Te Whatu Ora
Health New Zealand

Memorandum to Te Whata Ora Board

Radiology Information System (RIS) and Picture Archiving Communication System (PACS)

Date:	17th November 2022
From:	Russell Simpson, Interim Regional Director, Central Region Stuart Bloomfield, Interim Chief Data and Digital Officer Jaco van der Walt, Clinical Lead Hutt Valley and Wairarapa, Radiology

Released under the Official Information Act 1982

Recommendation

a) **note** the Radiology Information Systems (RIS) and Picture Archiving Communication Systems (PACS) in each region and the various stages of standardisation in clinical workflow and system integration.

b) **note** the clinical networks in place and time needed to steward the use and ongoing development of RIS/PACS systems within each region and nationally.

c) **note** the activities and formal review being undertaken to manage or mitigate the clinically agreed clinical risks.

d) **note** the National Radiology Advisory Digital Data and Analytics (NRAG DDA) group has endorsed the current approach being taken by the Central and Te Manawa Taki region.

e) **note** the creation of a Central Region clinically lead 'Tiger Team' to fully mitigate the current residual clinical risks. This team being overseen by the Regional Clinical Board and a Chief Operating Officer as Senior Responsible Officer.

f) **note** the Central Region clinical teams are getting additional support to address the clinical risks and that continuity of established relationships across TAS, Data and Digital and the region need to be maintained in a changing environment.

g) **note** following several infrastructure related activities, the stability of the Central Region RIS system has significantly improved. As of the 16 November, there has been 23 days of continuous system stability.

h) **note** the Central Region is the only region currently in production on the Phillips (Carestream version 11.3.1.6) RIS solution. Te Manawa Taki is currently progressing its implementation of this solution, and the lessons learnt from the Central Region will inform the Te Manawa Taki implementation.

i) **note** Central and Te Manawa Taki Regions are collectively managing Phillips to support our regional initiatives.

j) **note** the development of a Central Region Imaging strategy, its alignment nationally, and the role of the "tiger team" and ongoing regional and national radiology advisory groups.

k) recommend the board approves the approach described in the paper to continue to mitigate the risks/issues and the activities underway to set the future direction of Radiology Information Systems.

Background

1. Hospitals historically have used independent local IT systems to support the delivery of Radiology Services. In some cases, these have evolved to become common regional solutions.

2. There are two core systems that typically support Radiology Services specifically, as follows:

   - **Radiology Information System (RIS):** support the clinical workflow associated with managing medical imagery and associated data. It tracks radiology imaging orders, appointments, and data around image acquisition. This is often used in conjunction with PACS and/or Vendor Neutral Archives (VNA) to manage image archives, record-keeping and radiologist report distribution.
   - **Picture Archiving Communication System (PACS):** provide the storage, rapid retrieval and access to images acquired with multiple modalities and simultaneous access at multiple sites.

   These are essential tools to the radiologists, patient administration staff and medical imaging technologists. The electronic ordering, report distribution, review and sign off including follow up workflow is dependent on the rest of the health information technology ecosystem, both within the hospitals and the external practice management systems.

3. In addition, new technology is starting to be adopted called Vendor Neutral Archives (VNAs). These systems further support the consolidation, standardization and archiving of images and data from different picture archiving and communication systems (PACS) into a single, accessible and interoperable repository that become independent or agnostic to the viewing software.

4. This technology will likely form a key part of the Sectors future imaging strategy to support integrated radiology service provision nationally. This strategy will be guided by input from the various Regional Radiology Steering Groups and the National Radiology Advisory Group.

5. In 2010, the Central Region developed a Central Region Information Strategy Plan (CRISP) that was the catalyst for the regional programme of work which included the design and build of a common regional Radiology Information System (RIS) based on regional clinical input. The aim of such a project was to develop a networked approach to delivering regional radiology services.

6. The Central Region had already established a common regional Picture Archiving Communication System (PACS), and each district has been using this for a number of years.

7. There has been progressive onboarding of Whanganui, Hawkes Bay, MidCentral and Capital, Coast to a regional RIS. Hutt Valley and Wairarapa are yet to be onboarded and remain on ageing and vulnerable RIS systems.

Released under the Official Information Act 1982

Te Whatu Ora
Health New Zealand

8. The technical learnings from Whanganui, Hawkes Bay and MidCentral onboarding were around network and technology compatibility. Protracted progressive onboarding with constantly changing project leads has led to locally identified issues and risks with local mitigations developed without consistent cross regional project support.

9. The major clinical focus for these districts was mostly regarding stability and reliability for basic functionality in order to provide clinical services. Each clinical area was allowed to create/maintain their own image and reporting workflow.

10. Clinical and administrative staff shortage has contributed to additional pressures on departments whilst working within a difficult technology environment. Inefficient systems created greater clinical pressures and balance of clinical focus has been on providing basic radiology services with little time available to provide the clinical leadership required to standardise and optimise image and reporting workflow.

11. Significant attention was placed on network and technology compatibility and stability prior to Capital Coast onboarding in April 2022.

12. Capital Coast through onboarding began to raise issues and clinical risks which were shared by other districts already on the platform. The different districts remain on different iterations of the product and product issues and processes affected differing sites in differing ways adding to complexity. A major role of the "Tiger team" will be to align the processes across the region and ensure the right procedure codes are available to remove the "missing clinical results (images)" clinical risk.

13. Since April 2022, there have been multiple product developments to accommodate several of the issues encountered from variable workflows. Some of these partially address the clinical risks and affect the districts in differing ways.

14. This process is now being overseen by a regional radiology information system working group which also has accountability for standardised operating procedures and prioritisation functional improvement to both the RIS and PACs systems, in line with clinical requirements.

15. The regional radiology working group is supported by a Regional Radiology Steering Group. Each region has an equivalent group in place, and each region is represented at the National Radiology Advisory Group (NRAG). The NRAG provides guidance at a national level for the future direction of radiology services and is working toward a national data and digital strategy.

16. The Te Manawa Taki region is in the process of transitioning from an out of support RIS system, to the same supported system the Central Region has implemented. It is important to note, that Te Manawa Taki have already achieved regional clinical agreement to the clinical workflow, and all districts have been using the common RIS system for a number of years The Central Region was not previously integrated, is still on this journey and is therefore dealing with greater complexity in the change management required through the need to obtain regional clinical consensus on the RIS clinical workflow, contributing to some of the issues and risks.

Released under the Official Information Act 1982

Current Situation

17. The Central Region continues to progress the integration of radiology systems through the progressive transition of individual districts onto the regional common RIS system.

18. Capital and Coast onboarded to the regional RIS/PACs in April 2022 and their use of the systems has exposed inherent clinical issues and risks which had not been previously understood. Hutt Valley and Wairarapa's transition has been paused until several defined clinical issues have been addressed. This will require standardised clinical processed and will require agreed extra codes for combined procedures, it will require expert advice from on the ground Philips representatives to minimise any more product changes, and these will continue prior to acceptance for Hutt Valley and Wairarapa onboarding. These changes will help address the identified clinical risks locally.

19. The clinical risks described in the previous memorandum were provided to inform the executive that a combination of time and resource limitations, product, process and change management issues were having a clinical impact resulting in clinical risk.

20. Several product upgrades will be required, and the districts will require reconciliation to ensure all sites are on the same versions of the software. There will have to be further work on clinical processes, and this requires regional clinical agreement, which requires dedicated non clinical time, a resource that is very limited in the smaller districts. Expert Philips resource and a talented local business analyst can mitigate the total required clinical time.

21. Upon regional clinical agreement, any necessary product changes to support this, will be subsequently scoped, scheduled and delivered. Work is underway to obtain clinical consensus as to the required clinical process changes to mitigate these current clinical risks.

22. Stability and performance of the system has also been of considerable concern, and based on a series of activities, a significant improvement is now evident. Active ongoing monitoring and management is in place and will continue, to ensure proactive supervision of the system.

23. There has been ongoing clinical leadership working in partnership with the region's Data and Digital function in this area since Capital and Coast onboarding. This has been further developed into three core regional work streams driven by a 'Tiger Team' (a targeted team of clinical and technical experts), to drive acceptable clinical resolution.

24. The National Radiology Advisory and Digital Data and Analytics (NRAG DDA) group has endorsed the current approach. NRAG DDA agrees that optimising regional and bi-regional cooperation to de-risk the current situation as a tactical approach is sensible, while continuing work on a shared strategic direction which may help to guide a process towards to a single national unified solution.
25. The Central Region has established a regional Clinical Board to oversee the identification, management and mitigation of Clinical Risks moving forward.

