



AdPha NSW Branch Committee 2025-26 Pre-Budget submission

December 2024

Introduction

Formerly known as the Society of Hospital Pharmacists of Australia (SHPA), Advanced Pharmacy Australia (AdPha) is the progressive voice of Australian pharmacists and technicians, built on 80 years of hospital innovation that puts people and patients first. AdPha supports all practitioners across hospitals, transitions of care, aged care and general practice clinics to realise their full potential. We are the peak body committed to forging stronger connections in health care by extending advanced pharmacy expertise from hospitals to everywhere medicines are used.

Welcoming the opportunity to provide input in the 2025-2026 NSW Pre-Budget consultation, the AdPha NSW Branch Committee's submission addresses ways in which the NSW Government can support NSW hospital pharmacy departments and hospital pharmacists to provide safe and high-quality care, as well as ensuring a sustainable workforce.

AdPha has continuously advocated for the provision of safer and better-quality care for NSW hospital patients, and measures to support hospital pharmacy workforce sustainability through increasing the opportunities for pharmacists trained in NSW to work for NSW Health¹. This workforce investment is sorely needed to address the longstanding under-resourcing of the hospital pharmacy workforce in NSW.

AdPha NSW Branch commends the NSW government for its investment into the Tertiary Health Study Subsidies program which includes pharmacy students, and these should be leveraged into programs that put graduates in prime positions to undertake positions in NSW hospitals. The first step would be to significantly increase the pharmacy intern intake in NSW public hospitals to be in line with other Australian jurisdictions to secure this workforce pipeline.

Training programs such as the Resident Training Program will develop early career pharmacists to work in hospitals or for pharmacists making the switch to hospital pharmacy from other settings. Presently, up to 90% of applications for pharmacist positions in NSW LHDs have no hospital pharmacy experience, and without financial support from NSW Health for

training programs such the Resident Training Program, recruiting rounds are often unsuccessful, and issues around capacity, under-resourcing and employee burnout can become cyclical without a clear resolution.

The proposed recommendations in this submission align with Recommendations 8 and 9 of Report No. 60 – Portfolio Committee No. 2 – Health – Ambulance, the Final Report² into *Inquiry on Impact of ambulance ramping and access block on the operation of hospital emergency departments in NSW*, as well as the key priorities of the *NSW Health Workforce Plan 2022-2032*.³

Lastly, in line with the principles of the National Medicine Policy, AdPha has long been an advocate for equitable access to healthcare for all Australians, regardless of location. Truly equitable healthcare cannot be achieved without established Pharmaceutical Reform Agreement (PRA) arrangements in all states and territories in Australia. AdPha therefore welcomes current negotiations between NSW Health and the Commonwealth to make the PRAs a uniform policy in Australia and enter into PRAs with the Commonwealth.

If you have any queries or would like to discuss our submission further, please contact Jerry Yik, Head of Policy and Advocacy at jyik@adpha.au.

Recommendations

1. Fund an **additional 100 FTE Hospital Pharmacy Interns in NSW Health** in line with similar jurisdictions, strengthening the pipeline of hospital pharmacists and securing a healthy workforce capable of delivering quality care and improving system capacity through expanded scope of practice.
2. Invest in the future capabilities of the NSW pharmacy workforce by **funding positions for Pharmacist Resident and Registrar training programs**.
3. Invest in strengthening the rural pharmacy workforce to address workforce shortages in these areas.
 - a. **Fund rural and remote placements** for pharmacy students.
 - b. Provide **relocation and living support for pharmacists** undertaking AdPha's two-year Pharmacy Resident Training Program.
4. Provide funding of a **ward-based pharmacy technician-led 'Bedside Medication Management' Project** across NSW public hospitals to improve medication supply and nursing time productivity.
5. Invest in adequate staffing levels of Emergency Medicine Pharmacists in NSW hospitals in line with AdPha's *Standard of practice in emergency medicine for pharmacy services* to provide a comprehensive, consistent and sustainable **Partnered Pharmacist Medication Charting** (PPMC) service to free up capacity of medical and nursing workforce, reduce length of stay, reduce medication errors and improve hospital capacity.
6. Inclusion of dedicated **Clinical Informatics Pharmacists** as electronic medicines management experts in the planning and development of the Single Digital Patient Record (SDPR) project across NSW, to ensure viability, quality, safety, and governance.

