical issues for Pacific families. Create a wider conversation. Have consumers sitting on governance and advising – worked well for Head and Neck	HNC patient experience has been obtained through HNC Review. Patient experience has been sought, low number of complaints for Māori (1) and Pacific (0) in 2019 from WDHB (awaiting feedback from other DHB's). Themes have been on communication and information provided.
Is there epidemiological data for adults for these conditions? A lot of this is anecdotal and needs hard data to support.	We have this for HNC but were enable to find any specific research on this. This was proposed as part of phase 2 and will be incorporated into further data analysis.
What levers do you have? Not contractual. • For ongoing specialist registration, they must demonstrate to the College; cultural safety and responsiveness can't be bullies, evidence that working in teams leads to better outcomes. • Main lever is money – how do you incentivise behaviour? • Vulnerable for Māori academics to critique them; point where service becomes dangerous for the vulnerable and mortality may result	The Planned Care Steering Group have requested a revised process is undertaken with an explicit paper to go to REF. The process to this is outlined in this paper.
Language in paper: • We can gently lead to the solution or tell them there will be consequences if they don't change – their international reputations are at stake • Appendix 2 analysis on selves is quite gentle and needs to be firmer • Appendix 3 principles aren't really principles	See above.

Both the Pacific Clinical -TAG and Te Kāhui Arataki would like an update on progress.

19/11/2020

Northern Regional Alliance
He Hononga o te Raki

Vulnerable Services Progress Update

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Eyes	Key people engaged	Initial info complete	Held 17 June	Streams complete	Held 1 Jul, 19 Aug & 1 Sept	Maori/ Pacific & SG done	√ Completed. REF 17 Sept. Implementing.
Vascular	Briefing held Thurs 11/6	Initial Info complete	Held 25 June	Streams complete	Held 27 Jul + extra CMH 29 Oct + Last 12 Nov	Maori, Pacific & SG done	3rd Wshop complete. To REF early Dec.
ORL/H&N	Key people engaged	Info collected	Held 6 July	Streams complete	Held 7 Aug & 9 Sept	Pacific & Maori SG done	Paeds REF Nov, Adults W/shop 4/12
Oral	Key people engaged	Initial Info complete	Held 15 June	Key pressures identified	Held 7 July	Surgical being progressed within ADHB. End to end approach proposed under Sustainability.	
Sarcoma	Key leads briefed	Initial info completed	Held 4 Sept	Work underway	Held 25 Sept + 9 Oct	Māori done, Pacific on 19/11	Progressing after initial delays.
Max Fac	Key people engaged	Initial info collected	Held 8 July	Streams initiated	Ongoing w/shop challenges		Postponed until 2021

NB Spinal & Surgical Prioritisation in Phase 2

AUCKLAND DISTRICT HEALTH BOARD Te Toka Tumai
Waitematā District Health Board Best Care for Everyone
COUNTIES MANUKAU HEALTH
NORTHLAND DISTRICT HEALTH BOARD

Northern
Regional Alliance
He Hononga o te Raki

To	Regional Executive Forum
From	Richard Sullivan
	Exec Lead Vulnerable Services ORL
Date	12 November 2020
Subject	Paediatric ORL Vulnerable Services Recommendation and Next Steps
For	**Decision**
Do recommendations incur financial costs not previously planned /approved?	No

Recommendations and Request:

It is recommended that the Regional Executives Forum:

1. **Note** principles have been agreed across ORL-HNS for adults and paediatrics and this paper outlines the process, solutions and next steps for paediatrics.

2. **Note** from undergoing this process it has been agreed that greater co-ordination of secondary Paediatric ORL across the 3 Metro Auckland DHB would provide equitable access and sustainability

3. **Note** Northland do not see themselves as vulnerable following an internal service plan being put in place and would work with Metro- Auckland on addressing vulnerabilities and a regional solution.

4. **Note** a regional process needs to be led for ORL to develop an equity led strategy across the region to sustain Starship as a tertiary provider whilst ensuring secondary care services are delivered closer to home. This would ensure patients are seen at the right time at the right place.

5. **Note** that there is support for a regional approach with measurable gains for paediatric ORL patients and their whanau. However, further work needs to be undertaken, including data analysis to identify and address inequities ethnical and geographical and to establish what regional processes and structures could be put into place. This includes the feasibility of a single regional waitlist for surgery.

6. **Note** the recommendations were agreed by the Māori Clinical Governance Group and Pacific Clinical-TAG, with the recognition that more work needed to be done to understand the epidemiology, access to treatment and outcomes for Māori and Pacific. Models of care in place in South Island DHBs were recommended to be explored as to what 'good' looks like in addition to patient experience. The group would like to be updated on the development of the options and any recommendations.

7. **Note** funding for a Project Manager and Clinical Lead submitted through the Planned Care Funding Bids were approved by MoH to lead the development and implementation of a model of care across the region.

8. **Recommendation** to support the development and implementation of a recommended model of care across the region for paediatric ORL. This will be informed through further data analysis into ethical and geographical inequities, unwarranted variation and patient experiance across the ORL paediatric pathway.

Background/Context:

- Post lockdown, the Northern Region's COVID-19 response turned to recovery. A key focus on the recovery was on planned care. The NRHCC established the Hospital Capacity Service Improvement Steering group to lead an equity focused recovery program for planned care which included a particular focus on seven potentially vulnerable services to help them a) recover from the impacts of the COVID-19 lockdown and b) be more resilient with a particular focus on equity.
- Paediatric ORL was identified as a vulnerable service with no regional consistency in levels of access for children. Three of the DHBs provide a combined adult and paediatric service with challenges to provide consistency of secondary care services and adequate cover 52 weeks of the year. Infrastructure remains a challenge with children often needing to be transferred to Starship due to capacity, equipment, co-morbidities and requirement for specialist workforce skills.
- This 'vulnerable services' work was initiated as a rapid process with key regional leads leveraging the rapid progress gained under COVID while incorporating some of the longer term goals articulated in the LTIP and elective deep dive.

Paediatric ORL

It was agreed by the steering group on 6 July 2020 this was an opportunity to make a change across the system to address vulnerabilities, particularly with regard to sustainability and impact of equity and patient experience) and principles agreed (Appendix 1). The paediatric discussion has progressed to agree that success will involve:

- Equitable outcomes for Māori and Pacific patients
- Appropriate intervention rates, delivered in a timely and sustainable way
- Regional model / approach which supports this

Key problem

1. Equity of access and service provision within secondary care.

It is recognised that there are vulnerabilities within the system for Paediatric ORL in the Northern Region with inequities in access to secondary care treatment, particularly in Metro-Auckland with different thresholds in place. Within Metro-Auckland all DHBs provide FSA outpatients to secondary care patients, however there is variation in access to surgery due to long wait times within some DHBs and variable admission and patient oversight practices.

WDHB contracts ADHB to carry out tonsillectomies, whilst CMDHB is able to undertake this with an admission to Kidz First if necessary. There is recognition that tertiary services, high complexity or patients under multiple tertiary subspecialties will currently need to be carried out at Starship for Paediatrics. This is due to service requirements such as prolonged care, infrastructure such as theatre, equipment, ICU, and access to a range of subspecialties.

Delivery of tertiary care at Starship has been identified as necessary to maintain safe care for complex paediatric ORL patients. The model of secondary care by local DHBs will be considered with the full range of options worked through. Guidelines or updated Models of Care need to be put in place for secondary level care including age, BMI and co-morbidities to define what would require a referral to Starship. Further work also needs to be undertaken for greater clarity as to what constitutes secondary care or tertiary referral for FSA. Where patients are referred for tertiary services, the referring DHBs are unable to have a real time view of the patients waiting for assessment or treatment.

High volumes of patients were waiting >4months for an FSA in June NDHB (n=141), WDHB (n=271) ADHB (n=183) and CMDHB (n=75). Patient waiting >4 months for treatment in June has increased in, in NDHB (n=62), WDHB (n=229) and ADHB (n=211) and reduced in CMDHB to one patient[1].

Currently there are high levels of paediatric inpatient and follow up activity happening at Auckland, which is to be expected in light of Starship being the Tertiary Provider. Additionally, Waitematā patients are seen and treated at Starship for tonsillectomies. Starship have also provided additional support to WDHB due to reduced capacity owing to leave and recruitment issues. Data is reflective of patients being transferred to ADHB from WDHB and CMDHB which is particularly evident for inpatient and follow ups.

Table1 outlines that there is statistical difference in volumes of high need (Māori/Pacific or Deprivation Quintile 5) patients against non-high need for FSAs, Auckland and Counties Manukau are providing large coverage for their DHB of Domicile per 10,000 in comparison to other DHB's.

There is statistical difference in volumes of high need patients against non-high need for FUPs, Auckland is providing large coverage for their DHB of Domicile per 10,000 in comparison to other DHB's.

Table 1: Direct Aged Standardised Rates per 10,000 by High Need (Māori/Pacific or Deprivation Quintile 5) and Non High Need by DHB of Domicile[2]

	FSA		**FUP**		**ENT Minor Ops**		**Inpatient**	
DHB	**High need**	**Non High Need**	**High need**	**Non High Need**	**High need**	**Non High Need**	**High need**	**Non High Need**
NDHB	98.7	84.7	189.9	138.8	6.4	7.4	90.8	62.4
WDHB	87.1	79.1	114.7	98.1	4.2	4.5	69.8	52.5
ADHB	143.1	91.2	297.3	163.7	3.9	2.9	103.8	60.7
CMDHB	138.9	89.9	179.7	114.3	0.6	0.6	60.6	43.1
Northern Region	**119.5**	**85.2**	**190.3**	**121.8**	**3.2**	**3.4**	**76.1**	**53.3**

There is no significant difference between the volumes of patients for high need and non-high need being seen for ORL minor ops, there is high coverage in Northland compared to the Auckland Metro DHB's

There is statistical difference in volumes of high need patients against non-high need for inpatients, Auckland and Northland are providing large coverage for their DHB of Domicile, with lower volumes being seen per 10,000 for Counties and Waitematā.

Figure 1 demonstrates high levels of FSA to FUP for Māori and Pacific in Northland and Auckland. Counties Manukau have high levels of FSA in comparison to FUP. Across the Northern Region Volumes of Māori accessing ORL services is high in comparison to other ethnicities.

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[1] MoH Planned Care Measure ESPI's Ear Nose and Throat June 2020 (Adults and Paediatrics Combined)

[2] Please be aware that an age-standardised rate (ASR) has no absolute meaning; it is an artificial number based on a hypothetical population (adults and paediatrics) and is only useful for comparing with other rates calculated in the same manner. The ASR presented here is calculated by the direct method per 10,000. WHO world standard population is used as standard.

Table 2: Paediatric FSA and FUP Volumes 2019 Northern Region

	Asian	Māori	Other	Pacific
FSA	1,142	1,134	2,033	960
FUP	1,418	1,806	2,723	1,415
% of population	24%	14%	50%	12%

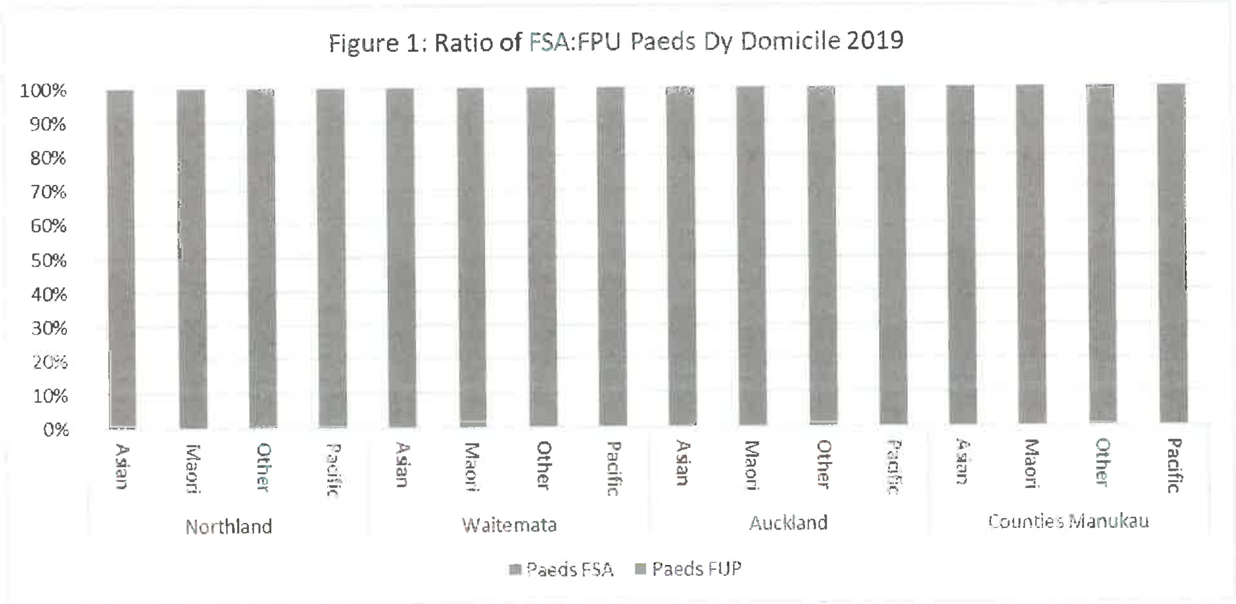


Figure 1: Ratio of FSA:FPU Paeds Dy Domicile 2019

Recommended Solutions:

Through the vulnerable services process it has been agreed that a regional approach for secondary care services would provide measurable gains for paediatric ORL patients and their whānau. It is acknowledged that we are at an early point in the regional discussion and that there will need to be a developmental approach to regional solutions.

The agreed next steps are:

1. Explore the development of a regional waitlist for paediatric ORL patients
2. Explore the development of a regional paediatric ORL pathway
3. Consider options for improved equity of access and outcomes for paediatric ORL patients and specifically Māori and Pacific

Options that have been identified through regional discussion have been detailed in table 2, it is anticipated that some of the options such a regional waitlist could be achieved to address inequities in access to treatment. Further work needs to be carried out to complete data analysis to provide better insight into unwarranted variation and the impact for Māori and Pacific and secondly to further understand these options to determine what a regional model of care would look like and how it could be funded and delivered going forward.

Table 2: Options for improved equity of access and outcomes for the region population

	Advantages	Disadvantages	For resolution
1. Status quo - each DHB delivers to own population, complex tertiary cases to Starship	no change or implementation requirements	Inequities of thresholds, timeliness and outcomes remain. Workforce vulnerabilities remain	Data to identify inequities across the population
2. Regional waitlist	Visibility of all patients and any inequitable waiting times	Will not result in any direct change regionally for patients or services Management of the waitlist and the associated ESPIs within one DHB would need to be resourced. Is this a service change?	The feasibility of a regional waitlist, determining what this would include, how patients would be allocated and who would own this.
3. Joint SMO appointment	Access to surgical expertise across DHBs Provides care closer to home for patients through the majority of services being provided within the DHB Maintains and builds on local DHB services	Less attractive to surgeons, complexities around managing leave, professional development, cover etc.	Models of joint appointments elsewhere across the region or nationally, determine full employment issues
4. Starship delivers regional tertiary ORL with secondary activity delivered by local DHBs for DHB populations - local theatre teams	Retains anaesthetic and theatre nursing competency Provides care closer to home for patients More sustainable ORL medical workforce	Costly to deliver for employing DHB Limitations around overnight stay for patients Variable inpatient ORL medical presence	Full work-up of change requirements and feasibility including Waitematā providing tonsillectomy
5. Starship delivers regional ORL with some offsite activity for local DHB populations - surgeon and theatre team	Provides care closer to home for patients More sustainable ORL medical workforce	Reduces anaesthesia and OR nurse competency for children in CMH, WDHB	Full work-up of change requirements and feasibility
6. Starship delivers regional ORL at Starship and Greenlane	Full suite of ORL sub-specialty expertise, inpatient and daystay cover and nursing expertise.	Loss of anaesthesia and OR nurse competency for children in CMH, WDHB	Full work-up of change requirements and feasibility

	More sustainable ORL medical workforce		

This programme of work will form a sustainable model of care for secondary care paediatric ORL services across the region. This will be monitored and overseen by Starship and with potential to scale across other specialties or population groups over time.

Measurements of success.

- Reduction in waiting times for FSA across the region
- Reduction in waiting times for treatment across the region
- Patient experience
- Patient outcomes

Recommendation

It is recommended a Project Manager (0.25), Clinical Lead (0.1) lead the process through ADHB with an additional Pathway Project Manager for pathway development (0.5 for 6 months) which has been submitted and agreed by MoH through the Planned Care Bids. This will lead the development of a regional Model of Care across the region through further data analysis into pathways and further understanding on inequities for Māori and Pacific which need to be addressed.

Proposed Timeline

A high-level timeframe for this project is as follows:

Commencement of Project Manager, Clinical Lead and pathway Project Manager	November 2020
Commencement of project team ensuring equity led leadership	November 2020
Detailed analysis of options outlined in Table 1 including costing	November - January 2021
Preferred option agreed	February 2021
Confirm cost associated with agreed option	February 2021
Business case and implementation plan developed	February - March 2021
Implementation of model of care across the region to commence.	April 2021
Complete implementation plan	July 2021
Review and evaluate pathway approach and model of care	July 2021

The Project Managers and Clinical Lead will report through to ORL Clinical Director of Starship Hospital and General Manager. Reporting will be provided through to the Vulnerable Services group ORL steering group.

Risk and issues.

If there is not project management and clinical leadership to support this programme of work the service vulnerabilities will endure. If this was not agreed this would require the on-going commitment of GM's and CD's to lead the process resulting in delays and insufficient resource to complete some of the work programme.

Unmet need if there is not robust data analysis on the pathways and projected forecasts and inequities within paediatric ORL resulting in a revised model of care not being sustainable or adequately addressing inequities across the population.

Robust leadership and management will be required to ensure the programme of work is not delayed and any future change processes are supported.

Interdependencies with other Functions:	The recommendations will need to work in tandem with the Head and Neck Cancer Accreditation recommendations
Equity considerations of recommendations:	This process has been equity driven and informed by service data and clinical expertise with recognised gaps in capturing wider population needs such as social determinants of health. Further engagement will be sought in the development of the recommendations from Māori and Pacific.
How recommendations align with Treaty responsibilities:	Aligns to regional service design principles including: - **Partnership** where these proposals have been reviewed by the Māori Clinical Governance Group and Pacific CTAG in late September recommendations have be incorporated into the report. - **Equity** as per above **Active Protection** of Māori taonga, culture and knowledge as per the Regional Service Design Principles are to be factored into any work moving forward

Cost estimate summary for recommendations with financial impact:				
One-off costs:	Capex:	-	Opex:	-$46,875
Recurrent costs (full year effect):	Capex:	-	Opex:	-
Source of funding, if approved:				
Provider cost within existing provider revenue allocation:				
DHB funder cost pressure 2020/21:				
Pre-commitment to funding round 2021/22+:				

Alternate source of funds (please specify details):	Funding has been obtained through the planned care recovery bid for a project manager and clinical lead for $46,875
Basis for DHB cost split:	
Additional comments (please specify):	Additional resource for a pathway project manager across the region will be allocated within existing resource.

Appendix 1: ORL-HNS Principles Adults and Paediatrics.

1. COVID and our regional response to this illuminated a number of service vulnerabilities including paediatric and adult ORL
2. Vulnerabilities may include service, workforce and sub-speciality volumes and may vary over time
3. There is current variability in equity of access and outcomes regionally which there is a commitment to addressing
4. Regional solutions for paediatric and adult ORL-HNS will seek to improve patient safety, quality and health equity
5. Decisions about any future changes will be data informed and regionally agreed
6. Issues and solutions may be different for adult and paediatric populations and will be considered separately

Appendix 2: ORL Paediatric snapshot.

Current Utilisation Profile by DHB of Patient Domicile 2019

	DHB of Patient Domicile (Paeds)							DHB of Patient Domicile (Paeds) % Of Northern Region				
	Northland	Waitemata	Auckland	Counties Manukau	Northern Region	Outside Northern Region	Total	Northland	Waitemata	Auckland	Counties Manukau	Total
FSA	517	1445	1338	1969	5269	82	5351	9.8%	27.4%	25.4%	37.4%	100.0%
FUP	927	1724	2812	1899	7362	149	7511	12.6%	23.4%	38.2%	25.8%	100.0%
Other Inpatient	490	1368	1160	980	3998	185	4183	12.3%	34.2%	29.0%	24.5%	100.0%
Skin Lesions	2	3	1	1	7	0	7	28.6%	42.9%	14.3%	14.3%	100.0%
ENT Minor Ops	13	83	98	18	212	18	230	6.1%	39.2%	46.2%	8.5%	100.0%
FSA Dizzy clinic	0	76	28	2183	2287	5	2292	0.0%	3.3%	1.2%	[illegible]	100.0%
Nurse Clinics FUP	955	745	30	34	1764	3	1767	54.1%	42.2%	1.7%	1.9%	100.0%
Speech Therapy	0	3	4	15	22	0	22	0.0%	13.6%	18.2%	68.2%	100.0%
All Services	2904	5447	5471	7099	20921	442	21363	13.9%	26.0%	26.2%	33.9%	100.0%

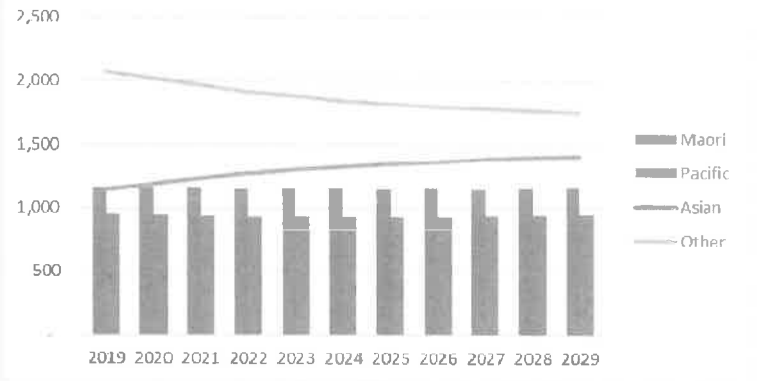
Note:

- High number of Patient referred for ORL treatment at CMDHB
- High volumes of patients seen at CMDHB and ADHB
- High number of FSA in ADHB and CMDHB
- High FUP in ADHB
- High number of inpatients at ADHB which is to be expected
- High number of Nurse Clinics FUP at WDHB and NDHB
- High number of FSA Dizzy Clinics in CMDHB
- The largest growth across ORL services will be in the Asian population followed by other

Current Utilisation Profile by DHB Service 2019

	DHB of Patient Service (Paeds)					DHB of Patient Service (Paeds) % Of Northern Region				
	Northland	Waitemata	Auckland	Counties Manukau	Total	Northland	Waitemata	Auckland	Counties Manukau	Total
FSA	495	1,073	1,930	1,853	**5,351**	9.3%	20.1%	36.1%	34.6%	100.0%
FUP	907	677	4,434	1,493	**7,511**	12.1%	9.0%	59.0%	19.9%	100.0%
Other Inpatient	440	475	2,680	588	**4,183**	10.5%	11.4%	64.1%	14.1%	100.0%
Skin Lesions	2	3	1	1	**7**	28.6%	42.9%	14.3%	14.3%	100.0%
ENT Minor Ops	5	15	210	-	**230**	2.2%	6.5%	91.3%	0.0%	100.0%
FSA Dizzy clinic	-	75	-	2,217	**2,292**	0.0%	3.3%	0.0%	[illegible]	100.0%
Nurse Clinics FUP	963	748	28	28	**1,767**	54.5%	42.3%	1.6%	1.6%	100.0%
Speech Therapy	-	-	9	13	**22**	0.0%	0.0%	40.9%	59.1%	100.0%
All Services	2812	3066	9292	6193	**21363**	13.2%	14.4%	43.5%	29.0%	100.0%

Forcasted Growth FSA per DHB and total ethnicty growth



Appendix 3: Reported Current Position 6 July 2020 for Adults and Paediatrics

WDHB	CMDHB
• Equity of access to services – 45% of patients are declined and referred back to the GP. • Not seeing any P3 • Growth has caused the biggest challenge. • Started as an elective service which outgrew resulting in SMO doing work outside of their JD's. • Resources are limited – physical and FTE, no house surgeon, limited SMO due to clinic capacity and no inpatient beds. • Ability to see patients and operate is hard due to the above • Support to intensive care and emergency depart • Cover H&N, paediatrics emergency and aftercare • Lack of Theatre capacity for ORL Paeds (2 September 2020) • FSA OP secondary patients • Minimal paediatric audiology • Inpatient Grommets and adenoids [also a few more complex Daystay cases – ie. myringoplasty] • No inpatient tonsils – all contracted to ADHB	• ORL-HNS based at MSC and set up as an elective day case service. • Infrastructure makes it challenging to provide an acute service • Service is small, with ageing workforce, limits to on call provision and recruitment issues • Issues working across two sites, no beds at Middlemore for ORL-HNS rely on plastics and ADHB • Intervention rates for paediatrics is not good, with increasing waiting lists and waiting a long time in comparison to Starship. Starship would not be able cope the current volumes coming through to CMDHB. Paeds (2 September 2020) • FSA OP secondary patients • 1x Paed ORL SMO shared with ADHB-selected tertiary OP • Inpatient Grommets and adenoids [At CMDHB we do quite a lot of other ORL Paeds Surgery (in older children mainly >10 yrs or so) - some nasal and limited FESS surgery, Myringoplasties, a few mastoidectomies, some limited head and neck - ie. FNA or node biopsy, skin tags or lesions, pre-auricular sinuses etc.] • Inpatient tonsillectomies – admission Kidz First if required(under Paeds Med) • Longer waiting times than ADHB (& by default WDHB) • Regular outsourcing to private
ADHB	**NDHB (12 June 2020)**
• Issues with patient care with different intervention rates between DHB's, aftercare and inpatient care • Metro Auckland access to emergency theatre is restricted resulting in elective patients being cancelled or acute	• Functioning differently in NDHB • Vulnerable with staffing but in a better position following service plan including peripheral hospital in place and to outsource for recent issues in Private • Working well in resources but could do better.

presentation waiting until the end of the list. • On call roster is problematic across the region due to clinicians opting out. This is made up of clinicians from each DHB. • ADHB does not have any SLA's in place with the other DHB's confirming what ADHB should deliver. • Support required for clinicians across the region • Two theatres which ORL-HNS do not have access to all of the time. Would be hard to find theatre space if anymore SMO were recruited. Potentially space in CTU but would result in split service. Paeds (2 September 2020) • FSA all ADHB patients and tertiary WDHB/CMDHB • Inpatient care all ADHB, WDHB tonsils and tertiary WDHB/CMDHB • Shorter waiting times than CMDHB but • Regular intra DHB additional lists to manage volumes	• Regional networks for complex and tertiary care and paediatrics are important and could be strengthened • On-call is different to Metro Auckland • Intervention rates provide a broad service from paediatrics to extensive H&N and in line with national intervention rates; however, some cases are turned away • More work could be done on quality of life cases. • Theatre provision is good with two new theatres being built.