26. A Chief Operating Officer has been assigned to the role of Senior Responsible Officer for Regional Radiology Services. The SRO is accountable for ensuring the remediation of the clinical risks identified.

Released under the Official Information Act 1982

Te Whatu Ora
Health New Zealand

27. Recently an individual Central Region clinician issued a document outlining a range of local issues with the current regional common RIS/PACS system. This was released to a Te Whatu Ora board member without any formal clinical peer review nor regional governance awareness. Independent clinical review of the document has now been commissioned, and the findings of this review will be tabled for the regional Clinical Board and SRO, with appropriate action taken.

28. Active management of the vendor of the RIS/PACS system (Phillips) is in place with support from Phillips senior management to address any product changes or enhancements required to address the current clinical risks identified. The Central and Te Manawa Taki regions are collaborating in this process.

Current Clinical Risks

29. There are five main clinical risks currently identified summarised as follows:

Clinical Risks	Original Risk	Category	Management	Progress to date	Current Residual Risk	Further Mitigation	Expected Date
1. Missing Clinical Result		Product/ Process	Avoid	Philips has implemented many product changes to address this risk. These changes have reduced instances dramatically.		Focus from the Tiger team to assess workflow issues with Districts and agree regional standardisation of workflow and processes for ERP's	FYQ3 (January to March 2023)
2. Delayed or missed communication of clinical result		Process	Avoid	Improvements to integration with other regional applications. Improvements to Data Quality		Focus from Tiger team to agree Workflow and messaging across the region. Regional informatics team need to work collaboratively with the radiology department to improve the rest of order/result cycle, including a process to highlight critical results to the right practitione.	FYQ3

Released under the Official Information Act 1982

Clinical Risks	Original Risk	Category	Management	Progress to date	Current Residual Risk	Further Mitigation	Expected Date
3. End users not raising/accepting high clinical risk within the application/system		Change Management	Avoid	Ongoing communication established through several Clinical Groups to capture local & regional risks		Tiger team established to capture any additional risks across the Region and work with Phillips as required to address	FYQ3
4. Reduced capacity/clinical capability due to lack of integration		Process	Avoid	Services (e.g. CT/MRI) are cut internally to match capacity from the reporting workforce and current capacity of linked/integrated external providers available to the region		Tiger Team established to agree process for linking to external providers and sharing of radiology imaging. Looking to add additional ERP's to mitigate the risk	FYQ3
5. Unavailability/ poor performance of system.		Product	Avoid	Number of infrastructure & network changes completed		Performance and stability under active monitoring. Further work to optimise database searches and indexing.	FYQ2 (October-November 2022)

Next steps

30. The Board support the activities to manage and mitigate the current clinical issues and risk outlined in this paper.

31. Central and Te Manawa Taki region continue to collaborate on:

    a) the activities to resolve the clinical issues and risks for the Central Region including engagement with Phillips

    b) supporting one another in the implementation of the Phillips solution in their respect regions

32. The National Radiology Advisory Group, in collaboration with Data and Digital, continue to develop a national approach to Radiology Services and enabling digital capabilities that cross the private / public divide.

Released under the Official Information Act 1982

Te Whatu Ora
Health New Zealand

Released under the Official Information Act 1982

Te Whatu Ora
Health New Zealand

Appendix 1: Current Regional RIS/PACs Solutions

Region	District	Vendor	Version	In/out of Support	Contract Renew Date
Northern	Te Tai Tokerau	Philips	Phillips VUE PACS (12.2.5.300) Kestral - Krisma - RIS (3.1.1.559	Vue PACS - in Support RIS - In Support	Philips: March 23
	Waitemata	Agfa	RIS & PACs Impax 6.6.1	Out 31/12/19	N/A
	Te Toka Tumai Auckland				
	Counties Manukau				
Te Manawa Taki	Waikato	Philips	IntelliSpace 4.4 - PACS Kestral - Krisma- RIS	EOL - Supported until Migration	Aug-24
	Hauoro a Toi Bay of Plenty				
	Lakes				
	Tairawhiti				
	Taranaki				
Central	Te Matau a Maui Hawke's Bay	Philips	Carestream RIS 11.3.1.6 Carestream Regional VUE PACS 12.2.5.400 Carestream Local VUE PACS 12.1.5 Reporting - Carestream VUE RIS	RIS - In support PACS in-support (Oct 2023)	Mar-24
	Whanganui		Carestream RIS 11.3.1.6 Carestream Regional VUE PACS 12.2.5.400 Carestream Local VUE PACS 12.1.5 Reporting - Carestream PACS VUE Reporting		
	Te Pae Hauora o Tararua MidCentral		Carestream RIS 11.3.1.6 Carestream Regional VUE PACS 12.2.5.400 Carestream Local VUE PACS 12.2.0 Reporting - Carestream VUE RIS		

Released under the Official Information Act 1982

Te Whatu Ora
Health New Zealand

Region	District	Vendor	Version	In/out of Support	Contract Renew Date
Central (continued)	Capital, Coast	Phillips	Carestream RIS 11.3.1.6 Carestream Regional VUE PACS 12.2.5.400 Carestream Local VUE PACS 12.2.5.400 Reporting - Carestream VUE PACS Reporting	RIS - In support PACS in-support (Oct 2023)	Mar-24
	Hutt Valley, Wairarapa		Carestream/Kodak RIS 10.1.5 Carestream Regional VUE PACS 12.2.5.400 Carestream VUE Local PACS 12.2.1.3 Reporting - Carestream Vue RIS	RIS- Out of Support Dec 2020 PACS in-Support (Oct 2023)	
Te Waipounamu	Nelson Marlborough	Intelerad & COMRAD	Intelerad - PACS COMRAD - RIS	Unable to determine at time of reporting	Unable to determine at time of reporting
	Waitaha Canterbury				
	West Coast				
	South Canterbury				
	Southern	Phillips & Sectra	Kestral - Kerisma RIS Sectra - PACS		

Released under the Official Information Act 1982

Te Whatu Ora
Health New Zealand

Clinical Quality Assurance Committee Paper

Te Matau a Mauri Hawke's Bay Radiology: update on implementation of review recommendations

Date:	25 August 2023	Author: [redacted]	
For your:	Choose an item. Note	Approved by: Leigh Donoghue	
Seeking funding:	No	Funding implications:	No
To:	**Board**		

Released under the Official Information Act 1982

Purpose

1. To provide the Committee with an update on progress implementing the recommendations of a Hawke's Bay Radiology review ("External Review of Te Whatu Ora Te Matau a Māui Hawke's Bay Radiology Services" ratified at Te Whatu Ora Executive Leadership Team, 18th April 2023

Recommendations

2. The Committee is asked to:

   a) **note** that a project Oversight Group and team has been established to track and monitor the implementation of The Review recommendations. The Oversight Group is meeting monthly.

   b) **note** that progress has been made in implementing The Review recommendations as described in this paper.

   c) **note** that next steps include undertaking a targeted audit of a sample of clinical and radiology reports to identify if harm that has occurred to patients.

   d) **note** that this paper will be shared with Te Aka Whai Ora ELT

   e) The **author recommends** that this paper be released proactively in full

Contribution to strategic outcomes

Link to health sector principles (s7, Pae Ora Act)

3. The paper contributes to:

a) equity through access to services, levels of service, health outcomes for Māori and other population groups by ensuring the recommendations of The Review are implemented, in particular engagement with Māori patients and whānau

b) engagement with Māori and other population groups to develop and deliver services and programmes that reflect needs and aspirations by ensuring Māori are engaged the recommendations of The Review are implemented

c) opportunities for Māori to exercise decision-making authority on matters of importance to Māori by ensuring engagement with Māori these opportunities are respected during the implementation of the recommendations of The Review

d) choice of quality services to Māori and other population groups by engagement with Māori

e) promoting people's health and wellbeing by ensuring Hawke's Bay Radiology services meet the needs of the population

Te Tiriti relationship and achieving equity

4. The paper contributes to achieving equity outcomes in the health system reinforces Te Tiriti principles by ensuring the recommendations of The Review are implemented, in particular engagement with Māori patients and whānau

Te Pae Tata contribution

5. The paper contributes to:

a) placing whānau at the heart of the system to improve equity and outcomes by ensuring Māori patients and whānau are engaged in the design and implementation of the recommendations of The Review

b) embedding Te Tiriti o Waitangi across the health sector by ensuring Māori patient and whānau engagement in radiology services improvement

c) developing an inclusive health workforce by implementation of the recommendations relating to workforce wellbeing and work set out in The Review

d) keeping people well in their communities by working to improve radiology services at Hawke's Bay and ensure they are safe and effective

e) developing greater use of digital services to provide more care in homes and communities by implementing the recommendations of The Review

f) establishing Te Whatu Ora and Te Aka Whai Ora to support a financially sustainable system by stablising and improving Hawke's Bay's radiology information and picture archive system.