RECOMMENDATION 1: Fund an additional 100 FTE Hospital Pharmacy Interns in NSW Health in line with similar jurisdictions, strengthening the pipeline of hospital pharmacists and securing a healthy workforce capable of delivering quality care and improving system capacity through expanded scope of practice.

In addressing the key priorities of the *NSW Health Workforce Plan 2022-2032*³, NSW Health should fund an additional 100 FTE Hospital Pharmacy Internships in NSW Health in line with similar jurisdictions like Victoria and Queensland. Trailing well behind other jurisdictions, NSW Health offers approximately 40 Hospital Pharmacy Intern positions compared to Victoria who are funding 100 Hospital Pharmacy Intern positions in 2025, highlighting disparities and chronic under-funding in NSW hospital pharmacy departments.

To improve retention and investment in the clinical pharmacy workforce, more hospital pharmacy internships must be made available for pharmacy graduates to set up career pathway entry points into hospital pharmacy. This workforce strategy has been effective in states such as Victoria, where hospital pharmacy internship positions are 60% funded by the state government. These intern positions have fostered stability and improvement in hospital pharmacy workforce and service development, with most hospital pharmacy interns finding gainful employment in the public sector following completion of their internship. According to the National Australian Pharmacy Students' Association (NAPSA), hospital pharmacy is the most desirable job setting with over 80% of pharmacy students wanting jobs in Hospital Pharmacy. According to the National Australian Pharmacy Students' Association (NAPSA), hospital pharmacy is the most desirable job setting with over 80% of pharmacy students wanting jobs in Hospital Pharmacy.

Hospital pharmacy interns not only contribute significantly to the efficient functioning of hospital pharmacies and alleviating workload pressures, but these interns also serve as integral contributors to the development and fortification of the hospital pharmacist workforce pipeline in NSW. The practical experiences they acquire during their internships foster clinical and operational skills, as well as providing a unique opportunity for mentorship and knowledge transfer within the pharmacy team, fostering a culture of continuous learning and professional growth.

AdPha proposes NSW Health to increase the number of Hospital Pharmacy Intern positions to 100 positions annually in a staggered manner over three to four years and subsidise half the costs of Hospital Pharmacy Intern positions for Local Health Districts as undertaken in other jurisdictions.

Additional requisite funding for pharmacist educator positions, similar to what is provided in Victoria, is essential to maintaining robust Hospital Pharmacy Intern Programs. Clinical educators provide continual guidance and support which is paramount in ensuring the success and competence of hospital pharmacy interns. It is imperative to acknowledge that the capacity of hospital pharmacy departments to employ more interns parallels appropriate resourcing of clinical pharmacist educators. Without sufficient investment in these educators,

the expansion of intern programs lacks value and becomes challenging, limiting the potential growth of the hospital pharmacist workforce as it lacks structure, oversight and necessary guidance.

Establishing a fully funded, state-wide pharmacist intern training program through the NSW Ministry of Health for each Intern position is fundamental to addressing immediate workload challenges as well as providing a strategic investment in the future resilience and competence of the pharmacy workforce, aligning with the vision of the *NSW Health Workforce Plan 2022-2032*.³

Cost of investment: ~\$10 million to employ 100 additional FTE hospital pharmacy interns per year with 0.1 FTE G2Y3 clinical educator pharmacist per intern.

RECOMMENDATION 2: Invest in the future capabilities of the NSW pharmacy workforce by funding positions for Pharmacist Resident and Registrar Training Programs.