Appendix 4: Feedback from Pacific Clinical –TAG and Maori Clinical Governance Group

Feedback Paediatrics	What has been done/ will be done
To achieve equity and standardisation we can't allow for different thresholds	The intention of the regional waitlist would enable thresholds to be the same
It would be useful to include data from point of referral from GP	Further analysis will be undertaken to inform the regional solution, including referrals declined.
Ethnicity data should be separated	Including breakdown by Ethnicity for FSA and FUP, more in-depth analysis will be undertaken.
South Island has central control for all of paediatrics; regional waiting lists, can maneuver in regional hospitals to use public/private with/without Zoom. Big systems and volume. Score everybody and if they need an operation, they get an operation.	Contact will be made with Rachelle Love, Māori ORL surgeon to understand the process and systems they have in place.
When adults' surgeons move into paediatrics, not always the best for children; it's adults pushing policies, processes and procedures.	Clinical leads who cover both adults and paediatrics have been at the workshop and acknowledge the impact on children. At this stage there is more commitment to a regional approach for paediatrics to address issues in comparison to adults.
Māori prioritisation and engagement: What conversation has there been? Would people developing the equity pathway be Māori? Draw on existing patient and whānau centred care data? Two people presenting with same issues; Māori or Pakeha get higher priority? Māori were disadvantaged before they even got to this point.	This will be incorporated into the next stage of the process. A processes for prioritisation will need to be built into the process.
Type of support given to Māori applicants? Cultural competency learning for clinicians and Māori ways of engaging with patients.	An assessment would need to be undertaken specifically on this.
Language in paper: • "Equitable outcomes for all patients" – doesn't name Māori, be explicit. • Funding for project manager – be explicit about where this coming from • "Explore development", "Consider options" – strengthen and have a plan to break through and change these issues • Data about Māori experience, project outcomes for Māori; name it, break through the power system of senior doctors	Amendments have been made to the paper to reflect this. Explore remains within the paper as the options are to be further developed as the group so that this might appropriate at this stage. Further data is to be obtained low number of complaints for Maori (1) and Pacific (0) in 2019 from WDHB (awaiting feedback from other DHB's).

Conversely "explore" might be appropriate; we don't know how to undo the issues around senior doctors working across public and private – conflict could wreck the service and lead to longer wait times. We are stuck with them holding this power	Themes have been on communication and information provided.

Feedback Adults	**What has been done/ will be done**
Further work to understand if there is inequity for Pacific in adult pathways – point out where things are broken in order to make the case to fix them.	This will be part of phase 2
Use the families to pivot change – have families on the front end/at centre of the model. Have the clinicians look at it from family point of view, outcome basis, rather than looking at it from clinician point of view. Capture family stories, data, and critical issues for Pacific families. Create a wider conversation. Have consumers sitting on governance and advising – worked well for Head and Neck	HNC patient experience has been obtained through HNC Review. Patient experience has been sought, low number of complaints for Maori (1) and Pacific (0) in 2019 from WDHB (awaiting feedback from other DHB's). Themes have been on communication and information provided.
Is there epidemiological data for adults for these conditions? A lot of this is anecdotal and needs hard data to support.	We have this for HNC but were unable to find any specific research on this. Will look into this as part of phase 2
What levers do you have? Not contractual. • For ongoing specialist registration, they must demonstrate to the College; cultural safety and responsiveness can't be bullies, evidence that working in teams leads to better outcomes. • Main lever is money – how do you incentivise behaviour? • Vulnerable for Māori academics to critique them; point where service becomes dangerous for the vulnerable and mortality may result	The Planned Care Steering Group have requested a revised process is undertaken with an explicit paper going to REF detailing 1. Objectives 2. Current state and momentum behind this 3. Proposed regional plan and risks associated.
Language in paper: • We can gently lead to the solution or tell them there will be consequences if they don't change – their international reputations are at stake • Appendix 2 analysis on selves is quite gentle and needs to be firmer • Appendix 3 principles aren't really principles	See above.

Both the Pacific Clinical -TAG and Maori Clinical Governance Group would like an update on progress.

To	NRHCC Hospital Capacity Service Improvement/Planned Care Steering Group
From	Michael Stewart, Project Lead for Vulnerable Services Vascular and Director of Cardiovascular Services, Auckland DHB, and Peter Watson, CMO, Counties Manukau Health
Date	19 November 2020
Subject	Regional Vascular Vulnerable Service Update and Next Steps
For	**Review and feedback**
Do recommendations incur financial costs not previously planned /approved?	**n/a**

Recommendations:

It is recommended that the Planned Care Steering Group:

- **Note** that there is support from the 4 DHBs' clinical stakeholders to develop a regionally integrated single vascular surgical service which will be delivered via multiple sites in the region.

- **Note** that work has been done internally at Counties Manukau Health as well as through regional discussion on the 12 November, to understand and clarify concerns about the model. In particular these are:
    - Surgical interdependencies – acknowledging that for Counties this is key to their status as a major trauma hub for the region. The regional model of care will need to ensure there is vascular availability both in hours and after hours at Counties Manukau for major trauma cases as well as for the uncommon iatrogenic and obstetric vascular emergencies. Historical data shows that the need for vascular to attend to major trauma cases is about 1 patient a month. Acute support needed for other surgical specialities was not quantified but it was acknowledged that gaps in acute vascular cover at Counties Manukau are increasing and will worsen if the issue of the vulnerable workforce is not addressed. Appropriate mitigation to ensure no change to non-vascular clinical pathways felt to be deliverable.

    - Vascular Surgery and Interventional Radiology – The regional model of care will need to ensure that both specialities are integrated into the Regional Vascular Service with clear definition of what will be done by the different specialities and what will be done jointly. This is important from a safety perspective (maintenance of a safe acute on-call service, with vascular surgery and endovascular IR available across the region) as well as from a professional perspective (recruitment and retention dependent on being able to offer potential access to full range of procedures). The Waitemata/Auckland IR model was highlighted as one which is working well and could be extended to the entire region.

- **Note** that the following will be recommended to REF for endorsement:

    - That a project manager is recruited to drive this work, including further work on health needs analyses, as soon as possible;
    - Regional clinical governance group is established so that there is clear shared accountability for design and implementation, noting the desire expressed by clinical stakeholders for a fully transparent regional process;

- That regional governance addresses regional equity issues and has clear links to the Maori Clinical Governance Group – Te Kahui Arataki for guidance around service re-design and reducing inequities for Maori;
- That an incremental change management approach is taken, with the following suggested as priorities for immediate focus by the regional group:
  - Acute vascular afterhours rota and the shift of AAA work from Counties Manukau Health; and
  - Outpatient and local community outreach services with Northland DHB and Waitemata DHB.

Regional Provider Capacity Planning and Response – Steering Group

Agenda 3.12.2020

Vulnerable services – General

Vulnerable services – Vascular

Vulnerable services – Sarcoma

3/12/2020

Northern Regional Alliance
He Hononga o te Raki

Vulnerable Services Progress Update

	1. Mobilise	2. Gather Info	3. Problem & Solution W/shop	4. Solution Analysis	5. Solution W/shops	6. Finalise & Submit	
Eyes	Key people engaged	Initial info complete	Held 17 June	Streams complete	Held 1 Jul, 19 Aug & 1 Sept	Maori/ Pacific & SG done	√ Completed. REF 17 Sept. Implementing.
Vascular	Briefing held Thurs 11/6	Initial Info complete	Held 25 June	Streams complete	Held 27 Jul + extra CMH 29 Oct + Last 12 Nov	Maori, Pacific & SG done	3rd Wshop complete. To REF 3rd Dec.
ORL/H&N	Key people engaged	Info collected	Held 6 July	Streams complete	Held 7 Aug & 9 Sept	Pacific & Maori SG done	Paeds √ REF Nov, Adults W/shop 11/12
Oral	Key people engaged	Initial Info complete	Held 15 June	Key pressures identified	Held 7 July	Surgical being progressed within ADHB. End to end approach proposed under Sustainability.	
Sarcoma	Key leads briefed	Initial info completed	Held 4 Sept	Work underway	Held 25 Sept + 9 Oct	Māori done, Pacific done SG Dec 3	Progressing after initial delays.
Max Fac	Key people engaged	Initial info collected	Held 8 July	Streams initiated	Ongoing w/shop challenges		Postponed until 2021

NB Spinal & Surgical Prioritisation in Phase 2

3 December 2020

To	Regional Executives Forum
From	Michael Stewart
	Project Lead for Vulnerable Services Vascular Surgery
Date	3 December 2020
Subject	Regional Vulnerable Services Vascular Workstream: Updated Recommendations and Next Steps
For	**Decision**
Do recommendations incur financial costs not previously planned /approved?	**No**

Recommendations and Request:

It is recommended that the Regional Executive Forum:

- **Approves** the establishment of a regional vascular service based on the agreed regional model.
- **Note** the reason for this reconfiguration was mandated by CEs in May 2020 and is driven by the need for a regional solution to long standing issues around vascular surgical service vulnerability caused by persistent difficulties with recruitment and retention of vascular SMOs to both the Auckland and Counties Manukau services.
- **Note** the model advances the concept of a unified regional service, with a single workforce delivering services across multi-sites at the 4 DHBs; consolidating services where this could improve the quality and outcomes of care, and localising services where increased access would improve equity and population health.
- **Note** that further to REF feedback (15 September 2020), the team has reviewed with regional clinical stakeholders - in particular Counties Manukau Health - the identified risks and issues relating to service viability at the Middlemore site, particularly around surgical interdependencies between VS/IR services and other clinical services, and the professional tensions between VS and IR. *See Addendum 1 for details.* Outcomes from these discussions have been incorporated into this paper.
- **Note** that the 4 DHBs' clinical stakeholders have agreed to develop a regionally integrated single specialist vascular surgical service, contingent upon the following changes to the regional model of care:
    - Surgical interdependencies –. The regional model of care will recognise Counties Manukau Health's status as a major trauma hub for the region and will ensure there is vascular availability both in hours and after hours at Counties Manukau Health for major trauma cases as well as for the uncommon iatrogenic and obstetric vascular emergencies. Historical data shows that the need for vascular to attend to major trauma cases is about 1 patient a month. Acute support needed for other surgical specialities was not quantified but it was acknowledged that gaps in acute vascular cover at Counties Manukau are increasing and will worsen if the issue of the vulnerable workforce is not addressed. Appropriate mitigation to ensure no change to non-vascular clinical pathways felt to be deliverable.

  - Vascular Surgery and Interventional Radiology – The regional model of care will ensure that both specialities are integrated into the Regional Vascular Service with clear definition of what will be done by the different specialities and what will be done jointly. This is important from a safety perspective (maintenance of a safe acute on-call service, with vascular surgery and endovascular IR available across the region) as well as from a professional perspective (recruitment and retention dependent on being able to offer potential access to full range of procedures). The Waitemata/Auckland IR model was highlighted as one which is working well and could be extended to the entire region.

- **Endorse** the following as next steps, noting that the anticipated 12 month implementation will be funded via a pooled Sustainability Fund budget (to be confirmed):
  - A project manager is recruited to drive this work, including further work on health needs analyses, as soon as possible;
  - A regional clinical governance group is established so that there is clear shared accountability for design and implementation, noting the desire expressed by clinical stakeholders for a fully transparent regional process;
  - The regional clinical governance group monitors and addresses regional equity issues and has clear links to the Māori Clinical Governance Group – Te Kahui Arataki for guidance around service re-design and reducing inequities for Māori;
  - That an incremental change management approach is taken, with the following suggested as priorities for immediate focus by the regional group:
    - Acute vascular afterhours roster and the shift of AAA work from Counties Manukau Health;
    - Outpatient and local community outreach services with Northland DHB and Waitemata DHB;
    - Establish joint Vascular / Interventional Radiology Regional MDT; and
    - Early engagement with Whanau Ora/ Fanau Ola cultural navigator teams, Maori and Pacific health providers and service users to help review and develop pathways of care.

Background

The original driver for this review was the publication of *Model of Care: Vascular Services, by Ministry of Health* in December 2016, which recommended a regional model of care and service delivery centred on a specialist vascular centre supported by other centres providing some vascular services. The goal of this model is to improve the quality of care for patients though four strategies:

- Optimise prevention and detection
- Reduce clinical variation
- Enhance the intervention pathway
- Integrate services effectively.

The need to progress this work in Northern Region has been highlighted by three main factors:

1. Persistent workforce recruitment and retention issues across both of the main providers of vascular surgical services in the region – Auckland DHB and Counties Manukau Health - resulting in service frailty and heightened risk of services not being able to maintain quality of services or develop capacity. With an ageing workforce and the potential need to recruit a minimum of 5-6 VS SMOs over the next few years, this problem will become more pressing without action.

2. Linked to that, maintaining an out-of-hours on-call roster has been dependent on use of locum staff and at times this is fragile. Moreover, there are no formal on-call arrangements for vascular surgery in 2 of the 4 regional DHBs (Northland and Waitemata), causing a significant patient safety risk with limited support to other surgical services and only ad hoc arrangements for emergency vascular cover.
3. Evidence of delayed / limited access to treatment, continued health inequity with, for example, lower limb amputation rates for Māori twice the rate of non-Māori, long and expensive commutes to outpatient clinics for those living in Northland and Waitemata, and potentially poorer patient outcomes for some.

In addition, vascular surgery must work closely with interventional radiology and the recent development of an integrated IR service across ADHB and WDHB, and planned to include Northland DHB, has demonstrated the potential to develop greater integration of services with joint working and common protocols at the core. Although Counties Manukau DHB is not part of this initial development, the ability to further develop a full regional service has been explored and will be considered further in future. The imperative for any change to the VS model of care to also strengthen joint working with IR at all sites, maintaining and developing those services, is recognised as key to this proposal.

Covid-19 has given DHBs reason to pause and consider how vulnerable services in the region could be strengthened, and in June 2020, CEs and CMOs mandated senior clinicians and managers to work with experts across the DHB to develop proposals for improving service resilience and regional integration of clinical service delivery in six service areas, including vascular surgery.

For vascular surgery, the region has two unique opportunities:

- The opportunity to re-design disparate services into one cohesive service which ensures patients receive consistently good quality, culturally safe, equitable care regardless of where they present in the region, in hours or afterhours. This will include the interface with primary care and community services.
- The opportunity to re-organise the workforce into a singular regional workforce which will be more resilient to challenges around the recruitment and retention of a highly specialised workforce.

Process

A project working group was established in June 2020 to review options for a regional model for the Northern Region, including pathways and afterhours urgent/emergency care, and to understand what the implications of a regional integrated multi-site model would mean and what delivery of vascular services at a DHB level would look like compared to the status quo.

Two workshops have been held to develop the regional model: the first one with project working group members and the second with a wider group of stakeholders including Primary Care, Podiatry, Emergency Department, General Surgery, Nursing, and Interventional Radiology.

The draft model was tested with the Regional Steering Group with multidisciplinary review by CEO, CMO, COO, Public Health, Funder, Māori and Pacific Health leads from across the region. Their feedback is incorporated in the paper.

A further workshop took place on 12th November with representatives from all 4 DHBs which included members of VS and IR multidisciplinary teams.

Regional Vascular Service Model

The regional integrated multi -site model will deliver an integrated regional service which is more equitable and delivers the same high quality vascular services at all DHB sites across the Northern Region. And which is also more resilient to the vagaries of current workforce recruitment and retention issues.

The regional model will be designed and implemented through a regional process, led by an accountable regional clinical governance group with links to the Māori Clinical Governance Group – Te Kahui Arataki and to the Pacific Clinical Advisory Group for guidance around service re-design and reducing inequities for Māori and Pacific.

Key elements of the regional model include:

- A single site undertaking major arterial vascular surgery and endovascular intervention, linked to multiple sites in each Northern Regional DHB
    - Selection of sites based on published criteria, including access to ICU, renal, and IR support, and with facilities including a theatre specification (or hybrid) IR suite and a dedicated vascular surgery ward
    - The recognition of Middlemore Hospital as a designated multi trauma site (specifically "mangled limb" management) and the need to provide 24/7 vascular surgery cover.
- Consistent and equitable prioritisation based on clinical need regardless of where patient is domiciled; with centralised MDT meetings supported by telehealth access to ensure consistency in care planning for all major vascular cases, accessible from all sites
- Centralised waiting list across Northern Region for OP, diagnostic and surgical activity to ensure optimal scheduling and equitable delivery;
- Re-designing out inequities by ensuring there is active Māori and Pacific perspectives and engagement in design of care models;
- No destabilisation of VS support/ IR access for hospitals affected by model of care changes;
- A 24/7 specialised major arterial unit with the surgical volumes to give the best results and be large enough to enable subspecialisation;
- Regionally developed and agreed acute and elective service pathways across the region including primary care pathways and a future role in the promotion of primary prevention initiatives;
- Formalised arrangements for what services are provided in-hours and after-hours across all hospital sites and clear protocols which allow for patients to be transferred to the appropriate centre to receive the best care for their condition;
- Elective pathways which facilitate equitable access to vascular care as close to home and where clinically safe to do so, including increased use of telehealth to support remote clinical working;
- Multi local sites should provide out-patient services and day cases (surgical ± IR) as minimum: patients able to access initial care and rehabilitation as close to home as possible;
- Inpatient vascular opinion/review available within 48-72 hours at each non-vascular centre (prevent unnnecessary transfers to major arterial unit);
- Virtual /telehealth MDT meetings for all major vascular cases, accessible from all hospital sites;
- A regional workforce rostered to work across multi sites, in and after hours;
    - All SMO staff employed and/or rostered at major arterial unit with equitable access to both complex and non-complex cases;
    - All SMO staff will have sessions at all multi sites (working predominantly at one multi-site to develop collegiate working);
    - Single on-call roster at major arterial unit, supporting multi sites through telemedicine advice, robust care pathways and transfer protocols; but including protocols for emergency surgical support at non-arterial sites if required;
- All vascular intervention, whether surgical or endovascular, will be provided by the right people with the best skills for the procedure;
- Robust framework to maintain professional standards in place linked to credentialing of clinicians;

  - This will entail strong collaboration between VS and IR teams for endovascular work with joint operating for more complex procedures, both to optimise outcomes and ensure appropriate clinical volumes across both craft groups; including joint regional VS and IR MDT meetings.
- Robust framework of clinical outcome measures and regular audit of outcomes.

Proposed Benefits

There is good evidence to support the concentration of specialist vascular services in centres serving populations of at least 800,000, with surgeons doing minimum volumes of activity and centres with good critical care, radiological and surgical support services. [1]

Quality

- There is evidence that the centralisation of vascular services in the United Kingdom is resulting in better outcomes . UK-wide mortality rates following elective AAA procedures fell from 7 per cent in 2008 to 2.4 per cent in 2012/13[2]. The operative mortality rate for elective repair in NZ is 6.7%[3]
- Annual caseload of 75 – 100 elective cases of AAA repair associated with the lowest mortality. High hospital volume also associated with shorter lengths of stay, decreased use of blood products and lower complication rates.[4]
- Hospitals in the UK and North America providing a higher annual caseload have lower in-hospital mortality, irrespective of surgical modality used. Outcomes of ruptured AAA repairs were better when care was delivered from hospitals performing high volumes of elective aneurysm repairs, irrespective of surgical modality[5, 6, 7]
- The effects of centralisation on spoke hospitals has not impacted on overall efficiency of the CEA pathway but demonstrated a decrease in service variation seen between different spoke hospitals[8]

Workforce

- High-volume surgeons with specialist vascular surgical training deliver AAA repair with lower perioperative mortality than lower volume surgeons or those without specialist vascular practice[9]

Caveat

We recognise that the benefits outlined above are based on volume and quality indices which may not always align with patients' preference and perspectives on what is important to them. To that end, it will be important to ensure that what patients have fed back about care closer to home, including convenience, proximity to personal support systems and continuity of care need to be taken into account in this recommendation.

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[1] Imison C, Sonola L, Honeyman M, Ross S The reconfiguration of clinical services: What is the evidence? *The Kings Fund.* Published November 2014.

[2] Earnshaw JJ, Mitchell DC, Wyatt MG, Lamont PM, Naylor AR (2012). 'Remodelling of vascular (surgical) services in the UK'. *European Journal of Vascular and Endovascular Surgery*, vol 44, no 5, pp 465–7.

[3] Nair N, Shaw C, Sarfati D, Stanley J. Abdominal aortic aneurysm disease in New Zealand: epidemiology and burden between 2002 and 2006. *N Z Med J.* 2012;125(1350):10-20. Published 2012 Feb 24.

[4] Trenner M, Kuehnl A, Salvermoser M, et al. Editor's Choice - High Annual Hospital Volume is Associated with Decreased in Hospital Mortality and Complication Rates Following Treatment of Abdominal Aortic Aneurysms: Secondary Data Analysis of the Nationwide German DRG Statistics from 2005 to 2013. *Eur J Vasc Endovasc Surg.* 2018;55(2):185-194. doi:10.1016/j.ejvs.2017.11.016

[5] Holt, P.J.E., Karthikesalingam, A., Hofman, D., Poloniecki, J.D., Hinchliffe, R.J., Loftus, I.M. and Thompson, M.M. (2012), Provider volume and long-term outcome after elective abdominal aortic aneurysm repair. *Br J Surg*, 99: 666-672. doi:10.1002/bjs.8696

[6] Dimick JB, Upchurch GR Jr: Endovascular technology, hospital volume, and mortality with abdominal aortic aneurysm surgery. *J. Vasc. Surg.* 47(6), 1150–1154 (2008).

[7] Holt PJ, Karthikesalingam A, Hinchliffe R, Poloniecki JD, Loftus IM, Thompson BG: Ruptured aneurysms in England: a propensity scored analysis of outcomes. *Brit. J. Surg.*(2010)

[8] Partridge, E., Brooks, M., Curd, C., Davis, V., Oates, C., & McGeeney, D. (2017). The effects of centralisation of vascular surgical services in the Bath, Bristol and Weston area on the carotid endarterectomy pathway. *Annals of the Royal College of Surgeons of England*, *99*(8), 617–623. https://doi.org/10.1308/rcsann.2017.0087

[9] Dimick JB, Cowan JA Jr, Stanley JC *et al.*: Surgeon specialty and provider volumes are related to outcome of intact abdominal aortic aneurysm repair in the United States. *J. Vasc. Surg.* 38(4), 739–744 (2003).

Issues/Risks and Mitigation

The following are issues and/or risks which have been identified that will need to be considered in a reconfiguration of vascular surgery in the region. It is worth nothing that some of the challenges around ensuring ongoing recruitment and retention for VS and IR have been considered and successfully resolved in other health systems adopting this model. There are case studies from the UK vascular networks where these type of arrangements have been considered and from which the region can draw.

	Issue/ Risk	**Potential mitigation**
Equity *Refer Appendix 2*	• Importance of maintaining services close to home especially for Māori and Pacific and rural communities • Delivering care closer to home for Waitemata and Northland patients • "Postcode care " – different thresholds and access depending on where patient lives in the region	• Close working with and guidance from the Māori Clinical Governance Ropu and the Pacific Clinical and Technical Advisory Group on service design • Co-design with key patient groups and Māori and Pacific providers to ensure service design addresses barriers to access and inequities instead of exacerbating them. • Multi-site hospitals will, at a minimum, provide out-patient services, vascular labs and day cases (surgical ± IR) with: patients able to access initial care and rehabilitation as close to home as possible. • Improve access to consultant vascular surgeon at multi-sites, for in-hours and after-hours: outpatient clinics, day case lists, ward referrals, vascular emergencies in non-vascular operating theatres recognising that some sites are also a part of the major trauma network • Clear pathways and guidelines for emergency vascular cover • Invest in telehealth technologies to support outreach clinics and care closer to home Establish cross regional monitoring by ethnicity and geography to track and demonstrate the impact on equity and outcomes
Workforce	• Regional workforce located in local DHBs and rostered working across in and after hours services • SMO contracts where SMOs have dual roles • SMO buy-in to the regional oncall roster particularly in the short to medium term before additional staff are onboard.	• Workforce management of contract changes via a formal HR process of consultation with staff of proposed changes • Recruitment for SMOs to be prioritised.
Interventional	• As more vascular surgeons	• Set up joint VS/ IR regional MDT for case selection

Radiology	are trained in endovascular intervention, there may not be enough volumes to justify all individuals continuing to maintain endovascular interventional skills.	• Close collaboration between VS and IR required • Subspecialisation • Clinical outcomes measures and audit of outcomes used for both quality assurance and to help drive appropriate subspecialisation across the workforce
Interventional Radiology (Counties Manukau)	• Potential loss of complex endovascular work - the impact on current staff satisfaction and future staff recruitment	• Single waiting list to increase the amount of endovascular work undertaken at Counties Manukau Health – currently only a small number of complex vascular procedures are completed at CMH, e.g. in 2019, a total of 20 AAA repairs were carried out of which 8 were endovascular repairs[10]. Moving to a regional model could increase opportunities for interventionists in multi-site hospitals to be involved in more complex cases in the arterial centre to maintain or develop their skills, whilst ensuring patient care in hospital site with the volume required to optimise outcomes. • Agree guidelines and engage in MDT meetings for case selection and quality control • Auckland patients who are geographically closer to Middlemore to be scheduled at Counties Manukau Health to increase access for vulnerable Māori and Pacific communities
Non-vascular surgery (Counties Manukau)	• Concern that reducing vascular surgery volumes at Counties Manukau Health could affect safe delivery of other surgical services.	• Plan to roster some vascular outpatient, diagnostic or surgical activity at CMH Monday-Friday to ensure continued on-site surgical presence for acute support if needed. • Robust protocol for out of hours vascular surgical support, including potential to attend on site, at all 3 major Auckland metro hospitals in place.

Conclusion

There is broad consensus amongst clinical stakeholders on the regional integrated multi-site model of care. However, the major challenges to implementation are as stated above. Any undeclared concerns will need to be managed through the implementation stages.