Executive summary

6. **REQUIRED** A brief overview of the document and its main points.

Released under the Official Information Act 1982

Background

7. In approximately 2008, Te Whatu Ora Te Matau a Māui, Hawke's Bay (formerly Hawke's Bay District Health Board) selected a radiology IT system, Carestream, supplied by Philips Health Systems, to replace its radiology information and picture archive systems (RIS PACS) (then provided by GE Centricity). The project to replace Te Matau a Māui, Hawke's Bay's GE Centricity RIS PACS commenced around 2008. Carestream was initially deployed locally into the 6 Central Region District Health Boards (DHBs), with a long-term plan to bring all six Central Region DHBs (Districts) onto a single shared regional RIS PACS system.

8. Te Matau a Māui, Hawke's Bay radiology staff state that there have been ongoing issues since the first Carestream installation and that issues have gone unresolved for over a decade.

9. 12 September 2022 a memo to the central clinical board highlighted 5 key patient safety risks with a recommendation to pause the onboarding of Hutt Valley and Wairarapa to the regional RIS until it was stabilised. This memo was released to the press and a subsequent Te Whatu Ora press release on radio NZ was an assurance that no major harm had occurred with the system.

10. October 2022 an internal document "Systemic Errors of Data Management" was written and circulated as a preliminary document by a consultant radiologist with Hawke's Bay where large clinical harm was claimed, this document was circulated widely including to the health and disability commissioner and to the chair of Te Whatu Ora.

11. In December 2022, the Interim National Director Medical- Te Whatu Ora, and Interim Chief Medical Officer Te Aka Whai Ora, at the request of the Committee, commissioned an independent review into radiology services at Te Whatu Ora Te Matau a Māui, Hawke's Bay (External Review report) following receipt of a report titled- "Systematic errors of data management" (Systemic Errors Report).

12. The purpose of The Review was to evaluate the seriousness of the issues and concerns raised in the Systemic Errors Report; identify and address concerns of patient harm; and to make recommendations as to any further actions and/or investigations required. An independent review team produced a "Report on External Review of Te Whatu Ora Te Matau a Māui Hawke's Bay Radiology Services ratified at ELT 18th April 2023" (External Review Report). The External Review Report was presented to the Committee for its approval.

13. The Review Report sets out 18 recommendations. The Interim National Director Medical- Te Whatu Ora requested a plan be developed to implement the recommendations including a steering group to monitor and track progress of the implementation plan. It has subsequently been agreed that the Data and Digital Directorate will lead the programme of work and the programme sponsor will be the Chief Data and Digital.

14. Post the September memo the 'Tiger Teams' were established in partnership between the Central Regional Radiology Steering Group and Central Regional Digital Health services, to look at the regional radiology information system (RIS) and picture archiving system (PACS) issues. Three Tiger Teams were established to address:

    - Issues with regional RIS administration.

Released under the Official Information Act 1982

- Clinical management
- Future options for RIS PACS.

15. The Tiger Teams are overseen by the regional Chief Operating Officers (COOs) and the regional Data and Digital Executive. Progress was made against many of the issues, with some still some remaining in progress on the Action Register. The completion of these actions will be overseen by the steering group and project team established to implement The Review recommendations.
16. This paper provides an update on progress made to implement the recommendations in The Review Report.

Discussion

Progress

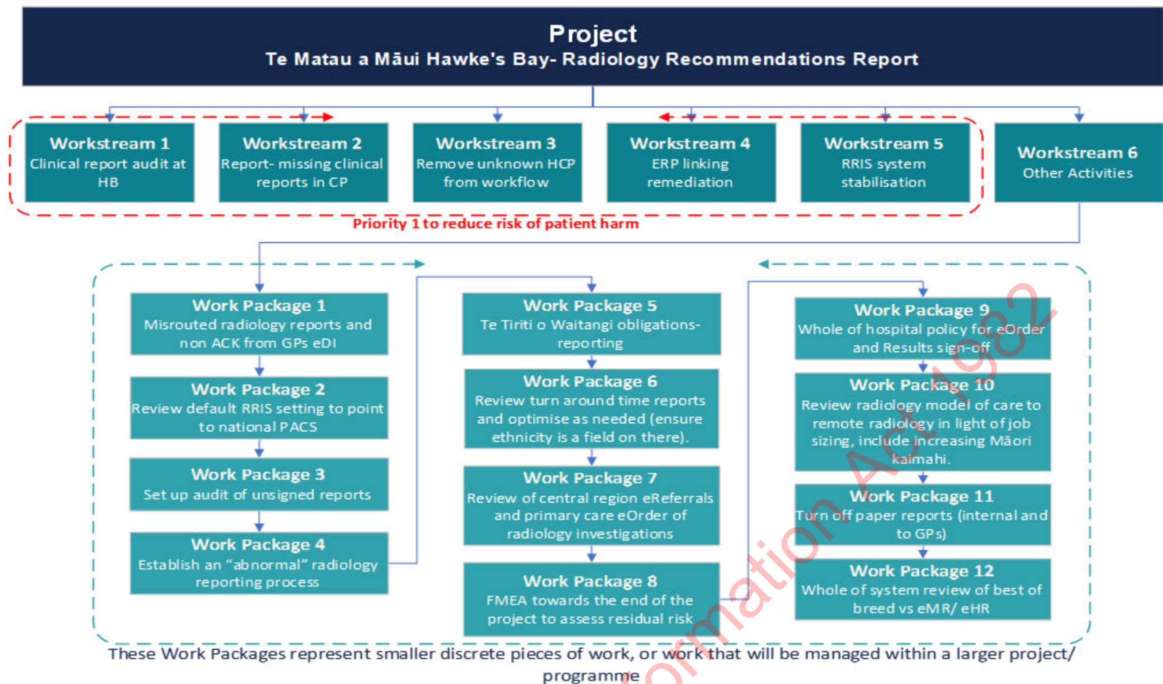
Review Report Recommendation 1: establish a working party which is adequately resourced to oversee implementation of the recommendations in the report. The first priority of the group is to prioritise and establish timelines with appropriate clinical engagement, for addressing each recommendation -

17. A project Oversight Group and team has been established to track and monitor the implementation of The Review recommendations. The Oversight Group is meeting monthly. Te Aka Whai Ora representation in the Oversight Group has been established and a consumer representative(s) is being sought.
18. A project initiation document has been completed along with a workplan, which set out the critical components of the project and a detailed plan to implement The Review recommendations. The workplan identifies six main workstreams:

Released under the Official Information Act 1982

9. The Work Plan

The following diagram shows an overview of the breakdown of the work into Workstreams and Work Packages:



19. Workstreams 1-5 in the workplan are the first priority as these have the potential to reduce the risk of patient harm.