Despite NSW Hospital Pharmacy Departments undertaking additional clinical, safety, vaccine distribution virtual care and medication governance roles over recent years from their hospitals and NSW Health, there has been insufficient commensurate resourcing to support these additional tasks.

NSW is an outlier compared to all other Australian jurisdictions, with significantly lower investment into hospital pharmacists. This has resulted in NSW Hospital Pharmacy departments operating at staffing levels that are far from reaching pharmacist-to-patient ratios published in professional standards such as AdPha's *Standards of Practice for Clinical Pharmacy Services*⁴, extending to a likely future shortage of suitably trained pharmacists with the capacity and the skills to deliver expert clinical pharmacy services within the NSW healthcare system.

Coupled with this shortage of pharmacists in NSW public hospitals, every year, for over a 10-year period, NSW public hospitals have had a higher adverse event rate of adverse drug effects, medicaments, biological substances than the average rate across Australia.⁵

AdPha's Resident and Registrar Training Programs (previously known as the Foundation Residency and Advanced Training Residency Programs) are Australia's premier structured, formalised, supported and accredited national pharmacy training programs. By providing a structured and supported training environment, the Resident Training Program equips early career pharmacists with foundation clinical skills whilst the Registrar Training Program offers a pathway for speciality development for pharmacists with three to five years of foundation hospital experience, seeking to advance their practice towards [The Australian and New Zealand College of Pharmacy \(ANZCAP\) Registrar status](#).



Figure 1: The 46 specialty disciplines recognised by ANZCAP

Moreover, the economic impact of pharmacists undertaking these training programs is substantial, as well-trained pharmacists contribute to streamlined healthcare delivery, reducing medication errors, optimising therapeutic outcomes, and mitigating unnecessary healthcare costs associated with suboptimal pharmaceutical care. The value of clinical pharmacy services is well documented in literature, with an Australian economic analysis indicating a \$23 return for every \$1 spent on clinical pharmacy services.⁶

AdPha recommends NSW government to invest in AdPha's Resident and Registrar Training Programs to capitalise on the proposed investment into additional hospital pharmacy interns annually, ensuring young pharmacists trained by the NSW public hospital system remain in this pipeline. This is a key workforce recruitment and retention strategy adopted by many hospitals in other jurisdictions to deliver quality care and attract the best pharmacists across Australia to their hospitals. To date, over 800 pharmacists have completed or are completing AdPha training programs, out of which less than 50 are from NSW, all practicing at Resident level.

Fundamentally, health and economic outcomes are best achieved with a knowledgeable and skilled workforce, and these two-year training programs not only upskill the workforce and alleviate pressures on public hospitals, but also act as an imperative strategy to combat the recruitment and retention challenges facing the hospital pharmacy sector.

Cost of investment: ~\$11.7 million per annum to employ 100 additional FTE Resident Pharmacists per year with 0.1 FTE G2Y3 clinical educator pharmacist per Resident, with recommended ongoing review by the NSW government to further understand needs for specialist pharmacists in all NSW LHDs and provide requisite investment in Registrar Training Programs.

RECOMMENDATION 3: Invest in strengthening the rural pharmacy workforce to address workforce shortages in these areas.

Healthcare recruitment in regional and rural Australia poses a multifaceted challenge, one of which is the scarcity of healthcare professionals willing to practice in remote areas, leading to persistent workforce shortages severely impacting rural communities. Addressing this issue requires comprehensive strategies that incentivise healthcare professionals to work in rural areas, ultimately ensuring equitable access to healthcare services across the country.

a. Fund rural and remote placements for pharmacy students.

Earlier engagement in rural practice through fully funded, well-structured rural placements for pharmacy students during the progression of their university degree can positively influence interest and commitment in a rural career, and ensures all graduates have a broad understanding of rural practice.⁷ Unfortunately the current lack of funding for pharmacy students to undertake rural clinical placement remains a barrier for students engaging and committing to a rural career.