Interdependencies with other Functions: (Ensure recommendation is agreed by other Function team	Māori Clinical Governance Roopu

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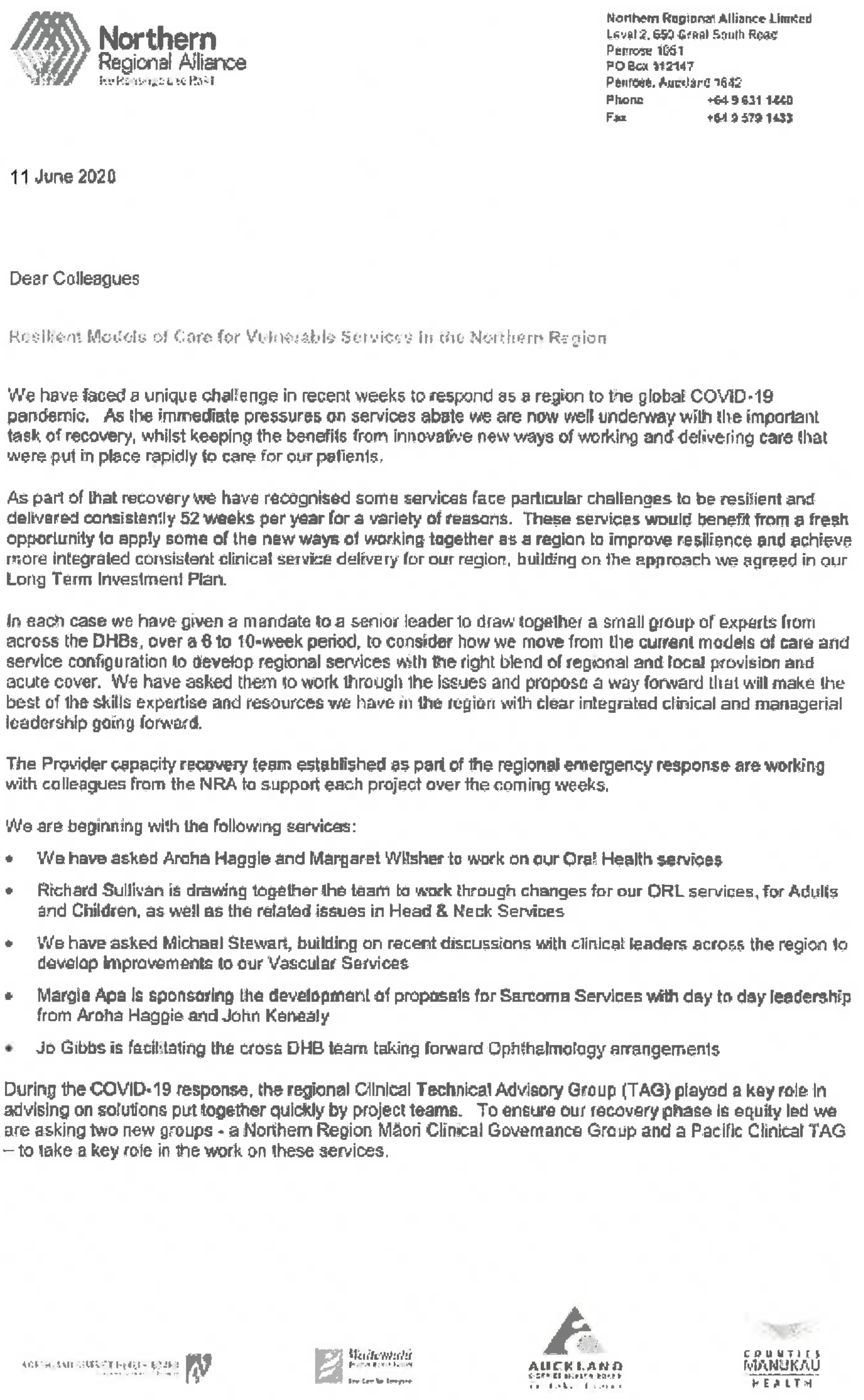
[10] Total AAA repairs for the Northern Region in 2019 was 135 (96 endovascular + 39 surgical)

prior to submission)	
Equity considerations of recommendations:	Equity will be progressed broadly via inputs from Māori and Pacific clinical governance and advisory groups and within the Regional Clinical Governance Group overseeing regional design and implementation.
How recommendations align with Treaty responsibilities:	Recommendations were developed following feedback from the Māori Clinical Governance Roopu. Appendix 2 of the paper outlines the ways in which the project design and implementation will take into account the Treaty principles of Partnership, Equity, Options and Active Protection.

Appendix 1 – CEs Letter



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11 June 2020

Dear Colleagues

Resilient Models of Care for Vulnerable Services in the Northern Region

We have faced a unique challenge in recent weeks to respond as a region to the global COVID-19 pandemic. As the immediate pressures on services abate we are now well underway with the important task of recovery, whilst keeping the benefits from innovative new ways of working and delivering care that were put in place rapidly to care for our patients.

As part of that recovery we have recognised some services face particular challenges to be resilient and delivered consistently 52 weeks per year for a variety of reasons. These services would benefit from a fresh opportunity to apply some of the new ways of working together as a region to improve resilience and achieve more integrated consistent clinical service delivery for our region, building on the approach we agreed in our Long Term Investment Plan.

In each case we have given a mandate to a senior leader to draw together a small group of experts from across the DHBs, over a 6 to 10-week period, to consider how we move from the current models of care and service configuration to develop regional services with the right blend of regional and local provision and acute cover. We have asked them to work through the issues and propose a way forward that will make the best of the skills expertise and resources we have in the region with clear integrated clinical and managerial leadership going forward.

The Provider capacity recovery team established as part of the regional emergency response are working with colleagues from the NRA to support each project over the coming weeks.

We are beginning with the following services:

- We have asked Aroha Haggie and Margaret Wilsher to work on our Oral Health services
- Richard Sullivan is drawing together the team to work through changes for our ORL services, for Adults and Children, as well as the related issues in Head & Neck Services
- We have asked Michael Stewart, building on recent discussions with clinical leaders across the region to develop improvements to our Vascular Services
- Margie Apa is sponsoring the development of proposals for Sarcoma Services with day to day leadership from Aroha Haggie and John Kenealy
- Jo Gibbs is facilitating the cross DHB team taking forward Ophthalmology arrangements

During the COVID-19 response, the regional Clinical Technical Advisory Group (TAG) played a key role in advising on solutions put together quickly by project teams. To ensure our recovery phase is equity led we are asking two new groups - a Northern Region Māori Clinical Governance Group and a Pacific Clinical TAG – to take a key role in the work on these services.

AUCKLAND

COUNTIES MANUKAU HEALTH

Those of you who are approached to contribute your expertise to these five projects over the next 3 months can expect a more detailed briefing. Achieving real change in these services is a key priority for our region and we recognise it will need us to continue with the same flexible positive approach so in evidence during the emergency response.

We will consider carefully the findings of these projects and provide a clear mandate to implement changes that will benefit patients, and will keep you updated as the work progresses

Ngā mihi

Ailsa Claire
Chief Executive Officer
Auckland District Health Board

Margaret Wilsher
Chief Medical Officer
Auckland District Health Board

Margie Apa
Chief Executive Officer
Counties Manukau Health

Peter Watson
Chief Medical Officer
Counties Manukau Health

Dale Bramley
Chief Executive Officer
Waitematā District Health Board

Jonathan Christiansen
Chief Medical Officer
Waitematā District Health Board

Nick Chamberlain
Chief Medical Officer
Northland District Health Board

Mike Roberts
Chief Medical Officer
Northland District Health Board

Appendix 2 - Equity in regional vascular surgical services

Introduction

This has been prepared in response to a request from members of the steering group, the Māori Clinical Governance Rōpū and Pacific Clinical and Technical Advisory Group, for more equity data to provide a view of what the current issues are for Vascular Surgery services in the region.

Limitations

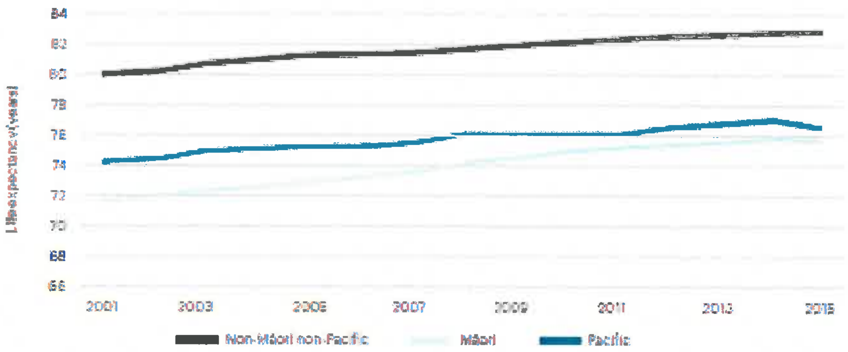
We have done a scan of service delivery data for vascular surgical services across the two main providers – Auckland DHB and Counties Manukau Health. Getting good quality data has been challenging in particular for Counties Manukau Health. The Counties Vascular Surgery service is a part of General Surgery and do not have elective services patient flow indicators captured and reported as a matter of routine. CMH were unable to provide data on what their current waiting lists for vascular services were for ESPIs 2 (time to FSA) and 5 (time to treatment) but were able to provide some DNA information and retrospective data on resolved ESPI2 breaches.

Summary of current picture in the Northern Region

Outcomes

- There is a life expectancy gap of approximately 6 to 8 years for Māori and Pacific compared to non- Māori / non-Pacific.
- Vascular disease is an important contributor to health inequities for Māori and Pacific peoples[11, 12]

FIGURE 1: LIFE EXPECTANCY FOR PACIFIC, MAORI AND NON-MAORI NON-PACIFIC PEOPLE IN NZ, 2001-15



SOURCE: MORTALITY COLLECTION (MICHAEL WALSH, EPIDEMIOLOGIST, AUCKLAND DHB AND WAITEMATA DHB).

- Mortality from cardiovascular disease is more than 2.5 times higher for Māori than non-Māori/non-Pacific[1]
- Cardiovascular disease is the leading cause of death for Pacific people with affecting 1 in 3 Pacific people[13]

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[11] Ministry of Health. 2015. *Tatau Kahukura: Māori Health Chart Book 2015 (3rd edition).* Wellington: Ministry of Health.

[12] Gray S., Garrett M. 2019*Audit of Diabetes Related Lower Limb Amputations in the Northern Region 2013 – 2016.* Prepared for the Northern Region Diabetes Foot Advisory Group

[13] *Mortality Tables*. Ministry of Health. Published April 2020

- People of Pacific ethnicity have a 12 times higher, and Māori six times higher, rate of starting treatment for end-stage renal disease than people of European ethnicity. Population rates of those starting dialysis with concurrent diabetes: 74% in Pacific and 68% in Māori compared to 24% in European.[14]
- Rates of lower limb amputations in the Māori diabetic population are at more than twice the rate of non-Māori/non-Pacific diabetic population; and the average age of Māori LLA candidates at least 10 years younger than non-Māori[2]
- Rates of lower lower limb amputations in the Pacific diabetic population are also at more than twice the rate of non-Māori/non-Pacific diabetic population

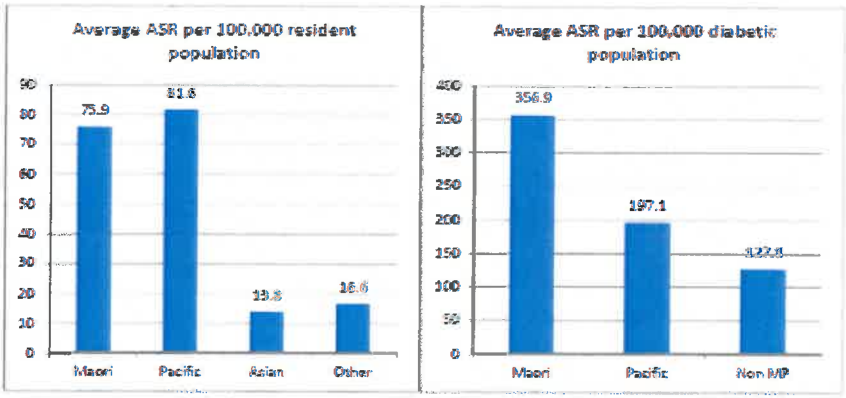

Figure 4 Average ASR per 100,000 resident / diabetic populations for admissions for diabetes related LLAs July 2013 – June 2016 by ethnicity for the Northern Region

Access

CPAC thresholds are not used for vascular surgical services in the region but access is based on clinical presentation. Any delay to clinical presentation could potentially mean worse outcomes for patients. Limited clinic capacity can mean that patients are sometimes not seen in a timely manner, and Covid-19 has exacerbated matters for planned care services in this respect.

- Data from ADHB's Planned Care Equity Value Stream shows that in 2018/19 there are actually no significant inequities once people were in the vascular surgical services pathway. See Table 1.
- In terms of timeliness of access to vascular surgery:
  - Māori had slightly longer waits than non-Māori/ non-Pacific (mean of 64 days compared to 58 days) but all groups received an FSA within the targeted 4 month wait times.
- FSA outcomes
  - 59% vs 52% given a follow up; 3% vs 3% added to surgical wait list
  - Waiting list data appears to indicate no issues with any patients waiting longer than 4 months for surgery once on the surgical waiting list
  - Some patients appear to be waiting longer from referral to FSA, and this appears to be more significant for Māori and Pacific patients as a percentage of overall referrals
  - Deep dives shows that these delays are due to access to diagnostics for vascular (i.e. blood flow tests – angiography etc.)

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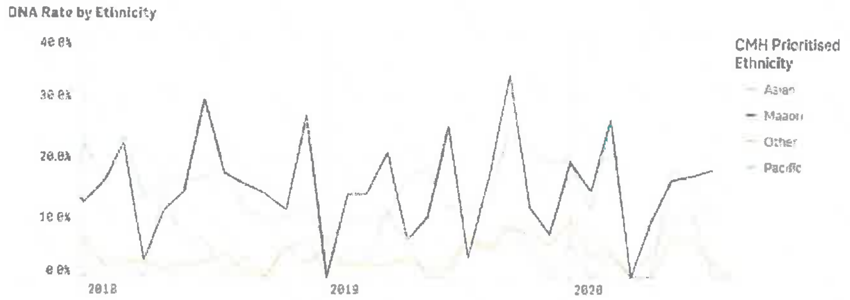
[14] *Australia and New Zealand Dialysis and Transplant Registry*, National Renal Advisory Board. Aotearoa New Zealand Nephrology 12th Annual Report. 2017.

- Counties Manukau data shows that in 2018/19 only 1 patient waited > 120 days for a FSA. All others received an FSA within the targeted 4 months' wait times.[15]
    - In 2019/20, of the 154 patients who waited > 120 days for a FSA, 17% were Māori compared to 21% Pacific and 62% Others.
    - Mean waiting times for Māori waiting < 120 days for a FSA was 78 days compared to 81 for Pacific and 76 days for Others
    - Mean waiting times for Māori waiting > 120 days for a FSA was 142 days; similar to Others (141 days) and Pacific (140 days).

Patient Experience of Care

- DNA rates for Vascular outpatient clinics – both FSA and Follow Ups - for Māori and Pacific at the two main vascular surgery sites (ADHB and CMH) are consistently higher than non-Māori/non-Pacific, and further work needs to be done if services are being re-configured.
- For ADHB the planned care equity value stream work found the following for vascular surgical services:
    - Māori DNA rate for FSAs was 5x higher than for non-Māori/non-Pacific
    - Māori DNA rate for Follow Ups almost 3 times higher than for non-Māori/ non-Pacific

Counties Manukau – DNA rates by ethnicity



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[15] Retrospective 2019/20 data from the service showing only resolved ESPI 2 breaches. No data on current waiting list for vascular surgical services was available.

Table 1: ADHB Planned Care Equity Value Stream - 2018/2019 service utilisation data

Vascular – Planned Care Equity Overview

	Māori	Pacific	European	Asian	Other	Māori	Pacific	European	Asian	Other	Māori	Pacific	European	Asian	Other
Referrals	*Referrals*					*Referrals Rejected*					*Proportion of Referrals Rejected*				
	204	204	1436	227	89	19	23	95	21	10	9%	11%	7%	9%	11%
Waiting for FSA	*Patient Count*					*Mean Days Waiting*									
	94	136	900	163	57	64	51	58	60	63					
ESPI2 Compliance	*Waiting <= 4 months*					*Waiting > 4 months*					*% Waiting > 4 months*				
	95	136	900	163	57						0%	0%	0%	0%	0%
FSA Outcome	*Follow Up Appointment*					*Waitlist for Surgery*					*Discharge to GP*				
	55	72	465	86	29	3	5	26	3	2	36	59	409	74	26
	59%	53%	52%	53%	51%	3%	4%	3%	2%	4%	38%	43%	45%	45%	46%
FSA Attendance	*FSA DNAS*					*FSA Attended*					*Ratio of FSA to 1 DNA*				
	36	30	83			103	147	1,209			3	5	15		
FSA to Follow Up	*FSA*					*FU*					*Ratio of FU to 1 FSA*				
F/U Attendance	*Follow Up DNA*					*Follow Up Attended*					*Ratio of FU to 1 DNA*				
	36	72	126			246	281	2,407			7	4	19		
Procedure Attendance	*DNA Procedure / Other*					*Procedure / Other Attended*					*Ratio of Procedure to 1 DNA*				
	14	0	31			220	57	1,148			16	-	37		
Waitlist Outcome	*Surgery Completed*					*Surgery Deferred*					*Surgery Suspended*				
	150	139	600	132	21	27	35	93	13	4	6	5	39	5	3
	82%	78%	82%	88%	75%	5%	6%	4%	3%	10%	1%	1%	2%	1%	8%
Deferral Reason	*Deferred by Hospital*					*Deferred for Medical Reasons*					*Deferred by Patient*				
	16	22	58	8	2	6	2	16			5	11	19	5	2
	59%	63%	62%	62%	50%	22%	6%	17%	0%	0%	19%	31%	20%	38%	50%
Suspend Reason	*Suspended for Medical Reasons*					*Suspended by Patient*									
	3	2	27	2	1	3	3	12	3	2					
	50%	40%	69%	40%	33%	50%	60%	31%	60%	67%					

Proposed priorities for designing an equitable regional vascular surgery service

At a very high level, these are the three main areas the Project proposes to focus on but will work with and take direction from the Northern Region Māori Clinical Governance Rōpū and the Pacific Clinical and Technical Advisory Group to review and confirm direction should implementation proceed.

- *Improve access and quality along the care pathway*

Whilst the reconfiguration of vascular surgical services is to ensure that there is high quality vascular care to deal with the consequences of vascular disease caused by diabetes, renal or cardiovascular conditions, what our data is telling us is that the region needs to look more closely at the front end of pathways of care.

To do that the Project recognises that better integration with primary care pathways, community services, diabetes and cardiology pathways etc. need to be a part of discussions around the pathways of care, so, that patients are accessing care much earlier in their pathway. There is also a need to target preventative care earlier for Māori and Pacific given the average age of Māori and Pacific for conditions like stroke, diabetes and cardiovascular disease is at least 10 years younger than non-Māori/non-Pacific.

This work needs to include further detailed analysis of patient journeys, specifically:

1. Time from primary care referral to FSA, including diagnostics pathways
2. Time from joining surgical waiting list to undergoing surgery
3. Total time from primary care referral to completed surgery (acknowledging that this is different to 1+2)
4. Proportion of vascular surgical procedures done as urgent/emergency vs elective,
5. Tracking DNA rates and understanding the reasons for patients not attending clinics

All of the.above broken down by Māori /Pacific/other groups, and analysed both as a whole and at a DHB level (both DHB of Domicile and DHB of Service).

- *Understand the Māori and Pacific worldview of health*

> " *Our framework suggests that what you need to do is find people who are impacted by this condition, and make sure that they are at the table when figuring out what needs to be done and how it should be done. It's not just the DHB saying 'Here's what we need to do, based on international best practice'. We actually need to go to the community and say 'here's what we've learned from international best practice. How does it resonate with you? What do you want to be done differently? Would this work? Would it not? Why?' ".*
>
> *Professor John Oetzel, Lead Researcher,*
> *He Pikinga Waiora*

The high DNA rates for Māori and Pacific across ADHB and CMH vascular services have been persistent and show no sign of abating. Understanding how Māori and Pacific patients and their whanau/fanau are experiencing services will be key to any re-configuration of services.

A trawl of the ADHB patient survey portal feedback found that there were only 13 Māori and 6 Pacific respondents to the vascular services inpatient survey from 1 January 2018 to 30 June 2020. There were no responses returned for outpatient services for the same period for Māori nor Pacific.

Electronic-based patient surveys are not optimal tools for services to gain an understanding of how Māori and Pacific patients are experiencing their care. The insight from navigator teams or the Whanau Ora/ Fanau Ola teams will be key to supporting co-design with Māori and Pacific patients and their whaanau/ fanau.

There are also existing pieces of published research like the series authored by Fiona Cram, and Hotu et al which can provide an excellent secondary source of data as a starting point to understand what are some of the barriers to health services for Māori patients and their whaanau, and physician-related barriers.[16, 17, 18]

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[16] Cram F. 2014. *Improving Māori access to health care: Research report.* Auckland: Katoa Ltd.

[17] Cram F. 2014. *Improving Māori access to cancer, diabetes and cardiovascular health care: Key informant interviews.* Auckland: Katoa Ltd.

[18] Hotu C, Bagg W, Collins J, et al. 2010. A community-based model of care improves blood pressure control and delays progression of proteinuria, left ventricular hypertrophy and diastolic dysfunction in Māori and Pacific patients with type 2 diabetes and chronic kidney disease: a randomized controlled trial. *Nephrology Dialysis Transplantation*25: 3260-3266.

- *Measuring equity*

Measuring and tracking progress is needed to reduce inequities and the re-configuration of vascular surgical services will ensure that patient flow indicators, quality and clinical outcome measures are reported by ethnicity and geography.

Addendum 1:

Vulnerable Services Vascular Recommendations – Further CMDHB Feedback

UPDATE 26/11/2020: This feedback was received on the 15 September 2020 and the project team has since had further dialogue with Counties Manukau Health and other regional clinical stakeholders to review and clarify the issues raised. Mitigation to the risks and issues has been incorporated into the revised regional model of care and reflected in the updated recommendations to REF.

Recent discussions at CMDHB have focused on the following issues requiring consideration in taking forward the outcomes of the project:

1. The need to move to a hub and spoke model for the region is supported to address service availability for WDHB and NDHB
2. The first step towards any changes in protocols between CMDHB and the ADHB hub service should be the completion of work on the identified risks and issues relating to service viability at the Middlemore Site, particularly:
    a. The development of CMDHB/ADHB service pathways
    b. A workforce development plan that supports Vascular and Interventional radiology sustainability
    c. A health needs analysis of the CMDHB population in relation to vascular services particularly considering diabetic and renal diabetic patients is put alongside the evidence that informed the protocols about case selection for hub vs spoke based treatment
3. An analysis of the outcome impact from any consequences of interdependencies between local IR/vascular services and other clinical services within each hospital that cannot be mitigated, together with how local clinical pathways operate should be developed to understand how far these would offset the mortality benefits of the new model for the counties' population
4. The CMDHB leadership propose that further regional work goes forward on the implementation issues with an IR subgroup in parallel with the Vascular group, and consideration of the related issues, or else broaden the scope of the project to include both vascular and IR services
5. The go/no go decision on changes to the hub/spoke patient flow changes, together with the combining of the clinical workforces between the two services, is taken following this further consideration of local viability of services at CMH as the outcome of this work

Northern
Regional Alliance
He Hononga o te Raki

To	Planned Care Steering Group
From	John Kenealy Exec Lead Vulnerable Services Sarcoma Project
Date	3 December 2020
Subject	Regional Sarcoma Services Recommendation and Next Steps
For	**Feedback**
Do recommendations incur financial costs not previously planned /approved?	Y

Recommendations

It is recommended that the **Planned** Care Steering Group:

- **Notes** the feedback on this paper received from the Māori Clinical Governance Group and the Pacific Clinical TAG Group
- **Notes** the feedback on this paper received from the Northern Region Expert Group and other stakeholders
- **Endorses** that the following immediate changes are taken to mitigate the vulnerability of the existing MDM and lists with agreed actions and timeframes, pending transition to the agreed option in 2021/22
    - Address succession planning and funding for the MDM coordinator and data base manager role
    - Address concern about theatre access for operating lists at the MMH site by reconciling surgeon availability / need with theatre availability
    - Address concern of regular access to GA radiology lists (supporting data to be provided)
    - Address lack of CNS support at ADHB site.
- **Provides feedback** on the options for consideration for the Northern Region Sarcoma Service model.
- **Notes** the intent that the next stage development of the detail and implementation of change will be delivered with project leadership and clinical time as set out in the proposals agreed by REF for submission to the Ministry of health funding in response to the call for proposals for sustainability projects.

Background/Context

- Post lockdown, the Northern Region's COVID-19 response turned to recovery. The NRHCC established the Hospital Capacity Service Improvement Steering group to lead an equity focused recovery program for planned care which included a particular focus on seven potentially vulnerable services to help them a) recover from the impacts of the COVID-19 lockdown and b) be more resilient with a particular focus on equity.

- The Regional Sarcoma Service delivered through Counties Manukau was initially identified as a vulnerable service due to changes in the specialist workforce that led to a change in referral for surgery patterns between CMDHB and ADHB without a clear plan to support a change in provider arrangements and the consequence of sarcoma surgeries displacing patients within the orthopaedic service at Auckland DHB.

- This 'vulnerable services' project was initiated utilising a rapid process with key regional leads leveraging the rapid progress gained under COVID, while incorporating some of the longer term goals in the LTIP and Cancer Deep Dive. John Kenealy and Aroha Haggie were mandated by the CEs to lead this project and Margie Apa is the sponsor.

- The driver and purpose of this project is to address the issues with regard to orthopaedic sarcoma. Where related services interface and/or could be part of the solutions they are in scope.

The key problem to solve

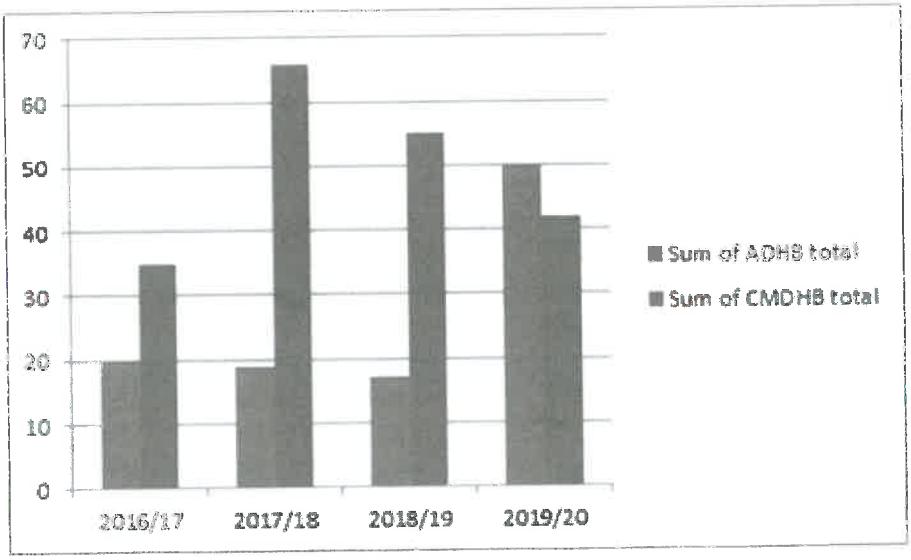
Equity of access and service provision

The regional sarcoma service operates on a split site basis across CMDHB and ADHB but there has been no lead taken by either DHB for planning the combined workforce, capacity and facility requirements of the service across the two providers. There has been a change in the sarcoma patient flow between ADHB and CMDHB, without visibility of the clinical pathway across the region, or coherent service planning to proactively identify and agree the resources required and associated funding.

A key consequence is that the time-critical nature of sarcoma surgery has displaced other patients within the orthopaedic service at ADHB who are already disadvantaged by disproportionately long waiting times for elective surgery.

Data for sarcoma inpatient events for CMDHB and ADHB shows the change in patient flow. Total volumes increased from 2016 to 2017 in CMDHB and subsequently decreased in 2019/20, whilst volumes at ADHB had more than doubled (see Figure 1) and the majority of orthopaedic surgical treatment now takes place at ADHB.

Figure 1. Sarcoma inpatient events at CMDHB and ADHB, 2016/17 to 2019/20 (NMDS data).