20. The Work Plan has been scheduled as follows:

10. Schedule

Task Name	Notes	Duration	Start	Finish
HB Report Recommendations Response	WORKSTREAMS 1-5: Mapping references to the Recommendations Report	203 days	Thu 1/06/23	Thu 4/04/24
1 Clinical report audit at HB	WORKSTREAM 1- Report Recommendation 2.1, Memo Risk 1	22 days	Thu 10/08/23	Fri 8/09/23
2 Further operationalise the report showing missing clinical reports between Clinical Portal and RRIS	WORKSTREAM 2- Stabilise- Report Recommendations 2.1	50 days	Wed 23/08/23	Tue 31/10/23
3 Remove unknown HCP from workflow	WORKSTREAM 3- Report Recommendation 7, 10, Memo Risk 2	59 days	Mon 4/09/23	Thu 23/11/23
4 ERP linking remediation- Standardise process across the region	WORKSTREAM 4- Report Recommendations 2.3, 2.4, 8.1, 8.2, 8.3, 8.4, 9.1, 9.2, 9.3, 9.4, Memo Risk 1	81 days	Thu 17/08/23	Thu 7/12/23
5 Regional RIS system stabilisation	WORKSTREAM 5- Report Recommendations 5.3, 12.1, 12.2, Memo Risk 5	75 days	Mon 14/08/23	Fri 24/11/23
6 Workstream 6: Other activities/ Work Packages	WORKSTREAM 6: Work Packages- Other Activities	203 days	Thu 1/06/23	Thu 4/04/24
6.1 Misrouted radiology reports and ACK issues when sending to GP eDI.	WORKSTREAM 6 (Other activities)- Work Package 1: Report recommendations 7, 10, Memo Risk 2	28 days	Mon 25/09/23	Wed 1/11/23
6.2 Review RRIS settings and ensure that all point to the Regional PACS by default	WORKSTREAM 6 (Other activities)- Work Package 2: Report recommendations 6.1, 13	82 days	Thu 1/06/23	Fri 22/09/23
6.3 Set up audit of all unsigned reports across hospitals	WORKSTREAM 6 (Other activities)- Work Package 3: Report Recommendations 7.3, 7.4, 7.5,	47 days	Mon 28/08/23	Tue 31/10/23
6.4 Establish an "abnormal" radiology reporting process and make it regional.	WORKSTREAM 6 (Other activities)- Work Package 4: Report Recommendations 7.3, 7.4,10,	60 days	Mon 2/10/23	Tue 16/01/24
6.5 Te Tiriti o Waitangi Obligations: Quality improvement reporting.	WORKSTREAM 6 (Other activities)- Work Package 5: Report Recommendations 4.1 to 4.6, Memo Risk 4,	80 days	Wed 23/08/23	Tue 12/12/23
6.6 Review turnaround time reports and optimise as needed (ensure ethnicity is a field on there).	WORKSTREAM 6 (Other activities)- Work Package 6: Report Recommendations 4	40 days	Thu 21/09/23	Wed 15/11/23
6.7 Review of central region eReferrals and primary care eOrder of radiology investigations	WORKSTREAM 6 (Other activities)- Work Package 7: Report Recommendations 7, 10,	69 days	Mon 11/09/23	Thu 14/12/23
6.8 FMEA towards the end of the project to assess residual risk	WORKSTREAM 6 (Other activities)- Work Package 8: Report Recommendations 2, 7, 8, 9, 10, 11, Memo	31 days	Fri 8/12/23	Wed 14/02/24
6.9 Whole of hospital policy for eOrder and Results sign-off	WORKSTREAM 6 (Other activities)- Work Package 9: Report Recommendations 7,10,	36 days	Thu 15/02/24	Thu 4/04/24
6.10 Review radiology model of care to remote radiology in light of job sizing, include increasing Māori kaimahi.	WORKSTREAM 6 (Other activities)- Work Package 10: Report Recommendations 16,18, Memo Risk 4,	68 days	Mon 11/09/23	Wed 13/12/23
6.11 Turn off paper reports (internal and to GPs)	WORKSTREAM 6 (Other activities)- Work Package 11: Report Recommendations 7, 10, Memo,	68 days	Mon 11/09/23	Wed 13/12/23
6.12 Whole of system review of best of breed vs eMR/ eHR	WORKSTREAM 6 (Other activities)- Work Package 12: Report Recommendations 15	20 days	Mon 4/09/23	Fri 29/09/23

Released under the Official Information Act 1982

Recommendation 2: Reduction of patient harm - steps should be taken immediately to reduce the risk of further patient harm

21. Action has been taken to address the priority issues, mitigate risk and stabilise the system, including:

    a) Prior studies not being visible to reporting radiologists – Internal and External PACS are linked, default to major PACs now **done**, PACSlink roll out planned

    b) Radiology reports not being delivered to referrers – components in progress

        i) Unknown HCP is encounter issue and needs order form changes

        ii) RRIS report not landing in RCP has a report that needs monitoring daily

    c) Linking body parts – **done**

        i) MIT capture images with the appropriate study (training)

        ii) Use of modalities to "split" images across multiple studies (regional agreement reached on the split and investigating resource feasibility in each department)

        iii) Use of & codes for studies that share a set of images that cannot be split by modality

            - Regional Agreement
            - Determine who chooses this - currently it's the ordering clinician argument to be made to change this to the radiologist – eOrder form review
            - Stop & codes sent externally

    d) Outsourced reporting turnaround time and messaging between internal and external systems - **done**

    e) Radiology order entry systems including use of 'unknown healthcare provider' – see above needs vendor to redevelop the eOrder form, in a region where a second eOrder product is being considered

    f) Regional RIS system stabilisation - a range of stabilisation activities have been put in place between the time the external report was released and the Hutt Valley/ Wairarapa Regional RIS onboarding (12 August). Go-live resulted in an additional issue; a root cause analysis and remediation activities are currently underway (as at 24 August) –

22. Reports are already in regular use to identify inequity and monitor unwarranted variation in service access and outcomes.

23. A more detailed description of the actions being taken to reduce risk of patient harm and the current state of these actions is set out in **Appendix 1**.

Recommendation 3: Clinical governance

24. A regional clinical governance board has been established, with a subgroup focused on digital clinical risk being established.

Released under the Official Information Act 1982

Next actions: audit to assess patient harm

Recommendation 2: investigation of degree of patient harm

25. The Review Report recommended “a full review be undertaken to determine to what degree the issues raised within this [The Review] report and the original memo, have contributed to patient harm” The Review panel noted “We are aware that this review has not addressed all of the concerns raised in the report Systemic Errors of Data Management or incorporated the regional voice and it is important that the wider review does so.

26. A “full review” to determine the degree the issues raised have contributed to patient harm is not feasible given the more than ten years of history of the issues and the corresponding volume of patient records in multiple systems and both paper and electronic. The Oversight Group has commissioned a review of all Safety1st (risk reporting system) and a targets audit of a sample of patients from 2015 till 2023, with significant radiology reports with a high risk of being missed, to identify if any harm has occurred to patients. The audit continue until 50 significant radiology reports have been review, at least 25% of which are of patients with Māori ethnicity, and 10% of Pacific ethnicity.

    a) Review of the Safety1st issues from December 2021 to August 2023 showed 2 500 cases that were manually reviewed to determine cases that related to this issue

    b) 27 events meet the criteria for a deeper dive

    c) 10 are in progress and 17 closed (completed investigation)

        i) SAC 1 = 2 cases (referral request issue and a reporting error)

        ii) SAC 2 = 1 case (incomplete result sign off)

        iii) SAC 3 = 8 cases (1 was a linked report issue, others relate to RRIS stability, referral request and sign off)

        iv) SAC 4 = 15 cases (RRIS stability, results request and sign off)

        v) Incomplete = 1

    d) Limitations – Only reported if noted by the subsequent clinician, reported when it is generally a poor reporting culture within busy clinical lives and within the Hawke’s Bay hospital.

    e) Conclusions – little evidence to support significant patient harm but a targeted random review is needed

27. An audit protocol is being developed that will be approved by the National Clinical Governance Group. Results of the audit will be analysed and any harm identified will be reported utilising the Safety First (RL6) definitions of harm to be consistent with the current Te Matau a Māui, Hawke's Bay Hospital patient safety incident reporting system.

28. The patient Safety and Quality team within Te Whatu Ora Te Matau a Māui Hawke's Bay Radiology will review any potential harm and act on the findings as per their normal quality and safety processes.

Released under the Official Information Act 1982

29. The audit is expected to be completed within the next three weeks. There are several steps that need to be completed prior to commencement including access for the auditors to Te Matau a Māui, Hawke's Bay clinical records, auditors training, approval of the audit protocol, and identification and record extraction of an appropriate sample.

Te Aka Whai Ora contribution

Contributed by:	Laura Ailoene

30. Laura Ailoene**,** GM, Te Aka Whai Ora is a member of the Oversight Group. Laura was one of The Review panel members.

Next steps

31. The Oversight Group will continue to track progress of implementation of The Review recommendations against the work plan timeline. Monthly progress updates will be provided to the Committee.

