SHPA Submission to Inquiry into health outcomes and access to health and hospital services in rural, regional and remote New South Wales

Introduction

The Society of Hospital Pharmacists of Australia (SHPA) is the national, professional, for-purpose organisation for over 5,000 leading pharmacists and pharmacy technicians working across Australia's health system, advocating for their pivotal role in improving the safety and quality of medicines use. SHPA members are progressive advocates for clinical excellence, committed to evidence-based practice and passionate about patient care. SHPA is committed to facilitating the safe and effective use of medications, which is the core business of pharmacists, especially in hospitals.

SHPA welcomes the establishment of the *Inquiry into Health outcomes and access to health and hospital services in rural, regional and remote New South Wales* following the September 2020 broadcast of the *Sixty Minutes: The Greatest Loss* report on the tragic deaths of Mr Bryan Ryan and Mr Allan Wells in 2019. According to SHPA analysis (based on information from the Productivity Commission using AIHW data) in 2017-2018, NSW patients were 48% more likely to experience an adverse effect from medicines than Victorian hospital patients, and 29% more likely to experience an adverse effect from medicines than Queensland hospital patients.

The important role of pharmacists in reducing medication-related incidents

Across Australia and internationally clinical pharmacists are experts in medicines and complex medication management. These highly skilled health care professionals are employed by hospitals and community pharmacies or work as independent contractors. They work in collaboration with doctors and nurses to provide direct patient care as well as supporting high-quality clinical governance.

Pharmacists are integral in leading and facilitating the safe and high-quality use of medications wherever and whenever they are used. Timely pharmacy services are essential in hospitals, where the most unwell Australians are treated, and the most complex and high-risk medications are used, to ensure safe medication use[1]. According to NSW's Clinical Excellence Commission, in 2016–17, approximately 28,000 medication-related incidents in hospitals were reported and 99 of these resulted in serious patient harm. This equates to over 75 medication-related incidents each day, and approximately two medication-related incidents resulting in serious patient harm weekly. To prioritise the safe and quality use of medications in the acute setting, whilst maximising patient health outcomes, hospital pharmacists undertake medication management services daily. SHPA's Standard of Practice for Clinical Pharmacy Services[2] describes the clinical activities provided by pharmacists in hospitals to ensure the safe and effective use of medicines. These include:

- taking a medication history and ensuring medications are charted correctly and available at admission to be administered in a timely manner
- regular review of the safety, quality, storage and supply of medications during hospital stay
- review of discharge prescriptions, dispensing a sufficient supply of medications to take home, counselling patients on their medications and communicating changes to primary healthcare providers
- ensuring appropriate follow-up and monitoring of medications post-discharge including in specialised clinics and outpatient services and checking for adverse reactions to medications

In conjunction with these activities, hospital pharmacists play a significant role in procurement, supply, storage, compounding, monitoring and safe disposal of medications, along with educating other health professionals on the safe and judicious use of medications[1].

The important role of pharmacists at the transitions of care

The transitions of care for patients moving out of hospital is recognised as a great area of risk and poor medicines safety with multiple pain points which are compounded by complex and different clinical information systems that are used in the acute and primary settings[3].

In the *Sixty Minutes: The Greatest Loss* report, a major causative factor of the patient missing vital doses of their medications, appearing to contribute to untimely death, was poor and incomplete information flow at the transitions of care between the public and private hospital setting.

SHPA members in NSW report that NSW hospitals have comparatively lower clinical pharmacy service coverage compared to other jurisdictions, and this is exacerbated even more in non-metropolitan areas. Often, patients are discharged from hospitals or transferred to other facilities, without review by a pharmacist to ensure they have adequate supply of their medications, or that the receiving health service will accurately chart and administer the patient's vital medicines. In this way an insufficient hospital pharmacy workforce puts patients at risk even after they return home.

Hospital pharmacists are integral to improving the safety and quality of care at the transitions of care. As discussed previously, one of a hospital pharmacist's core duties is to ensure patients have the right medications, and that their healthcare providers and carers have the most up-to-date medication list upon discharge or transfer, so that the patient can transition to the next setting in a safe manner, avoiding unnecessary re-admission or potentially fatal adverse events. This information cannot be provided without adequate staffing.

NSW has higher rates of medication-related adverse events compared to other states

According to the Productivity Commission's annual Report on Government Services, NSW experiences higher rates of medication adverse events than other states such as Victoria and Queensland, who have better resourced hospital pharmacy departments who are better equipped to reduce the medication related errors.