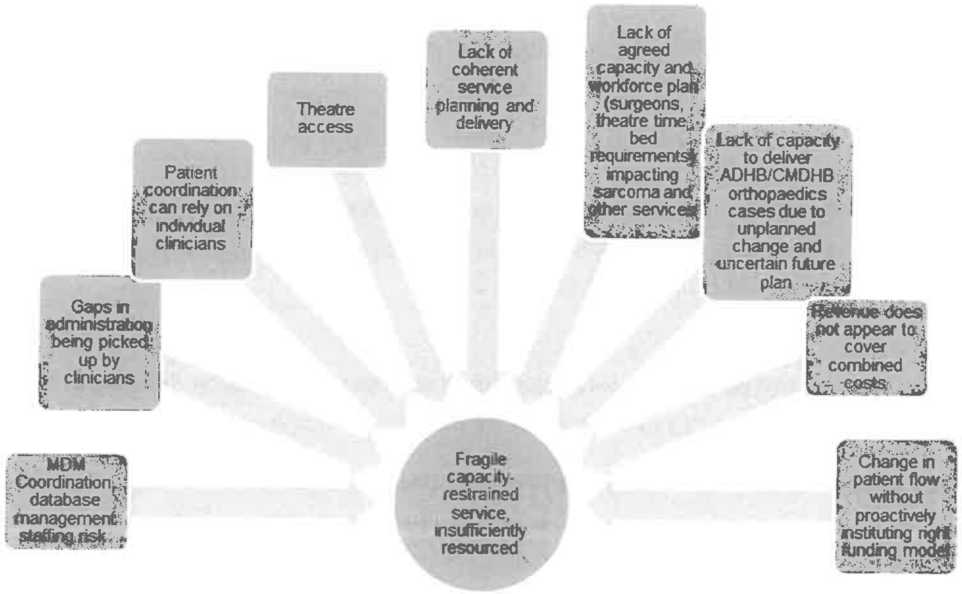


Discussion with service leads has identified gaps in the core resourcing of the MDM hosted by Counties Manukau which leave the service highly vulnerable to the loss of a single individual, as well as sporadic access to theatre time for surgery and interventional radiology at CMDHB which is contributing to sustained failure to meet treatment time standards.

Data on costs has not been quality assured but suggests a prima facie case that the current arrangements are not financially sustainable either, with the split site arrangement costing close to $3m on a WIES income of $2m for the number and complexity of patients treated. Figure 2 captures the various drivers contributing to fragility of the service.

Despite the substantially challenged nature of the organisational arrangements, it is apparent that the nationally recognised MDM expertise in pathology and radiology that is provided by CMDHB clinicians, and the collaborative practice of the orthopaedic surgeons working across DHB boundaries in a regional way, with highly aligned views about future models of care mean there is the potential to create a high quality centre of excellence and equity for sarcoma care if managerial and service arrangements are addressed.

Figure 2. What's the problem we're trying to solve?



Providing a well-planned and appropriately resourced service will ensure optimal, equitable patient outcomes delivered in a timely manner, and importantly a well sign-posted and coordinated pathway for patients.

Current state

Sarcoma encompasses bone (orthopaedic), soft tissue and retroperitoneal sarcomas. Sarcoma is a low volume, high complexity tumour stream requiring treatment from a highly specialised multidisciplinary team.

Recommendations from the UK National Institute for Clinical Excellence (Improving Outcomes Guidance, IOG) and the London Model of Care for Cancer Services set out the catchment size and minimum volumes by provider for a range of cancer procedures. For sarcoma this was a catchment area of 7 million for bone and 2-3 million for soft tissues with 100 cases per year for soft tissue and bone or 50 for bone if also undertaking 100 for soft tissue. The 2018 NRLTIP Cancer Deep Dive highlighted 76 new cases in total for the region in 2014 split between two surgical treatment sites with a supra-regional MDM in place at CMDHB was not compliant with these recommendations.[1]

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[1] NRLTIP Cancer Deep Dive – Final Report 2018

The Sarcoma Multidisciplinary Meeting (MDM) is hosted by CMDHB and accepts referrals from all DHBs in the North Island. The MDM provides key diagnostic expertise to almost 1,000 patients per year, almost 90% of which do not go on to sarcoma surgery. There is specialised sarcoma radiology and pathology expertise at CMDHB and specialist surgeons over both ADHB and CMDHB sites. The service has evolved over time due to the high level of expertise of the individuals in the region.

Access to other specialist services in line with tumour pathways such as Paediatric / Adolescents and Young Adults (AYA) Oncology, Medical Oncology and Radiation Oncology, and Plastic Surgery are also key to the provision of comprehensive specialised sarcoma services within the northern region.

A view of the current Multidisciplinary Team (MDT) and a pictorial view of the current service model are shown in Appendix 1 and 2, respectively.

Waiting times

The service under current arrangements has consistently not been meeting Faster Cancer Treatment (FCT) wait time standards for patients for the last year of data collected: the FCT 62-day indicator was met in 78.6 % of patients vs target of 90% over 12 months from July 2019 to June 2020.

Equity

Sarcoma is a low volume tumour stream and due to the relatively small numbers it has been difficult to make any conclusions with regard to identifying inequities in care for patients with sarcoma.

According to data from the NZ Cancer Registry for new sarcoma registrations in the Northern Region (2015 to 2019) the percentage for Māori and Pacific peoples was 14.31% and 12.74%, respectively. Table 3 shows the data by ethnicity and age group.

Figure 3. New Sarcoma *Registrations

Ethnicity	0 to 24 years	25 to 64 years	65 years and over	Total
Pacific Peoples	12	40	21	73
Māori	11	45	26	82
European or Other	18	97	249	364
MELAA	1	3	3	7
Asian	8	28	11	47
	50	213	310	573

*mesothelial and soft tissue C45-49, bone and articular cartilage C40-41.

The percentage of Māori and Pacific peoples in the Northern Region population in the same time period was 14% and 12.08% respectively.

The northern region Faster Cancer Treatment performance data does not show a substantial difference between ethnicities, including for Māori or Pacific but the overall numbers are small (see Appendix 3.)

National FCT data have been requested and will be added when available.

The availability of survival data is limited, but in the Northern Region 2010 data suggests that, for bone and soft tissue sarcoma respectively, 78% and 83% of patients survive for 1 year, and 39% and 60% of patients survive for 5 years (see Appendix 4; data not available by ethnicity).

A survival analysis in Adolescents and Young Adults (AYA) has shown that New Zealand achieves excellent survival outcomes for many common AYA cancers such as lymphomas, germ cell tumours, melanomas, and thyroid carcinomas and has also identified some specific cancers, namely bone and soft tissue sarcomas, CNS tumours, and adolescent ALL, where the overall survival does not currently appear to meet international benchmarks[2]. In the same study, comparisons by AYA diagnostic group provided evidence of a higher incidence of bone tumours for Maori. Across all cancers in this study, Māori and Pacific had a lower 5-year survival compared with non-Māori/ non-Pacific peoples.

Although there appears to be a paucity of equity data for sarcoma, where data exists outcomes are inequitable.

Patient experience

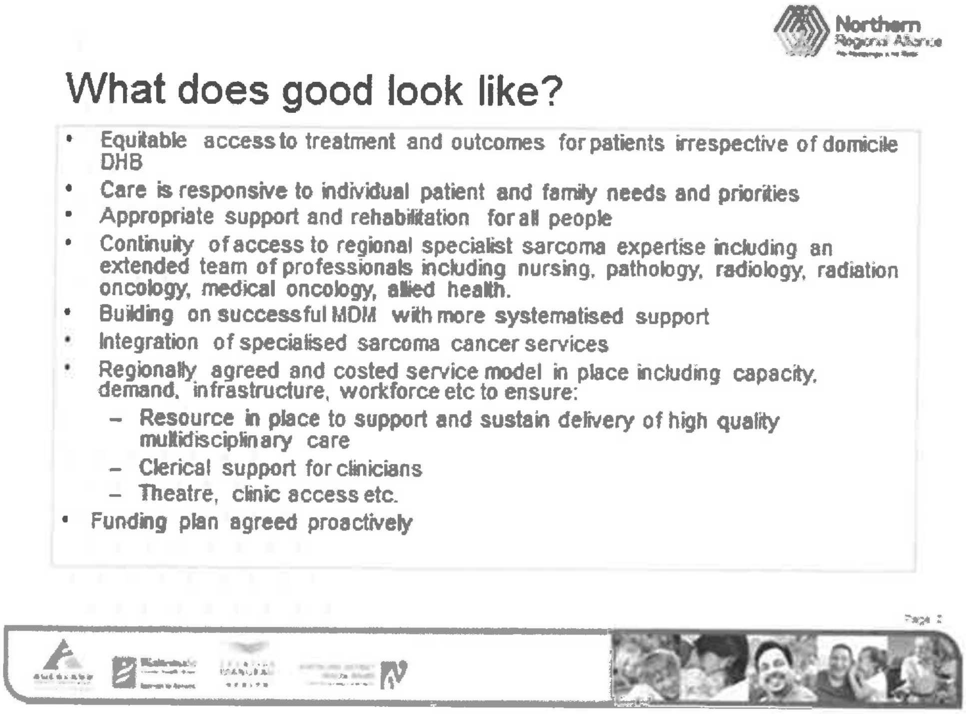
To date the Northern Cancer Network has not conducted sarcoma patient experience surveys or projects, and no information on sarcoma patient experience was available through the DHB patient experience services or the Cancer Society. Input from a patient perspective will be sought in this project.

What does good look like?

There is compelling evidence that for complex cancer procedures there is a positive relationship between the volume of patients that cancer services see and the outcomes that they achieve. This evidence suggests that perioperative mortality and long-term survival improves as hospital surgical volumes increase.

The Northern Region Expert Group has met several times over the past few months to discuss and work up what good looks like for a specialist sarcoma service, based on international literature and local experience. Figure 4 shows a summary of the aspirational picture agreed by the regional expert group.

Figure 4. What does good look like – the aspirational picture.



What does good look like?

- Equitable access to treatment and outcomes for patients irrespective of domicile DHB
- Care is responsive to individual patient and family needs and priorities
- Appropriate support and rehabilitation for all people
- Continuity of access to regional specialist sarcoma expertise including an extended team of professionals including nursing, pathology, radiology, radiation oncology, medical oncology, allied health.
- Building on successful MDM with more systematised support
- Integration of specialised sarcoma cancer services
- Regionally agreed and costed service model in place including capacity, demand, infrastructure, workforce etc to ensure:
    - Resource in place to support and sustain delivery of high quality multidisciplinary care
    - Clerical support for clinicians
    - Theatre, clinic access etc.
- Funding plan agreed proactively

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[2] Ballantine et al. Small Numbers Big Challenges: Adolescent and Young Adult Cancer Incidence and Survival in New Zealand. Journal of AYA Oncology. Vol 6, No 2, 2017.

At a workshop on 09 October 2020, the expert group agreed the following principles when considering the aspirational picture of what good looks like in the context of the northern region:

- Ideally each subspecialty would be on the same site
- Medical Oncology, Radiation Oncology and Paediatric Oncology/AYA can currently only be delivered at ADHB.
- Pathology and Radiology should be on the same site and they are part of wider specialist teams and work closely together.
- Most Radiology can be done at the local DHB with oversight from specialist sarcoma radiologists if the right clinical pathways and protocols and payment mechanisms are in place.
- Sarcoma surgeons (including Paediatric Oncology/AYA) should be located on the same site to facilitate working together and optimal patient care.
- Although noted that pathology should ideally be located with surgeons due to advantages for frozen sections and in-person conversations.
- Sarcoma patients should have access to clinical trials. Clinical trials are accessed through medical oncology at ADHB as the national accredited centre. Colocation at ACH fosters opportunity to expand trials access for sarcoma patients.
- Sarcoma service coordination (includes MDM coordination) should incorporate database management.

Starship Hospital currently treats most if not all of Paediatric Sarcoma on a single site at ACH, with pathology and radiology support from the MMH site. All medical therapy is delivered on site and surgery is performed in a collaborative manner with the paediatric and orthopaedic sarcoma surgeons. In addition all Paediatric Oncology patients are discussed in a MDM on Friday mornings as well as the Sarcoma MDM.

Options for consideration

On the basis of the aspirational picture of what good looks like and the principles agreed by the expert group, the following need to be addressed immediately to mitigate the current imminent vulnerabilities in the service with agreed actions, timelines and oversight :

    - Address succession planning and funding for the MDM coordinator and data base manager role
    - Address concern about theatre access for operating lists at the MMH site by reconciling surgeon availability / need with theatre availability
    - Address concern of regular access to GA radiology lists (supporting data to be provided)
    - Address lack of CNS support at ADHB site.

The following are the options for consideration (see Appendix 5 for full options analysis):

Dual site options

- **Modified current model (sarcoma orthopaedic surgery split over 2 sites) (Option 5).**

Under this option, surgeons would operate over both sites with a regionally agreed protocol for the allocation of surgeries to each site based on case type and complexity (e.g. frozen sections and complex plastics cases at MMH). This model would be formalised and a lead DHB allocated. Regional pathways would need to be documented and visible. Noted that workforce planning needs to resolve the orthopaedic backfill at ACH.

- **All treatment at ACH, and sarcoma service coordination/ database management with Pathology and Radiology at MMH (Option 3a) or All treatment and sarcoma service coordination/ database**

management at ACH, with Pathology and Radiology at MMH (Option 3b).

Essentially both options 3a and 3b mean that all treatment subspecialties are together on one site at ACH to facilitate collaborative working, both between the sarcoma surgeons and with the other treatment modalities (medical oncology, radiation oncology and paediatric oncology), and all diagnosis subspecialties are one site at MMH. The items for resolution include:

- the location of the sarcoma service coordination/ database management (what constitutes the "MDM Office" and whether this should sit with the surgeons at ACH or with pathology and radiology at MMH),
- protocols for when frozen sections are required as currently if performed at ACH live tissue would need to be transported or a pathologist would need to go to ACH (note that one of the two orthopaedic surgeons uses frozen sections for a small number of patients),
- protocol for complex plastic surgery (currently performed at CMH) and
- workforce planning to cover the non-sarcoma component of CMDHB sarcoma surgeon (25-30% of FTE) and orthopaedic backfill at ACH.

The lack of resolution of some of these items may be a barrier to acceptance of options 3a and 3b from some of the stakeholders.

Single site option

- **Single site for all tertiary and quaternary services related to sarcoma (Option 1 or Option 2).**

There was generally a consensus from the clinicians that this is the ideal option and feedback from the Māori and Pacific Groups indicated that this is what the region should aim for. Noted difficulties with these options are the rationale for keeping the specialised sarcoma pathology and radiology expertise at CMH due to them working closely together and being part of a wider workforce at CMH and the fixed nature of Radiation Oncology, Medical Oncology and Paediatric Oncology at ACH. It has also been raised that if a single centre were to be formally established then this should be formally acknowledged and discussed at a National level to ensure there is commitment to ensure full and appropriate resourcing of the centre to accommodate referrals coming from all of the North Island.

Dependencies and considerations

It is recommended that the lead site for surgery take the lead on capacity planning and management of the service overall whether on its own site or at an alternate site to ensure there is clear management and accountability for the whole tertiary care pathway. Noted that according to NICE guidelines[3], there should be a nominated clinician (clinical lead) who takes responsibility for the service and this should be reflected in their job plan. The clinical lead should be a member of the core MDT.

Noted that the site on which surgery capacity is centralised will need to provide required weekly theatre sessions and weekly clinic hours on site, to ensure the service has sufficient capacity to maintain waiting time standards as an essential quality requirement. Early estimates are 1 all-day OR session and 1 all-day Clinic session per week each for the ADHB and CMH sarcoma orthopaedic surgeons. It is recognised that for ACH or MMH this could require consideration of other work moving out of the site to make room to accommodate the service, and where this is not possible it may result in a reduction of access.

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[3] NICE Guidance available at https://www.nice.org.uk/guidance/csg9/resources/improving-outcomes-for-people-with-sarcoma-update-pdf-773381485

The service needs to deliver equitable access to treatment and outcomes for patients irrespective of domicile DHB and care that is responsive to the individual needs of patients, in particular to those who are most vulnerable.

From a patient perspective, it is important to have clear and visible pathways with attention to seamless coordination for patients throughout their journey.

Noted that the assessment to date has been a non-financial consideration of options only so has not addressed the issue of financial sustainability.

Recommendations

- Note the feedback on this paper received from the Māori Clinical Governance Group and the Pacific Clinical TAG Group (Appendix 6)
- Note the feedback on this paper received from the Northern Region Expert Group and other stakeholders (Appendix 7)
- Endorse that the following immediate changes are taken to mitigate the vulnerability of the existing MDM and lists with agreed actions and timeframes, pending transition to the agreed option in 2021/22
    - Address succession planning and funding for the MDM coordinator and data base manager role
    - Address concern about theatre access for operating lists at the MMH site by reconciling surgeon availability / need with theatre availability
    - Address concern of regular access to GA radiology lists (supporting data to be provided)
    - Address lack of CNS support at ADHB site.
- Provide feedback on the options for consideration for the Northern Region Sarcoma Service model.
- Note the intent that the next stage development of the detail and implementation of change will be delivered with project leadership and clinical time as set out in the proposals agreed by REF for submission to the Ministry of health funding in response to the call for proposals for sustainability projects.

Appendix 1.

The Regional Multidisciplinary Team

	ADHB	CMDHB	
Core Multidisciplinary Team			NICE guidance Specification[4]
Specialist sarcoma surgeon	1 person, 0.8 FTE (orthopaedic) 1 person, 0.2 to 0.3 FTE (retroperitoneal) Note: Cardiothoracic sarcoma dealt with by one surgeon at ADHB	1 person (0.70-0.75 FTE) (orthopaedic)	Min of 2 per MDT (These surgeons should have a major clinical interest in sarcoma)
Sarcoma clinical nurse specialist	TBC	1 person, 1 FTE	Sufficient to allocate a clinical nurse specialist/key worker for each patient (but a minimum of two)
Specialist sarcoma pathologist	-	5 people* 2.5 FTE	At least one and ideally two
Specialist sarcoma radiologist	2.0 people**	2.0 FTE	At least two with a special interest in musculoskeletal/oncological imaging
Medical Oncologist	2 people 0.4 FTE	-	
Radiation Oncologist	3 people, FTE TBC	-	
MDM Coordinator and secretariat support	N/A	Currently admin FTE in radiology; FTE TBC	
Palliative care specialist			
Paediatric Sarcoma Team***	Orthopaedic Surgeon 0.8FTE Paediatric Nurse specialist 0.8 FTE Paediatric Oncologist (2 people) Paediatric Radiation Oncologist Weekly GA/biopsy/Radiation therapy lists including Interventional Radiologist	-	
Extended Multidisciplinary Team			NICE guidance Specification
Specialist sarcoma physiotherapist			
Specialised allied health professionals			Consisting of other relevant AHPs, such as radiographers, occupational therapists, dietitians and social workers, counsellors and/or psychologists
Specialist nurses			Including palliative care nurses and appropriately trained ward staff
Other professionals including orthopaedic, plastic, head and neck, gynaecological, GI and vascular surgeons			

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[4] NICE Guidance available at https://www.nice.org.uk/guidance/csg9/resources/improving-outcomes-for-people-with-sarcoma-update-pdf-773381485

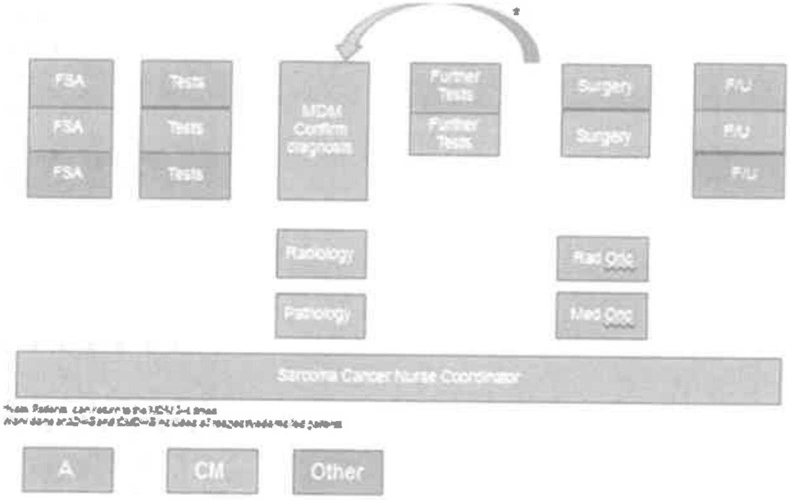
*Currently spread across 5 people, needs to be ≥3 people to allow for cover

** There are two sarcoma fellowship trained radiologists at ACH. Treatment from radiology is also provided via ADHB (e.g. RFA and cryotherapy).

***For Adolescents and Young Adults, there is crossover between ADHB orthopaedic oncology surgeon and paediatric sarcoma surgeon

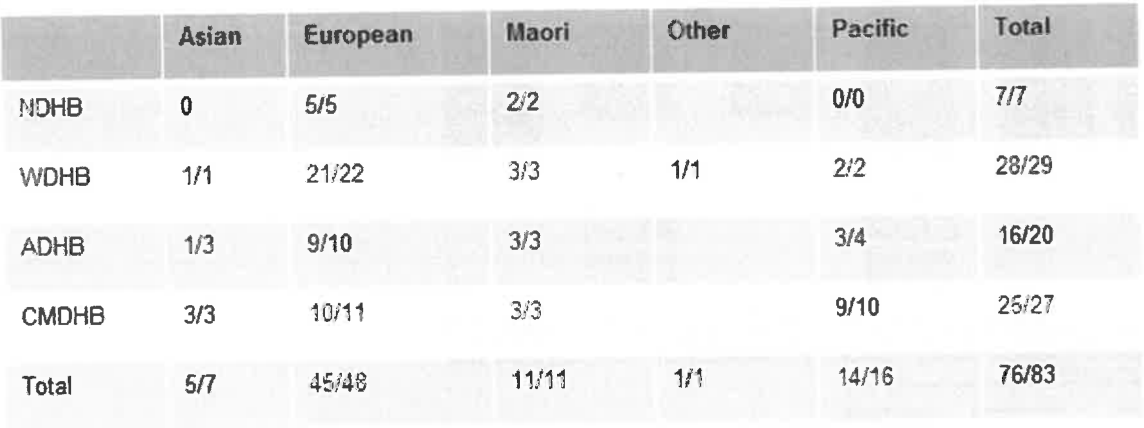
Appendix 2.

Current Service Model



Appendix 3.

Northern Region FCT performance for sarcoma by ethnicity (2019/2020)



	Asian	European	Maori	Other	Pacific	Total
NDHB	0	5/5	2/2		0/0	7/7
WDHB	1/1	21/22	3/3	1/1	2/2	28/29
ADHB	1/3	9/10	3/3		3/4	16/20
CMDHB	3/3	10/11	3/3		9/10	25/27
Total	5/7	45/48	11/11	1/1	14/16	76/83

Appendix 4.

Survival (%) by sarcoma type and region 2009- 2010.

Note 5yr survival can't be calculated beyond 2010

ICD 10 code **C40, C41, C46, C48, C49**

	2009					2010				
	<1yr	1yr	3yr	5yr	Total	<1yr	1yr	3yr	5yr	Total
Northern										
Bone	21%	21%	21%	36%	**100%**	11%	22%	6%	61%	**100%**
Soft tissue	26%	20%	7%	46%	**100%**	37%	17%	6%	40%	**100%**
Midland										
Bone	25%	0%	0%	75%	**100%**	10%	30%	0%	60%	**100%**
Soft tissue	48%	8%	0%	44%	**100%**	28%	19%	11%	42%	**100%**
Central										
Bone	38%	0%	0%	63%	**100%**	0%	13%	13%	73%	**100%**
Soft tissue	26%	13%	13%	47%	**100%**	21%	38%	8%	33%	**100%**
Southern										
Bone	22%	11%	0%	67%	**100%**	17%	17%	0%	67%	**100%**
Soft tissue	15%	30%	3%	52%	**100%**	18%	24%	11%	47%	**100%**
Overseas										
Soft tissue										
Grand Total	**27%**	**17%**	**7%**	**49%**	**100%**	**22%**	**23%**	**8%**	**46%**	**100%**

Continued: Survival (%) by sarcoma type and region, 2011-2013

Note 5yr survival can't be calculated beyond 2010

	2011					2012					2013			
	<1yr	1yr	3yr	>3yrs	Total	<1yr	1yr	3yr	>3yrs	Total	<1yr	1yr	>3yrs	Total
Northern														
Bone	0%	9%	9%	82%	**100%**	18%	18%	6%	59%	**100%**	29%	10%	62%	**100%**
Soft tissue	14%	17%	6%	63%	**100%**	12%	24%	2%	62%	**100%**	15%	15%	69%	**100%**
Midland														
Bone	25%	25%	25%	25%	**100%**	22%	22%	11%	44%	**100%**	14%	14%	71%	**100%**
Soft tissue	26%	11%	11%	51%	**100%**	30%	21%	0%	48%	**100%**	23%	13%	65%	**100%**
Central														
Bone	0%	50%	0%	50%	**100%**	30%	10%	5%	55%	**100%**	9%	27%	64%	**100%**
Soft tissue	18%	21%	4%	57%	**100%**	16%	28%	6%	50%	**100%**	16%	19%	66%	**100%**
Southern														
Bone	0%	22%	0%	78%	**100%**	10%	30%	0%	60%	**100%**	40%	10%	50%	**100%**
Soft tissue	32%	11%	8%	50%	**100%**	28%	9%	0%	63%	**100%**	23%	23%	55%	**100%**
Overseas														
Soft tissue				100%	**100%**				100%	**100%**				
Grand Total	**19%**	**16%**	**7%**	**58%**	**100%**	**21%**	**20%**	**3%**	**56%**	**100%**	**20%**	**17%**	**63%**	**100%**

Appendix 5.

Table 1. Options analysis for regional sarcoma service model

	1) Have all specialties at ADHB	2) Have all specialties at CMDHB	3a) Have all sarcoma surgeons on one site at ADHB	3b) Have all sarcoma surgeons, and sarcoma service coordination/ database management on one site at ADHB	4) Have all sarcoma surgeons, and sarcoma service coordination/ database management on one site at CMDHB	5) Current model: sarcoma orthopaedic surgery split over 2 sites with immediate changes implemented
What does this mean	All specialties at ADHB	All specialties at CMDHB (Note the difficulty of having rad onc,med onc and paed onc at CMH)	Surgeons together and with rad onc, med onc and paed onc but separate from sarcoma service coordination, pathology and radiology	Surgeons together and with rad onc, med onc, paed onc and sarcoma service coordination, but separate from pathology and radiology	Surgeons together and with sarcoma service coordination, pathology and radiology but separate from rad onc, med onc and paed onc.	Surgeons across two sites. Pathology and radiology together on one site and rad onc, med onc and paed onc together on other site. Note the following immediate changes to mitigate vulnerabilities: -succession planning for sarcoma service coordinator -availability of theatre lists at MMH and GA radiology lists
Advantages	-Ideal model of all specialties on one site providing integrated specialised sarcoma service -Fosters opportunity to expand trials access for sarcoma patients	Ideal model of all specialties on one site providing integrated specialised sarcoma service	-Facilitates collaboration between sarcoma orthopaedic surgeons, including scheduling of combined surgeries. -facilitates collaboration with AYA/Paeds, medical oncology and radiation oncology (combined	-Facilitates collaboration between sarcoma orthopaedic surgeons, including scheduling of combined surgeries. -Better collaboration with AYA/Paeds, medical oncology and radiation oncology (combined	-Facilitates collaboration between sarcoma orthopaedic surgeons, including scheduling of combined surgeries. -In line with current agreed IDF funding arrangements	-Note immediate changes above

			clinics) - only move one clinician for benefits above -Fosters opportunity to expand trials access for sarcoma patients	clinics) -Fosters opportunity to expand trials access for sarcoma patients		
Disadvantages	-Not ideal to move pathology and radiology from CMDHB because it is part of a wider specialist workforce -No Resident Plastic Surgery service -Increases capacity pressure at ADHB	-Expert group agreed not possible to move medical oncology, radiation oncology and paediatric oncology to CMDHB -Increases capacity pressures at CMH	-MDM not on the same site as surgeons -MDM not on the same site as CNS -No Resident Plastic Surgery service Increases capacity pressure at ADHB	-MDM not on the same site as pathology and radiology -No Resident Plastic - Surgery service Increases capacity pressure at ADHB	-Sarcoma orthopaedic surgeons not with other general sarcoma and paediatric surgeons, medical oncology and radiation oncology, for collaboration and combined clinics. -Increases capacity pressures at CMH	-Hinders collaboration between sarcoma surgeons -No provision for combined clinics with med onc and rad onc
For resolution	- Impact of establishing pathology and radiology at ADHB -Management and leadership arrangements -Funding agreement - Strategy for when Plastic surgery needed (Provision of off-site complex plastic surgery reconstruction is suboptimal)	- Having medical oncology, radiation oncology and paediatric oncology at CMDHB is a barrier -Clinic and theatre capacity requirements available at CMDHB -Management and leadership arrangements - Funding agreement	-Strategy for when frozen sections needed - Strategy for when Plastic surgery needed (Provision of off-site complex plastic surgery reconstruction is suboptimal) -All clinic and theatre capacity need to be in place -Management and leadership arrangements -Funding agreement	-Logistics of establishing the sarcoma service coordination at ADHB -Management and leadership arrangements -Funding agreement - Strategy for when Plastic surgery needed (Provision of off-site complex plastic surgery reconstruction is suboptimal)	-Clinic and theatre capacity requirements available at CMDHB -Management and leadership arrangements -Funding agreement	-Service planning would need to be undertaken for 21/22 to ensure the right funding plan was in place to ensure sustainability -Management and leadership arrangements -pathways to be defined

Table 2. Description of options for regional sarcoma service model.

