

NUCLEAR MEDICINE WORKFORCE SUMMIT OUTCOMES REPORT 2023

OFFICE OF THE CHIEF ALLIED
HEALTH OFFICER

December 2023

Acknowledgement of Country

We respectfully acknowledge Aboriginal and Torres Strait Islander peoples as the Traditional and Cultural Custodians of the lands on which we live and work. We recognise the continuation of First Nations peoples cultures and connection to the lands, waters and communities across Queensland.

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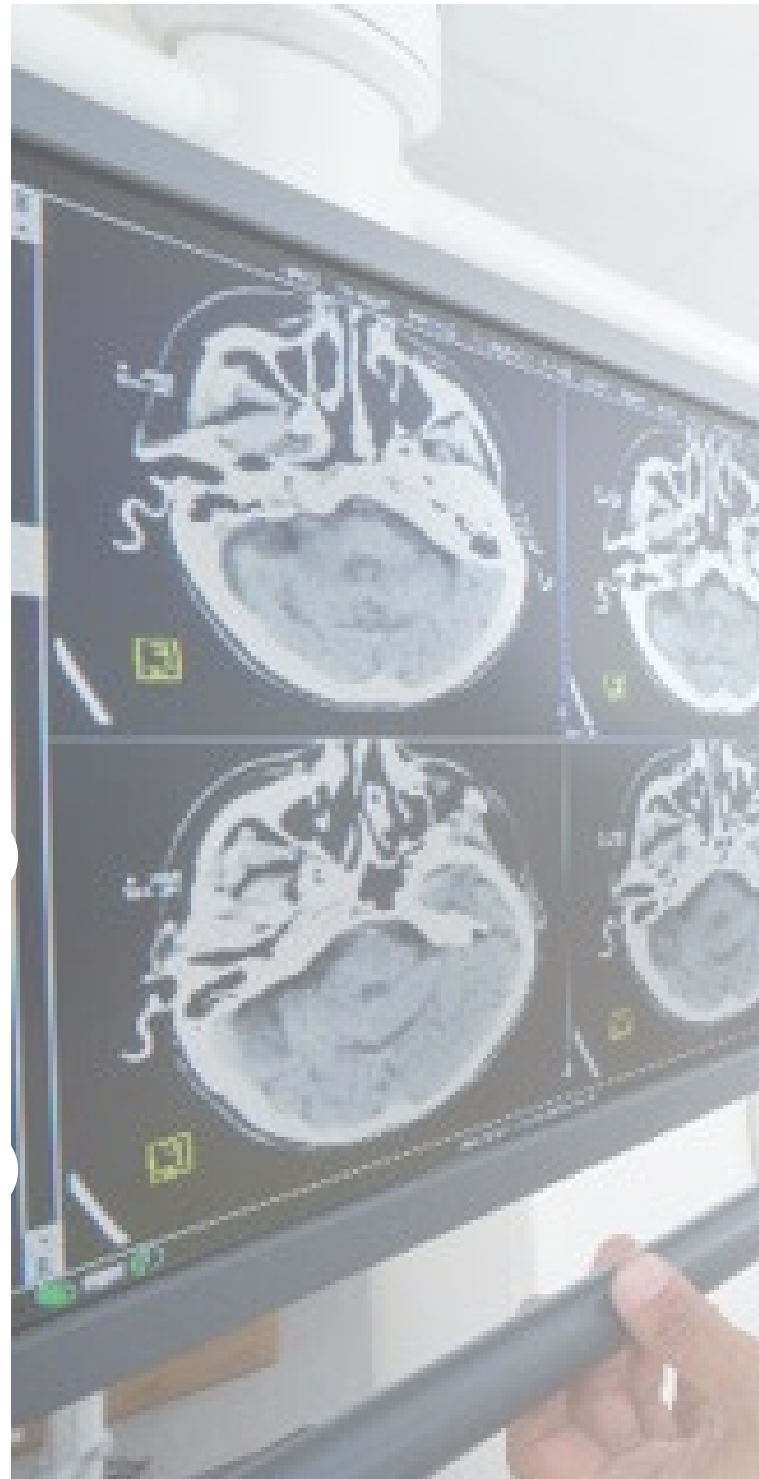
The need for workforce action for Nuclear Medicine Scientists in Queensland

Workforce action is needed now to proactively manage the sustainability, emergent risks and challenges faced by the Nuclear Medicine Scientist workforce across Queensland.

Currently Queensland is experiencing significant growth in the demand for nuclear medicine services from a range of factors including planned new cancer services and growth in theranostic services, while at the same time experiencing limitations to workforce supply, including no university based in Queensland, and a small workforce of approximately 220 registered practitioners.

These and other workforce factors are culminating in an urgent need to address some of the key constraints to the sustainability of the Queensland workforce.

The Queensland Summit, and informing Environmental Scan, have provided the opportunity for the public and private sector and enabling stakeholders to come together to agree on meaningful workforce reforms. These reforms seek to boost workforce sustainability, enable capacity and capability, and support and retain the current Nuclear Medicine Scientists who deliver critical services for Queenslanders.





This Summit provides the opportunity for a range of nuclear medicine stakeholders to come together on ideas for change, and to be a part of making these real over the coming years.

Participant, Queensland Nuclear Medicine Sciences Summit Day.

A Summit to discuss meaningful workforce reform

Bringing the nuclear medicine workforce and wider partners together to create solutions

On the 22nd November 2023, the Office of the Chief Allied Health Officer within Queensland Health hosted a Nuclear Medicine Scientist Workforce Summit.

This Summit brought together 48 diverse participants including Nuclear Medicine Scientists from across the public and private sector, professional organisations, unions, education and training providers, student and university representatives, and Queensland Health executive leaders. Attendees joined from a mix of rural, regional and metropolitan locations including Cairns, Townsville, Rockhampton, Brisbane, the Gold Coast, Sunshine Coast, Melbourne, Perth and Wellington.

The breadth of expertise represented in the room provided a platform for the Nuclear Medicine Scientist workforce stakeholders to speak with a **collective voice**, gather **collective input** and ideate **collective actions** for the future Nuclear Medicine Scientist workforce for Queensland.

Environmental Scan

Prior to the Summit, participants were provided with an Environmental Scan that provided a current state view of the key workforce challenges facing the Nuclear Medicine Scientist workforce in Queensland. This provided a shared understanding of fourteen key workforce challenges that need to be addressed to achieve meaningful change. This Environmental Scan drew from publicly available academic and grey literature and stakeholder insights, with a summary of its key findings on the current context provided in this Report.

Summit overview

The Summit opened with a discussion on the vision and ambitions for the Nuclear Medicine Scientist workforce for Queensland, noting a need for sustainability, innovation and support for the workforce.

Over the course of the day, Summit attendees worked as teams to discuss possible workforce actions and priorities using ideation activities drawing on world leading practices and thinking beyond current constraints to address workforce challenges.

This Outcomes Report sets out the identified priority actions and provides further detail on next steps that need to be taken to address both immediate and longer term needs to ensure the State meets the nuclear medicine needs of Queenslanders into the future.



Positioning for the future

A national workforce lens for priority actions

This Summit Outcomes Report has been designed across three strategic ‘pillars’ to categorise the key workforce opportunities to achieve the vision for workforce sustainability, contemporary practice and innovation by 2033.

A 10 year time horizon

The Summit focused on practical actions to be undertaken over the next decade (to 2033) in recognition that:

- There are a broad number of strategies that have been identified as key priorities. However not all actions can be pursued immediately, and many will require a staged approach across time horizons;
- Further prioritisation and developing strategic partnerships across the sector nationally will be required in order to drive impact and short-term solutions that can lead to long-term benefits; and
- Growing the workforce pipeline in Queensland, including through new education and training pathways, will take time to implement.