In the recently released *Australian Universities Accord Final Report*⁸, there was strong feedback from students about the burdens imposed by unpaid work placements, referred to as 'placement poverty'. Recommendation 14 of the report advised the Australian Government to work with tertiary education providers, state and territory governments, industry, business, and unions to introduce financial support for unpaid work placements, in order to reduce the financial hardship and placement poverty caused by mandatory unpaid placements.

AdPha recommends that NSW government supports rural placements, by funding undergraduate clinical placement grants for pharmacy students, which would assist students with travel and accommodation costs directly incurred due to temporary relocation. Similar to the current clinical placement grants awarded for nursing and midwifery students in NSW, the grant can be based on the geographical distance travelled to the placement site from their enrolled universities. Improving access to positive rural clinical placement experiences for pharmacy students will be a key strategy in building a pipeline of future job-ready graduates in rural and remote areas of NSW, and in closing workforce gaps in rural and remote areas as per the intended outcomes of the *NSW Health Workforce Plan 2022-2032*.

b. Provide relocation and living support for pharmacists undertaking AdPha's two-year Pharmacy Resident Training Program.

According to the *Future focused primary health care: Australia's Primary Health Care 10 Year Plan 2022-2032*¹⁰, addressing inequities of access to health services and poorer health outcomes among people in rural and remote Australia has been a strong focus for the Australian government. However, data from the National Health Workforce Dataset demonstrates that whether you look at pharmacy workforce statistics on a per capita or per 100 hospital beds metric, regional and rural Australia pharmacy workforce numbers are far

below metropolitan pharmacy workforce statistics. Less than 1% of the pharmacists currently undertaking AdPha's two-year Pharmacy Residency Program in NSW are practicing in regional, rural, or remote hospitals.

AdPha recommends the NSW government allocates up to \$8,000 in relocation and living allowance per candidate, for up to five pharmacists per annum willing to undertake a placement in a regional or rural hospital whilst completing their Residency Training Program through AdPha. To ensure that the grant framework is fit-for-purpose and accommodates for flexibility in the design of the rural rotations for Residents, AdPha recommends that the relocation and living allowances are scaled according to the duration of the rotation as well as the distance travelled from their main employment site.

Relocation funding and living allowances alleviate financial burdens associated with moving to and living in regional locations, making it more attractive for pharmacists to consider undertaking their training in these areas. This strategy ensures a steady influx of skilled pharmacy professionals into these underserved areas, directly combating workforce shortages and contributing to a more well-rounded and adaptable pharmacy workforce that is equipped to address the diverse healthcare requirements of regional communities.

Large metropolitan public and private hospitals accredited to deliver AdPha's Residency Training Program, can partner with smaller regional and rural hospitals, and send their pharmacists to undertake a six-month rotation at these sites as part of their two-year training. This model, which already exists between The Alfred in Victoria and both Central Gippsland Health (VIC) and Alice Springs Hospital (NT), is a means of ensuring efficient workforce distribution and bolstering the capacity of regional healthcare facilities, whilst also upskilling pharmacists practicing in metropolitan areas and enhancing their skills and experience. While the onus would be on the metropolitan and regional or rural hospitals to form partnerships that facilitates these rotations, the NSW government can partner with Rural Health Workforce Australia to provide relocation and living allowances for eligible candidates.

Cost of investment: up to \$40,000 per annum relocation and living support for up to five pharmacists to undertake a rotation in a regional or rural hospital whilst completing AdPha's two-year Resident Training Program.

RECOMMENDATION 4: Provide funding of a ward-based pharmacy technician-led 'Bedside Medication Management' Project across NSW public hospitals to improve medication supply and nursing time productivity.

Pharmacy technicians are qualified and trained to provide a range of pharmacy services in hospitals. As pharmacists' roles have evolved to allow more time for clinical activities and direct patient care, pharmacy technician roles have also expanded to support medication management functions on hospital wards. In many jurisdictions, hospitals have ward-based pharmacy technicians who undertake traditional nursing administrative roles associated with medication storage and supply.