	NSW	VIC	QLD
2011-12	2.4	2.1	2.1
2012-13	2.5	2.3	2.4
2013-14	2.6	2.2	2.4
2014-15	2.8	2.2	2.4
2015-16	2.8	2.1	2.4
2016-17	2.8	2.2	2.4
2017-18	3.1	2.1	2.4

Table 1. Adverse effects of drugs, medicaments and biological substances, events per 100 separations
Source: Productivity Commission, Report on Government Services

SHPA NSW members frequently report that hospital pharmacy departments in NSW public hospitals lack the investment and resources to meet accepted standards of practice for hospital pharmacy services. This means that the full suite of clinical pharmacy services, which reduce the incidence and severity of medication related incidents, cannot be provided to all NSW hospital patients that require it. These issues are exacerbated further in rural and regional NSW health services.

SHPA believes that the following recommendations will improve health outcomes and ensure equity of healthcare across NSW, particularly in rural and regional settings.

Recommendations

1. In order to improve access to medications and high-quality- medication management in public hospitals for regional, rural and remote patients, the NSW government must:

    a) Commit to joining the Public Hospital Pharmaceutical Reform Agreement which ensures resourcing to support medication safety

    b) Address the inadequate ratio of hospital pharmacists to hospital beds in regional and metropolitan NSW health services

    c) Institute pharmacist-led Medication Safety programs in the fifty NSW Principal Referral, Public Acute Group A and Public Acute Group B Hospitals

    d) Reverse the closure of Medication Information Services which support regional prescribers and pharmacists

2. In order to ensure safe, high-quality care for patients undergoing chemotherapy, all cancer services within regional, rural and remote NSW health services must meet staffing ratios of 1 clinical pharmacist for every 20 medical oncology patients (1:20) and 1 pharmacist for every 15 haematology patients (1:15) in line with the Standard of Practice for Oncology and Haematology in Pharmacy Services[4].

3. In order to ensure safe, high-quality care for palliative patients in regional, rural and remote regions, all palliative care services must have clinical palliative care pharmacy services embedded and delivered at a ratio of 1 pharmacist for every 20 acute patients (1:20) and 1 pharmacist for every 30 stable patients (1:30) in line with the Standard of Practice for Palliative Care Services[5].

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Recommendations to the Inquiry into Health outcomes and access to health and hospital services in rural, regional and remote New South Wales

1. In order to improve access to medicines and high quality medicines management in public hospitals for regional, rural and remote patients, the NSW government must:

a. Commit to joining the Public Hospital Pharmaceutical Reform Agreement

SHPA strongly recommends the NSW government commit to joining the Public Hospital Pharmaceutical Reform Agreements as a key plank of improving medication management across all NSW health services, particularly for regional, rural and remote patients.

The Pharmaceutical Benefits Scheme (PBS) is a fundamental pillar of health care in Australia that was initially developed to enable access to affordable medications for patients in the community setting. Over time, the PBS has evolved to respond to patient needs by providing access to affordable medicines in the hospital setting at discharge, to prevent gaps in supply, and to support the provision of clinical pharmacy services in hospitals. Patients in non-signatory states such as NSW are not able to access PBS subsidised medications in public hospitals for a range of serious conditions, or at discharge from hospitals, with a typical supply to cover only two to three days' post-discharge rather than 30 days. This puts a dangerous onus on patients to visit a GP immediately post-discharge, to ensure they can continue to access more of the medications prescribed on discharge that keep them out of hospital, through the PBS.

Since the adoption of the Public Hospital Pharmaceutical Reforms in the signatory states and territories, public hospital patients receiving care as an outpatient, including chemotherapy, are able to access a month worth of their discharge medicines with PBS subsidy post-discharge. This ensures a consistent standard of care for vulnerable people and reduces the need for individuals to immediately seek an appointment with their general practitioner on discharge from the hospital. It supports the access of PBS medicines in public hospitals and enables approved public hospitals to prescribe and dispense PBS-subsidised medicines, chemotherapy drugs and highly specialised drugs to day-admitted patients and outpatients.