To support progress against the priority actions, time horizons of 1-3 years, 3-5 years and 10 years have been considered.

Shared accountability for progress

There is recognition that there is work to be undertaken to pursue both short-term approaches to the current workforce challenges while also pursuing actions that will ensure a sustainable workforce over the longer term.

Addressing the workforce challenges in Queensland must also factor in the context of the challenges affecting the national Nuclear Medicine Scientist workforce, and the broader funding and workforce shortage challenges across the health sector.

A strong theme emerging from the Summit was a clear need for better workforce and service demand data. To be meaningful for this small and specialist workforce, this data, planning and forecasting needs to extend across both the public and private sector who both play a critical role in nuclear medicine service delivery across Queensland.

Summit day attendees recognised that realising the vision will require a strong collaborative approach from all stakeholders, and ongoing and open dialogue.

The Summit convened with the acknowledgement that turning actions into outcomes will be the shared responsibility of the whole profession, in partnership with local and national stakeholders.



NUCLEAR MEDICINE SCIENTIST SUMMIT...

22nd NOVEMBER 2023

IMPRESSIVE MIX OF PARTICIPANTS!

FUN DAY TODAY!

...LOOKING FOR ACTIONABLE SOLUTIONS!

WHO IS IN THE ROOM...

48 PEOPLE HERE TODAY!

DECISION MAKING!

POSITIVE DISCUSSION TODAY...

LIZA-JANE McBRIDE

...TODAY WE WILL TALK ABOUT BUILD, GROW and SUSTAIN THE NUCLEAR MEDICINE INDUSTRY IN QUEENSLAND...

THE FOCUS OF TODAY...

GROW THE WORKFORCE!

...INNOVATION TO DRIVE SUSTAINABILITY...

...STRENGTHEN THE WORKFORCE...

I DIDN'T KNOW WHAT I WAS GETTING INTO?!?

HIGH ATTRITION IN FIRST YEAR!

ENVIRONMENTAL SCAN...

LIMITED STUDENT SUPPORT FUNDING...

...LIMITED UNI PROVIDERS!

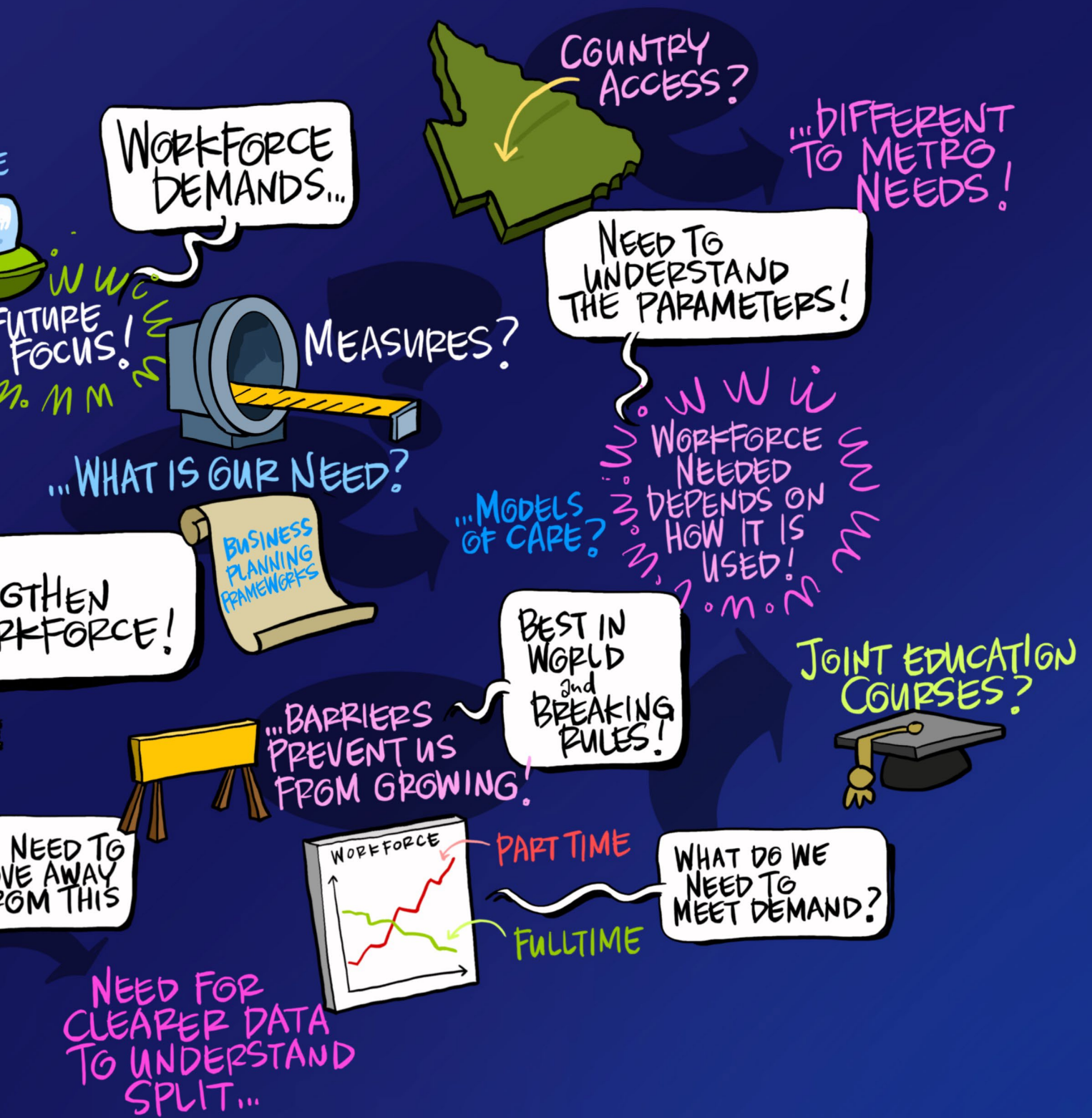
STAFF SHORTAGES...

COMPETITION BETWEEN PUBLIC and PRIVATE!

AGEING WORKFORCE!?