Attachments

- **Appendix 1**: Overview and current state of review recommendations: actions completed/in progress

Released under the Official Information Act 1982

Appendix 1: Overview and current state of review recommendations:

Rec No.	External Review Report Recommendations	Status	Priority	% complete	Workstream Reference	Responsible Team(s) in order of responsibility	Comments as of 27 August 2023
1	**Recommendation 1:** **Establishment of a Te Whatu Ora Report Implementation Oversight**	**Complete**	**P1**		NA	SI&I	Group established with monthly meetings. Chief Data and Digital is SRO. Review and widening of group membership underway. PID nearing completion.
2	**Recommendation 2: High priority** **Reduction and investigation into patient harm**	**In progress**	**P1**	**50%**	WS1, 2, 4	H&SS, D&D, with assistance from Te Aka Whai Ora (2.6)	Priority items have been established and planning is underway. review of satfety1st is done. Access for external reviewers in place, can begin next week
3	**Recommendation 3:** **Clinical Governance**	**Complete**	**P2**		NA	Project governance/ oversight group	Regional Clinical Governance board has been set up. Mature risks register is used for discussion. Subgroup focused on digital clinical risk has been authorised to be stood up. Purpose and Terms of Reference are being written.
4	**Recommendation 4:** **Te Tiriti O Waitangi obligations**	**In progress**	**P2**	**20%**	WS6, WP5	D&D, Te Aka Whai Ora, People and Comms,HB ELT	Whole of organisation expectation of cultural safety education is ongoing. Set ethnicity as a field visible in the RIS to be viewed when reporting is in progress. Quality improvement report to identify inequities within the system is underway. Quality improvement report to monitor unwarranted variation in service access and outcomes underway. Te Aka Whai Ora and consumer representative in the oversight group in progress.

Released under the Official Information Act 1982

Rec No.	External Review Report Recommendations	Status	Priority	% complete	Workstream Reference	Responsible Team(s) in order of responsibility	Comments as of 27 August 2023
5	Recommendation 5: **RIS/PACS implementation**	In progress	P2	80%	WS5	Te Whatu Ora legal team	Investigation into potential conflicts of interests in relation to the Carestream procurement in the Te Manawa Taki Region has been responded to with relevant information. No financial or personal conflicts of interests were evident on review. Functional review of the Philips RIS product against international standards finds it within the top 5 radiology information systems available worldwide. RIS/PACs upgrade was reviewed and deemed essential to stabilise the RIS PACS system. RIS/PACs replacement for Hutt Valley and Wairarapa underwent a robust risk review, and considered fit for purpose and not proceeding was increasing the risk of the Hutt Valley and Wairarapa patients. Upgraded 10-12 August 2023.
6	Recommendation 6: **Prior studies not being visible to reporting radiologists**	In progress	P2	90%	WS6	D&D, H&SS	Philips has been undertaking this work and it is believed to be largely completed. Update/ confirmation to be provided by Philips.
7	Recommendation 7: **Radiology reports not being delivered to referrers**	In progress	P2	50%	WS4, WS6/ WP4	D&D, H&SS	Multiple associated tasks in planning and review with MidCentral who use the same RRIS and RCP but a different eSign off and have a business case for a new eOrder form

Released under the Official Information Act 1982

Rec No.	External Review Report Recommendations	Status	Priority	% complete	Workstream Reference	Responsible Team(s) in order of responsibility	Comments as of 27 August 2023
8	Recommendation 8: **Linking body parts**	In progress	P1	70%	WS4	D&D, H&SS	MIT capture of images with study (training) Use of modalities to "split" images across multiple studies Use of & codes for studies that share images and should not be split by modality Regional agreement, resource and training implications
9	Recommendation 9: **Outsourced reporting issues**	In progress	P2	60%	WS4	D&D	External Radiology providers have a tighter and controlled SOP with improved turnaround times. Messaging between internal and external system has a fault that has been identified and remedied which has removed the manual transcription. Further work planned for Philips and ERPs.
10	Recommendation 10: **Radiology order entry system**	In progress	P2	5%	WS2, WS3, WS6/WP4/ WP6/WP8 and others	D&D, H&SS	Multiple activities in planning to address this issue including primary care referral workflow. Review of order forms. Use of 'unknown HCP'. Expectation that all reports will be viewed and accepted electronically. Ensure contact details are on all order forms. Establish team-based sign-off. Feedback for misrouted results. HL7 ACK. And review of MidCentral Project
11	Recommendation 11: **Empty reports**	Complete	P1			D&D, H&SS	The upgrade to PACS reporting on 26th May resolved this issue for the region.

Released under the Official Information Act 1982

Rec No.	External Review Report Recommendations	Status	Priority	% complete	Workstream Reference	Responsible Team(s) in order of responsibility	Comments as of 27 August 2023
12	**Recommendation 12: Stability**	In progress*	P2	80%	WS5	D&D	A range of improvements have been undertaken since the report. Additional review will be undertaken post HV/ Wairarapa onboarding. Note system is not optimal and thus closed action reverted to in progress
13	**Recommendation 13: Separate PACS archives**	In progress	P3	90%		D&D	Education and ongoing reinforcement is occurring
14	**Recommendation 14: Support processes**	Complete	P2			H&SS, Regional Clinical Board, NRAG	Tighter governance and digital enablement teams has occurred during the upgrade and Tiger team remediations. Draft risk register has been produced.
15	**Recommendation 15: Integrated vs interfaced electronic health records**	Not started (future planning)	P3			D&D (future planning)	This recommendation is well outside the purview of the review team, however as the chief data and digital officer is SRO and this is a focused piece of work for the integrated planning of Te Whatu Ora in the next 2 years, this recommendation is considered in hand.
16	**Recommendation 16: Workforce**	In progress	P3	5%		People and Communications, Te Aka Whai Ora	Repeat job sizing has not occurred, as recent advertising failed to attract candidates and the work needed to do a full job size would have detracted from other recommendations. Strategies to develop a sustainable radiology workforce is considered outside of the purview to resolve, this will be handed to the national radiology clinical

Released under the Official Information Act 1982

Rec No.	External Review Report Recommendations	Status	Priority	% complete	Workstream Reference	Responsible Team(s) in order of responsibility	Comments as of 27 August 2023
							network (when established) to consider revamping to a mainly remote radiology service provision enabled by a new whole of system radiology system, which will be the focus of a targeted RFI
17	**Recommendation 17: Safety First**	Complete	P3			H&SS	Enhanced classroom and at the elbow training by the local digital enablement team is ongoing
18	**Recommendation 18: Establishment of a National Radiology Clinical Network**	In progress	P3	75%		H&SS leadership	The National Radiology Clinical Network is within tranche 2 of the whole of system restructure of Hospital and Specialist services

Released under the Official Information Act 1982

Panoramic Xray Compliance Report

Source License

Location Wairoa Community Dental

Surgery Xray room

Type Panoramic

Manufacturer Carestream

X-ray Model CS9000

Serial Number of Timer DDBG001

COMPLIANCE

Test	Status	Note
Filtration	Pass	
Reproducibility	Pass	
KV Setting	Pass	
Accuracy of tmer	Pass	
Deadman	Pass	
Collimation	Pass	
Stability of unit	Pass	
Dose Value	Pass	
Leakage	Pass	
Scatter	Pass	

Corrective action if required for Compliance

Released under the Official Information Act 1982

Technician

Name Paul Murphy

Signature

Date : 15/08/2023 R.A. Jenks Ltd

Measurement Details for Panoramic Compliance

Filtration

Total filtration marked on tube head.	2.5 mmAl	
Filtration in X-ray beam as measured by Piranha.	3.0 mmAl	
Compliance with ORS C4. Ap1 1.6.		Pass

Reproducibility

Exposure at KVP 70 Time 14.3

	Dose (mGy)	Time (Sec)
	12.14	14.24
	12.17	14.24
	12.21	14.24
	12.16	14.24
	12.15	14.24
Standard Deviation	0.03	0.00
Co-efficient of Variation	0.00	0.00

Compliance with ORS C4 Ap1 1.8 Should not exceed 0.1 and preferably < 0.05 Pass

Peak Kilovoltage

Set (kV)	Time (mS)	Meas. (kVp)	Dev (%)	ORS Comp.	Man. Comp.
70 kV	14.3	73 kV	5%	Pass	Pass
70 kV	14.3	73 kV	5%	Pass	Pass
70 kV	14.3	73 kV	4%	Pass	Pass

Compliance with ORS C4 Ap1 1.9 Deviation of +/- 5% Pass

Note: Manufacturers Deviation: 10% Pass

Compliance with ORS C4 Ap1 2.1 KV over 60 kvp Pass

Leakage rate of less than 1mGy @ 1m 0.0 mGy
Complance with ORS C4 Ap1 1.7 Pass

Safe working distance of greater than 2m 2.0 m
Pass

R.A. Jenks Ltd

Released under the Official Information Act 1982

X-ray Timer

Compliance with ORS C4 Ap1 Cannot expose with 0 selected	Pass
Compliance with ORS C4 Ap1 Exposure switch is of deadman type	Pass
Compliance with ORS C4 Ap1 Operator able to confirm exposure termination	Pass