Across Australia, it is the experience of SHPA members that states and territories who participate in the program provide higher quality and safer care to more patients than those that do not participate, as supported by Table 1. The expansion of PBS into public hospitals has allowed more hospital pharmacists to be employed and provide clinical pharmacy activities to patients, as well as allow investment into specialised pharmacy services, such as pharmacists specialising in oncology, paediatrics, emergency medicine and geriatric medicine provided both to inpatients and outpatients also support this claim. These services are necessary to safeguard and maximise the federal government's investment into new PBS medicines that treat complex conditions.

b. Address the inadequate ratio of hospital pharmacists to hospital beds in regional and metropolitan NSW health services

The NSW government should end the inequity of access to clinical pharmacy services through investment in more public hospital pharmacists to bring NSW in line with hospital staffing levels of other states.

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	METRO Hospital Pharmacist to Population	REGIONAL Hospital Pharmacist to Population	METRO Hospital Pharmacist to Hospital Beds	REGIONAL Hospital Pharmacist to Hospital Beds
NSW	1:5517	1:8516	1:13	1:27
VIC	1:3741	1:6706	1:8	1:18
QLD	1:3367	1:5436	1:8	1:14

Table 2. Ratio of hospital pharmacist to population & hospital beds along comparable Eastern seaboard states
#This data records all pharmacists reporting working in hospitals not only those providing ward-based services
Data source: National Health Workforce Data Set, Australian Bureau of Statistics

Each year, the NSW government spends over $700 million on medicines for use in public hospitals[6]. In 2016–17, approximately 28,000 medication-related incidents in hospitals were reported and 99 of these resulted in serious patient harm[6]. This equates to over 75 medication-related incidents each day, and approximately two medication-related incidents resulting in serious patient harm weekly.

In all other states, hospital pharmacists are embedded into medical units, treat patients on specialist wards, support patients in emergency departments, advise prescribers, facilitate clinical trials and provide outreach to patients going home from hospitals. Due to adequate investments in the hospital pharmacy workforce in other jurisdictions, hospitals are able to safely meet Australian Commission for Safety and Quality in Health Care accreditation standards for Medication Safety[7], as well as deliver medication management services that support the quality use of medicines described in SHPA's Standards of Practice for Clinical Pharmacy Services[1] such as:

- Medication reconciliation by a pharmacist
- Daily medication chart review by a pharmacist
- Therapeutic drug monitoring and dose titration in collaboration with prescribers
- Discharge medicines counselling by a pharmacist

In NSW, many of the above activities which are vital to reduce the incidence of medication-related incidents, are not provided due to inadequate investment in hospital pharmacists, especially in rural and remote settings, leaving patients at risk and receiving suboptimal care. The severe inequity in access to hospital pharmacists in NSW hospitals compared to other jurisdictions contributes to the 75 medication-related incidents daily. Poorly managed medicines can result in unintended hospital admissions, increased length of stay, poor health outcomes, re-admissions, morbidity or mortality[8]. International evidence shows that regular pharmacist input in a hospital setting is cost-effective, resulting in a reduced length of stay and increased patient satisfaction5. Australian evidence has shown a $23 return for every $1 spent on clinical pharmacy services in public hospitals.[9]

Information about adverse medication incidents from the Productivity Commission based on AIHW data supports our members' feedback. In 2017-2018, NSW patients were 48% more likely to experience an adverse effect from medicines than Victorian hospital patients, and 29% more likely to experience an adverse effect from medicines than Queensland hospital patients.

c. Institute pharmacist-led Medication Safety programs in the fifty NSW Principal Referral, Public Acute Group A and Public Acute Group B Hospitals

NSW should implement pharmacist-led Medication Safety programs in all fifty Principal Referral, Public Acute Group A and Public Acute Group B Hospitals in NSW. Medication safety programs are fundamental to a health service organisation's risk management strategy. The primary goal of a medication safety program is to ensure systems and governance are in place to reduce the risk of preventable harm from medications for patients, using an evidence-based, multidisciplinary approach to achieve system improvements. Inappropriate use of medicines is a key contributor to patient harm as well as unnecessary costs.

A 2019 report into Medication Safety highlights that 1.2 million Australians have experienced an adverse medication event in the last six months and 250,000 hospital admissions annually are a result of medication-related problems[10]. Medication safety and prevention of this harm is core business for all health service organisations. As outlined in SHPA's Medication Safety Position Statement, well-developed medication safety systems and strategies ensure clinicians and other health professionals safely prescribe, dispense and administer appropriate medication to informed consumers and/or carers, reducing the risks associated with the incorrect use of medications, while enhancing their positive outcomes[7,11].

Around 50% of medication related harm is preventable[12] and instituting pharmacist-led medication safety programs in all hospitals will lead to a significant reduction in this harm. Pharmacist-led medication safety programs drive organisation wide system changes that place the safe and judicious use of medications central to consumer healthcare.