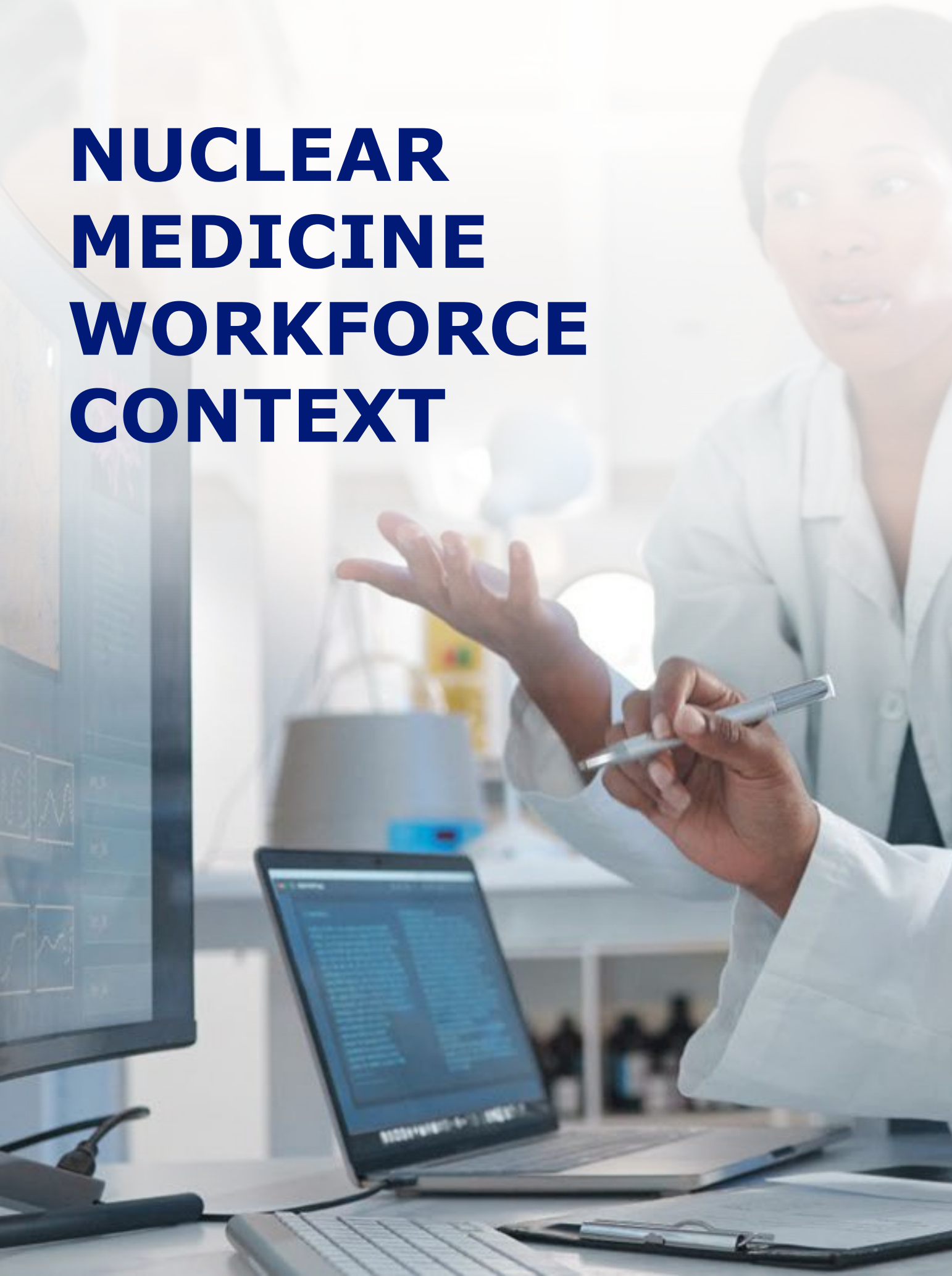
...WE MOVED...







NUCLEAR MEDICINE WORKFORCE CONTEXT



“

We are a small but specialist workforce, involved in using radiation to diagnose, prevent and treat disease. We are critical to the future of healthcare as almost one third of all procedures in hospitals involve radiation or radioactivity.

Participant, Queensland Nuclear Medicine Sciences Summit Day.

Current state workforce profile

The national Nuclear Medicine Scientist workforce

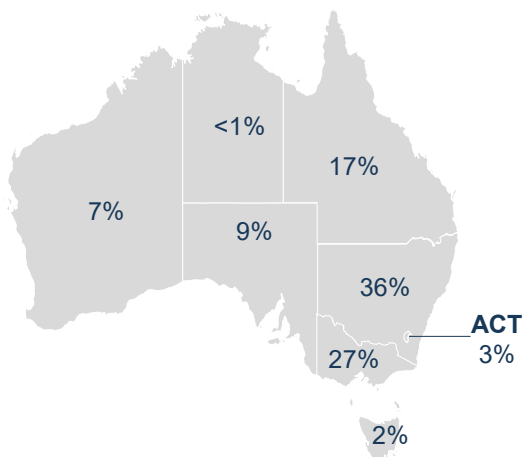
Nuclear Medicine Scientists are one of three practitioner groups which are registered through the Medical Radiation Practice Board of Australia. The other two practitioner groups that form part of the Medical Radiation Practitioners are diagnostic radiographers and radiation therapists.

Across Australia there are almost 19,000 Medical Radiation Practitioner registrants, however the Nuclear Medicine Scientist workforce are the smallest of the three professions, comprising only 6.8 per cent of total registrants (1,294 persons, including fourteen who are dual qualified with another medical radiation profession) (MRPBA, 2023).

Queensland has the third highest distribution of the 1,294 Nuclear Medicine Scientists across Australia, with 17 per cent registered in Queensland, New South Wales home to 36 per cent of this workforce, and 27 per cent registered in Victoria as shown in Figure 1 (MRPBA, 2023).

68.9 per cent of the national registered Medical Radiation Practitioner workforce are female, and 19.9 per cent are 50 years or over (MRPBA, 2023).

Figure 1: Geographic distribution of the Nuclear Medicine Scientist workforce by jurisdiction (June 2023)



Source: Medical Radiation Practitioner Board of Australia, 2023.

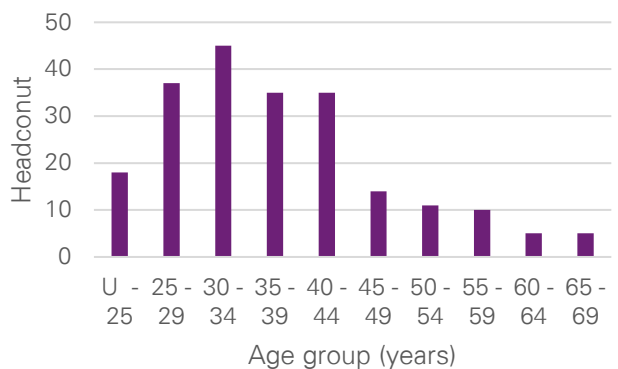
Nuclear Medicine Scientists in Queensland

There are 3,919 Medical Radiation Practitioners in Queensland. Of these, 218 are registered in Nuclear Medicine Science, representing 5.4 per cent of the total Medical Radiation Practitioners in the State (MRPBA, 2023).

It is estimated that between 65 to 75 per cent of the Queensland workforce are employed by private providers, with the remainder employed by Queensland Health or not actively practising in Queensland.

The age distribution of the Nuclear Medicine Scientist workforce in Queensland is shown in Figure 2. While only a small proportion of the workforce (approximately 5 per cent) are expected to retire over the coming decade, the impact on supply of this small workforce is a key consideration in future workforce supply.

Figure 2: Age distribution of the Nuclear Medicine Scientist workforce in Queensland (June 2023)



Source: Australian Health Practitioner Regulation Agency, Queensland registrant count by postcode and age – Nuclear Medicine Scientist division, received 15 November 2023.

Workforce distribution

Queensland distribution

The distribution of the Nuclear Medicine Scientist workforce across Queensland is shown in Figure 3. This shows the distribution of registrants by principal place of practice, highlighting the concentration of Nuclear Medicine Scientists located in the metropolitan areas in south-east Queensland.

Figure 3: Geographic distribution of the Nuclear Medicine Scientist workforce in Queensland (June 2023)



Key: Each blue dot is representative of one (1) registered Nuclear Medicine Scientist with the Medical Radiation Practitioner Board of Australia as of June 2023.

Source: Australian Health Practitioner Regulation Agency, *Queensland registrant count by postcode and age – Nuclear Medicine Scientist division*, received 15 November 2023.

The education and training pipeline for Nuclear Medicine Scientists

In Australia, the majority of the Nuclear Medicine Scientist workforce are educated and trained domestically, with overseas entrants comprising a relatively small portion of total new registrants.

Accredited Nuclear Medicine Scientist courses are currently only available in three states at the following four universities:

- Charles Sturt University – Wagga Wagga & Port Macquarie, New South Wales;
- Royal Melbourne Institute of Technology – Bundoora, Victoria;
- University of Newcastle – Newcastle, New South Wales; and
- University of South Australia – Adelaide, South Australia.