	1) Have all specialties on one site at ADHB	2) Have all specialties on one site at CMDHB	3a) Have all sarcoma surgeons on one site at ADHB	3b) Have all sarcoma surgeons, and sarcoma service coordination/ database management on one site at ADHB	4) Have all sarcoma surgeons, and sarcoma service coordination/ database management on one site at CMDHB	5) Current model: sarcoma orthopaed surgery split over 2 sites
All orthopaedic sarcoma surgeons on same site	✓	✓	✓	✓	✓	✗
Orthopaedic sarcoma surgeons with general and paediatric sarcoma surgeons, medical oncology and radiation oncology	✓	✓	✓	✓	✗	✗
Pathology and radiology on the same site together	✓	✓	✓	✓	✓	✓
MDM on same site as pathology and radiology	✓	✓	✓	✗	✓	✓
MDM on same site as surgeons	✓	✓	✗	✓	✓	✗
MDM on same site as pathology and radiology and surgeons	✓	✓	✗	✗	✓	✗
All orthopaedic sarcoma surgeons on same site as plastic surgery	✓	✓	✗	✗	✓	✗

Appendix 6.

Sarcoma feedback from Māori and Pacific Advisory Groups

	Feedback (from minutes)	How addressed:
Māori Clinical Governance Group **12 Nov 2020**	Presentation summary Proposal for potential change in service that will impact on everyone and particularly impact Māori with slightly poorer outcomes. Proposed to move service to Auckland (rather than across Auckland and Counties). Feedback and patae • Have to have to have a site of significant size and number of cases to meet international safety guidelines; tension of DHBs across different locations – need to work out what works best for patients then fund and organise that way • Can oncologists visit Super Clinic? No radiation bunker. • Got registry data on sarcoma incidence by ethnicity; data on attendance, mortality? No – just time to access. • Resist silos and fragmentation; causes delays • Is this a patient centric or clinician centric solution? • COVID has taught us how much can be done remotely but good to have oncologists and surgeons working together • Blaming tumour biology for inequity of outcomes for Māori – focus on system level issues; racism, differences in surgical rates between Māori and non-Māori • Theatre access is common theme in presentations – are we using them efficiently, do we have enough? • Split/one site is a capital issue – is the capital investment to make it happen part of issue? Who else would benefit? Have some allies. • Māori sarcomas is 18-19% of sarcomas; mostly young people – compare with young Māori pop. closer to 20% • How can you comment on different survival rates as there is no disaggregated data in paper? Local data only, not national • If we could put it all in one place Auckland makes sense; surgical is split across two sites and to amalgamate either moves it from oncology or pathology and radiology • Account for different travel times depending on	Seek patient feedback: • Feedback on the paper with emphasis on patients requested from Navigator, Allied Health and CNS • Patient voice to be included at service planning stage Further Cancer registry data: • Cancer registry data by Pacific and Māori and by age group added to revised paper. Tumour biology: • Statement on tumour biology removed from revised paper (so as not to imply tumour biology is responsibe for inequity in Māori). No disaggregated survival data: • We do not currently have access to disagregated survival data

	appointment time • Plastic surgery should be onsite with the rest of the surgical pathway for better outcomes Messages heard, next steps • Design around patient – talk to patients • Demographic for young adult Māori, reflect %age of young pop. Talk to Pacific group	
Pacific Clinical TAG **19 Nov 2020**	Presentation summary: Proposal for potential change in service that will impact on everyone and particularly impact Māori with slightly poorer outcomes. Proposed to move service to Auckland (rather than across Auckland and Counties). Key issues: 1. Under resourced MDM system 2. Increasing demand on service, creating capacity issues for Auckland and Counties 3. Divided surgical workforce; one orthopaedic surgeon in Auckland, one in Counties – providing bony sarcoma service to whole North Is. (which is not nationally mandated) 4. Divided services; radiation and medical oncology at Auckland; pathology, radiology and plastic surgery at Counties 5. Sarcoma a low volume service, difficult to get good data – lower Pacific numbers than expected; whether a registration issue, treatment issue or genuine difference is unclear Themes – advice/questions: • From the outside a single site looks desirable for a low volume, highly specialised service; o Arrange speciality services around this o Some aspects be done via technology such as Zoom e.g. MDT/radiology. Patients often show distress afterwards in primary care setting because their family was not able to travel and support o Focus on surgeons is historical; pooling the services has to be the long game; tease out what each service does. • Becomes personalised to medical people; those that don't support will move on in time. Walk through with clinicians to avoid delays. Response: about management, logistics and capacity more than clinician preferences • Cancer control agency plays a role in strategic planning and coordination	Feedback noted for future service plan: • A single site is desirable • Some aspects to be via technology where possible • Most important is clinical outcomes and solidity of the service

	• South Island went through this with paediatric oncology; four down to two sites in Auckland and Wellington (Wellington surgeons travel to South Is). See "Through the eyes of a child", HFA report • Can MDT/non-surgical work be done remotely using technology? For Pacific patients going to town is a big burden and having family there is important; show distress later if not supported by family and community • Priority for Pacific population is to make service secure and effective. Lower priority is where the population is located; they will come to a good service • Pacific are very scared of the word Cancer. Need to provide reality and perception that services are safe, they will be well cared for and health can improve (not just a place to die) • Pacific/Māori cancer nurse coordinator supporting whole pathway (not just tumour streams) to walk alongside and take families with them – review evidence and scale currently, but has been really helpful to keep people in journey Messages taken away • Ideally one site • Most important is clinical outcomes and solidity of the service • Patient considerations in terms of location are lower priority than service delivery.	

Appendix 6.
Sarcoma feedback from Expert Group and other stakeholders

Discipline	Feedback	How addressed
Orthopaedic Sarcoma Surgical ACH	I saw Paediatric points and agree with them, also: Appendix 1 - There are 2 sarcoma fellowship trained radiologists at Auckland Hospital; Biopsy numbers have gone up an estimated 150% in the last year. A lot of our treatment from radiology is also provided via ADHB, RFA and cryotherapy for example -There are 3 radiation oncologists at ADHB who do sarcoma and are part of the MDT - there are 2 paediatric sarcoma oncologists not 1 - cardiothoracic sarcoma dealt with by 1 surgeon at ADHB The ideal setting is not currently attainable, as path and some radiology are at CMDHB. However I feel strongly that all surgical services and the MDT office and database need to be moved to ADHB. This does not mean that the counties site with not need admin support for path and radiology, but that is not the same as an MDT office. The MDT office is part of the clinical side of the service. We also desperately need people for both the MDT office and CNS support at ADHB. I am currently operating on full tumour lists every week and have had to get extra operating time in the last 2 months to cover the demand.	Feedback on Appendix 1 incorporated into the paper. **Note:** - **The ideal setting is not available** - **Preference for all surgical services and the MDT office and database to move to ADHB.** - **Need for CNS support at ADHB** - **Currently operating on full tumour lists every week and have had to get extra operating time to cover demand**
Orthopaedic Sarcoma Surgical ACH	Realised that I didn't give my preferred option which is 3b. The issue is that what pathology and radiology currently consider as an MDT office is an administrative role and not a true MDT office. The "sarcoma database" is currently a pathology database and does not record outcome or patients journeys. In almost all sarcoma MDT groups the MDT office sits with the clinicians seeing and treating patients. *Clarification by phone:* *The MDT office (MDM database) encompasses more than diagnosis i.e. should cover outcomes data, PROMS, PREMS etc.*	**Note:** **-Preference for Option 3b** **-What is currently considered the MDT office is an administrative role and not a true MDT office which should encompass outcomes data, Quality of Life measures etc.**
Orthopaedic Sarcoma	See Sarcoma service specifications (these are from the NHS, embedded below). Please note that although	**As above**

Surgical ACH	radiology and pathology are a critical part of diagnosis of sarcoma they play a small part in the care of the patient long- term. Sarcoma-Service-Specification copy.pdf	
Orthopaedic Sarcoma Surgical MMH	Having canvassed the Expert Group clinicians it is our strong feeling that a further workshop is required to address some of the imminent outstanding issues. As you are aware the last workshop focussed on the radiology and pathology portions of the diagnostic arm of the service. In the discussions around surgery the focus so far has been on the overall goals and potential movements. There has not been significant discussion around the interim model, and there needs to be clarity on the immediate needs and changes required, with specific actions to target these. We would be grateful if you could organise a further workshop.	**Note:** - **Another workshop required to address imminent outstanding issues**
Plastic surgical	To summarise what I see as the issues and points of concern from Plastics point of view: • I am not sure how many sarcoma cases (what %?) require Plastics input for reconstruction. I know it will likely be a small percentage of the overall sarcoma cases, but will be the larger and more complex cases • Currently the sarcoma MDM is not functioning well from our perspective. Unfortunately, Plastics attendance is somewhat ad hoc. Although we have one or two surgeons who are keen to be involved and try to attend regularly, this has never been allocated into FTE and we are having to attempt to retro-fit them into our surgeons schedules as able • Perhaps as a consequence of inconsistent MDM attendance, there is historically poor collaboration and communication of complex patients as combined cases; these are often notified to Plastics late in the patients course with little time for the necessary pre-op assessment and operative list planning • Our experience in other cancer streams of doing complex reconstructions at other sites can be sub-optimal due to lack of access to RMOs on the alternative site; challenges with	**Note:** **-Not sure of number of sarcoma requiring but likely to be small** **-Plastic surgeon attendance at MDM ad hoc (not allocated into FTE resulting in poor comminication of complex cases)** **-Doing complex reconstructions at other sites suboptimal** **- Suggest model of single MDT which specialists from both sites attend and distributed based on complexity of surgery, domicile DHB, capacity etc.**

	our staff who are rostered to work at CMDHB providing regular in-patient follow up post-operatively at ADHB; insufficient nursing expertise to monitor complex flaps etc. I therefore cannot guarantee that we would be able to provide such good patient outcomes if we needed to deliver complex reconstruction to this patient group across two sites. • The accepted model in the H&N cancer stream is to have a single MDT (for H&N cancer this is at ADHB, but for sarcoma could stay at CMDHB potentially) where specialists from both sites attend and all cases are discussed. They are then distributed across both sites based on complexity of surgery, domiciled DHB, capacity etc. I would suggest a similar model could be considered for sarcoma. Overall, we are certainly supportive of improving sarcoma care and patient pathways. We are keen to be involved collaboratively, from early on in the patients journey, to facilitate combined surgery where needed for reconstruction. As with many other work streams, there has been a steady increase in the workload over time with no specific FTE to accommodate this. We would like to see some Plastics FTE worked into the regional sarcoma plan for this purpose. Thank you for giving me the opportunity to comment on this review. I look forward to hearing from you with regards to the next steps.	
Retroperitoneal Sarcoma Surgical	Looks good to me. I would say currently my time spent on RPS at ACH is ~ 0.2-0.3FTE Roughly!	FTE updated in Appendix 1
Paediatric/AYA Surgical	Thank you for the draft. I see that in the current Multidisciplinary team section (Appendix 1) you have excluded the entire Paediatric Sarcoma team from the MDM team. Orthopaedic Surgeon 0.8 FTE Paediatric Nurse specialist 0.8 FTE Paediatric Medical Oncologist (key component of the MDM not an extended member) Paediatric Radiation Oncologist Weekly GA/biopsy/Radiation therapy lists including	Paediatric Sarcoma feedback noted in Appendix 1 and paper.

	Interventional Radiologist As we have previously explained, Starship currently treats most if not all Paediatric sarcoma on a single site with essential pathology and radiology support from the MMH site. This is with combined Oncology/Radiation/surgery clinics and dedicated GA biopsy and Radiation therapy lists. All medical therapy is delivered on site and surgery is performed in a collaborative manner with me and sarcoma orthopaedic surgeons. In addition all Paediatric Oncology patients are discussed in a robust MDM on Friday mornings as well as the Thursday AM Sarcoma MDM. I'm not sure that the current situation for Paediatric Sarcoma treatment is accurately reflected in your draft.	
Medical Oncology	I agree with comments that Paediatric sarcoma services aren't reflected in the document and are integral to the adult sarcoma service. It may be also worth noting that, as well as the MDM being integral to the diagnosis of sarcoma in the North Island; it also provides recommendation to the management of diagnosed sarcomas. In rare tumours, this helps provide continuity across the country and helps ensure up-to-date management. Whilst all of the components of the current sarcoma service are vulnerable from being under resourced, the fundamental issue being raised here is one relating to orthopaedic sarcoma services. My feedback is related to the proposed changes from a medical oncology perspective: - Medical oncology (and will be the same for radiation oncology) will always remain based at ACH. This is due to complex chemotherapy regimes that require highly skilled chemo nursing staff and often inpatient admissions. Although oncology is starting to move out some chemotherapy regimes (breast only) to MMH, the likelihood of developing 2 -3 sets of nursing/ medical teams experienced enough in managing sarcoma chemotherapy is low. In an ideal world, in future (?2-3years) we may be able to offer some palliative sarcoma chemo at MMH/NSH but our service will still be based out of ACH. In this respect option 2 is not realistic for us. - Medical oncology is currently separate from diagnostics (radiology/path) and MMH ortho but this has no implications on our ability to	**Note:** **-Medical Oncology will always remain at ADHB (due to complexity of sarcoma)** **- Due to upheaval option 1 doesn't seem feasible** **-Options 3a, 4 and 5 appear most plausible but need work around the services they affect** **-Agree with pathology that ensuring appropriate database management is fundamental to the on-going service**

	provide chemotherapy. The current system (being on separate sites) still allows us to provide our chemotherapy service adequately because of on-going well formed working relationships between all MDM members. Being able to attend MMH MDM in person and video conferencing it to ACH, helps maintains these. Because of this and the tremendous upheaval that would be required for radiology/path, option 1 doesn't seem feasible. - Options 3a, 4 or 5 appear the most plausible but need work around for the specialties that they affect. I agree with Pathology that ensuring appropriate database management (location and person) is fundamental to our on-going service.	
Specialist nursing	I have read the draft report and these are some thoughts that come to mind: I disagree that the majority of orthopaedic surgeries for sarcoma now happens at Auckland Hospital. I think the cases are more evenly spread as there were some sarcoma patients who returned to Middlemore for procedures to manage infection or revise implants in the 2019/20 year. I don't think these would have been coded as sarcoma. There is a lack of available theatre time at Middlemore Hospital for sarcoma surgery. Not only people with complex comorbidities, but also those requiring big resections and reconstructions with custom made implants and/or free flaps, need to be operated on at Middlemore. Most of the time the list has to be provided by the orthopaedic service which means another surgeon has to give up an elective list, resulting in those on the waiting list at CMH also being disadvantaged. There is at times a problem securing a plastic surgeon and it would be a great help to have a regular combined ortho /plastic surgical list for sarcoma free flap reconstructions. A timed list would also be helpful for the charge nurse on the plastics ward when rostering staff as patients with free flaps are high acuity. I think the MDM is the most pressing problem. When I began as a CNC in 2008 we seldom had more than 10 cases for discussion at the MDM. Part of my role was to assist the manager of the Bone & Soft Tissue Tumour Registry to prepare for the meeting	**Note:** **-Believe there is an even spread of sarcoma cases over ACH and MMH** **- Lack of available theatre time at MMH** **-MDM most pressing problem (not enough FTE for MDM prep, vulnerable if CNS or MDM manager sick).The number of cases over the years has quadrupled but administrative FTE has stayed the same** **-At times problems securing a plastic surgeon** **- Have concerns about implications for CNS role if surgery based at ACH**

	and enter data in the registry. Over the years the number of cases discussed has quadrupled yet the administrative FTE is unchanged. The amount of work involved in putting together the cases for discussion at the MDM cannot be done by one person alone. There is no additional help and no one to cover if either myself or the manager take leave. If one of us became sick and was unable to work I doubt that the MDM would continue as it is at present. As far as FCT is concerned, sarcoma is a rare cancer so usually not graded as high suspicion. Most of our patients are on the 31 day pathway. We are not always told at the time of referral to the MDM that the patient is on a 62 day pathway despite this question being on our updated proforma. And if we are aware, sometimes that patient is well into the 62 days before we receive the referral. We also have no control over the timing of investigations recommended by the MDM and carried out in the patient's domicile DHB. I do have concerns about my role if the surgeons are both based at Auckland. If that was to happen would I have to be employed by ADHB? In my role relationships with other disciplines is really important. Having contacts in Radiology (with radiologists, radiographers and clerical staff), pathology, clinics (nursing staff & schedulers), surgical bookers and pre op nurse co-ordinators are vital in arranging timely investigations and treatment. Thanks for the opportunity to provide feedback.	
Radiology	The main issue driving this review has always been decreased revenue for orthopaedics at ADHB and CMDHB taken away by sarcoma instead of elective surgery and this has dragged radiology, pathology radiation and medical oncology into the problem and I worry we will be collateral damage. Funding must come from above the DHB level and not allow for issues such as patient interdistrict flow from CMDHB Tertiary hospital status affect the best outcome. For radiology, we have cared and managed the database without any orthopaedic or external support since its beginning in 1988 and will not willingly give this resource away as proposed in options 1, 2, or 3b. The volume of prep work by the MDM administrator and	**Note:** - **Admin suppport needed for radiology who runs the database** - **Local DHBs need to buy in to radiology protocols** - **Relocation of sarcoma radiology to ADHB near impossible** - **Single site doesn't seem to be an option** - **Need a workshop to discuss immediate needs**

CNS who are the only admin team is immense, the complexity of importing imaging and reports onto the DHB system and following up subsequent imaging so it can be reviewed is extremely time consuming. Often incomplete studies are sent requiring double handling. Admin support needs to come to radiology who run the database. I think there needs to be separation of CNS support for the orthopods for patient management and admin support for running the database. Unfortunately the CNS at CMDHB ends up having to do a larger volume of admin than her role suggests.

Most radiology can be performed at the local DHB, but they must buy in to the protocols in place otherwise this adds to our local workload and expense. For example Wellington refuses to follow our whole body STIR protocol or send CT chest sarcoma standard 3mm axial, coronal and sagittal reformats which limits our sensitivity for detecting lung mets. We have several patients who fly up to get standard sarcoma imaging their DHB will not perform.

The time component of radiology interpretation is 3-4 hrs because several panel members are required to make a consensus opinion due to case complexity, subspecialist experience and knowledge similar to pathology. Our group has sarcoma fellowship experience from Leiden the Netherlands, Sloan Kettering New York, Stanmore UK and decades locally. This can not be done by one person in isolation otherwise standards will drop.

Relocation of sarcoma radiology to ADHB is near impossible as many CMDHB radiologists involved in sarcoma are also involved in other aspects of the department, eg head for MRI & spine service, oncology. ADHB does not currently have the same resource or expertise to run the sarcoma MDM as well as perform their biopsies and no one from the review panel has actually asked them if they would want to add this service to their workload.

CMDHB has nurtured sarcoma expertise from locally trained radiologists who have gained fellowship expertise and come back to the department. Sarcoma is one of the jewels for CMDHB radiology and taking this away would greatly affect future registrar training and SMO recruitment.

Our close relationship with pathology that has evolved

	since the beginning of the sarcoma MDM anchors the diagnostic arm of the service to MMH and separating either would be detrimental or delay patient diagnosis. Radiation and medical oncology and paediatrics have always been located at ADHB and because of their size can not be split into different sites. Along with surgery, they form the treatment arm of the service and have always functioned as support to CMDHB for other surgical MDMs such as plastics, colorectal and breast. They have always done this for sarcoma. If sarcoma went to ADHB, it would lose plastics support which seems to counter the argument of single site. Single site does not seem an option if diagnostics (radiology and pathology) can't move from CMDHB and all treatments apart from surgery can't move from ADHB. I agree that a further workshop to work on immediate solutions listed second under Recommendations needs to be discussed.	
Pathology	Thank you for preparing a very clear draft recommendation document, and for the opportunity to provide feedback. My comments and suggestions follow. I have discussed this response with my colleagues and collectively we represent approximately 60 years of experience in sarcoma diagnosis. The Background/Context should include the fact that there has been a supraregional sarcoma service based at Middlemore Hospital for over 30 years, which provides expert Pathology and Radiology review and diagnosis of sarcomas and lesions suspicious for sarcoma. The pathology team at Middlemore deals mostly with cases from the North Island, but we also receive referrals from the sarcoma unit in Christchurch. The accrued database includes over 10,000 cases and is a valuable resource based on countless hours of collective work. I would like to put in writing some of the background to the current situation, not necessarily as an addition to the document. The vulnerability of the surgical component of the sarcoma service is not new or surprising. The immediate predecessor at Middlemore, advocated strongly for better recognition and resourcing of the service. He championed the national sarcoma guidelines, and took his case for access to theatre lists, enhanced MDM support, and formal recognition of the supraregional nature of the service with appropriate funding, to the top levels of hospital	**Note:** **-Neither option 1 or 2 possible without major infrastructure changes** **-The CNS and MDM/Database manager are separate roles** **- Option 3b not appropriate (database and MDM should be with diagnostic services).** **-Options 3a, 4 and 5 are most practical** **- 3a least preferred because it requires transport of fresh human tissue** **- Urgent attention needed for provision of adequate operating lists and radiology biopsy lists** **-Historic resourcing issues at the supraregional unit**

[redacted]	management. He was not supported by management or, apparently, his surgical colleagues, and in the end he withdrew. That was how we lost a highly competent, subspecialty trained sarcoma surgeon mid-career. Middlemore has not replaced his sarcoma tenths. However when Auckland DHB effectively did, by appointing a sarcoma specialty trained surgeon, who joined the MDM and started sharing the surgical workload (with the provision of full radiology and pathology support from CMDHB), the issue has suddenly been "discovered". Regarding the options going forward, I suggest that neither option 1 nor 2 is possible without major infrastructural changes. Option 1: Sarcoma pathology services based at CMDHB cannot be moved to ADHB, unless there is a regional "super laboratory" built at the ADHB site. To document the reasons for this: this is a highly specialised area of pathology, which has been developed at CMDHB over many years. There is a cohesive group of pathologists involved, with the intention of providing seamless cover and succession planning. To maintain a high level of expertise with these rare and diverse tumours in a small population, we share the cases – considering them individually, then discussing as a group. For these reasons, the number of personnel involved exceeds the FTE requirement. To streamline the group to 2 individuals would add vulnerability in both service provision and quality. The corollary is that we all have a major involvement in other aspects of pathology provision at CMDHB, and many of us take senior roles. Our group includes the leads for liver, lung, gynaecological pathology and cytology, and we include more than half of the senior pathologists involved in breast and lymphoma pathology. Option 2: Oncology services are mostly based at ADHB, and that will not change. It is not at all unusual to have a centralised Oncology service in NZ or internationally, and the lack of co-location of oncology treatment with surgery is the norm for every other tumour stream operated on at CMDHB and WDHB. It is much more unusual to have a specialised diagnostic pathology unit entirely remote from its surgical service. Many specialised pathology units would receive work outsourced from additional hospitals, but the core local work is co-located with surgery. In assessing options 3-5, there seems to be some merging of the CNS role and the MDM/ database management. These are separate roles. The CNS needs	

to work closely with the surgeon(s). The MDM/ database management needs to work with everyone, but primarily with the radiologists. The surgeons chair the MDM, but the radiologists run it, using their information system in their department, with considerable pre meeting preparation. There is also a substantial body of pathology work in the preparation of the MDM. The database is a shared resource which needs to be modernised and improved, and should be accessible from both sites to allow input of information in real time. However the main work which underpins the database is the diagnostic data, which is the work of pathology and radiology. The original physical records of the database are at CMDHB. The database and MDM should be based with the diagnostic services. Therefore option 3B is not appropriate.

The other area of vulnerability is access to operating theatre and GA-biopsy lists. Theatre lists are obviously in high demand at both sites, and indeed this seems to be the crux of the issue we need to address. From the data you present it is clear that time to treatment needs to be improved. These are rare tumours, so they don't get much public recognition compared to breast cancer or melanoma for instance, but they are often highly aggressive, often occur in young healthy people, and there is often a substantial delay before someone gets suspicious and the key imaging occurs, with subsequent biopsy and treatment. Therefore it is essential that we cause no further delay. Whether this requires access to theatres at both CMDHB and ADHB sites, or at one or the other, will depend on what the surgical departments can come up with, but it seems unethical to delay surgery on aggressive tumours because the surgeons with the requisite skills are not provided with sufficient regular lists. An unintended consequence of the health funding model is that elective joint replacement surgery is more important for the financial viability of the hospital, and is therefore being prioritised over elective cancer surgery.

Options 3A, 4 and 5 are the most practical. From the pathology point of view, 3A is the least preferred because it requires transportation of irreplaceable fresh human tissue across the city. Yes, we can do it if required, as we have demonstrated with some cases this year, but we would prefer not to expand this further.