Fundamentally, these programs embed systems that:

- Lead the governance of medication safety committees.
- Lead the development and implementation of improvement initiatives using change management techniques.
- Promote a 'just culture' and 'open disclosure' in developing safety systems for medication use.
- Share knowledge with other health professionals.
- Lead the development and review of policies to enhance medication use.
- Report and review errors, near misses and adverse medications events.
- Report and monitor adverse reactions to medications.
- Monitor trends and review work practices and systems to identify risks or gaps in practice e.g., medications use review, chart audit.
- Introduce evidence-based medication safety initiatives and programs that can be monitored against accreditation standards.
- Educate healthcare staff about medication safety.

The implementation of these pharmacist-led medication safety programs is vital to ensuring patient safety and equity across regional and rural NSW. Bringing these services in line with other jurisdictions across Australia will help to provide higher quality patient care to more patients across NSW.

d. Reverse the closure of the Medication Information Centre which supported regional prescribers and pharmacists

In 2018 the sudden closure of the Medication Information Centre based at St Vincent's Hospital, which assisted prescribers and pharmacists with medication-related enquiries to enhance the safety and quality of clinical decisions reduced the capacity of NSW Health to support medicine safety. This service had operated

since 1980 led by a team of experienced pharmacists. It received on average 1200 enquiries per year from doctors, pharmacists and allied health professionals about medicines to support safe and quality use of medicines[13]. Since its sudden closure, there has not been a satisfactory alternative made available to NSW practitioners.

More broadly, Medicines Information Services are a pharmacist-led service to assist patients and healthcare professionals use medicines safely and effectively. They provide current, evidence-based and practical medicines information to healthcare professionals and the general public by phone and email. As the provision of care and medicines use becomes increasingly complex, Medicines Information Services are increasingly important services for prescribers and pharmacists to guide their clinical decision making, especially when faced with rare and complex medicines that are seldom used, but critical to patient care.

Whilst some principal referral hospitals have sufficient workforce resources to have dedicated Medicines Information pharmacists in their pharmacy departments, this is the exception rather than the rule across New South Wales. The lack of Medicine Information pharmacists is particularly apparent in rural and regional hospitals. For an enduring time, these hospitals were supported by a state-wide Medicines Information Service, until its closure a few years ago, without any replacement services in its stead.

SHPA members in NSW report that this sudden loss of funding and closure of the state-wide Medication Information Centre has been a great loss to the rural and regional hospital doctors and pharmacists who need this service.

2. In order to ensure adequate access to high quality medication management of chemotherapy, all cancer services within regional, rural and remote NSW health services must have embedded clinical pharmacy services delivered at a ratio of 1 pharmacist for every 20 medical oncology patients and 1 pharmacist for every 15 haematology patients in line with the Standard of Practice for Oncology and Haematology in Pharmacy Services.

Clinical oncology pharmacists are experts at treating the complex needs of patients diagnosed with cancer [4, 14] These patients often have complex medicine regimes whilst on chemotherapy and are often subject to discrepancies that need to be corrected. Embedding clinical oncology pharmacy services in hospitals ensures that the evidence-based chemotherapy treatment regimens are adhered to, additional medication reviews are provided and there is appropriate provision of advice for when treating doctors seek to treat outside of protocol, reducing the likelihood of under-dosing chemotherapy. In situations when medical specialists are less accessible, the employment of pharmacists with specialty experience can supplement existing services and improve patient care.

In Australia, approximately one-third of all people living with cancer live in rural and regional areas, yet the majority of cancer services are in metropolitan centres and generally poor access to cancer services in rural and regional areas. The Clinical Oncological Society of Australia[15] and the Medical Oncology Group of Australia[16] have reported that:

- 38% of rural hospitals administering chemotherapy had neither a resident nor visiting medical oncology service
- only 58% of rural hospitals surveyed reported that most chemotherapy orders were written by a medical oncologist

- as the remoteness of hospitals increased, chemotherapy was increasingly administered by people other than a chemotherapy-trained nurse, such as other nurses and general practitioners
- people with cancer who live in rural areas have poorer survival rates than Australians in the major metropolitan centres
- rural patients' cancers are often diagnosed at a later stage, meaning they are more advanced and more difficult to successfully treat

Despite being a well-established treatment modality, chemotherapy errors represent a potentially serious risk of patient harm. Chemotherapy errors occur at a rate of about one to four per 1000 orders, occurring at all stages of the patient journey[17]. It is fundamental that the patient and carers are provided with information on the benefits and side-effects of chemotherapy and are aware of supportive management to minimise discomfort of therapy.