The Environmental Scan developed prior to the Summit highlighted challenges in filling student placement positions in Queensland, with the need for students to travel or relocate interstate to complete placement blocks.





WORKFORCE CHALLENGES



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We don't understand what staffing is currently needed to properly provide services for patients.

It is hard to talk about growth when you don't know what you have and need right now. But we know there is a gap between the staffing we have, and what we need.

Participant, Queensland Nuclear Medicine Sciences Summit Day.

Workforce challenges

An Environment Scan was undertaken prior to the Summit to provide a current view of the Nuclear Medicine Scientist workforce challenges, pressures and opportunities for Queensland. This identified the following key workforce challenges facing the sector. Further detail on each of these challenges is provided in the Environmental Scan.

Absence of a Queensland university provider



Education is the critical first step to building the Nuclear Medicine Scientist workforce, however, Queensland does not have an accredited Nuclear Medicine Scientist tertiary education training provider.

Without an education pathway in Queensland, there is no direct Nuclear Medicine Scientist education and training pipeline for the State. As such, Queensland is reliant on attracting graduates from the four interstate universities. Recruiting interstate graduates is a highly competitive market. In 2023, there will be approximately 50 Nuclear Medicine Science graduates in Australia, and it is anticipated 40 will transition to registration (ANZSNM, 2023).

This shortage in supply presents an opportunity to explore education and training pipeline viability in the Queensland context.

Attrition of university students



Whilst an education and training pipeline assists with workforce sustainability, it needs to be balanced with sustaining a viable education and training cohort size.

Student cohort size is a key consideration for the viability of education and training providers for this small but specialist workforce.

If a Queensland university did not believe there was sufficient interest for the course to be financially viable, the possibility of education and training partnership options with one of the existing universities may also be possible.

Cross skilling pathways between the divisions of Medical Radiation Practice are not clearly articulated



The five domains of professional capabilities across the three Medical Radiation Practice divisions overlap, but there are not clear pathways for practitioners to cross skill, transition across roles or achieve dual registration.

While it is understood there are areas of common competency across the nuclear medicine scientist, radiation therapy and diagnostic radiography qualifications, further recognition of these common elements could be supported to encourage cross-skilling or dual registration across the different divisions.

There may also be opportunity to explore different models of micro-credentialing, and recognition of prior learning for transition into nuclear medicine science from other areas of related study.

Limited awareness and knowledge of nuclear medicine as a career pathway



Limited public awareness of nuclear medicine and the unique role of the Nuclear Medicine Scientist profession impacts on the general interest and enrolment in Nuclear Medicine Scientist courses.

There is a recognised need for targeted education and awareness campaigns that promote and build awareness of the role and functions of a Nuclear Medicine Scientist.

Given all Medical Radiation Practitioner professions are currently experiencing workforce shortages, it may also be possible to strengthen the awareness of these professions nationally amongst target cohorts (such as school leavers). Improved public awareness may also help to harness change for mid-career students, particularly through postgraduate pathways for education in Australia.

Limited student financial support for interstate placements



Requirements for unpaid placements (of up to 26 weeks) are reported to place a financial burden on students and make interstate placements to Queensland more difficult.

Similar to other allied health professions, Nuclear Medicine Scientist education programs in Australia require approximately 40 weeks of professional practice placement time throughout the degree. While placements provide critical learning experiences, compulsory unpaid placements can lead to 'placement poverty' and attrition from study (Evans & Bonner, 2023).

Successful student placements are a key source of graduate recruitment for Queensland medical imaging providers. Financial support for relocation while studying or paid placements are an area that stakeholders have suggested could be addressed in the more immediate term.

Workload pressure from staff shortages



There are workload pressures resulting from workforce shortages and emergent leave which need to be managed across a small and specialist workforce.

Stakeholders noted that due to the small and specialised nature of the Nuclear Medicine Scientist workforce, they have limited flexibility in managing emergent leave (such as sick leave and carer's leave). At present it is understood that short term leave usually leads to increased workload pressure for the current workforce to ensure service delivery for consumers. These pressures are leading to burnout and fatigue in some areas of the workforce.

Stakeholders reported boosting workforce supply could reduce the impact of workload pressure on the current workforce.

Wider models of care are not being utilised to optimise the Nuclear Medicine Scientist scope of practice



Medical Radiation Practitioners collaborate across specialities to manage demands where possible, however there is an opportunity to increase use of medical imaging assistants, particularly in the public sector.

The Nuclear Medicine Scientist workforce could be better supported to optimise their scope of practice. This included use of the assistant workforce and better recognition of some common functions and skills undertaken by the Medical Radiation Practitioner workforce including in computed tomography (CT) scanning.

The opportunity exists to further support recognition of common competencies amongst the Medical Radiation Practice workforce. There is also opportunity to explore mechanisms to harmonise regulatory and licencing differences that impact the scope of the Nuclear Medicine Scientist workforce and mobility within Queensland and across other jurisdictions.

Significant growth in demand for services which is outstripping workforce supply



A number of factors are driving significant growth in the expected future demand for the Nuclear Medicine Scientist workforce.

The key drivers for significant increase in demand for Nuclear Medicine Scientists in Queensland include emerging practice (including theranostics), growth in consumer expectations and planned service planning expansions such as the Queensland Cancer Centre and private practice expansion.

These factors suggest a need for a consolidated view of service planning and workforce planning across Queensland (in both public and private settings) to allow for accurate modelling of the demand and projected supply of the Nuclear Medicine Scientists in workforce.

Challenges recruiting to regional locations



The challenges in recruiting and retaining Nuclear Medicine staff in regional service centres is exacerbated by limited access to specialist equipment which may limit the breadth and scope of work making these roles less attractive.

The Nuclear Medicine Scientists workforce are only employed across six of Queensland's 16 HHSs. The challenge of encouraging graduates and the existing workforce to relocate to regional locations is exacerbated by the limitations in scope of practice required due to available technologies.

It is possible that a shared workforce model that allows mobility across public and private providers could improve regional location workforce recruitment and enhance service delivery reliability. This would require exploration of single employer models and or relief pools that work across public and private sectors within the same geographical area.

Competition between public and private providers



There is increasing workforce competition leading to new ways in which public and private providers are seeking to attract the workforce.

Private providers and Queensland Health alike reported that they have invested in a number of strategies to help boost their Nuclear Medicine Scientist workforce in recent years.

There is an opportunity to explore mechanisms for greater collaboration across the public and private sector to support the overall sustainability of the Nuclear Medicine Scientist workforce in Queensland. This could include flexible models of employment that support greater mobility across the workforce and the ability to more easily work across the private and public sectors to meet service demands.

A need to strengthen clinical education and research



There is a need to boost education and research that promotes contemporary practice in a small but specialist workforce where there is a mix of private and public workforce.

Workforce shortages and workload pressure impact the opportunity for pursuing clinical education and research. Stakeholders noted the current workforce rarely, if ever, have capacity to partake in development activities without impacting service delivery.

To continue advancing the Nuclear Medicine Scientist profession, it is important to safeguard non-clinical time and bolster support for education and research, creating the necessary capacity for progress and advancement.

An increase in the opting for part time and flexible work is requiring additional staff to meet demand



Data from Queensland Health shows a steady decline in the number of full time Nuclear Medicine Scientist employees since 2017, with staff seeking part-time and flexible work arrangements.

Analysis of Queensland Health Nuclear Medicine Scientist workforce data between 2017 to 2023 shows growth of approximately 8.4 per cent in part time working arrangements over the period (with a total of 29 per cent of the workforce part-time in 2023). This trend is consistent with an overall increase in part time working arrangements across Australia.

This workforce trend needs to form a part of workforce modelling of the expected supply of the Nuclear Medicine Scientist workforce into the future, as it will require additional headcount (likely through student pipeline) to achieve the same FTE.