With the current pharmacy workforce retention issues in regional NSW, a stronger pharmacy technician workforce would support the limited number of clinical pharmacists to perform more direct patient care activities that result in improved medication safety and ultimately better patient health outcomes. Expansion of the pharmacy technician workforce also creates career and employment opportunities for the regional population.

AdPha recommends that the NSW Government invests in the implementation and funding of a technician-led Bedside Medication Management (BMM) supply system in NSW hospitals. Other jurisdictions such as Tasmania, already utilise another technician led model called Tech-Check-Tech, which has seen success in supporting hospital pharmacists to increase their capacity to perform more clinical tasks.

In BMM, hospital pharmacy technicians are utilised to create workforce capacity through relieving nursing resources to increase their time spent in patient-facing roles and promote safer and cost-saving outcomes by through a dedicated quality use of medicines supply focus. Ahead of the Tasmanian Health Service implementing the BMM model a few years ago, an evaluation conducted by KPMG for the Tasmanian Health Service concluded that Tasmanian nurses 'waste' over 1,526 hours each week on reactively managing medication orders and supply for inpatients, time which could have been spent on delivering direct patient care.

Funding, however, is required to implement these hospital pharmacy technician-led services across NSW public hospitals. The role of ward-based pharmacy technicians in the BMM model is to co-ordinate and streamline timely supply of medications, coordinate and maintain appropriate storage of medications, as well as to remove ceased and unwanted medications from patient care areas. This ensures cost-saving medication stock management at ward level, cost-savings by the return of unused medicines, timely supply of newly initiated medications, and reduces the risk of administration of expired or incorrect medications.

A study exploring missed doses on inpatient wards found that of the 1,947 medication administration episodes collected during the pre-implementation period, there were 23 omissions, resulting in an omission rate per medicine episode of 1.18%. Following implementation of a ward-based pharmacy technician, of the 2367 medication administration

episodes, there were 7 omissions, resulting in an omission rate per medicine episode of 0.30%.¹¹

A recent pilot program at Monash Health, Melbourne, also demonstrated the benefit of ward-based technicians in freeing up clinical pharmacist time to complete pharmaceutical reviews, discharge planning and attendance to ward rounds.¹²

Currently, a nurse with an undergraduate qualification must perform administrative medication tasks, taking away from direct patient care and other clinical activities. A pharmacy technician holds a TAFE-level qualification (Cert III), creating a career pathway for local people who wish to be involved in medication management, but not undertake an undergraduate pharmacy or nursing degree. Expanding technicians' scope of practice also aligns with objectives 4.3-4.5 of *Future Health: Guiding the next decade of care in NSW 2022-2032*¹³, which recommends empowering staff to work to their full potential around the future care needs and equipping them with the skills and capabilities to be an agile, responsive workforce. This could retain and attract this skilled workforce to rural and remote communities.

AdPha therefore recommends funding five pharmacy technicians in the implementation of BMM to support the hospital pharmacy workforce as well as nursing capacity. This will help to immediately address the current pharmacy workforce retention issues in NSW with a stronger pharmacy technician workforce, creating capacity for both nursing and hospital pharmacists to perform more patient-facing, complex, clinical tasks, and optimising the utilisation of skilled professionals within NSW Health.

Cost of investment: ~\$460,000 per annum to fund five hospital technician positions for the implementation of BMM services estimated to be recoverable in costs to nursing time.

RECOMMENDATION 5: Invest in adequate staffing levels of Emergency Medicine Pharmacists in NSW hospitals in line with AdPha's Standard of practice in emergency medicine for pharmacy services to provide a comprehensive, consistent and sustainable Partnered Pharmacist Medication Charting (PPMC) service to free up capacity of medical and nursing workforce, reduce length of stay, reduce medication errors and improve hospital capacity.