Collimation

Panoramic

Compliance with ORS C4 AP1 Primary Barrier of 2mm lead eq	Pass
Compliance with ORS C4 AP1 Focal Trough is adjustable	Pass
Compliance with ORS C4 AP1 "Child Mode" Function	Pass
Compliance with ORS C4 AP1 Ceph positioning system	N/A
Compliance with ORS C4 AP1 Field size noted	N/A
Compliance with ORS C4 AP1 Beam limited	N/A

Instrument used

RTI Piranha **Serial #** **CB2-21020263**

Certified calibration due Date : 4, 2024

R.A. Jenks

Released under the Official Information Act 1982

RISK REGISTER - Health Services

Cl ck HERE fo add tional R sk Management nfo mation/ esou ces

Risk ID	Date Ent	Entered by	Group	Service / Team	Responsible Manager	Next Review Dt	Maturity date	Risk Strategy	Risk Environment	Enterprise Risk	Risk Name	Description of Risk	Consequence	Likelihood	Inherent Risk Rating	Controls	Consequence	Likelihood	Residual Risk Rating	Treatment Plan	Consequence	Likelihood	Tolerable Risk Rating	Commentary	Status	Date Closed	Become I
Calculated	Date - man Free text [START ENTERING HERE]		D opdown	D opdown	D opdown	Date - manual	Date - manual	D opdown	D opdown	D opdown	Free text	Free text	D	D	Calc	Free text	D	D	Calc	Free text	D	D	Calc	Free text	D opdown	Date - manual	D opdown
R-4304-007-HO	18/04/2021	P Jones	Hosp tal	Rad ology		31/07/2023		Reduce l kel hood AND consequence	Env onment / Ut l t es / P ope ty	9 Inf ast uctu e and Ut l t es	Pat ent coho t fac l ty const a nts	IF a se v ce can not espond to a chang ng pat ent coho t due to s gn f cant fac l ty const a nts THEN opt ons to add ess nc eas ng demand o complex ty w ll be l m ted and/o mo e complex to mplement and models of ca e w ll be based a ound fac l ty const a nts RESULTING n a h ghe cost of change to the same o lowe benef t.	1 - M n mal	5 - F equent	Mode ate - (5)	1. Rad ology e-bu ld w ll add ess these conce ns (2024/2025)	2 - M no	4 - L kely	Mode ate - (8)	1. Complete ad ology p oject	2 - M no	3 - Poss ble	Mode ate - (6)	Developed des gn s g ned off	Open		
R-4753-009-HO	11/07/2022		Hosp tal	Rad ology		31/07/2023		Reduce l kel hood AND consequence	Se v ce Del ve y	2 Wo kfo ce Capac ty and Capab l ty - Wo kfo ce of the futu e	Wo kfo ce - SMO	[illegible]	5 - Seve e	5 - F equent	C t cal - 25)	1. Use of tele ad ology p ov de 2. Invest gat ng anothe supp le fo teleadology supp le 3. Act ve ec u tment	4 - Majo	4 - L kely	C t cal - (16)	1. Rec u tment open 2. Agency - ec u tment of ove seas cand dates 3. PRL tele ad ology onboa ded May 2023 4. IMED on boa d ng planned 2023 5. Requested TNG nteg at on 6. Retent on st ategy	4 - Ma o	3 - Poss ble	Majo - (12)	M n mal US Ste od nject on se v ce PRL on boa ded May 2023 and nc eased out-sou c ng May H gh AL n June 2023 - l st 3 on s te most days should be 10	Open		
R-4753-010-HO	11/07/2022		Hosp tal	Rad ology		31/07/2023		Reduce l kel hood AND consequence	Se v ce Del ve y	2 Wo kfo ce Capac ty and Capab l ty - Wo kfo ce of the futu e	Wo kfo ce - MIT	[illegible]	5 - Seve e	5 - F equent	C t cal - 25)	1. Reduced cove fo gene al dep a tment and theat e 2. Out-sou c ng of exam nat ons 3. act ve ec u tment	3 - Mode ate	4 - L kely	Majo - 12)	1. Rec u tment open 2. Agency - ec u tment of ove seas cand dates 3. Inc ease student numbe s next 2-4 yea s 4. Plan fo ka wo kfo ce 5. St ategy fo etent on 6. Safe oste that meets oste gu del nes	2 - M no	4 - L kely	Mode ate - (8)	Locum secu ed fo June Appo nted casual fo CHB 1 MIT on boa ded 19/6/23 - New G ad 1 MIT f om ove seas due 3/7 - equ es supe v s on	Open		
R-4753-011-HO	11/07/2022		Hosp tal	Rad ology		30/06/2023		Reduce l kel hood AND consequence	Se v ce Del ve y	2 Wo kfo ce Capac ty and Capab l ty - Wo kfo ce of the futu e	Wo kfo ce - Sonog aphe	[illegible]	3 - Mode ate	5 - F equent	Majo - (15)	1. On-go ng n house t a n ng of sonog aphe s 2. Inc ease fund ng to nc ease FTE	3 - Mode ate	4 - L kely	Majo - 12)	1. Inc ease sonog aphe FTE 2. Ma nta n n house t a n ng p og amme 3. [illegible] p ov de s 4. Retent on st ategy	2 - M no	4 - L kely	Mode ate - (8)	Potent al n-house sonog aphe t a nee do ng taste days	Open		
R-4753-012-HO	11/07/2022		Hosp tal	Rad ology		31/07/2023	1/03/2023	Reduce l kel hood AND consequence	Se v ce Del ve y	2 Wo kfo ce Capac ty and Capab l ty - Wo kfo ce of the futu e	Wo kfo ce - Nuclea Med c ne	[illegible]	4 - Ma o	5 - F equent	C t cal - 20)	1. Rec u tment of 2 NM MIT f om SA unable to a ve Jan 2023 - Update t a n ng 21/11/2022 2. Reduced se v ce p ov s on Sept 2022 - Jan 2023	2 - M no	4 - L kely	Mode ate - (8)	1. Rec u tment of suff c ent FTE to cove ex st ng gap and planned FTE educt on 2. Rec u tment/Success on plann ng fo team leade	1 - M n mal	3 - Poss ble	M no - (3)	NM Team leade educ ng hou s - need 2 to adve t se TL pos t on and t a n st on	Open		
R-4753-013-HO	11/07/2022		Hosp tal	Rad ology		30/06/2023		Reduce l kel hood AND consequence	Se v ce Del ve y	2 Wo kfo ce Capac ty and Capab l ty - Wo kfo ce of the futu e	Wo kfo ce - Nu s ng Inc eased Nu s ng FTE	[illegible]	5 - Seve e	5 - F equent	C t cal - 25)	1. Reduced nu s ng cove 2. No AL/S closes backf ll 3. Rev ew of FTE (Nu s ng St ategy) 4. CNM nc eased cl n cal hou s v's adm n	4 - Majo	4 - L kely	C t cal - (16)	1. Nu s ng St ategy to plan FTE equ ed fo ad ology wo kload 2. Inc ease Nu s ng FTE acco d ngly 3. Plan eplacement of NP	1 - M n mal	3 - Poss ble	M no - (3)	Nu s ng FTE app oved and appo nted. 2nd On call commenced. R2 Rfo 1 RN o p og ess due to es gnat on	Open		
R-4753-014-HO	11/07/2022		Hosp tal	Rad ology		30/06/2023	1/07/2027	Reduce l kel hood AND consequence	Se v ce Del ve y	1 Ab l ty to esou ce	Wo kfo ce - P oject Resou ce	[illegible]	4 - Ma o	5 - F equent	C t cal - 20)	1. Suppo t fo Rad ology P oject Manage (and Rad ology Manage 2. Reduced cl n cal wo k to allow p oject wo k to be done	4 - Majo	4 - L kely	C t cal - (16)	1. Inc ease MIT esou ce to elease adm n t me fo TL 2. FTE fo p oject suppo t	3 - Mode ate	4 - L kely	Majo - (12)	Ut l sed locum MIT to elease TL to completed developed des gns gn off and IANZ p epa at on W l need MIT esou ce fo CT p oject	Open		
R-4754-015-HO	12/07/2022		Hosp tal	Rad ology		30/06/2023		Avo d sk	O gan sat on / Reputat on / Gove nance	8 Cl n cal Gove nance - Qual ty & Ope at onal pe fo mance	Ma ntenance of IANZ acc ed tat on fo ad ology Management of IANZ non confo m t es	[illegible]	3 - Mode ate	3 - Poss ble	Ma o - (9)	1. Rad ology p oject unde way to add ess non confo m t es 2. good wo k ng elat onsh p w th IANZ - updates on p og ess of p oject 3. Ma nta n equ pment eplacement p og amme 4. Ma nta n pol cy and p ocedu es as pe IANZ code	2 - M no	3 - Poss ble	Mode ate - (6)	1. complet on of ad ology p oject 2. ma nta n wo k fo ce 3 Planned Equ pment eplacement p og amme 4. Ma ntenance of pol cy and p ocedu es	2 - M no	4 - L kely	Mode ate - (8)	IANZ v s t June 2023	Open		
R-4754-016-HO	12/07/2022		Hosp tal	Rad ology		31/07/2023		Sha e sk	Se v ce Del ve y	11 Populat on needs - Del ve ng equ table health se v ces of the futu e	Rad ology Capac ty/Demand	[illegible]	5 - Seve e	4 - L kely	C t cal - 20)	1. ad ology p oject - add t onal CT and MRI 2. Cont act w th TNG 3. HB fund obt ned out-sou c ng payment 4. Rec u tment of staff ac oss all d sc pl nes	4 - Majo	4 - L kely	C t cal - (16)	1. D ect on of se v ce p ov s on f om Te Whatu Ora 2. Capac ty to al gn w th Te Whatu Ora Plan	4 - Ma o	4 - L kely	C t cal - 16)	Cont nue to see wa t me nc ease fo CT and MRI H gh acute demand outst ps capac ty Reduce OP CT slots to accommodate acute wo kload Inc eased CT out-sou c ng to m t gate wa t t mes fo CT eplacement	Open		