4.3 per cent of the Nuclear Medicine Scientist workforce will reach retirement age within five years



National Nuclear Medicine Scientist data shows that approximately 4.3 per cent of the Nuclear Medicine Scientist workforce will reach retirement age within the next five years, which impact on future supply of this small and specialist workforce

While almost 75 per cent of the Nuclear Medicine Scientist workforce are under 45 years of age, there remains a need to continue to manage retirements that are likely to occur across the workforce over the next five years.

Workforce data on the age profile of the Queensland Nuclear Medicine Scientist workforce would assist in understanding the extent of this challenge in the Queensland context, however it is expected with the workforce already in shortage, retirements will exacerbate workforce challenges.

A need to improve evidence-based workforce planning



There is currently no Queensland workforce forecast of the projected demand and supply of the Nuclear Medicine Scientist workforce across both public and private sector.

While all stakeholders acknowledge Queensland is facing a significant shortage of Nuclear Medicine Scientists, there remains limited workforce analytics to identify, quantify and prioritise workforce challenges. This means that current workforce planning efforts are largely reactive, lacking the flexibility and agility to adapt to the changing service and workforce environments.

Increased utilisation of workforce lead and lag indicators could inform proactive management of workforce risks.

VISION, AMBITIONS AND WORKFORCE PILLARS

Queensland's nuclear medicine workforce vision

By 2033, Queensland has a sustainable and contemporary nuclear medicine workforce that are able to meet the service delivery needs of Queenslanders.

Queensland aims to achieve this vision through the following focus areas:

01**Growing the future Nuclear Medicine Scientist workforce****02****Workforce innovations to drive sustainability****03****Strengthening the Nuclear Medicine Scientist workforce**

Summit participants identified an extensive range of ideas and opportunities for exploration in the Nuclear Medicine Scientist workforce challenge context. The wealth of ideas generated in discussions have been preserved for potential exploration and consideration in subsequent workforce initiatives and actions.

This report explores twelve key workforce initiatives for action across the three pillars, focusing on the key opportunities recognised as having the greatest potential impact on the overarching vision for this workforce.

Growing the future Nuclear Medicine Scientist workforce







PILLAR I

Growing the future Nuclear Medicine Scientist workforce

Summit attendees recognised the need to grow the future supply of the Nuclear Medicine Scientist workforce in order to ensure sustainable service delivery given both expected and future escalating demand for nuclear medicine services.

While the supply shortage across the Nuclear Medicine Scientist workforce is not unique to Queensland, the absence of a local university provider further exacerbates the challenge. Throughout the Summit, student representatives articulated the difficulties in Nuclear Medicine Science being seen as a viable choice for school leavers with the added burden of interstate relocation to study.

Due to credentialing and recognition of international qualifications the Nuclear Medicine Scientist workforce in Australia rely more heavily on a domestically trained workforce to address shortages than some other health professions.

Exploring options to support retention of current students, increase uptake by future students and implement new education approaches are critical to bolster the graduate pipeline and ensure the sustainability of the Nuclear Medicine Scientist workforce in the future.

The identified challenges to growing the future Nuclear Medicine Scientist workforce include:



Absence of a Queensland university provider



Attrition of university students



Limited awareness and knowledge of nuclear medicine as a career pathway



Limited student financial support for interstate relocation

During the Summit, the largest section of the day was spent on ideation work to resolve these key challenges. Participants considered alternative approaches to education overseas, including:



United Kingdom Apprenticeship Model – Integrated Degree:

Introduced in 2017 by the Institute for Apprenticeships and Technical Education, the Healthcare Science Practitioner (Integrated Degree) is a three year course that supports learning while practicing.

The apprenticeship results in the same degree as a traditional education program. This is a national approach in the United Kingdom and similar models apply to a range of health professions, including medicine.



New Zealand Postgraduate diploma pathway:

The University of Auckland offers a two year postgraduate diploma model to provide an articulation pathway for registration with the New Zealand Medical Radiation Therapy Board. Prior to undertaking the course, students must obtain a clinical training position at an approved clinical centre prior to commencement. Assessment of competency occurs in the workplace, across 2000 clinical training hours.



I knew I wanted to do Nuclear Medicine Science... but there was no opportunity for me in Queensland. I had to study in Victoria, and I know this is limiting other people in Queensland from choosing this degree.

Participant, Queensland Nuclear Medicine Sciences Summit Day.

Workforce initiatives and actions

The following initiatives and key actions will support growing the future supply of the workforce and will be progressed by professional organisations, employers (public and private) and universities.

	Initiative	Key Actions
1.1	Provide financial support to students to increase the viability of student placements and reduce student attrition.	<p>Assess the feasibility of implementing financial support mechanisms for students, including consideration of bonded scholarship programs and affordable accommodation options for student placements.</p> <p>1.1.1 Establish mechanisms for student placement arrangements between employers and students that provide funding and relocation support. This could include scholarships, bursaries or other allowance payments.</p> <p>1.1.2 Explore onsite and other low-cost accommodation options for students who undertake their placement away from home.</p> <p>1.1.3 Implement a bonded scholarship scheme where graduates commit to employment for a specified period in an eligible location. This may consider eligibility across both public and private student placements.</p> <p>1.1.4 Promote placement support options to current and prospective students through all education and training providers, to raise awareness and support uptake.</p>
1.2	Gain commitment from a tertiary education provider for course delivery options that allow Queensland students to study closer to home.	<p>Engage with existing and new university providers to explore Nuclear Medicine Scientist study options that would boost the Queensland graduate pipeline.</p> <p>1.2.1 Explore opportunities for remote learning or alternate delivery mechanisms to support Queensland study options with existing education and training providers. This includes investigation of potential partnerships to deliver current undergraduate or postgraduate Nuclear Medicine Science courses locally.</p> <p>1.2.2 Explore an undergraduate or postgraduate Nuclear Medicine Science education option delivered through a Queensland university (noting this needs to be considered in conjunction with 1.2.1, noting both may not be possible to pursue given cohort size).</p> <p>1.2.3 Explore the viability of a national apprenticeship model for Nuclear Medicine Science with the Medical Radiation Practice Board of Australia and education providers. This could include consideration for a national pilot of this model, with a particular focus on supporting rural and remote Nuclear Medicine Science opportunities. It is noted this would also require consideration of the viability of this option given the education and training credentialing process for the profession.</p>



PILLAR I

Workforce initiatives and actions

Initiative	Key Actions
<p>1.3 Promote nuclear medicine as a career pathway through public awareness campaigns.</p>	<p>Build greater public and professional awareness of the Nuclear Medicine Scientist role to encourage current and future interest in the profession.</p> <p>1.3.1 Establish and expand promotional activities with current university providers through collaborative 'Open Days' for Queensland school-leavers. This could also include opportunities for work experience programs.</p> <p>1.3.2 Identify career change opportunities and campaign to encourage mature age entry into Nuclear Medicine Science, including recognition of prior learning where applicable.</p> <p>1.3.3 Collaborate with hospitals and service providers in facilitating student Open Days and workplace tours.</p> <p>1.3.4 Launch a national campaign to raise public awareness about the role and impact of nuclear medicine, led by professional organisations. This would involve educating the general public about the work of a Nuclear Medicine Scientist, and the pathways that exist for this profession.</p>



Workforce innovation to drive sustainability



BALANCE WORKFO

WORKFORCE INNOVATION TO DRIVE SUSTAINABILITY

INVEST IN NUCLEAR MEDICINE AS A PROFESSION!



HO HEL

I'M A NUCLE MEDIC SCIE



A SEAT AT THE TABLE



THINK ABOUT PAYING STUDENTS?