In the current health system climate, there are known pressures throughout the hospitals and healthcare system with unprecedented demands on resources. The hospital admission process in emergency departments can often be a barrier to efficient bed flow, with the need to undertake a patient's medication history and chart their medicines being a task that doctors must juggle and balance along with their other responsibilities.

Pharmacists are able to take more accurate medication histories in a timelier manner than their nursing and medical colleagues in hospitals, and when supported to chart these medicines via a PPMC model, can contribute to efficiencies in medication charting, timely supply and administration whilst also freeing up capacity for nurses and doctors to spend more time with patients. Hospital Pharmacists already supervise and train junior doctors in prescribing and advise senior medical staff on medicine and treatment selection, dosing, medicine administration requirements and monitoring of adverse effects.

In a Partnered Pharmacist Medication Charting (PPMC) model, a pharmacist conducts a medication history interview with a patient; develops a medication plan in partnership with the medical team, patient, and the treating doctor. The pharmacist then charts the patient's regular medications with the doctor's authorisation, and the doctor charts any new medications that are initiated in hospital. PPMC has already been implemented across Victoria, Queensland and Western Australia and has recently been successfully implemented in regional areas of NSW such as Orange and Bathurst.

In addressing the causes and consequences of increased demand of healthcare, the 2022 *Inquiry into the impact of ambulance ramping and access block on the operation of hospital emergency departments (EDs) in NSW* identified "hospital pharmacists are another profession that can play an important role in improving patient flow at multiple points: during the admission process, while patients are being treated and at discharge". The NSW Government has since accepted the Inquiry's recommendation to assess options which improve the level of pharmaceutical care provided in EDs, including consideration of PPMC in NSW hospitals.¹⁴

Using a PPMC model will decrease the burden upon medical staff and clinical resourcing dedicated to medication charting and increase the through put of patients if medications are already reviewed and charted prior to admission and ready for review by the admitting medical or surgical team. This model improves bed-flow through emergency departments and has also been shown to improve medication safety and patient care.

A Deakin University health economic evaluation¹⁵ of more than 8,500 patients has explored the impacts of PPMC models upon patients in emergency departments and general medicine wards. The economic evaluation also showed a decrease in the proportion of patients with at least one medication error from 19.2% to 0.5% and a reduction in patient length of stay from 6.5 days to 5.8 days. The estimated savings per PPMC admission was \$726, which in the replication was a total hospital cost saving of \$1.9 million with the five health services involved in the PPMC service continuing their operations.

The benefits of including emergency medicine pharmacists in EDs are far reaching and can improve outcomes for patients. Researchers from Monash Health, Victoria have found that by adding an emergency pharmacist to the acute stroke call-out team provided an improvement in the average time to administer treatment to a patient by 12 minutes.¹⁶ In the current service model at the Alfred Hospital in Victoria, the emergency medicine pharmacist charts all medications required for patients, including intravenous blood pressure medications, thrombolysis and initiation of secondary prevention in line with the PPMC model of care.

It should be noted that NSW public hospitals have approximately 38% more inpatient beds than Victorian public hospitals, however from 2022 data, NSW has 1,505 hospital pharmacists compared to Victoria's 2,040 hospital pharmacists, 25% less than Victoria.¹⁷

This historic underfunding of NSW pharmacy departments with respect to workforce, prevents not only the AdPha *Standards of Practice for Clinical Pharmacy Services*⁴ and *Standard of Practice in Emergency Medicine for Pharmacy Services*¹⁸ from being met, but hinders the uptake of innovative pharmacy services such as PPMC that expand service capacity and scope of practice to improve quality, safety, efficiency and patient flow in hospitals that have been implemented in other jurisdictions.

PPMC services must be sustainable and consistent across all LHDs. Prior to the current approach to funding PPMC in NSW hospitals, there was a limited implementation attempt in one particular LHD in NSW. Due to a lack of dedicated funding to that hospital and the associated PPMC service, it presented inconsistent delivery of PPMC. This resulted in unpredictability of the service and inconsistencies with the support provided to doctors and nursing staff.