R-4754-017-HO	12/07/2022		Hosp tal	Rad ology		31/07/2023		Reduce l kel hood AND consequence	Se v ce Del ve y	5 S gn f cant event management	Ma nta n ng capac ty ad ology equ pment	[illegible]	4 - Ma o	5 - F equent	C t cal - 20)	1. Plan eplacement - local/ eg onal and nat onal 2. Ma ntenance Cont acts ma nta ned 3. Cont ngency plan + out-sou c ng of wo k	4 - Majo	5 - F equent	C t cal - (20)	1. Replace CT (2023) and NM CT (2024) 2. US (2023/24) 3. Mob le un t	2 - M no	4 - L kely	Mode ate - (8)	CT 1 eplaced o de ed - MOC fo dept d afted.	Open		
R-4754-018-HO	12/07/2022		Hosp tal	Rad ology		31/07/2023		Reduce consequence	Se v ce Del ve y	9 Inf ast uctu e and Ut l t es	Rad ology P oject t mef ame	[illegible]	4 - Ma o	4 - L kely	C t cal - 16)	1. Ove s ght by stee ng g oup 2. Owne sh p by ad ology team	3 - Mode ate	3 - Poss ble	Majo - (9)	1. P og ess ad ology p oject 2. Complet on by 2024/25 3. FTE nc eased n l ne w th se v ce expans on (t mely manne)	2 - M no	4 - L kely	Mode ate - (8)	Cu ently ad ology esou ce seve ely const a ned Expected delay n bu ld commencement	Open		
R-4754-019-HO	12/07/2022		Hosp tal	Rad ology				Reduce l kel hood AND consequence	Cl n cal	8 Cl n cal Gove nance - Qual ty & Ope at onal pe fo mance	Reg onal RIS platfo m 1. Unstable 2. Slow 3. Slow p og ess on changes 4. End use f ust at on-loss of staff 5. Integ at on w th tele ad ology p ov de s 6. Integ at on w th CP - esults messag ng 7. L nk ng of stud es IANZ Non-confo mance August 21 - Info mat on system platfo m	[illegible]	5 - Seve e	5 - F equent	C t cal - 25)	1. Reg onal ove s ght of ssues (CIO) - engagement w th RDHS 2. DE nvest gat ng ssues 3. Move to pACS epo t ng	4 - Majo	4 - L kely	C t cal - (16)	1. Te Whatu Ora ev ew of systems 2. TAS mp ovement of ex st ng systems 3. Upg ade to PACS epo t ng	3 - Mode ate	3 - Poss ble	Ma o - (9)	HB moved to PACS epo t ng - Now week 6 - mon to ng ssues/ mp ovements T ge team wo k cont nues	Open		
R-4754-020-HO	12/07/2022		Hosp tal	Rad ology				Remove sk sou ce	Se v ce Del ve y	7 Equ ty of outcomes	Wa t t mes fo out ne US Capac ty does not meet demand Suppo t fo Wa oa - Obs and gene al	[illegible]	3 - Mode ate	4 - L kely	Majo - (12)	1. Rev ew of US wa t l st 2. Commence US qual ty ev ew 3. D scuss ng opt ons fo out-sou c ng w th plann ng and fund ng	3 - Mode ate	4 - L kely	Majo - 12)	1. Te Whatu Ora gu dance on US se v ces and/o comm ss on ng 2. Release SMO/Sonog aphe to ev ew wa t l sts	3 - Mode ate	4 - L kely	Majo - (12)	Inc ease US demand cont nues No SMO o sonog aphe esou ce to ev ew wa t l sts	Open		
R-4754-021-HO	12/07/2022		Hosp tal	Rad ology				Reduce l kel hood AND consequence	Se v ce Del ve y	5 S gn f cant event management	COVID management and ecove y	[illegible]	3 - Mode ate	4 - L kely	Majo - (12)	1. Ma nta n full ad ology se v ces du ng COVID su ges 2. Ut l se out-sou c ng	2 - M no	3 - Poss ble	Mode ate - (6)	1. Inc ease FTE 2. Inc ease capac ty + add CT/MRI 3. Ma nta n out-sou ce cont acts	2 - M no	1 - Ra e	M no - (2)	BAU	Closed	28/06/2023	
R-4777-023-HO	4/08/2022		Hosp tal	Rad ology				Remove sk sou ce	Se v ce Del ve y	8 Cl n cal Gove nance - Qual ty & Ope at onal pe fo mance	IANZ Non confo m ty - mon to s	[illegible]	2 - M no	3 - Poss ble	Mode ate - (6)	1. Wo k locally w th US vendo s to move to as close as poss ble to standa d	3 - Mode ate	3 - Poss ble	Majo - (9)	1. Issue fo al mag ng depts - wo k nat onally/ eg onally to esolve ssue w th US vendo s/ egulato	2 - M no	3 - Poss ble	Mode ate - (6)	W l update follow ng IANZ v s t	Open		
R-4781-024-HO	8/08/2022		Hosp tal	Rad ology				Reduce l kel hood AND consequence	Cl n cal	2 Wo kfo ce Capac ty and Capab l ty - Wo kfo ce of the futu e	Tele ad ology Repo t ng not meet ng demand KPI-60 m ns not be ng met fo out of hou s scans Unable to l ase capac ty	[illegible]	4 - Ma o	5 - F equent	C t cal - 20)	Wo k ng w th tele ad ology p ov de (they a e expe ienc ng ssues w th staff ng/s ckness/volume of wo k f om cus tome s. Staff dent fy p o ty cases when send ng	3 - Mode ate	5 - F equent	Majo - 15)	1. EVL wo k ng on eg onal capac ty 2. Wo k ng w th eg on to b ng on boa d add t onal p ov de s	3 - Mode ate	4 - L kely	Majo - (12)	PRL nteg at on completed 5/5/23 Reg onal p og ess fo add t onal p ov de s s ve y slow and complex	Open		
R-4792-025-HO	19/08/2022		Hosp tal	Rad ology				Reduce l kel hood	Se v ce Del ve y	8 Cl n cal Gove nance - Qual ty & Ope at onal pe fo mance	Result pathway f om RIS Cl n cal Po tal Integ at on w th RIS/p ev ously ECA Incomplete Info mat on f om Cl n cal Po tal to Rad ology Info mat on System Result pathway f om RIS to CP - Results each ng efe e s	[illegible]	4 - Ma o	5 - F equent	C t cal - 20)	1. ad ology staff need to t ack down efe e f om ncomplete nfo populated n RIS/CP 2. Wo k a ound p ocesses fo efe e s to get esults	4 - Majo	5 - F equent	C t cal - (20)	1. Cl n cal Po tal has complete efe e nfo and th s populated n RIS (needs DE collabo at on) 2. End to end v s b l ty of esult del ve y	3 - Mode ate	4 - L kely	Majo - (12)	Rad ology need DE suppo t fo end to end v s b l ty of epo t del ve y and complete efe e nfo mat on	Open		
R-4875-028-HO	10/11/2022		Hosp tal	Rad ology		31/07/2023		Reta n / accept sk	F nanc al	2 Wo kfo ce Capac ty and Capab l ty - Wo kfo ce of the futu e	Fund ng to suppo t RN ec u tment (suppo t nte vent onal nu s ng 2nd on call oste)	[illegible]	3 - Mode ate	5 - F equent	Majo - (15)	fund ng allocated	4 - Majo	3 - Poss ble	Majo - 12)	Fund ng app oved	2 - M no	3 - Poss ble	Mode ate - (6)	Roles appo nted to - 7 is on go ng fund ng app oved	Open		
R-4888-029-HO	23/11/2022		Hosp tal	Rad ology		31/07/2023		Reta n / accept sk	Se v ce Del ve y	2 Wo kfo ce Capac ty and Capab l ty - Wo kfo ce of the futu e	P ov s on of US gu ded Ste o d nject on se v ce	[illegible]	3 - Mode ate	4 - L kely	Majo - (12)	Nu s ng FTE nc eased - wo k ng on ec u tment Move ad ology FTE to suppo t nject ons v's epo t/b opsy	3 - Mode ate	5 - F equent	Majo - 15)	L m ted se v ce p ov s on SMO spec al st efe als only	3 - Mode ate	5 - F equent	Majo - (15)	1 SMO do ng 1 l st of 8 pat ents pe month = Inc ease n wa t t mes	Open		
R-4984-030-HO	27/02/2023		Hosp tal	Rad ology		31/07/2023		Reta n / accept sk	Se v ce Del ve y	5 S gn f cant event management	P ov s on of Imag ng fo Wa oa Pat ents US/CT/MRI and NM	[illegible]	4 - Ma o	5 - F equent	C t cal - 20)	Re-d ect ng pat ents to G sbo ne Fly ng pat ents to Hast ngs	3 - Mode ate	4 - L kely	Majo - 12)	Re-d ect ng pat ents	3 - Mode ate	5 - F equent	Majo - (15)	BAU	Closed	28/06/2023	
R-5008-031-HO	23/03/2023		Hosp tal	Rad ology		31/07/2023		Reta n / accept sk	Se v ce Del ve y	2 Wo kfo ce Capac ty and Capab l ty - Wo kfo ce of the futu e	P ov s on of FNA - US gu ded b opsy se v ce	[illegible]	4 - Ma o	4 - L kely	C t cal - 16)	L m ted SMO cove - AL/s ckness	4 - Majo	4 - L kely	C t cal - (16)	SMO ec u tment - cannot out-sou ce	5 - Seve e	3 - Poss ble	C t cal - 15)	1 SMO ava lable fo FNA wo k = 1 l st pe week	Open		
R-5008-032-HO	23/03/2023		Hosp tal	Rad ology		31/07/2023		Reduce l kel hood AND consequence	Cl n cal	8 Cl n cal Gove nance - Qual ty & Ope at onal pe fo mance	Results not f cat on - C t cal f nd ng p ocess	[illegible]	5 - Seve e	5 - F equent	C t cal - 25)	Develop an ag eed c t cal f nd ng p ocess w th app op ate IT system nteg at on	2 - M no	3 - Poss ble	Mode ate - (6)	Reg onal ev ew/p ocess	2 - M no	3 - Poss ble	Mode ate - (6)	Pol cy d afted - need obta n efe all deta ls n RIS and cl n cal gove nance s gn off of pol cy	open		
R-5105-033-HO	28/06/2023		Hosp tal	Rad ology		31/07/2023		Inc ease (oppo tun ty)	Se v ce Del ve y	7 Equ ty of outcomes	Rad ology se v ce p ov s on to u al Hawkes Bay whe e the lowe soc o econom c /mao /pas f cka and ove ep esentat ve	[illegible]	5 - Seve e	5 - F equent	C t cal - 25)	P ov de c oss and on s te at Wa oa - poss ble va mob le se v ces	3 - Mode ate	3 - Poss ble	Majo - (9)	Te Whatu Ora d ect on	4 - Ma o	3 - Poss ble	Majo - (12)		Open		