AN INVESTMENT

REMOVE LICENCING



PILLAR II

Pillar II – Workforce innovation to drive sustainability

There is need to develop an agile and flexible workforce that is adaptable to rapid changes in service delivery, technology and contemporary nuclear medicine practice.

To address Nuclear Medicine Scientist workforce challenges in the short term, alternative workforce models need to be considered to support nuclear medicine service delivery to Queensland communities. Strategies to grow the pipeline of future Nuclear Medicine Scientists will take time, so there is an immediate need to build capacity within the existing workforce, as well as providing contemporary practice models designed around the service delivery needs of Queenslanders.

Implementing innovations to support the current workforce will require approaches that challenge the status quo. This includes consideration for models of care that utilise the assistant workforce, harmonise scope of practice and streamline regulatory requirements to minimise barriers that impact contemporary practice.

Key challenges considered under this pillar include:



Cross skilling pathways between the divisions of Medical Radiation Practitioners are not clearly articulated



Wider models of care are not being utilised to support the Nuclear Medicine Scientists to work to their full scope of practice



Significant growth in demand for services which is outstripping workforce supply



Competition between public and private providers

Summit discussion included support for exploring ways to reach future generations through improved public awareness, and considering models of care that reflect different needs, modalities and scope in rural and remote, regional and metropolitan centres.

There was a strong theme to address the differences in licencing regulations between the jurisdictions and move to a nationally recognised prescribed license system linked to AHPRA registration. This also included consideration for new processes to allow better recognition of competency and qualifications between different facilities, to support enhanced flexibility and mobility of the Nuclear Medicine Scientist workforce.



Workforce initiatives and actions

The following initiatives and key actions will support innovation and sustainability in the Nuclear Medicine Scientist workforce and will be progressed by professional organisations, regulators, employers (public and private) and education providers.

	Initiative	Key Actions
2.1	Enhance professional advocacy efforts to advance the workforce and raise the Nuclear Medicine Science profile amongst health sector and government stakeholders.	<p>Build collaborative relationships and raise the collective voice of the nuclear medicine profession through advocacy and education campaigns.</p> <p>2.1.1 Collaborate across professional networks and organisations to coordinate effective advocacy campaigns for Nuclear Medicine Scientists.</p> <p>2.1.2 Foster collaboration with a range of regulatory, education, and State government stakeholders to amplify the impact of advocacy efforts.</p> <p>2.1.3 Improve governance pathways within Queensland Health, including consideration for a Nuclear Medicine Scientist professional lead or a dedicated professional group reporting to the Chief Allied Health Officer.</p> <p>2.1.4 Define career pathways into leadership positions for Nuclear Medicine Scientists within Hospital and Health Services, ensuring there are no barriers within the wider medical imaging leadership structures. This should support greater professional advocacy within the public system in relation to capital assets requests, resourcing and continuing education needs.</p>
2.2	Establish and recognise a nationally prescribed licence linked to Nuclear Medicine AHPRA registration.	<p>Investigate options to streamline licencing requirements across the national Nuclear Medicine Scientist workforce.</p> <p>2.2.1 Engage with the Medical Radiation Board of Australia and state/territory regulators to explore mechanisms for national alignment in licensing requirements for Nuclear Medicine Scientists.</p> <p>2.2.2 Implement nationally consistent licensing arrangements which are prescribed upon general registration through the Australian Health Practitioner Regulation Agency. This will require collaborative effort from across the profession and will need to occur through a staged process to facilitate the required regulatory changes.</p> <p>2.2.3 Explore mechanisms that support prescribed license requirements for students undertaking practical training who are practicing under supervision of a qualified and registered practitioner.</p>



PILLAR II

Workforce initiatives and actions

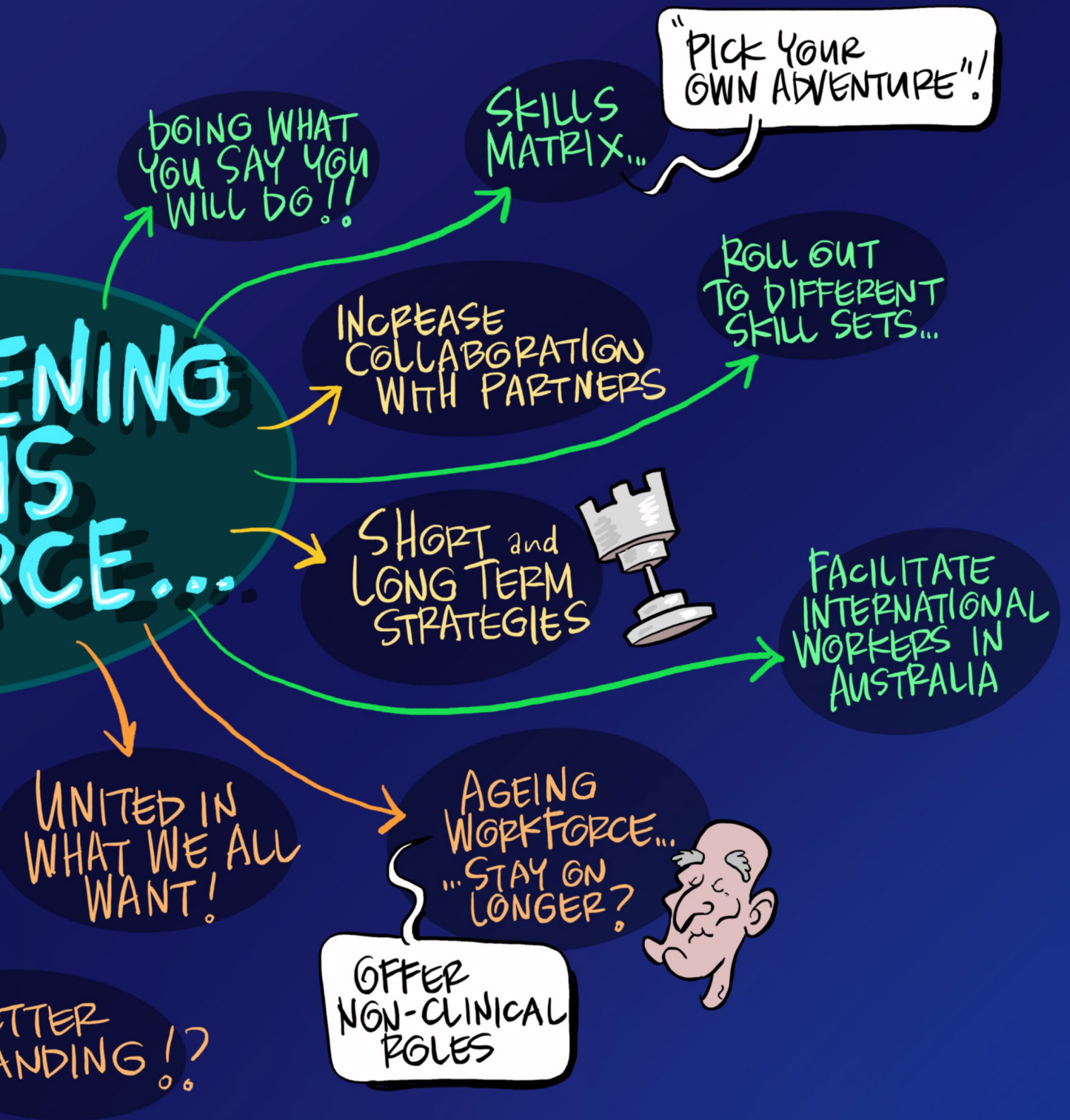
	Initiative	Key Actions
2.3	Establish guidance and frameworks to promote a consistent scope of practice for the national Nuclear Medicine Scientist workforce.	<p>Analyse and identify any key gaps, challenges or restrictions that impact the Nuclear Medicine Scientist scope of practice, and address inconsistencies.</p> <p>2.3.1 Work with the Medical Radiation Board of Australia and state/territory regulators to harmonise any scope of practice related differences between jurisdictions.</p> <p>2.3.2 Remove any barriers to Nuclear Medicine Scientists working to their full scope of practice. This includes providing clear scope of practice that is, wherever possible, consistent between different facilities (i.e. between public and private providers). It is noted the differences in workforce models such as use of radiochemists may impact on the tasks and functions undertaken by the workforce.</p> <p>2.3.3 Increase education and guidance for the nuclear medicine workforce to support greater clarity and consistency in scope of practice (e.g. through Clinical Services Capability Framework or a mechanism that applied across the public and private sector).</p>
2.4	Establish processes that effectively recognise Nuclear Medicine Scientists' skills and capabilities, to support portability of competency between facilities and employers.	<p>Implement a centralised process to recognise the skills and capabilities of individuals, to support increased mobility of the workforce between facilities.</p> <p>2.4.1 Develop a streamlined system to keep records of Nuclear Medicine Scientists' qualifications, skills, credentials and accreditations to support recognition of competency between Hospital and Health Service facilities and the private sector.</p> <p>2.4.2 Establish mechanisms to support employers with the seamless transfer of on-the-job education and training for Nuclear Medicine Scientists between public and private employers.</p> <p>2.4.3 Collaborate with education and training providers, professional organisations and industry partners to support a consistent approach to record keeping education and training competencies. This may include consideration for linkages to mandatory continuing professional development requirements for registration.</p>