Cost of investment: \$6 million annually for an additional 50 emergency medicine pharmacists across all NSW emergency departments

RECOMMENDATION 6: Inclusion of dedicated Clinical Informatics Pharmacists as electronic medicines management experts in each NSW Local Health District's pharmacy department to support the planning, development and safe implementation of the Single Digital Patient Record (SDPR) project across NSW, to ensure viability, quality, safety, and governance.

Early and dedicated funding should be provided to enable dedicated Clinical Informatics Pharmacists to be involved in the planning, development and roll-out of the NSW Health SDPR project. Pharmacists as medicines management experts are skilled to ensure that the electronic flow and whole systems approach to electronic medicines management and records are properly integrated and standardised across the healthcare system in a manner that is consistent with national and international safety standards and recommendations.

Failure to include pharmacy in advance of implementation will be extremely challenging for the state's healthcare system and will likely delay progress and negatively impact projected state government costings. Clinical Informatics Pharmacists are skilled in the design and implementation of these systems and are suitably trained to implement closed loop Electronic Medical Records (EMRs) ensuring medication safety.

To highlight the importance of the early inclusion of pharmacists as medication safety experts in the planning of SPDR and electronic medical records implementation can be seen in the failure of electronic medical records to adequately detect and alert staff to the incorrect prescribing, administration and monitoring of a Sydney patient who died from multi-drug toxicity after being inappropriately prescribed the wrong medication on their EMR.¹⁹

Pharmacists are necessary to ensure that in the planning stages, electronic management of medicines is adequate, safe, and interoperable across NSW hospitals. Closed loop EMRs are an integrated and interoperable electronic medication management system which includes hospital-wide medicines stock management and clinical medicines management systems where medication orders are electronically tracked and linked from the time of prescribing through to dispensing, supply, administration, and discharge and embedded throughout patient electronic medical records.

In reference to the Healthcare Information and Management Systems Society (HIMSS) EMR adoption model (EMRAM)²⁰, achieving closed-loop medication administration would enable NSW Health to be a leader in digital health implementation. With most Australian hospitals at stage 3 or 4 of the EMR adoption model, the roll out of SDPR gives NSW health a unique opportunity to be at the forefront of digital innovation.

We suggest dedicated informatics in each LHD to support implementation of SPDR in collaboration with the Ministry of Health, and ensure local success and implementation. With a recent project to have a single formulary across NSW health, each LHD pharmacy department was allocated a specific pharmacy resource to support the implementation of a statewide formulary. The additional tasks responsibilities and governance cannot be absorbed by existing staff and requires a dedicated pharmacist and resources to ensure

successful implementation. NSW cannot risk having any more digital health related medication errors through inadequate resourcing.

Closed loop EMRs have the potential to reduce medication errors, and other clinical errors, and improve medication safety by eradicating the need for transcription. International reviews found that a change from paper-based medicines ordering to electronic ordering of medicines in intensive care units resulted in an 85% reduction in error rates²¹, and recent systematic reviews showing overall reduction in the risk of medication errors and adverse drug events.²² This is timely given that changes to activity-based funding mean that hospitals will receive negative funding adjustments from sentinel events arising from medication administration errors and the incidence of medication-acquired complications.

Closed loop EMRs are in the process of being implemented across Australian jurisdictions and necessitate the expertise of Clinical Informatics Pharmacists. NSW should effectively plan to ensure this system and the expertise of specialised informatics pharmacists are included in NSW eHealth strategic planning. Closed loop EMRs improve safety, efficiency, and quality of care by enhancing transparency, clinical decision support and medicines management at all stages of the medical records process both within and beyond the acute hospital setting into primary care. Electronic medical records need to be fully integrated including from a medication safety and viability perspective at all stages of the NSW eHealth SDPR project.

Cost of investment: \$6 million annually for 50 clinical informatics pharmacists across all NSW LHDs

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