Risk ID	Date E t	Entered by	Group	Service / Team	Responsible Manager	Next Review D t	Maturity date	Risk Strategy	Risk Environment	Enterprise Risk	Risk Name	Descr ption of Risk	Consequence	L kelihood	Rating	Controls	Consequence	Likel hood	Rat ng	Treatment Plan	Consequence	L kelihood	Rating	Commentary	Status	Date Closed	Become I

Released under the Official Information Act 1982

Risk Register Matrix Summaries - Health Services (open risks)

Inherent Risk (PRE - Mitigation)

Likelihood \ Consequence	Severe	Major	Moderate	Minor	Minimal
Frequent	6	5	2		1
Likely	1	2	2		
Possible			1	1	
Unlikely					
Rare					

KEY	Critical	Major	Moderate	Minor	Total
	14	5	2		**21**

Residual Risk (Current as at last update)

Likelihood \ Consequence	Severe	Major	Moderate	Minor	Minimal
Frequent		2	2		
Likely		6	3	2	
Possible		1	3	2	
Unlikely					
Rare					

KEY	Critical	Major	Moderate	Minor	Total
	8	9	4		**21**

Tolerable Risk (POST - Mitigation)

Likelihood \ Consequence	Severe	Major	Moderate	Minor	Minimal
Frequent			1		
Likely		1	4	5	
Possible	1	2	1	4	2
Unlikely					
Rare					

KEY	Critical	Major	Moderate	Minor	Total
	2	8	9	2	**21**

Table format

Risk Assessment (Score)	Critical (25)	Critical (20)	Critical (16)	Critical (15)	Critical (10)	Major (15)	Major (12)	Major (9)	Major (8)	Major (5)	Moderate (10)	Moderate (8)	Moderate (6)	Moderate (5)	Moderate (4)	Moderate (3)	Minor (4)	Minor (3)	Minor (2)	Minor (1)	TOTAL (scores)	Count Check
Inherent Pre (count)	6	6	2			2	2	1					1	1							376	*21*
Residual Current (count)		2	6			2	4	3				2	2								269	*21*
Tolerable Post (count)			1	1		1	6	1				5	4					2			197	*21*

Released under the Official Information Act 1982

Risk Register Summary

Data Quality - Quantitative | Aspects you might have missed

	WHAT	HOW MANY	ACTION REQUIRED
	DRAFT RISKS		
a	How many risks are "In Draft"	0	Should the status be changed to "Open"?
	OPEN RISKS		
b	Risks (that haven't been closed), missing a Responsible Manager	0	Identify and apply a Responsible Manager
c	Risks (that haven't been closed) that are missing a RAG rating	0	Ensure Consequence and Likelihood are applied to all aspects of the risk (e.g. Inherent, Residual, Tolerable)
d	The "Next Review Date" is not in the future	9	These risks are OVERDUE, and need to be reviewed
e	Risks (that haven't been closed), missing a Group	0	Identify and apply a Group
f	Risks (that haven't been closed), missing a Service/Team	0	Identify and apply a Service/Team
g	Risks (that haven't been closed), without a Treatment Plan	0	Record the Treatment Plan for this/these risks
	CLOSED RISKS		
h	The Risk Status is "Closed" but there is no "Date Closed"	2	Update the "Date Closed" to reflect when it was determined to close the risk

Count of Description of Risk	Column Labels								
Row Labels		Critical - (16)	Major - (12)	Major - (15)	Major - (9)	Minor - (4)	Moderate - (4)	Moderate - (8)	Grand Total
Closed	2				1			1	4
Hospital					1				1
WHC								1	1
(blank)	2								2
In draft	3						1		4
Hospital							1		1
COO	1								1
CAHPO	2								2
Open	4	33	18	5	26	17	16	15	134
Hospital		14	7	1	9	5	5	6	47
Support		2	1	2	3	2	2	2	14
WHC		10	6	2	6	6	5	3	38
MHA		7	3		8	4	4	4	30
COO	1								1
CNO			1						1
CAHPO	3								3
Grand Total	9	33	18	5	27	17	17	16	142

Released under the Official Information Act 1982

Copy and Paste

Description	**IF** ... **THEN** ... **RESULTING** ...
Actions / Controls	1. xxxx [who, when] 2. xxxx [who, when] 3. xxxx [who, when] 4. xxxx [who, when]

Released under the Official Information Act 1982