Workforce initiatives and actions

Initiative	Key Actions
<p>2.5 Explore opportunities to leverage the common professional capabilities and scope across the Medical Radiation Practice workforce to address Nuclear Medicine Scientist service provision gaps.</p>	<p>Create clear pathways for practitioners to cross skill, transition across roles, achieve dual registration or fill capability gaps to greater flexibility in delivering nuclear medicine services.</p> <p>2.5.1 Explore the feasibility of developing frameworks to support cross-skilling between the different divisions of Medical Radiation Practice with the Medical Radiation Practice Board of Australia.</p> <p>2.5.2 Investigate opportunities with education providers and professional bodies to provide articulation pathways and promote greater uptake of dual registration amongst Medical Radiation Practice graduates.</p> <p>2.5.3 Develop micro-credentialling and/or postgraduate education to support upskilling that fills gaps in professional capabilities between Medical Radiation Practice to enable broader use of the existing workforces.</p>
<p>2.6 Foster collaboration between public and private providers to address workforce shortage and enhance sustainability.</p>	<p>Reduce competition between the public and private employers through establishing mechanisms that allow for a shared workforce and collaborative planning for workforce demands.</p> <p>2.6.1 Explore mechanisms that support closer partnerships and workforce mobility/ rotations between public and private providers to create provide and clear forecasting of the service and workforce needs for nuclear medicine across Queensland. Facilitate shared workforce models between public and private providers to optimise service availability and support a flexible and mobile Nuclear Medicine Scientist workforce.</p> <p>2.6.2 Undertake collaborative workforce planning to ensure a cohesive and coordinated approach to providing nuclear medicine services across the sector in Queensland. This service planning focus needs to inform workforce demands into the future and help to inform workforce shortages.</p>

Strengthening the Nuclear Medicine Scientist workforce







PILLAR III

Strengthening the Nuclear Medicine Scientist workforce

There is an urgent need to pursue actions that support and strengthen the current Nuclear Medicine Scientist workforce, as it is important to retain this critical workforce, address workload pressures across Queensland, and create a culture of high performance and collaboration.

Current workforce pressures are creating additional service delivery pressures on the existing Nuclear Medicine workforce, increasing the risk of burnout, turnover and job dissatisfaction.

To ensure a supported, contemporary, high performing and collaborative workforce there is a need to support the current workforce through education and training and career pathway opportunities, ensure job satisfaction through working to full scope, provide opportunities to engage in research and ongoing education of the workforce, and support collaboration across the public and private sector.

To support and strengthen the current workforce, there is a strong need to work together as a profession across Queensland. This includes bringing together public and private employers and workforce, academics, regulators and peak bodies to implement impactful reform and supporting the profession through a strong network.



There needs to be some short and some long-term ideas. We need to stabilise the current workforce sooner, and then we can look to the future.

Participant, Queensland Nuclear Medicine Sciences Summit Day.

The key challenges considered under this pillar include;



Workload pressure from staff shortages



Challenges recruiting to regional locations



A need to strengthen clinical education and research



An increase in the adoption of part time and flexible working arrangements is requiring additional staff to meet demand



4.3 per cent of the Nuclear Medicine Scientist workforce will reach retirement age within five years



A need to improve evidence-based workforce planning

Discussions during the Summit acknowledged the criticality of simultaneously considering both short and long term actions. There is a recognised need to act now while also pursuing solutions that will address the supply challenges and grow the future workforce over the long term.

There was a strong emphasis on the importance of supporting the current workforce by providing an enriching and rewarding workplace environment.

Empowering the experienced Nuclear Medicine Scientist workforce and educators to act as mentors will be important in providing upskilling of the next generation of graduates, and to support their retention in the profession.

Consideration should also be given to rural and remote locations, including identification of the service needs across these locations now and into the future. The Queensland workforce currently resides in metropolitan areas and regional centres due to the infrastructure and equipment needed to provide nuclear medicine services.

Workforce initiatives and actions

The following initiatives and key actions will support and strengthen the current Nuclear Medicine Scientist workforce and will be progressed by employers (public and private), professional organisations and leadership of the Department of Health.

	Initiative	Key actions
3.1a	Capture workforce analytics and develop a model that articulates the Nuclear Medicine Scientist workforce needs.	<p>Establish a deeper understanding of the current and projected future demand for the Nuclear Medicine Scientist workforce. Utilise this as the basis for proactive future workforce planning.</p> <p>3.1.1a Create a contemporary view of staffing requirements to operate nuclear medicine equipment within facilities that takes into account rural and remoteness, wider workforce models, and scope of practice. This includes consideration of consistency in guidance across both public and private nuclear medicine services.</p> <p>3.1.2a Undertake workforce modelling and analysis that identifies the current and future nuclear medicine service needs (including expansions of service) and workforce requirements. This should consider forecast demand across both the public and private sector in Queensland to ensure sustainable supply.</p> <p>3.1.3a Utilise workforce planning projection of the demand and supply of the Nuclear Medicine Scientist workforce across both public and private sectors to inform the future pipeline growth needs over the longer term, taking into account trends such as increased part-time working arrangements and expected retirements.</p>
3.1b	Develop a workforce model that accounts for geographical distribution and recognises workforce needs specific to regional, rural and remote locations.	<p>Deepen and extend the understanding of the current need for Nuclear Medicine Scientist workforce in rural and remote locations and consider the unique service demands and workforce models of these areas.</p> <p>3.1.1b Identify and model the service demand and workforce needs for rural and remote locations, noting that currently Nuclear Medicine services are primarily available in metropolitan and regional centres across Queensland.</p> <p>3.1.2b Explore alternative workforce models that consider the workforce and service delivery needs for rural and remote locations. For example, explore a shared employment model across public and private employers, utilisation of the assistant workforce, and telehealth support based workforce models.</p> <p>3.1.3b Provide education and training to support the sustainability of agreed rural and remote Nuclear Medicine Scientist workforce models.</p> <p>3.1.4b Establish partnerships and networks with other states with a large rural and remote footprint who are seeking nuclear medicine service delivery (such as Western Australia and Northern Territory).</p>