In summary, it seems that there needs to be urgent attention paid to provision of adequate operating lists, and radiology biopsy lists. With effective management

	and surgical cooperation this should be achievable. There needs to be an acceptance that the CNS and MDM/database roles are severely understaffed, and a decision made as to who is paying for this, so it can be remedied. Finally, the historic issue of the failure to resource this expert supraregional unit must be addressed. From the pathology perspective, the expert diagnostic service operates entirely on good will. This is not a robust framework.	
Allied Health (Physio)	I have reviewed the draft Regional Sarcoma Project paper. From the service model options I believe the best outcome would be to have everything on one site. How achievable this is, is obviously another story. I have been fortunate enough to work in a cancer centre and have seen the efficacy of this first hand. The advantages being: • One stop shop for patients – less stressful, consistency and routine • Having access to all specialities on site makes overall communication streamline and effective especially if problems arise – dealt with much quicker • Have the ability to see patients in a timely manner and even have the option to 'pop' and see them if there is a query • Clear patient pathway. If across sites, which is probably the more realistic option is achievable but key people need to be identified for across the boards and a very clear pathway implemented to ensure the patient pathway is streamline. • Communication needs to be key and regular MDM across platforms needs to be implemented • Patient information needs to be clear and include what both sites offer and what to expect • Key people need to be identified for patients to be able to contact I think it would be beneficial also to have staff members allocated to roles and this then written in job descriptions so it is clear who does what from each board and their responsibilities. I think the more you have on one site the better, irrelevant if it is ADHB or CMDHB.	**Note:** **-Best option is everything on one site** **- Across sites more realistic but key people need to be identifed for across the boards and a very clear pathway for patients implemented** **- Consider travel options for patients when comparing sites**

	The other consideration is public transport and parking for patients, is one site better than another?	
Orthopaedics ACH	I see the document as a start as presumably a business case is ultimately developed. I do not think, however, it has captured the impact that the lack of funding and the load on resources the out-of-zone cases have on both ADHB and CMDHB. This is a problem we face as a region. I think the 'What does good look like" agenda somehow had the meetings (and this is reflected in the document) focus on individual subspecialties establishing their importance and need for preservation and expansion of their individual service. I also sensed a MMH vs. ACH tension and the pathology response perhaps inadvertently, perhaps not, has captured this. We need to solve this problem together as a region not at individual hospital levels. All services involved in the management of MSK sarcoma are struggling. The document discusses only MSK sarcoma and think the brief really does need to be expanded or the impact of non sarcomatous MSK neoplastic disease be adequately acknowledged. Currently management of metastatic bone disease is a huge load on us all and this is only going to increase and needs to be taken into account as increasing numbers of cases will be referred to the group which is becoming a victim of its own success. What developed as an area of special interest for a small group at least 40 years ago has developed in an adhoc way into the service it is. Independent of domiciliary DHB, clinicians now either recognise the expertise that exists and use it, or feel the service has such authority that they feel obliged to be referring all cases of MSK neoplasm. I do not think that the immediate issues re MDM support,CNS support, GA Biopsy and OR access have been addressed as indicated by and I support the request that stakeholders meet . Addressing these now and improving resources for individual services specifically for this work e.g pathology ,would go along way to averting a significant crisis. We are many years from deciding on and then achieving "What does good look like".	**Note:** **-Haven't captured the lack of funding and load on resources that the "out of zone" cases have on ADHB and CMDHB.** **-Agenda and meetings been focussed on individual subspecialties** **-All services struggling, need to solve as region** **-Need to expand or acknowledge impact of non-sarcomatous MSK neoplastic disease (metastatic bone disease)** **-Agree immediate issues haven't been addressed and support that the stakeholders meet. Addressing now will go a long way to averting significant crisis.** **-We are many years from deciding "What does good like".**
Paediatric oncology	Figure 1 "sarcoma inpatient events" – can we clarify if this is surgical volumes only or if this includes medical	Emailed analyst re data query 30/11/2020.

	volumes (only relates to surgical services volumes). Echo the importance of Paeds in the mix. But also stress the importance of the multidisciplinary nature of the clinical interface. The model of surgeon, radiation oncologist and oncologist all able to meet with the patient in the same clinic or ward setting when first meeting them for diagnosis, local control options discussions for the complex patient with amputation etc, and post op wound care while on chemotherapy or deciding if next cycle is good to go. Clinical trials access also pathology and resourcing is critically important for this. The recent introduction of charges to release histology blocks from MMH to allow patients to be enrolled onto clinical trials via the Starship group makes biopsy and clinical trial on one site also more important. Radiology vs intervential radiology is not commented on. Ideally surgeon and interventional radiologist would be on one site to avoid errors in sampling. MMH doesn't have the OR it needs. Re equity this section is set out implying that there is some doubt over inequitable outcomes. We didn't have proper data but the only data available strongly supports inequitable survival. This should probably be the only point - where data exists outcomes are inequitable. I did have some other points but we likely need to do further work so can discuss that then. Thanks so much for all this work	Amended equity section, where data exists outcomes are inequitable. **Note:** **-Importance of multidisciplinary nature of clinical interface; the model of surgeon, radiation oncologist and oncologist all able to meet with the patient in the same clinic or ward** **-Ideally surgeon and interventional radiologist on the same site (MMH doesn't have the OR it needs).**

To	Planned Care Steering Group
From	John Kenealy Exec Lead Vulnerable Services Sarcoma Project
Date	3 December 2020
Subject	Regional Sarcoma Services Recommendation and Next Steps
For	**Feedback**
Do recommendations incur financial costs not previously planned /approved?	Y

Recommendations

It is recommended that the **Planned Care Steering Group**:

- **Notes** the feedback on this paper received from the Māori Clinical Governance Group and the Pacific Clinical TAG Group
- **Notes** the feedback on this paper received from the Northern Region Expert Group and other stakeholders
- **Endorses** that the following immediate changes are taken to mitigate the vulnerability of the existing MDM and lists with agreed actions and timeframes, pending transition to the agreed option in 2021/22
  - Address succession planning and funding for the MDM coordinator and data base manager role
  - Address concern about theatre access for operating lists at the MMH site by reconciling surgeon availability / need with theatre availability
  - Address concern of regular access to GA radiology lists (supporting data to be provided)
  - Address lack of CNS support at ADHB site.
- **Provides feedback** on the options for consideration for the Northern Region Sarcoma Service model.
- **Notes** the intent that the next stage development of the detail and implementation of change will be delivered with project leadership and clinical time as set out in the proposals agreed by REF for submission to the Ministry of health funding in response to the call for proposals for sustainability projects.

Background/Context

- Post lockdown, the Northern Region's COVID-19 response turned to recovery. The NRHCC established the Hospital Capacity Service Improvement Steering group to lead an equity focused recovery program for planned care which included a particular focus on seven potentially vulnerable services to help them a) recover from the impacts of the COVID-19 lockdown and b) be more resilient with a particular focus on equity.

- The Regional Sarcoma Service delivered through Counties Manukau was initially identified as a vulnerable service due to changes in the specialist workforce that led to a change in referral for surgery patterns between CMDHB and ADHB without a clear plan to support a change in provider arrangements and the consequence of sarcoma surgeries displacing patients within the orthopaedic service at Auckland DHB.

- This 'vulnerable services' project was initiated utilising a rapid process with key regional leads leveraging the rapid progress gained under COVID, while incorporating some of the longer term goals in the LTIP and Cancer Deep Dive. John Kenealy and Aroha Haggie were mandated by the CEs to lead this project and Margie Apa is the sponsor.

- The driver and purpose of this project is to address the issues with regard to orthopaedic sarcoma. Where related services interface and/or could be part of the solutions they are in scope.

The key problem to solve

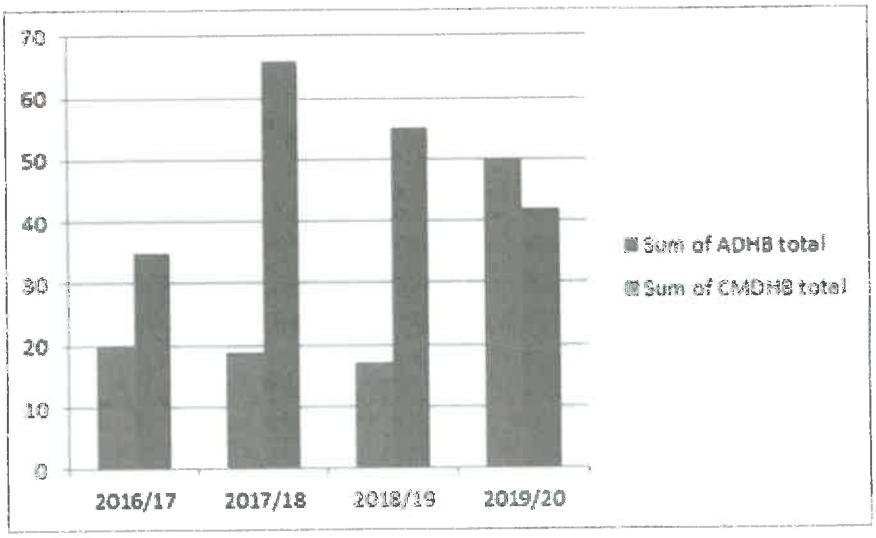
Equity of access and service provision

The regional sarcoma service operates on a split site basis across CMDHB and ADHB but there has been no lead taken by either DHB for planning the combined workforce, capacity and facility requirements of the service across the two providers. There has been a change in the sarcoma patient flow between ADHB and CMDHB, without visibility of the clinical pathway across the region, or coherent service planning to proactively identify and agree the resources required and associated funding.

A key consequence is that the time-critical nature of sarcoma surgery has displaced other patients within the orthopaedic service at ADHB who are already disadvantaged by disproportionately long waiting times for elective surgery.

Data for sarcoma inpatient events for CMDHB and ADHB shows the change in patient flow. Total volumes increased from 2016 to 2017 in CMDHB and subsequently decreased in 2019/20, whilst volumes at ADHB had more than doubled (see Figure 1) and the majority of orthopaedic surgical treatment now takes place at ADHB.

Figure 1. Sarcoma inpatient events at CMDHB and ADHB, 2016/17 to 2019/20 (NMDS data).

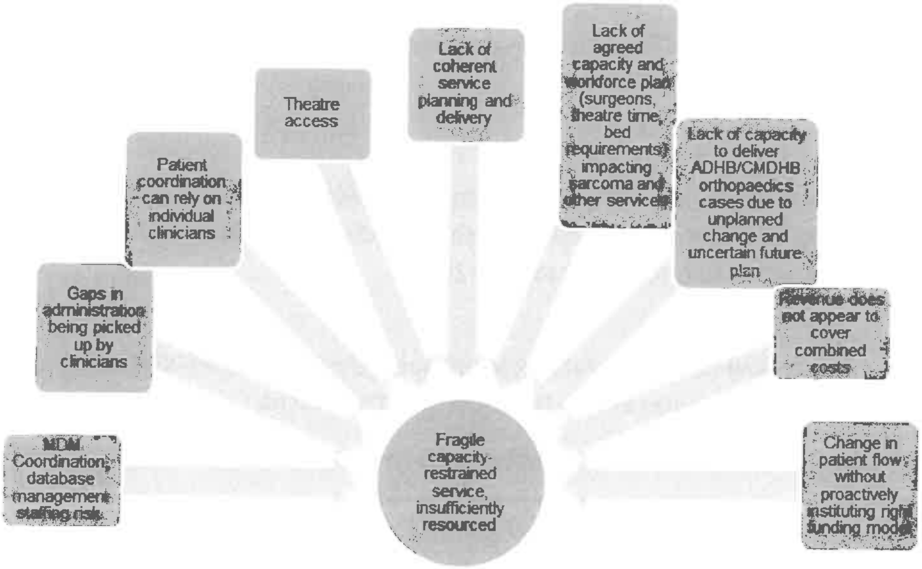


Discussion with service leads has identified gaps in the core resourcing of the MDM hosted by Counties Manukau which leave the service highly vulnerable to the loss of a single individual, as well as sporadic access to theatre time for surgery and interventional radiology at CMDHB which is contributing to sustained failure to meet treatment time standards.

Data on costs has not been quality assured but suggests a prima facie case that the current arrangements are not financially sustainable either, with the split site arrangement costing close to $3m on a WIES income of $2m for the number and complexity of patients treated. Figure 2 captures the various drivers contributing to fragility of the service.

Despite the substantially challenged nature of the organisational arrangements, it is apparent that the nationally recognised MDM expertise in pathology and radiology that is provided by CMDHB clinicians, and the collaborative practice of the orthopaedic surgeons working across DHB boundaries in a regional way, with highly aligned views about future models of care mean there is the potential to create a high quality centre of excellence and equity for sarcoma care if managerial and service arrangements are addressed.

Figure 2. What's the problem we're trying to solve?



Providing a well-planned and appropriately resourced service will ensure optimal, equitable patient outcomes delivered in a timely manner, and importantly a well sign-posted and coordinated pathway for patients.

Current state

Sarcoma encompasses bone (orthopaedic), soft tissue and retroperitoneal sarcomas. Sarcoma is a low volume, high complexity tumour stream requiring treatment from a highly specialised multidisciplinary team.

Recommendations from the UK National Institute for Clinical Excellence (Improving Outcomes Guidance, IOG) and the London Model of Care for Cancer Services set out the catchment size and minimum volumes by provider for a range of cancer procedures. For sarcoma this was a catchment area of 7 million for bone and 2-3 million for soft tissues with 100 cases per year for soft tissue and bone or 50 for bone if also undertaking 100 for soft tissue. The 2018 NRLTIP Cancer Deep Dive highlighted 76 new cases in total for the region in 2014 split between two surgical treatment sites with a supra-regional MDM in place at CMDHB was not compliant with these recommendations.[1]

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[1] NRLTIP Cancer Deep Dive – Final Report 2018

The Sarcoma Multidisciplinary Meeting (MDM) is hosted by CMDHB and accepts referrals from all DHBs in the North Island. The MDM provides key diagnostic expertise to almost 1,000 patients per year, almost 90% of which do not go on to sarcoma surgery. There is specialised sarcoma radiology and pathology expertise at CMDHB and specialist surgeons over both ADHB and CMDHB sites. The service has evolved over time due to the high level of expertise of the individuals in the region.

Access to other specialist services in line with tumour pathways such as Paediatric / Adolescents and Young Adults (AYA) Oncology, Medical Oncology and Radiation Oncology, and Plastic Surgery are also key to the provision of comprehensive specialised sarcoma services within the northern region.

A view of the current Multidisciplinary Team (MDT) and a pictorial view of the current service model are shown in Appendix 1 and 2, respectively.

Waiting times

The service under current arrangements has consistently not been meeting Faster Cancer Treatment (FCT) wait time standards for patients for the last year of data collected: the FCT 62-day indicator was met in 78.6 % of patients vs target of 90% over 12 months from July 2019 to June 2020.

Equity

Sarcoma is a low volume tumour stream and due to the relatively small numbers it has been difficult to make any conclusions with regard to identifying inequities in care for patients with sarcoma.

According to data from the NZ Cancer Registry for new sarcoma registrations in the Northern Region (2015 to 2019) the percentage for Māori and Pacific peoples was 14.31% and 12.74%, respectively. Table 3 shows the data by ethnicity and age group.

Figure 3. New Sarcoma *Registrations

Ethnicity	0 to 24 years	25 to 64 years	65 years and over	Total
Pacific Peoples	12	40	21	73
Māori	11	45	26	82
European or Other	18	97	249	364
MELAA	1	3	3	7
Asian	8	28	11	47
	50	213	310	573

*mesothelial and soft tissue C45-49, bone and articular cartilage C40-41.

The percentage of Māori and Pacific peoples in the Northern Region population in the same time period was 14% and 12.08% respectively.

The northern region Faster Cancer Treatment performance data does not show a substantial difference between ethnicities, including for Māori or Pacific but the overall numbers are small (see Appendix 3.)

National FCT data have been requested and will be added when available.

The availability of survival data is limited, but in the Northern Region 2010 data suggests that, for bone and soft tissue sarcoma respectively, 78% and 83% of patients survive for 1 year, and 39% and 60% of patients survive for 5 years (see Appendix 4; data not available by ethnicity).

A survival analysis in Adolescents and Young Adults (AYA) has shown that New Zealand achieves excellent survival outcomes for many common AYA cancers such as lymphomas, germ cell tumours, melanomas, and

thyroid carcinomas and has also identified some specific cancers, namely bone and soft tissue sarcomas, CNS tumours, and adolescent ALL, where the overall survival does not currently appear to meet international benchmarks[2]. In the same study, comparisons by AYA diagnostic group provided evidence of a higher incidence of bone tumours for Maori. Across all cancers in this study, Māori and Pacific had a lower 5-year survival compared with non-Māori/ non-Pacific peoples.

Although there appears to be a paucity of equity data for sarcoma, where data exists outcomes are inequitable.

Patient experience

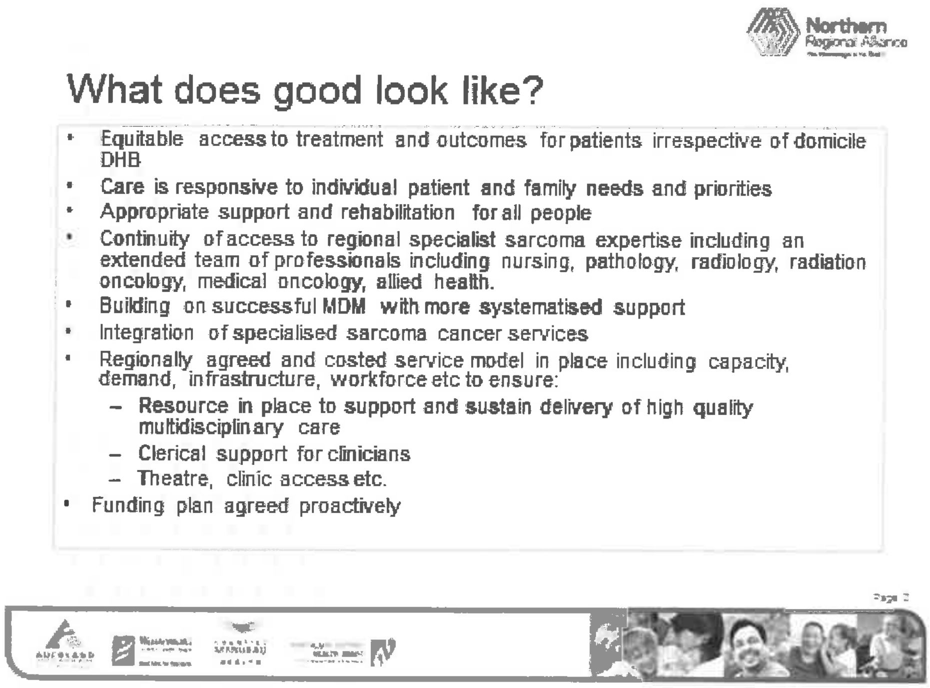
To date the Northern Cancer Network has not conducted sarcoma patient experience surveys or projects, and no information on sarcoma patient experience was available through the DHB patient experience services or the Cancer Society. Input from a patient perspective will be sought in this project.

What does good look like?

There is compelling evidence that for complex cancer procedures there is a positive relationship between the volume of patients that cancer services see and the outcomes that they achieve. This evidence suggests that perioperative mortality and long-term survival improves as hospital surgical volumes increase.

The Northern Region Expert Group has met several times over the past few months to discuss and work up what good looks like for a specialist sarcoma service, based on international literature and local experience. Figure 4 shows a summary of the aspirational picture agreed by the regional expert group.

Figure 4. What does good look like – the aspirational picture.



What does good look like?

- Equitable access to treatment and outcomes for patients irrespective of domicile DHB
- Care is responsive to individual patient and family needs and priorities
- Appropriate support and rehabilitation for all people
- Continuity of access to regional specialist sarcoma expertise including an extended team of professionals including nursing, pathology, radiology, radiation oncology, medical oncology, allied health.
- Building on successful MDM with more systematised support
- Integration of specialised sarcoma cancer services
- Regionally agreed and costed service model in place including capacity, demand, infrastructure, workforce etc to ensure:
  - Resource in place to support and sustain delivery of high quality multidisciplinary care
  - Clerical support for clinicians
  - Theatre, clinic access etc.
- Funding plan agreed proactively

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[2] Ballantine et al. Small Numbers Big Challenges: Adolescent and Young Adult Cancer Incidence and Survival in New Zealand. Journal of AYA Oncology. Vol 6, No 2, 2017.

At a workshop on 09 October 2020, the expert group agreed the following principles when considering the aspirational picture of what good looks like in the context of the northern region:

- Ideally each subspecialty would be on the same site
- Medical Oncology, Radiation Oncology and Paediatric Oncology/AYA can currently only be delivered at ADHB.
- Pathology and Radiology should be on the same site and they are part of wider specialist teams and work closely together.
- Most Radiology can be done at the local DHB with oversight from specialist sarcoma radiologists if the right clinical pathways and protocols and payment mechanisms are in place.
- Sarcoma surgeons (including Paediatric Oncology/AYA) should be located on the same site to facilitate working together and optimal patient care.
- Although noted that pathology should ideally be located with surgeons due to advantages for frozen sections and in-person conversations.
- Sarcoma patients should have access to clinical trials. Clinical trials are accessed through medical oncology at ADHB as the national accredited centre. Colocation at ACH fosters opportunity to expand trials access for sarcoma patients.
- Sarcoma service coordination (includes MDM coordination) should incorporate database management.

Starship Hospital currently treats most if not all of Paediatric Sarcoma on a single site at ACH, with pathology and radiology support from the MMH site. All medical therapy is delivered on site and surgery is performed in a collaborative manner with the paediatric and orthopaedic sarcoma surgeons. In addition all Paediatric Oncology patients are discussed in a MDM on Friday mornings as well as the Sarcoma MDM.

Options for consideration

On the basis of the aspirational picture of what good looks like and the principles agreed by the expert group, the following need to be addressed immediately to mitigate the current imminent vulnerabilities in the service with agreed actions, timelines and oversight :

    - Address succession planning and funding for the MDM coordinator and data base manager role
    - Address concern about theatre access for operating lists at the MMH site by reconciling surgeon availability / need with theatre availability
    - Address concern of regular access to GA radiology lists (supporting data to be provided)
    - Address lack of CNS support at ADHB site.

The following are the options for consideration (see Appendix 5 for full options analysis):

Dual site options

- **Modified current model (sarcoma orthopaedic surgery split over 2 sites) (Option 5).**

Under this option, surgeons would operate over both sites with a regionally agreed protocol for the allocation of surgeries to each site based on case type and complexity (e.g. frozen sections and complex plastics cases at MMH). This model would be formalised and a lead DHB allocated. Regional pathways would need to be documented and visible. Noted that workforce planning needs to resolve the orthopaedic backfill at ACH.

- **All treatment at ACH, and sarcoma service coordination/ database management with Pathology and Radiology at MMH (Option 3a) or All treatment and sarcoma service coordination/ database**

management at ACH, with Pathology and Radiology at MMH (Option 3b).

Essentially both options 3a and 3b mean that all treatment subspecialties are together on one site at ACH to facilitate collaborative working, both between the sarcoma surgeons and with the other treatment modalities (medical oncology, radiation oncology and paediatric oncology), and all diagnosis subspecialties are one site at MMH. The items for resolution include:

- the location of the sarcoma service coordination/ database management (what constitutes the "MDM Office" and whether this should sit with the surgeons at ACH or with pathology and radiology at MMH),
- protocols for when frozen sections are required as currently if performed at ACH live tissue would need to be transported or a pathologist would need to go to ACH (note that one of the two orthopaedic surgeons uses frozen sections for a small number of patients),
- protocol for complex plastic surgery (currently performed at CMH) and
- workforce planning to cover the non-sarcoma component of CMDHB sarcoma surgeon (25-30% of FTE) and orthopaedic backfill at ACH.

The lack of resolution of some of these items may be a barrier to acceptance of options 3a and 3b from some of the stakeholders.

Single site option

- **Single site for all tertiary and quaternary services related to sarcoma (Option 1 or Option 2).**

There was generally a consensus from the clinicians that this is the ideal option and feedback from the Māori and Pacific Groups indicated that this is what the region should aim for. Noted difficulties with these options are the rationale for keeping the specialised sarcoma pathology and radiology expertise at CMH due to them working closely together and being part of a wider workforce at CMH and the fixed nature of Radiation Oncology, Medical Oncology and Paediatric Oncology at ACH. It has also been raised that if a single centre were to be formally established then this should be formally acknowledged and discussed at a National level to ensure there is commitment to ensure full and appropriate resourcing of the centre to accommodate referrals coming from all of the North Island.

Dependencies and considerations

It is recommended that the lead site for surgery take the lead on capacity planning and management of the service overall whether on its own site or at an alternate site to ensure there is clear management and accountability for the whole tertiary care pathway. Noted that according to NICE guidelines[3], there should be a nominated clinician (clinical lead) who takes responsibility for the service and this should be reflected in their job plan. The clinical lead should be a member of the core MDT.

Noted that the site on which surgery capacity is centralised will need to provide required weekly theatre sessions and weekly clinic hours on site, to ensure the service has sufficient capacity to maintain waiting time standards as an essential quality requirement. Early estimates are 1 all-day OR session and 1 all-day Clinic session per week each for the ADHB and CMH sarcoma orthopaedic surgeons. It is recognised that for ACH or MMH this could require consideration of other work moving out of the site to make room to accommodate the service, and where this is not possible it may result in a reduction of access.

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[3] NICE Guidance available at https://www.nice.org.uk/guidance/csg9/resources/improving-outcomes-for-people-with-sarcoma-update-pdf-773381485

The service needs to deliver equitable access to treatment and outcomes for patients irrespective of domicile DHB and care that is responsive to the individual needs of patients, in particular to those who are most vulnerable.

From a patient perspective, it is important to have clear and visible pathways with attention to seamless coordination for patients throughout their journey.

Noted that the assessment to date has been a non-financial consideration of options only so has not addressed the issue of financial sustainability.

Recommendations

- Note the feedback on this paper received from the Māori Clinical Governance Group and the Pacific Clinical TAG Group (Appendix 6)
- Note the feedback on this paper received from the Northern Region Expert Group and other stakeholders (Appendix 7)
- Endorse that the following immediate changes are taken to mitigate the vulnerability of the existing MDM and lists with agreed actions and timeframes, pending transition to the agreed option in 2021/22
    - Address succession planning and funding for the MDM coordinator and data base manager role
    - Address concern about theatre access for operating lists at the MMH site by reconciling surgeon availability / need with theatre availability
    - Address concern of regular access to GA radiology lists (supporting data to be provided)
    - Address lack of CNS support at ADHB site.
- Provide feedback on the options for consideration for the Northern Region Sarcoma Service model.
- Note the intent that the next stage development of the detail and implementation of change will be delivered with project leadership and clinical time as set out in the proposals agreed by REF for submission to the Ministry of health funding in response to the call for proposals for sustainability projects.

Appendix 1.

The Regional Multidisciplinary Team

	ADHB	CMDHB	
Core Multidisciplinary Team			NICE guidance Specification[4]
Specialist sarcoma surgeon	1 person, 0.8 FTE (orthopaedic) 1 person, 0.2 to 0.3 FTE (retroperitoneal) Note: Cardiothoracic sarcoma dealt with by one surgeon at ADHB	1 person (0.70-0.75 FTE) (orthopaedic)	Min of 2 per MDT (These surgeons should have a major clinical interest in sarcoma)
Sarcoma clinical nurse specialist	TBC	1 person, 1 FTE	Sufficient to allocate a clinical nurse specialist/key worker for each patient (but a minimum of two)
Specialist sarcoma pathologist	-	5 people* 2.5 FTE	At least one and ideally two
Specialist sarcoma radiologist	2.0 people**	2.0 FTE	At least two with a special interest in musculoskeletal/oncological imaging
Medical Oncologist	2 people 0.4 FTE	-	
Radiation Oncologist	3 people, FTE TBC	-	
MDM Coordinator and secretariat support	N/A	Currently admin FTE in radiology; FTE TBC	
Palliative care specialist			
Paediatric Sarcoma Team***	Orthopaedic Surgeon 0.8FTE Paediatric Nurse specialist 0.8 FTE Paediatric Oncologist (2 people) Paediatric Radiation Oncologist Weekly GA/biopsy/Radiation therapy lists including Interventional Radiologist	-	
Extended Multidisciplinary Team			NICE guidance Specification
Specialist sarcoma physiotherapist			
Specialised allied health professionals			Consisting of other relevant AHPs, such as radiographers, occupational therapists, dietitians and social workers, counsellors and/or psychologists
Specialist nurses			Including palliative care nurses and appropriately trained ward staff
Other professionals including orthopaedic, plastic, head and neck, gynaecological, GI and vascular surgeons			

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[4] NICE Guidance available at https://www.nice.org.uk/guidance/csg9/resources/improving-outcomes-for-people-with-sarcoma-update-pdf-773381485

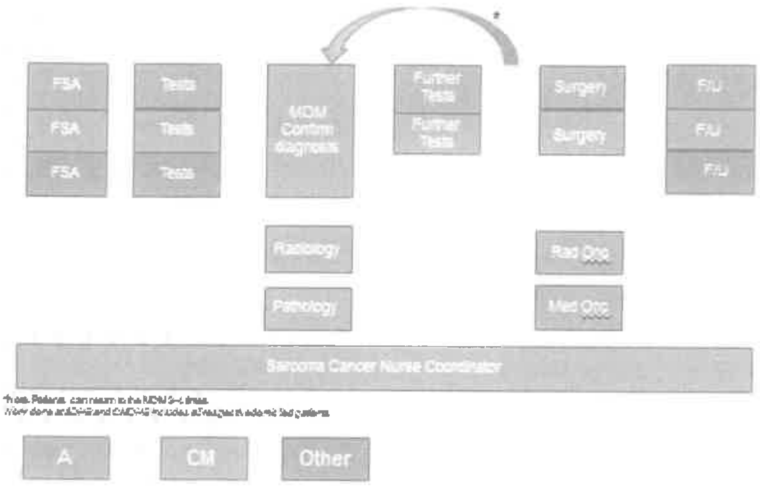
*Currently spread across 5 people, needs to be ≥3 people to allow for cover

** There are two sarcoma fellowship trained radiologists at ACH. Treatment from radiology is also provided via ADHB (e.g. RFA and cryotherapy).