PILLAR III

Workforce initiatives and actions

Initiative	Key actions
<p>3.2 Enhance clinical education and research support to promote growth and development among Nuclear Medicine Scientists and in the industry..</p>	<p>Promote a clinical learning atmosphere through support and supervision to ensure ongoing professional and competency development and enhance the development of nuclear medicine.</p> <p>3.2.1 Advocate for funding opportunities for nuclear medicine research to incentivise healthcare professionals to actively engage in research activities and contribute to the overall growth of clinical knowledge and contemporary practice.</p> <p>3.2.2 Establish roles that provide non-clinical time for experienced Nuclear Medicine Scientist leaders to provide mentorship, undertake continuing education, engage in research activities and advocate for the profession.</p> <p>3.2.3 Promote inter-facility collaboration for training and research. This includes collaboration between public and private providers.</p> <p>3.2.4 Implement dedicated mentorship programs to support students, new graduates and the early career workforce to benefit from the experienced Nuclear Medicine Scientist workforce.</p>



Implementation, monitoring and review





Implementation, monitoring and review

Summit attendees recognised the importance of monitoring key actions to ensure successful implementation and embedding of the strategies and actions.

It is recommended that to underpin the success of key actions under each workforce pillar, there is a continued commitment to:

- Identify new and emerging workforce demands challenges and risks that need to be addressed;
- Clearly set out the interrelation and alignment between education providers in terms of pipeline;
- Establish key performance indicators for each workforce initiative; and
- Support the regular monitoring and review of the workforce initiatives and the key actions for their implementation.

Key enablers for success

Collaboration across the profession:

Collaboration can create stronger momentum and provide a stronger collective voice for the Nuclear Medicine Scientist workforce.

Leadership and governance: Strong leadership is vital in advocating for and driving change across the industry. Clear governance will help to ensure accountability and buy-in for the agreed workforce strategies.

Communication and engagement: Open channels of communication among stakeholders is important to ensure strong collaboration and optimisation of effort. This will be important to maintain buy-in from key stakeholders and promote progressive improvement.

Data and evidence: The collection and analysis of qualitative and quantitative workforce and service planning data is crucial to form the evidence-base for future planning.

Monitoring and evaluation

There is no one size fits all approach to the evaluation of workforce strategies and actions. Rather than a prescriptive approach to evaluation, it is recommended that stakeholders accountable for progressing these actions for Queensland collectively adopt contemporary, best-practice principles. Principles may include that all workforce initiatives are:

- Evidence-based;
- Measurable;
- Outcomes focused;
- Co-designed;
- Collaborative;
- Cost-effective;
- Targeted; and
- Contemporary.

What's next for the Nuclear Medicine Scientist workforce?

The Nuclear Medicine sector in Queensland will need strong partnerships and collaboration to drive shared accountability across the sector for workforce reform and improvement.

This will build on the agreed shared vision and priority actions agreed by the sector for the future.

Securing the future of the Nuclear Medicine Scientist workforce nationally, and in Queensland, will rely on whole-of-sector collaboration and shared accountability from stakeholders across the profession.

Progress against the key strategies and actions identified during the Summit will be achieved through collective effort and advocacy from public and private employers, education providers, regulatory bodies, unions and professional organisations.

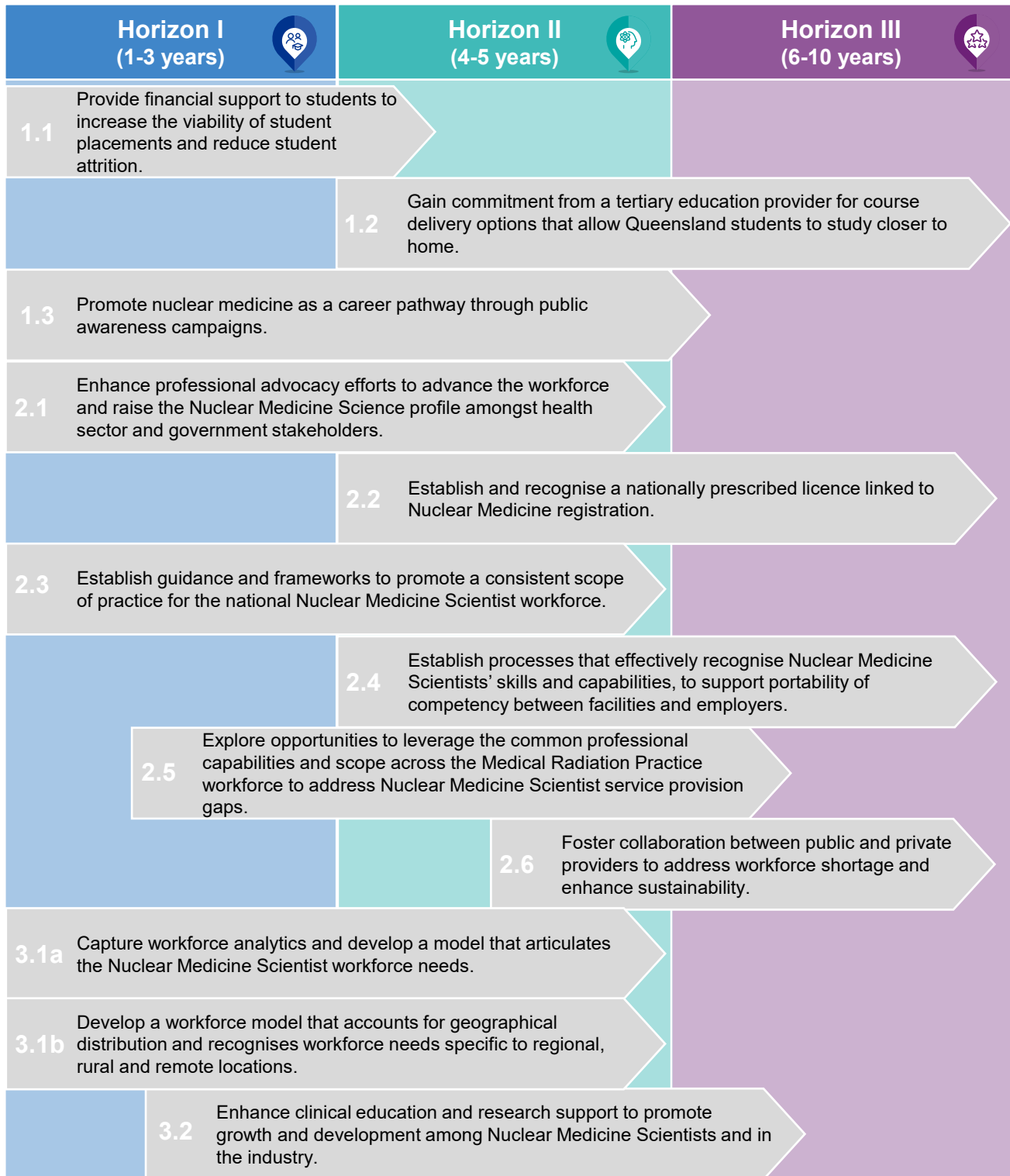
Support for change processes during the implementation of initiatives is a critical factor to their success, and positive impacts for the Nuclear Medicine Scientist workforce. Communication and feedback will also be important to ensure workforce needs are being met while service delivery quality and safety are maintained.

Embedded evaluation and monitoring of the workforce initiatives and actions will ensure a continued focus on improving the delivery of nuclear medicine services to Queenslanders.



Alignment to implementation horizons

These horizons identify an approach to implementation of the prioritised actions. This approach harnesses and builds upon current momentum and is a strong basis for the continued growth and sustainability of the Nuclear Medicine Scientist workforce over the next decade.



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