***For Adolescents and Young Adults, there is crossover between ADHB orthopaedic oncology surgeon and paediatric sarcoma surgeon

Appendix 2.

Current Service Model



Appendix 3.

Northern Region FCT performance for sarcoma by ethnicity (2019/2020)

	Asian	European	Maori	Other	Pacific	Total
NDHB	0	5/5	2/2		0/0	7/7
WDHB	1/1	21/22	3/3	1/1	2/2	28/29
ADHB	1/3	9/10	3/3		3/4	16/20
CMDHB	3/3	10/11	3/3		9/10	25/27
Total	5/7	45/48	11/11	1/1	14/16	76/83

Appendix 4.

Survival (%) by sarcoma type and region 2009- 2010.

Note 5yr survival can't be calculated beyond 2010

ICD 10 code **C40, C41, C46, C48, C49**

	2009					2010				
	<1yr	1yr	3yr	5yr	Total	<1yr	1yr	3yr	5yr	Total
Northern										
Bone	21%	21%	21%	36%	**100%**	11%	22%	6%	61%	**100%**
Soft tissue	26%	20%	7%	46%	**100%**	37%	17%	6%	40%	**100%**
Midland										
Bone	25%	0%	0%	75%	**100%**	10%	30%	0%	60%	**100%**
Soft tissue	48%	8%	0%	44%	**100%**	28%	19%	11%	42%	**100%**
Central										
Bone	38%	0%	0%	63%	**100%**	0%	13%	13%	73%	**100%**
Soft tissue	26%	13%	13%	47%	**100%**	21%	38%	8%	33%	**100%**
Southern										
Bone	22%	11%	0%	67%	**100%**	17%	17%	0%	67%	**100%**
Soft tissue	15%	30%	3%	52%	**100%**	18%	24%	11%	47%	**100%**
Overseas										
Soft tissue										
Grand Total	**27%**	**17%**	**7%**	**49%**	**100%**	**22%**	**23%**	**8%**	**46%**	**100%**

Continued: Survival (%) by sarcoma type and region, 2011-2013

Note 5yr survival can't be calculated beyond 2010

	2011					2012					2013			
	<1yr	1yr	3yr	>3yrs	Total	<1yr	1yr	3yr	>3yrs	Total	<1yr	1yr	>3yrs	Total
Northern														
Bone	0%	9%	9%	82%	**100%**	18%	18%	6%	59%	**100%**	29%	10%	62%	**100%**
Soft tissue	14%	17%	6%	63%	**100%**	12%	24%	2%	62%	**100%**	15%	15%	69%	**100%**
Midland														
Bone	25%	25%	25%	25%	**100%**	22%	22%	11%	44%	**100%**	14%	14%	71%	**100%**
Soft tissue	26%	11%	11%	51%	**100%**	30%	21%	0%	48%	**100%**	23%	13%	65%	**100%**
Central														
Bone	0%	50%	0%	50%	**100%**	30%	10%	5%	55%	**100%**	9%	27%	64%	**100%**
Soft tissue	18%	21%	4%	57%	**100%**	16%	28%	6%	50%	**100%**	16%	19%	66%	**100%**
Southern														
Bone	0%	22%	0%	78%	**100%**	10%	30%	0%	60%	**100%**	40%	10%	50%	**100%**
Soft tissue	32%	11%	8%	50%	**100%**	28%	9%	0%	63%	**100%**	23%	23%	55%	**100%**
Overseas														
Soft tissue				100%	**100%**				100%	**100%**				
Grand Total	**19%**	**16%**	**7%**	**58%**	**100%**	**21%**	**20%**	**3%**	**56%**	**100%**	**20%**	**17%**	**63%**	**100%**

Appendix 5.

Table 1. Options analysis for regional sarcoma service model

	1) Have all specialties at ADHB	**2) Have all specialties at CMDHB**	**3a) Have all sarcoma surgeons on one site at ADHB**	**3b) Have all sarcoma surgeons, and sarcoma service coordination/ database management on one site at ADHB**	**4) Have all sarcoma surgeons, and sarcoma service coordination/ database management on one site at CMDHB**	**5) Current model: sarcoma orthopaedic surgery split over 2 sites with immediate changes implemented**
What does this mean	All specialties at ADHB	All specialties at CMDHB (Note the difficulty of having rad onc,med onc and paed onc at CMH)	Surgeons together and with rad onc, med onc and paed onc but separate from sarcoma service coordination, pathology and radiology	Surgeons together and with rad onc, med onc, paed onc and sarcoma service coordination, but separate from pathology and radiology	Surgeons together and with sarcoma service coordination, pathology and radiology but separate from rad onc, med onc and paed onc.	Surgeons across two sites. Pathology and radiology together on one site and rad onc, med onc and paed onc together on other site. Note the following immediate changes to mitigate vulnerabilities: -succession planning for sarcoma service coordinator -availability of theatre lists at MMH and GA radiology lists
Advantages	-Ideal model of all specialties on one site providing integrated specialised sarcoma service -Fosters opportunity to expand trials access for sarcoma patients	Ideal model of all specialties on one site providing integrated specialised sarcoma service	-Facilitates collaboration between sarcoma orthopaedic surgeons, including scheduling of combined surgeries. -facilitates collaboration with AYA/Paeds, medical oncology and radiation oncology (combined	-Facilitates collaboration between sarcoma orthopaedic surgeons, including scheduling of combined surgeries. -Better collaboration with AYA/Paeds, medical oncology and radiation oncology (combined	-Facilitates collaboration between sarcoma orthopaedic surgeons, including scheduling of combined surgeries. -In line with current agreed IDF funding arrangements	-Note immediate changes above

			clinics) - only move one clinician for benefits above -Fosters opportunity to expand trials access for sarcoma patients	clinics) -Fosters opportunity to expand trials access for sarcoma patients		
Disadvantages	-Not ideal to move pathology and radiology from CMDHB because it is part of a wider specialist workforce -No Resident Plastic Surgery service -Increases capacity pressure at ADHB	-Expert group agreed not possible to move medical oncology, radiation oncology and paediatric oncology to CMDHB -Increases capacity pressures at CMH	-MDM not on the same site as surgeons -MDM not on the same site as CNS -No Resident Plastic Surgery service Increases capacity pressure at ADHB	-MDM not on the same site as pathology and radiology -No Resident Plastic - Surgery service Increases capacity pressure at ADHB	-Sarcoma orthopaedic surgeons not with other general sarcoma and paediatric surgeons, medical oncology and radiation oncology, for collaboration and combined clinics. -Increases capacity pressures at CMH	-Hinders collaboration between sarcoma surgeons -No provision for combined clinics with med onc and rad onc
For resolution	- Impact of establishing pathology and radiology at ADHB -Management and leadership arrangements -Funding agreement - Strategy for when Plastic surgery needed (Provision of off-site complex plastic surgery reconstruction is suboptimal)	- Having medical oncology, radiation oncology and paediatric oncology at CMDHB is a barrier -Clinic and theatre capacity requirements available at CMDHB -Management and leadership arrangements - Funding agreement	-Strategy for when frozen sections needed - Strategy for when Plastic surgery needed (Provision of off-site complex plastic surgery reconstruction is suboptimal) -All clinic and theatre capacity need to be in place -Management and leadership arrangements -Funding agreement	-Logistics of establishing the sarcoma service coordination at ADHB -Management and leadership arrangements -Funding agreement - Strategy for when Plastic surgery needed (Provision of off-site complex plastic surgery reconstruction is suboptimal)	-Clinic and theatre capacity requirements available at CMDHB -Management and leadership arrangements -Funding agreement	-Service planning would need to be undertaken for 21/22 to ensure the right funding plan was in place to ensure sustainability -Management and leadership arrangements -pathways to be defined

Table 2. Description of options for regional sarcoma service model.

	1) Have all specialties on one site at ADHB	2) Have all specialties on one site at CMDHB	3a) Have all sarcoma surgeons on one site at ADHB	3b) Have all sarcoma surgeons, and sarcoma service coordination/ database management on one site at ADHB	4) Have all sarcoma surgeons, and sarcoma service coordination/ database management on one site at CMDHB	5) Current model: sarcoma orthopaed surgery split over 2 sites
All orthopaedic sarcoma surgeons on same site	✓	✓	✓	✓	✓	✗
Orthopaedic sarcoma surgeons with general and paediatric sarcoma surgeons, medical oncology and radiation oncology	✓	✓	✓	✓	✗	✗
Pathology and radiology on the same site together	✓	✓	✓	✓	✓	✓
MDM on same site as pathology and radiology	✓	✓	✓	✗	✓	✓
MDM on same site as surgeons	✓	✓	✗	✓	✓	✗
MDM on same site as pathology and radiology and surgeons	✓	✓	✗	✗	✓	✗
All orthopaedic sarcoma surgeons on same site as plastic surgery	✓	✓	✗	✗	✓	✗

Appendix 6.

Sarcoma feedback from Māori and Pacific Advisory Groups

	Feedback (from minutes)	**How addressed:**
Māori Clinical Governance Group **12 Nov 2020**	Presentation summary Proposal for potential change in service that will impact on everyone and particularly impact Māori with slightly poorer outcomes. Proposed to move service to Auckland (rather than across Auckland and Counties). Feedback and patae • Have to have to have a site of significant size and number of cases to meet international safety guidelines; tension of DHBs across different locations – need to work out what works best for patients then fund and organise that way • Can oncologists visit Super Clinic? No radiation bunker. • Got registry data on sarcoma incidence by ethnicity; data on attendance, mortality? No – just time to access. • Resist silos and fragmentation; causes delays • Is this a patient centric or clinician centric solution? • COVID has taught us how much can be done remotely but good to have oncologists and surgeons working together • Blaming tumour biology for inequity of outcomes for Māori – focus on system level issues; racism, differences in surgical rates between Māori and non-Māori • Theatre access is common theme in presentations – are we using them efficiently, do we have enough? • Split/one site is a capital issue – is the capital investment to make it happen part of issue? Who else would benefit? Have some allies. • Māori sarcomas is 18-19% of sarcomas; mostly young people – compare with young Māori pop. closer to 20% • How can you comment on different survival rates as there is no disaggregated data in paper? Local data only, not national • If we could put it all in one place Auckland makes sense; surgical is split across two sites and to amalgamate either moves it from oncology or pathology and radiology • Account for different travel times depending on	Seek patient feedback: • Feedback on the paper with emphasis on patients requested from Navigator, Allied Health and CNS • Patient voice to be included at service planning stage Further Cancer registry data: • Cancer registry data by Pacific and Māori and by age group added to revised paper. Tumour biology: • Statement on tumour biology removed from revised paper (so as not to imply tumour biology is responsibe for inequity in Māori). No disaggregated survival data: • We do not currently have access to disagregated survival data

	appointment time • Plastic surgery should be onsite with the rest of the surgical pathway for better outcomes Messages heard, next steps • Design around patient – talk to patients • Demographic for young adult Māori, reflect %age of young pop. Talk to Pacific group	
Pacific Clinical TAG **19 Nov 2020**	Presentation summary: Proposal for potential change in service that will impact on everyone and particularly impact Māori with slightly poorer outcomes. Proposed to move service to Auckland (rather than across Auckland and Counties). Key issues: 1. Under resourced MDM system 2. Increasing demand on service, creating capacity issues for Auckland and Counties 3. Divided surgical workforce; one orthopaedic surgeon in Auckland, one in Counties – providing bony sarcoma service to whole North Is. (which is not nationally mandated) 4. Divided services; radiation and medical oncology at Auckland; pathology, radiology and plastic surgery at Counties 5. Sarcoma a low volume service, difficult to get good data – lower Pacific numbers than expected; whether a registration issue, treatment issue or genuine difference is unclear Themes – advice/questions: • From the outside a single site looks desirable for a low volume, highly specialised service; o Arrange speciality services around this o Some aspects be done via technology such as Zoom e.g. MDT/radiology. Patients often show distress afterwards in primary care setting because their family was not able to travel and support o Focus on surgeons is historical; pooling the services has to be the long game; tease out what each service does. • Becomes personalised to medical people; those that don't support will move on in time. Walk through with clinicians to avoid delays. Response: about management, logistics and capacity more than clinician preferences • Cancer control agency plays a role in strategic planning and coordination	Feedback noted for future service plan: • A single site is desirable • Some aspects to be via technology where possible • Most important is clinical outcomes and solidity of the service

	• South Island went through this with paediatric oncology; four down to two sites in Auckland and Wellington (Wellington surgeons travel to South Is). See "Through the eyes of a child", HFA report • Can MDT/non-surgical work be done remotely using technology? For Pacific patients going to town is a big burden and having family there is important; show distress later if not supported by family and community • Priority for Pacific population is to make service secure and effective. Lower priority is where the population is located; they will come to a good service • Pacific are very scared of the word Cancer. Need to provide reality and perception that services are safe, they will be well cared for and health can improve (not just a place to die) • Pacific/Māori cancer nurse coordinator supporting whole pathway (not just tumour streams) to walk alongside and take families with them – review evidence and scale currently, but has been really helpful to keep people in journey Messages taken away • Ideally one site • Most important is clinical outcomes and solidity of the service • Patient considerations in terms of location are lower priority than service delivery.	

Appendix 6.

Sarcoma feedback from Expert Group and other stakeholders

Discipline	Feedback	How addressed
Orthopaedic Sarcoma Surgical ACH	I saw Paediatric points and agree with them, also: Appendix 1 - There are 2 sarcoma fellowship trained radiologists at Auckland Hospital; Biopsy numbers have gone up an estimated 150% in the last year. A lot of our treatment from radiology is also provided via ADHB, RFA and cryotherapy for example -There are 3 radiation oncologists at ADHB who do sarcoma and are part of the MDT - there are 2 paediatric sarcoma oncologists not 1 - cardiothoracic sarcoma dealt with by 1 surgeon at ADHB The ideal setting is not currently attainable, as path and some radiology are at CMDHB. However I feel strongly that all surgical services and the MDT office and database need to be moved to ADHB. This does not mean that the counties site with not need admin support for path and radiology, but that is not the same as an MDT office. The MDT office is part of the clinical side of the service. We also desperately need people for both the MDT office and CNS support at ADHB. I am currently operating on full tumour lists every week and have had to get extra operating time in the last 2 months to cover the demand.	Feedback on Appendix 1 incorporated into the paper. **Note:** - **The ideal setting is not available** - **Preference for all surgical services and the MDT office and database to move to ADHB.** - **Need for CNS support at ADHB** - **Currently operating on full tumour lists every week and have had to get extra operating time to cover demand**
Orthopaedic Sarcoma Surgical ACH	Realised that I didn't give my preferred option which is 3b. The issue is that what pathology and radiology currently consider as an MDT office is an administrative role and not a true MDT office. The "sarcoma database" is currently a pathology database and does not record outcome or patients journeys. In almost all sarcoma MDT groups the MDT office sits with the clinicians seeing and treating patients. *Clarification by phone:* *The MDT office (MDM database) encompasses more than diagnosis i.e. should cover outcomes data, PROMS, PREMS etc.*	**Note:** **-Preference for Option 3b** **-What is currently considered the MDT office is an administrative role and not a true MDT office which should encompass outcomes data, Quality of Life measures etc.**
Orthopaedic Sarcoma	See Sarcoma service specifications (these are from the NHS, embedded below). Please note that although	**As above**

Surgical ACH	radiology and pathology are a critical part of diagnosis of sarcoma they play a small part in the care of the patient long- term. Sarcoma-Service-Specification copy.pdf	
Orthopaedic Sarcoma Surgical MMH	Having canvassed the Expert Group clinicians it is our strong feeling that a further workshop is required to address some of the imminent outstanding issues. As you are aware the last workshop focussed on the radiology and pathology portions of the diagnostic arm of the service. In the discussions around surgery the focus so far has been on the overall goals and potential movements. There has not been significant discussion around the interim model, and there needs to be clarity on the immediate needs and changes required, with specific actions to target these. We would be grateful if you could organise a further workshop.	**Note:** - **Another workshop required to address imminent outstanding issues**
Plastic surgical	To summarise what I see as the issues and points of concern from Plastics point of view: • I am not sure how many sarcoma cases (what %?) require Plastics input for reconstruction. I know it will likely be a small percentage of the overall sarcoma cases, but will be the larger and more complex cases • Currently the sarcoma MDM is not functioning well from our perspective. Unfortunately, Plastics attendance is somewhat ad hoc. Although we have one or two surgeons who are keen to be involved and try to attend regularly, this has never been allocated into FTE and we are having to attempt to retro-fit them into our surgeons schedules as able • Perhaps as a consequence of inconsistent MDM attendance, there is historically poor collaboration and communication of complex patients as combined cases; these are often notified to Plastics late in the patients course with little time for the necessary pre-op assessment and operative list planning • Our experience in other cancer streams of doing complex reconstructions at other sites can be sub-optimal due to lack of access to RMOs on the alternative site; challenges with	**Note:** **-Not sure of number of sarcoma requiring but likely to be small** **-Plastic surgeon attendance at MDM ad hoc (not allocated into FTE resulting in poor comminication of complex cases)** **-Doing complex reconstructions at other sites suboptimal** **- Suggest model of single MDT which specialists from both sites attend and distributed based on complexity of surgery, domicile DHB, capacity etc.**

	our staff who are rostered to work at CMDHB providing regular in-patient follow up post-operatively at ADHB; insufficient nursing expertise to monitor complex flaps etc. I therefore cannot guarantee that we would be able to provide such good patient outcomes if we needed to deliver complex reconstruction to this patient group across two sites. • The accepted model in the H&N cancer stream is to have a single MDT (for H&N cancer this is at ADHB, but for sarcoma could stay at CMDHB potentially) where specialists from both sites attend and all cases are discussed. They are then distributed across both sites based on complexity of surgery, domiciled DHB, capacity etc. I would suggest a similar model could be considered for sarcoma. Overall, we are certainly supportive of improving sarcoma care and patient pathways. We are keen to be involved collaboratively, from early on in the patients journey, to facilitate combined surgery where needed for reconstruction. As with many other work streams, there has been a steady increase in the workload over time with no specific FTE to accommodate this. We would like to see some Plastics FTE worked into the regional sarcoma plan for this purpose. Thank you for giving me the opportunity to comment on this review. I look forward to hearing from you with regards to the next steps.	
Retroperitoneal Sarcoma Surgical	Looks good to me. I would say currently my time spent on RPS at ACH is ~ 0.2-0.3FTE Roughly!	FTE updated in Appendix 1
Paediatric/AYA Surgical	Thank you for the draft. I see that in the current Multidisciplinary team section (Appendix 1) you have excluded the entire Paediatric Sarcoma team from the MDM team. Orthopaedic Surgeon 0.8 FTE Paediatric Nurse specialist 0.8 FTE Paediatric Medical Oncologist (key component of the MDM not an extended member) Paediatric Radiation Oncologist Weekly GA/biopsy/Radiation therapy lists including	Paediatric Sarcoma feedback noted in Appendix 1 and paper.

	Interventional Radiologist As we have previously explained, Starship currently treats most if not all Paediatric sarcoma on a single site with essential pathology and radiology support from the MMH site. This is with combined Oncology/Radiation/surgery clinics and dedicated GA biopsy and Radiation therapy lists. All medical therapy is delivered on site and surgery is performed in a collaborative manner with me and sarcoma orthopaedic surgeons. In addition all Paediatric Oncology patients are discussed in a robust MDM on Friday mornings as well as the Thursday AM Sarcoma MDM. I'm not sure that the current situation for Paediatric Sarcoma treatment is accurately reflected in your draft.	
Medical Oncology	I agree with comments that Paediatric sarcoma services aren't reflected in the document and are integral to the adult sarcoma service. It may be also worth noting that, as well as the MDM being integral to the diagnosis of sarcoma in the North Island; it also provides recommendation to the management of diagnosed sarcomas. In rare tumours, this helps provide continuity across the country and helps ensure up-to-date management. Whilst all of the components of the current sarcoma service are vulnerable from being under resourced, the fundamental issue being raised here is one relating to orthopaedic sarcoma services. My feedback is related to the proposed changes from a medical oncology perspective: - Medical oncology (and will be the same for radiation oncology) will always remain based at ACH. This is due to complex chemotherapy regimes that require highly skilled chemo nursing staff and often inpatient admissions. Although oncology is starting to move out some chemotherapy regimes (breast only) to MMH, the likelihood of developing 2 -3 sets of nursing/ medical teams experienced enough in managing sarcoma chemotherapy is low. In an ideal world, in future (?2-3years) we may be able to offer some palliative sarcoma chemo at MMH/NSH but our service will still be based out of ACH. In this respect option 2 is not realistic for us. - Medical oncology is currently separate from diagnostics (radiology/path) and MMH ortho but this has no implications on our ability to	**Note:** **-Medical Oncology will always remain at ADHB (due to complexity of sarcoma)** **- Due to upheaval option 1 doesn't seem feasible** **-Options 3a, 4 and 5 appear most plausible but need work around the services they affect** **-Agree with pathology that ensuring appropriate database management is fundamental to the on-going service**

	provide chemotherapy. The current system (being on separate sites) still allows us to provide our chemotherapy service adequately because of on-going well formed working relationships between all MDM members. Being able to attend MMH MDM in person and video conferencing it to ACH, helps maintains these. Because of this and the tremendous upheaval that would be required for radiology/path, option 1 doesn't seem feasible. - Options 3a, 4 or 5 appear the most plausible but need work around for the specialties that they affect. I agree with Pathology that ensuring appropriate database management (location and person) is fundamental to our on-going service.	
Specialist nursing	I have read the draft report and these are some thoughts that come to mind: I disagree that the majority of orthopaedic surgeries for sarcoma now happens at Auckland Hospital. I think the cases are more evenly spread as there were some sarcoma patients who returned to Middlemore for procedures to manage infection or revise implants in the 2019/20 year. I don't think these would have been coded as sarcoma. There is a lack of available theatre time at Middlemore Hospital for sarcoma surgery. Not only people with complex comorbidities, but also those requiring big resections and reconstructions with custom made implants and/or free flaps, need to be operated on at Middlemore. Most of the time the list has to be provided by the orthopaedic service which means another surgeon has to give up an elective list, resulting in those on the waiting list at CMH also being disadvantaged. There is at times a problem securing a plastic surgeon and it would be a great help to have a regular combined ortho /plastic surgical list for sarcoma free flap reconstructions. A timed list would also be helpful for the charge nurse on the plastics ward when rostering staff as patients with free flaps are high acuity. I think the MDM is the most pressing problem. When I began as a CNC in 2008 we seldom had more than 10 cases for discussion at the MDM. Part of my role was to assist the manager of the Bone & Soft Tissue Tumour Registry to prepare for the meeting	**Note:** **-Believe there is an even spread of sarcoma cases over ACH and MMH** **- Lack of available theatre time at MMH** **-MDM most pressing problem (not enough FTE for MDM prep, vulnerable if CNS or MDM manager sick).The number of cases over the years has quadrupled but administrative FTE has stayed the same** **-At times problems securing a plastic surgeon** **- Have concerns about implications for CNS role if surgery based at ACH**

	and enter data in the registry. Over the years the number of cases discussed has quadrupled yet the administrative FTE is unchanged. The amount of work involved in putting together the cases for discussion at the MDM cannot be done by one person alone. There is no additional help and no one to cover if either myself or the manager take leave. If one of us became sick and was unable to work I doubt that the MDM would continue as it is at present. As far as FCT is concerned, sarcoma is a rare cancer so usually not graded as high suspicion. Most of our patients are on the 31 day pathway. We are not always told at the time of referral to the MDM that the patient is on a 62 day pathway despite this question being on our updated proforma. And if we are aware, sometimes that patient is well into the 62 days before we receive the referral. We also have no control over the timing of investigations recommended by the MDM and carried out in the patient's domicile DHB. I do have concerns about my role if the surgeons are both based at Auckland. If that was to happen would I have to be employed by ADHB? In my role relationships with other disciplines is really important. Having contacts in Radiology (with radiologists, radiographers and clerical staff), pathology, clinics (nursing staff & schedulers), surgical bookers and pre op nurse co-ordinators are vital in arranging timely investigations and treatment. Thanks for the opportunity to provide feedback.	
Radiology	The main issue driving this review has always been decreased revenue for orthopaedics at ADHB and CMDHB taken away by sarcoma instead of elective surgery and this has dragged radiology, pathology radiation and medical oncology into the problem and I worry we will be collateral damage. Funding must come from above the DHB level and not allow for issues such as patient interdistrict flow from CMDHB Tertiary hospital status affect the best outcome. For radiology, we have cared and managed the database without any orthopaedic or external support since its beginning in 1988 and will not willingly give this resource away as proposed in options 1, 2, or 3b. The volume of prep work by the MDM administrator and	**Note:** - **Admin suppport needed for radiology who runs the database** - **Local DHBs need to buy in to radiology protocols** - **Relocation of sarcoma radiology to ADHB near impossible** - **Single site doesn't seem to be an option** - **Need a workshop to discuss immediate needs**

	CNS who are the only admin team is immense, the complexity of importing imaging and reports onto the DHB system and following up subsequent imaging so it can be reviewed is extremely time consuming. Often incomplete studies are sent requiring double handling. Admin support needs to come to radiology who run the database. I think there needs to be separation of CNS support for the orthopods for patient management and admin support for running the database. Unfortunately the CNS at CMDHB ends up having to do a larger volume of admin than her role suggests. Most radiology can be performed at the local DHB, but they must buy in to the protocols in place otherwise this adds to our local workload and expense. For example Wellington refuses to follow our whole body STIR protocol or send CT chest sarcoma standard 3mm axial, coronal and sagittal reformats which limits our sensitivity for detecting lung mets. We have several patients who fly up to get standard sarcoma imaging their DHB will not perform. The time component of radiology interpretation is 3-4 hrs because several panel members are required to make a consensus opinion due to case complexity, subspecialist experience and knowledge similar to pathology. Our group has sarcoma fellowship experience from Leiden the Netherlands, Sloan Kettering New York, Stanmore UK and decades locally. This can not be done by one person in isolation otherwise standards will drop. Relocation of sarcoma radiology to ADHB is near impossible as many CMDHB radiologists involved in sarcoma are also involved in other aspects of the department, eg head for MRI & spine service, oncology. ADHB does not currently have the same resource or expertise to run the sarcoma MDM as well as perform their biopsies and no one from the review panel has actually asked them if they would want to add this service to their workload. CMDHB has nurtured sarcoma expertise from locally trained radiologists who have gained fellowship expertise and come back to the department. Sarcoma is one of the jewels for CMDHB radiology and taking this away would greatly affect future registrar training and SMO recruitment. Our close relationship with pathology that has evolved	

	since the beginning of the sarcoma MDM anchors the diagnostic arm of the service to MMH and separating either would be detrimental or delay patient diagnosis. Radiation and medical oncology and paediatrics have always been located at ADHB and because of their size can not be split into different sites. Along with surgery, they form the treatment arm of the service and have always functioned as support to CMDHB for other surgical MDMs such as plastics, colorectal and breast. They have always done this for sarcoma. If sarcoma went to ADHB, it would lose plastics support which seems to counter the argument of single site. Single site does not seem an option if diagnostics (radiology and pathology) can't move from CMDHB and all treatments apart from surgery can't move from ADHB. I agree that a further workshop to work on immediate solutions listed second under Recommendations needs to be discussed.	
Pathology	Thank you for preparing a very clear draft recommendation document, and for the opportunity to provide feedback. My comments and suggestions follow. I have discussed this response with my colleagues and collectively we represent approximately 60 years of experience in sarcoma diagnosis. The Background/Context should include the fact that there has been a supraregional sarcoma service based at Middlemore Hospital for over 30 years, which provides expert Pathology and Radiology review and diagnosis of sarcomas and lesions suspicious for sarcoma. The pathology team at Middlemore deals mostly with cases from the North Island, but we also receive referrals from the sarcoma unit in Christchurch. The accrued database includes over 10,000 cases and is a valuable resource based on countless hours of collective work. I would like to put in writing some of the background to the current situation, not necessarily as an addition to the document. The vulnerability of the surgical component of the sarcoma service is not new or surprising. The immediate predecessor at Middlemore, advocated strongly for better recognition and resourcing of the service. He championed the national sarcoma guidelines, and took his case for access to theatre lists, enhanced MDM support, and formal recognition of the supraregional nature of the service with appropriate funding, to the top levels of hospital	**Note:** **-Neither option 1 or 2 possible without major infrastructure changes** **-The CNS and MDM/Database manager are separate roles** **- Option 3b not appropriate (database and MDM should be with diagnostic services).** **-Options 3a, 4 and 5 are most practical** **- 3a least preferred because it requires transport of fresh human tissue** **- Urgent attention needed for provision of adequate operating lists and radiology biopsy lists** **-Historic resourcing issues at the supraregional unit**

[redacted]	management. He was not supported by management or, apparently, his surgical colleagues, and in the end he withdrew. That was how we lost a highly competent, subspecialty trained sarcoma surgeon mid-career. Middlemore has not replaced his sarcoma tenths. However when Auckland DHB effectively did, by appointing a sarcoma specialty trained surgeon, who joined the MDM and started sharing the surgical workload (with the provision of full radiology and pathology support from CMDHB), the issue has suddenly been "discovered". Regarding the options going forward, I suggest that neither option 1 nor 2 is possible without major infrastructural changes. Option 1: Sarcoma pathology services based at CMDHB cannot be moved to ADHB, unless there is a regional "super laboratory" built at the ADHB site. To document the reasons for this: this is a highly specialised area of pathology, which has been developed at CMDHB over many years. There is a cohesive group of pathologists involved, with the intention of providing seamless cover and succession planning. To maintain a high level of expertise with these rare and diverse tumours in a small population, we share the cases – considering them individually, then discussing as a group. For these reasons, the number of personnel involved exceeds the FTE requirement. To streamline the group to 2 individuals would add vulnerability in both service provision and quality. The corollary is that we all have a major involvement in other aspects of pathology provision at CMDHB, and many of us take senior roles. Our group includes the leads for liver, lung, gynaecological pathology and cytology, and we include more than half of the senior pathologists involved in breast and lymphoma pathology. Option 2: Oncology services are mostly based at ADHB, and that will not change. It is not at all unusual to have a centralised Oncology service in NZ or internationally, and the lack of co-location of oncology treatment with surgery is the norm for every other tumour stream operated on at CMDHB and WDHB. It is much more unusual to have a specialised diagnostic pathology unit entirely remote from its surgical service. Many specialised pathology units would receive work outsourced from additional hospitals, but the core local work is co-located with surgery. In assessing options 3-5, there seems to be some merging of the CNS role and the MDM/ database management. These are separate roles. The CNS needs	

to work closely with the surgeon(s). The MDM/ database management needs to work with everyone, but primarily with the radiologists. The surgeons chair the MDM, but the radiologists run it, using their information system in their department, with considerable pre meeting preparation. There is also a substantial body of pathology work in the preparation of the MDM. The database is a shared resource which needs to be modernised and improved, and should be accessible from both sites to allow input of information in real time. However the main work which underpins the database is the diagnostic data, which is the work of pathology and radiology. The original physical records of the database are at CMDHB. The database and MDM should be based with the diagnostic services. Therefore option 3B is not appropriate.

The other area of vulnerability is access to operating theatre and GA-biopsy lists. Theatre lists are obviously in high demand at both sites, and indeed this seems to be the crux of the issue we need to address. From the data you present it is clear that time to treatment needs to be improved. These are rare tumours, so they don't get much public recognition compared to breast cancer or melanoma for instance, but they are often highly aggressive, often occur in young healthy people, and there is often a substantial delay before someone gets suspicious and the key imaging occurs, with subsequent biopsy and treatment. Therefore it is essential that we cause no further delay. Whether this requires access to theatres at both CMDHB and ADHB sites, or at one or the other, will depend on what the surgical departments can come up with, but it seems unethical to delay surgery on aggressive tumours because the surgeons with the requisite skills are not provided with sufficient regular lists. An unintended consequence of the health funding model is that elective joint replacement surgery is more important for the financial viability of the hospital, and is therefore being prioritised over elective cancer surgery.

Options 3A, 4 and 5 are the most practical. From the pathology point of view, 3A is the least preferred because it requires transportation of irreplaceable fresh human tissue across the city. Yes, we can do it if required, as we have demonstrated with some cases this year, but we would prefer not to expand this further.

In summary, it seems that there needs to be urgent attention paid to provision of adequate operating lists, and radiology biopsy lists. With effective management

	and surgical cooperation this should be achievable. There needs to be an acceptance that the CNS and MDM/database roles are severely understaffed, and a decision made as to who is paying for this, so it can be remedied. Finally, the historic issue of the failure to resource this expert supraregional unit must be addressed. From the pathology perspective, the expert diagnostic service operates entirely on good will. This is not a robust framework.	
Allied Health (Physio)	I have reviewed the draft Regional Sarcoma Project paper. From the service model options I believe the best outcome would be to have everything on one site. How achievable this is, is obviously another story. I have been fortunate enough to work in a cancer centre and have seen the efficacy of this first hand. The advantages being: • One stop shop for patients – less stressful, consistency and routine • Having access to all specialities on site makes overall communication streamline and effective especially if problems arise – dealt with much quicker • Have the ability to see patients in a timely manner and even have the option to 'pop' and see them if there is a query • Clear patient pathway. If across sites, which is probably the more realistic option is achievable but key people need to be identified for across the boards and a very clear pathway implemented to ensure the patient pathway is streamline. • Communication needs to be key and regular MDM across platforms needs to be implemented • Patient information needs to be clear and include what both sites offer and what to expect • Key people need to be identified for patients to be able to contact I think it would be beneficial also to have staff members allocated to roles and this then written in job descriptions so it is clear who does what from each board and their responsibilities. I think the more you have on one site the better, irrelevant if it is ADHB or CMDHB.	**Note:** **-Best option is everything on one site** **- Across sites more realistic but key people need to be identifed for across the boards and a very clear pathway for patients implemented** **- Consider travel options for patients when comparing sites**

	The other consideration is public transport and parking for patients, is one site better than another?	
Orthopaedics ACH	I see the document as a start as presumably a business case is ultimately developed. I do not think, however, it has captured the impact that the lack of funding and the load on resources the out-of-zone cases have on both ADHB and CMDHB. This is a problem we face as a region. I think the 'What does good look like" agenda somehow had the meetings (and this is reflected in the document) focus on individual subspecialties establishing their importance and need for preservation and expansion of their individual service. I also sensed a MMH vs. ACH tension and the pathology response perhaps inadvertently, perhaps not, has captured this. We need to solve this problem together as a region not at individual hospital levels. All services involved in the management of MSK sarcoma are struggling. The document discusses only MSK sarcoma and think the brief really does need to be expanded or the impact of non sarcomatous MSK neoplastic disease be adequately acknowledged. Currently management of metastatic bone disease is a huge load on us all and this is only going to increase and needs to be taken into account as increasing numbers of cases will be referred to the group which is becoming a victim of its own success. What developed as an area of special interest for a small group at least 40 years ago has developed in an adhoc way into the service it is. Independent of domiciliary DHB, clinicians now either recognise the expertise that exists and use it, or feel the service has such authority that they feel obliged to be referring all cases of MSK neoplasm. I do not think that the immediate issues re MDM support,CNS support, GA Biopsy and OR access have been addressed as indicated by and I support the request that stakeholders meet . Addressing these now and improving resources for individual services specifically for this work e.g pathology ,would go along way to averting a significant crisis. We are many years from deciding on and then achieving "What does good look like".	**Note:** **-Haven't captured the lack of funding and load on resources that the "out of zone" cases have on ADHB and CMDHB.** **-Agenda and meetings been focussed on individual subspecialties** **-All services struggling, need to solve as region** **-Need to expand or acknowledge impact of non-sarcomatous MSK neoplastic disease (metastatic bone disease)** **-Agree immediate issues haven't been addressed and support that the stakeholders meet. Addressing now will go a long way to averting significant crisis.** **-We are many years from deciding "What does good like".**
Paediatric oncology	Figure 1 "sarcoma inpatient events" – can we clarify if this is surgical volumes only or if this includes medical	Emailed analyst re data query 30/11/2020.

[redacted]	volumes (only relates to surgical services volumes). Echo the importance of Paeds in the mix. But also stress the importance of the multidisciplinary nature of the clinical interface. The model of surgeon, radiation oncologist and oncologist all able to meet with the patient in the same clinic or ward setting when first meeting them for diagnosis, local control options discussions for the complex patient with amputation etc, and post op wound care while on chemotherapy or deciding if next cycle is good to go. Clinical trials access also pathology and resourcing is critically important for this. The recent introduction of charges to release histology blocks from MMH to allow patients to be enrolled onto clinical trials via the Starship group makes biopsy and clinical trial on one site also more important. Radiology vs intervential radiology is not commented on. Ideally surgeon and interventional radiologist would be on one site to avoid errors in sampling. MMH doesn't have the OR it needs. Re equity this section is set out implying that there is some doubt over inequitable outcomes. We didn't have proper data but the only data available strongly supports inequitable survival. This should probably be the only point - where data exists outcomes are inequitable. I did have some other points but we likely need to do further work so can discuss that then. Thanks so much for all this work	Amended equity section, where data exists outcomes are inequitable. **Note:** **-Importance of multidisciplinary nature of clinical interface; the model of surgeon, radiation oncologist and oncologist all able to meet with the patient in the same clinic or ward** **-Ideally surgeon and interventional radiologist on the same site (MMH doesn't have the OR it needs).**

17/12/2020

Northern Regional Alliance
He Hononga o te Raki

Vulnerable Services Progress Update

	1. Mobilise	2. Gather Info	3. Problem & Solution W/shop	4. Solution Analysis	5. Solution W/shops	6. Finalise & Submit	
Eyes	Key people engaged	Initial info complete	Held 17 June	Streams complete	Held 1 Jul, 19 Aug & 1 Sept	Maori/ Pacific & SG done	√ Completed. REF 17 Sept. Implementing.
Vascular	Briefing held Thurs 11/6	Initial Info complete	Held 25 June	Streams complete	Held 27 Jul + extra CMH 29 Oct + Last 12 Nov	Maori, Pacific & SG done	√ Completed. REF 3rd Dec. Implementing
ORL/H&N	Key people engaged	Info collected	Held 6 July	Streams complete	Held 7 Aug, 9 Sept, 11 Dec (adult)	Pacific & Maori SG done	Paeds √ REF Nov, Adults ongoing
Oral	Key people engaged	Initial Info complete	Held 15 June	Key pressures identified	Held 7 July	Surgical being progressed within ADHB. End to end approach proposed under Sustainability	
Sarcoma	Key leads briefed	Initial info completed	Held 4 Sept	Work underway	Held 25 Sept + 9 Oct	Māori done, Pacific done SG Dec 3	Progressing recs from SG. Mtg in New Year
Max Fac	Key people engaged	Initial info collected	Held 8 July	Streams initiated	Ongoing w/shop challenges		Postponed until 2021

NB Spinal & Surgical Prioritisation in Phase 2

Vulnerable Services Implementation

Service	Implementation Progress	Next Steps
Ophthalmology	Implementation funding secured from MoH Planned Care Fund (3 projects supported). Interim Project Manager appointed. Substantive PM recruitment underway. Clinical Lead recruitment nearing completion. Draft ToR for regional oversight group developed for Steering Group/ REF consideration. Initial scoping of potential community model and e-referral/reporting tool underway. CMDHB started alignment by decreased their CPAC threshold for cataract from 55 to 50.	Formally establishing oversight group and continuing to progress all 9 recommendations.
Vascular	Endorsed early December. Awaiting confirmation of sustainability funding from MoH. In the interim, starting with recruitment for Clinical Lead role.	Communication to stakeholders of REF decision. Hand over to new clinical lead.
Paeds ORL	Implementation Funding secured via MoH Planned Care Fund. PM appointed through ADHB to lead this process with Clinical lead and GM oversight. Engagement with SCD, GM and service managers in NR DHB's. Further gathering of information and data collection to understand inequities and define options.	Meeting with Paed ORL steering group to present information and next steps in the New Year.
Oral Regional	Agreement regionally to set up regional group with focus on children. Awaiting confirmation of funding from MoH Sustainability Fund. Proposed Exec and Equity Regional leads identified. Drafting ToR for Governance Group with smaller group.	To bring ToR to Steering Group for review
Oral Surgical	Confirmed funding for ADHB service improvement from MoH Planned Care Fund. Project Manager in place.	TBC
Oral Community	Awaiting confirmation of funding from MoH Sustainability Fund.	

Northern
Regional Alliance
He Hononga o te Raki

To	Regional Executives Forum	
From	Joanne Gibbs	
	Executive Lead for Northern Region Ophthalmology Improvement Initiative	
Date	17 December 2020	
Subject	Northern Region Ophthalmology Oversight Group Interim Terms of Reference (ToR) and proposed Membership	
For	**Decision**	
Do recommendations incur financial costs not previously planned /approved?		**No**

Issues and Implications:

Background/Context

REF previously endorsed the nine recommendations of the Regional Ophthalmology Vulnerable Service Recommendations and Next Steps. This included the reaffirmation of the Regional Ophthalmology Strategy, additional support to Northland to support regional equity, the co-design of a more regional multisite service, a commitment to equalising CPAC thresholds over time, the systematic tracking of equity, service tracking and outcomes, and DHB investment to recovery from COVID.

To oversee all of this, another key recommendation endorsed by REF was to establish *"an initial Regional Ophthalmology Oversight Group (that reports to REF and with strong equity input) to progress the recommendations in this paper and co-design the implementation of the regional service, particularly the governance/service oversight (including Māori co-governance and inclusion/exclusion of retinal screening), staffing, facilities, funding arrangements and others."* The intent was for it to be time limited (12 months) with some form of succession signalled as part of the more regional multisite service going forward.

At the same time, it was noted *"that the terms of reference will be brought to REF for it to progress"* as a key component was the membership and the equity input given the Māori Clinical Governance Roopu's recommendation to have components of co-governance in the design of the service going forward.

The team has been doing some work on the Terms of Reference (attached) and this paper outlines the recommended approach going forward.

Te Tiriti and Equity Input

Ophthalmology is the first Vulnerable Service to move to implementation and explore this. Given a key component of the co-design of the more regional service for ophthalmology included the governance/ service oversight including Māori co-governance, the approach needs to reflect this intent.

In working through the best approach, it was noted that this was not unique to Ophthalmology, but spans all of the vulnerable services. Partnership, equity and ensuring protection of Māori needs, values, and beliefs are at the core of all of the vulnerable services solutions. Enhancing Pacific equity is also key given the significant needs for ophthalmology services amongst Pacific peoples.

Therefore, some broader discussions have commenced on a sustainable approach across the implementation of all the vulnerable services where similar oversight groups are being recommended and the resourcing of that. As that is being worked through, it is important to progress the non-governance components of the Ophthalmology recommendations in the interim. Therefore, this paper recommends a twin track approach to ensure equity in both the Ophthalmology work and across the broader Vulnerable Services work. That is:

- to progress with an Interim Northern Region Ophthalmology Oversight Group ToR (attached) to allow some of the recommendations to be progressed with the proposed clinical and patient/whānau inputs and links below with a note that the ToR will be adjusted once the broader vulnerable services equity arrangements are agreed, and
- to progress the broader sustainable partnership and equity input discussions across all the vulnerable services in parallel including clarification and agreement on the roles of the different equity groups

In terms of equity input to this Interim Regional Oversight Group both clinical and patient perspectives were identified as key and the following is proposed based on advice received:

1. Where possible, to engage Maori clinicians from within the Ophthalmology sector.
2. For there to be input from a Māori patient and whānau perspective with input from one of the DHB navigator or whānau support teams
3. For there to be strong links to the Māori Clinical Governance Roopu across this Māori clinician, patient/ whanau, the exec lead and clinical lead
4. For there to be a Pacific clinician and patient/family navigator input. Also with similar links to the Pacific Technical Advisory Group.
5. For the ToR to be reviewed when the broader approach has been agreed

Interim Northern Region Ophthalmology Oversight Group ToR

The Interim Northern Region Ophthalmology Oversight Group will oversee and coordinate the implementation of the Regional Ophthalmology Strategy and the nine recommendations of the Vulnerable Services review, including the co-design of a more regional multi-site ophthalmology service. The draft Terms of Reference are attached for REF's endorsement.

Core members of the group will include:

- Executive Lead (Chair) – which REF confirmed in September to be Jo Gibbs,
- Clinical Lead – being finalised through a Clinical Lead EOI
- Māori Clinician from within the ophthalmology sector with links to other Māori health professionals in the sector and the Māori Clinical Governance Roopu, Te Kāhui Arataki, together with the Exec and Clinical Lead. Currently proposed to be Renata Watene, an Optometrist and Waitemata DHB Board Member
- Pacific Clinician from the Ophthalmology sector and similar links to other Pacific health professionals and the Pacific TAG together with the Exec and clinical leads. A potential has been identified to approach.
- Māori Ophthalmology Navigator/Kaiāwhina/Whānau Support as a patient voice to be sourced from across the four DHB support teams
- Pacific Ophthalmology Navigator/Family Support to champion the Pacific patient experience similarly sourced from one of the four DHB Pacific support teams
- DHB Clinical Director Ophthalmology, up to 1 per service (up to 3 total)
- DHB non-clinical person (e.g. GM, Surgical Director, Ophthalmology Service Manager), up to 1 per service (up to 3 total)
- Funding & Planning, one per DHB, up to 4

With this configuration, likely to be up to 12-14 members.

Summary Recommendations:

It is recommended the Regional Executives Forum (REF):

1. **Note** REF previously endorsed to the recommendations coming out of the Vulnerable Services Ophthalmology review in September. One of the key recommendations being the establishment of a Northern Region Ophthalmology Oversight Group and for the group's Terms of Reference (ToR) to be brought to REF for it to progress.
2. **Endorse** the proposed twin track approach for the Northern Region Ophthalmology Oversight Group work to progress using the interim ToR while the broader equity input for the vulnerable services are worked through with the respective groups.
3. **Endorse** the Terms of Reference for the Interim Northern Region Ophthalmology Oversight Group (attached) and proposed membership.
4. **Note** the intent for a broader approach on incorporating equity input for the vulnerable services work,

Interdependencies with other Functions: (Ensure recommendation is agreed by other Function team prior to submission)	Māori Clinical Governance Roopu Pacific CTAG Māori & Pacific Health Navigators
Equity considerations of recommendations:	Equity will be progressed broadly via inputs from Māori and Pacific clinical governance and advisory groups and within the Northern Region Ophthalmology Oversight Group via Māori and Pacific clinical and Navigator/Kaiawhina representation
How recommendations align with Treaty responsibilities:	Aligns to regional service design principles including: - **Partnership** following feedback from the Māori Clinical Governance Roompu, explicit input from Māori in the Regional Ophthalmology Service Oversight Group. Components of co-governance will also be included in the regional model to be developed. - **Equity** as per above and several of the key recommendations - **Options** where the community models to be developed will consider hauora options such as the potential use of existing sites already at some marae and others to expand range of conditions seen in the community to better serve patients and whānau. - **Active Protection** of Māori taonga, culture and knowledge as per the Regional Service Design Principles.

Appendix 1 – Northern Region Ophthalmology Oversight Group Terms of Reference

Interim Northern Region Ophthalmology Oversight Group

TERMS OF REFERENCE

Background

The Northern Region has an agreed Regional Ophthalmology Strategy which was recently reaffirmed with an increased scope and nine recommendations as part of a COVID recovery Vulnerable Service Ophthalmology initiative under the NRHCC. A key recommendation was to:

> *"Establish an initial Regional Ophthalmology Oversight Group (that reports to REF and with strong equity input) to progress the recommendations in this paper and co-design the implementation of the regional service ..."*

A key component of that co-design was the governance aspects of the more regional service, particularly from a Te Tiriti and equity perspective. This is a common theme across all vulnerable services and a common approach is being worked on across all those services. While that is being worked through, this is the **Interim** Terms of Reference for the Regional Ophthalmology Oversight Group until that work is concluded.

This Terms of Reference (ToR) has been mandated through the Regional Executive Forum (REF)'s endorsement of the Regional Ophthalmology Strategy, the Vulnerable Services Recommendations Paper and support for this ToR and should be read in conjunction with those papers and associated minutes from the meeting it was endorsed at.

Aim:

Achieve equitable ophthalmology outcomes in Northern Region through delivery of effective ophthalmology services that meet the needs of our populations.

Purpose:

To oversee and coordinate the implementation of the Regional Ophthalmology Strategy and the nine recommendations of the Vulnerable Services review, including the co-design of a more regional multi-site ophthalmology service.

Objectives & Scope:

The objective of the Northern Region Ophthalmology Oversight Group ('the Group') is to oversee the implementation of the nine recommendations of the Vulnerable Services review:

Strategy and Service Model

1. To reaffirm the Northern Regional Ophthalmology Strategy with the more explicit inclusion of Northland DHB (i.e. beyond metro Auckland) with the intent to establish an overarching regional Service Oversight Group and develop a more regional multi-site service through a co-design process.

Northland/ Regional equity for Māori

2. Provide some immediate support to Northland to address current specialist staffing gaps

Waitlist Recovery from pre and post COVID

3. To catch up on all overdue patients from both pre COVID as well as those that were unable to be seen during COVID

Equity

4. Improve equity through targeted service improvements, increased

number of community locations for lower complexity and enhanced models of care

5. Commit to regional equity of access to services starting with equalising access to cataract surgery.
6. Develop a set of regional access, quality and outcome indicators identifying any key equity gaps.
7. Share learnings on barriers and models that work e.g. ADHB Navigator insights and CMDHB Pacific Retinal Screening attendance and surgical journey initiative

Investment – Recovery & Future Growth

8. For all DHBs to commit to Ophthalmology as a regional funding priority. Move to a more regionally co-ordinated approach to service development and investment given the significant increase in growth predicted at ~4-5% per annum compared with population growth of ~1.3% per annum.

Workforce

9. Optimising workforce through staffing models and extending scopes of practice

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Membership:

The Group will have a defined membership with the following roles represented as part of this membership;

- Executive Lead (Chair)
- Clinical Lead
- Māori Clinician from within the ophthalmology sector with links to other Māori health professionals in the sector and the Māori Clinical Governance Roopu, Te Kāhui Arataki (with the Exec and Clinical Lead).
- Pacific Clinician from the Ophthalmology sector and similar links to other Pacific health professionals in the sector and the Pacific TAG together with the Exec and clinical leads.
- DHB Clinical Director Ophthalmology, up to 1 per service (up to 3 total)
- DHB non-clinical person (e.g. GM, Surgical Director, Ophthalmology Service Manager, up to 1 per service (up to 3 total)
- Funding & Planning input (one per DHB, up to 4)
- Māori Ophthalmology Navigator/Kaiawhina/Whānau Support as a patient voice
- Pacific Ophthalmology Navigator/family support

Ex Officio Members:

- Portfolio Manager, NRA
- Project Manager, NRA

Delegates are allowed with the endorsement of the Chair.

Timeframe & deliverables

These Terms of Reference are valid for up to 12 months, or earlier once the broader equity arrangements are finalised or when the co-design of the more regional multi-site service and implementation plan is complete (whichever is earlier) and a new phase initiated.

Roles and Responsibilities:

The Group will:

- Be accountable for outcomes by maintaining focus on the agreed scope, outcomes and benefits of regional implementation activities
- Act as an agent for changes in regional approaches
- Connect with other regional/district groups as necessary

	Individual group members will: • Communicate and report back on a regular basis to their own organisation • Provide a regional perspective within their scope of practice/ role • Make every effort to attend all meetings and participate fully including attending meetings and contributing to project work • Provide feedback and/or review of documentation responses within requested timeframes • Be accountable and transparent in operations and act ethically • Declare any conflict of interests
Delegated Authority and Decision Making:	The group is accountable to the Regional Executive Forum (REF). Decisions for ratification within the Group will be made by mutual agreement for the collective good of the Northern Region population. If it is not possible then areas of disagreement will be identified by the Chair and escalated to REF.
Support and Resources:	Secretariat and project support will be provided by the Northern Regional Alliance.
Reporting:	The group will provide updates and reports to REF. It will also provide regular updates and seek input from the Māori Clinical Governance Group and Pacific CTAG as required. A risk and issues register will be maintained. The Group will document its work and record the proceedings of all meetings in writing. Such records will be available to all members and will include an agenda, papers, and minutes. The minutes will include any conflicts on interest, any decisions taken, and recommendations made.
Meetings:	• Monthly meetings held at NRA – zoom facilities will be available. • The group will be chaired by the nominated Executive Lead • Agenda and meeting papers will be distributed prior to each meeting with sufficient time allowed for consideration by members. • Meeting minutes will be approved by the Chair and circulated to members promptly following each meeting. **Quorum** Quorum for this Group is at least one representative from each DHB, with the Chair then to determine if there is sufficient representation for a robust discussion of agenda items. If the quorum is not achieved: • The meeting will be cancelled and held on the next scheduled meeting date, unless an earlier date can be agreed • Matters that can reasonably be expected to be addressed by email will be circulated for noting, advice on work to be progressed prior to the next meeting or for endorsement • The Chair reserves the right to consult further on any issues that may have been considered in the absence of specific Group members.