Investing in oncology clinical pharmacists to a ratio of 1 oncology pharmacist to every 20 patients and 1 pharmacist to every 15 patients in haematology in health services will ensure that clinical pharmacist can provide the most optimal care and a full suite of clinical pharmacy services, such as:

- medication reconciliation on admission.
- daily medication chart reviews.
- medication counselling on discharge.

The complexities involved the management of medications for oncology/haematology patients often require further specialised clinical pharmacist medication services such as:

- Verification of adherence to evidence-based chemotherapy treatment protocols and clinical advice on off-protocol chemotherapy treatments.
- Prescribing advice and calculation of cancer medicine doses according to weight, height, age, renal and hepatic function, ensuring currency of these measurements.
- Compounding and manufacturing of oncology medicines.
- Prescribing advice on antimicrobial prophylaxis for immunocompromised oncology/haematology patients.
- Detection, monitoring and management of side effects of chemotherapy medicines.

The 2016 final report on the *NSW Inquiry into Off-protocol prescribing of chemotherapy for head and neck cancers*[18]*,* where over 100 NSW patients received underdosing of chemotherapy treatments, found that pharmacists were expected to have a proactive responsibility to more diligently monitor prescribing, with a view to detecting patterns in the prescribing and to escalate concerns through to hospital management. The subsequent report, *Prescribing of chemotherapy: Report on patients treated at Western NSW Local Health District*[19]*,* also recommended that systems be put in place to ensure that the oncology pharmacist and the head of medical oncology review any overrides in the electronic prescribing system that may suggest patterns of off-protocol prescribing.

The recommendations made by NSW inquiries into chemotherapy services can only be realised by adequate funding and staffing ratios for oncology pharmacists. Ensuring a oncology clinical pharmacists ratio of 1 oncology pharmacist to every 20 patients and 1 pharmacist to every 15 patients in haematology in health services will bring NSW in line with hospital staffing levels as per SHPA Standards of Practice for Clinical Pharmacy Services to improve medication safety for all cancer patients. Service such as these are required to ensure adequate treatment of the needs of oncology and haematology patients. This is particularly even more

important in rural, regional and remote health services providing cancer treatment, given a higher incidence of chemotherapy prescribing in these settings is undertaken by non-specialist prescribers. Oncology pharmacists are able to act as a safeguard against any potential inappropriate prescribing through clinical review and identification, and ensure cancer patients are being treated according to established chemotherapy protocols.

3. In order to ensure optimal care for regional, rural and remote patients, all palliative care services within regional, rural and remote NSW health services must have embedded clinical palliative care pharmacy services delivered at a ratio of 1 pharmacist for every 20 acute patients and 1 pharmacist for every 30 stable patients in line with the Standard of Practice for Palliative Care Services.

SHPA believes that palliative care pharmacists should be embedded across all settings where palliative care is provided including: hospital, hospice, ambulatory, residential aged care, within the community and for both rural and remote settings. Ensuring a ratio of 1 pharmacist for every 20 acute patients and 1 pharmacist for every 30 stable patients would bring NSW health services in line with the Standard of Practice for Palliative Care Services and improve patient care in palliative care settings.

Palliative care pharmacists are crucial to ensuring the safe and quality care of palliative care patients across all care settings, especially with respect to management of their medicines. Palliative care patients have complex health needs and medication regimens, so missed doses and incorrect medicines place them at risk of serious complications, lack of symptom relief and re-hospitalisation.

It is therefore, vital that sufficient information is gathered to better understand the challenges experienced by people suffering from life-limiting illness and/or their carers, in accessing their prescribed medications and managing their complex medication regimens frequently changed by multiple prescribers across a variety of health settings with minimal coordination.

Patients with a life-limiting illness may be transitioning from hospitals to residential aged care facilities or community palliative care services, and vice versa, and at times may be cared for by a combination of public and private healthcare providers without sufficient communication to ensure continuity of care. These transition points are known to be a high risk for adverse medication events, including missed doses of medications and disrupted supply when patients are transferred to another setting.

Palliative care pharmacists are an integral part of an interdisciplinary team and optimise the outcome of symptom management through evidence-based, patient-centred medication therapy. Palliative care pharmacists educate patients, carers and fellow health professionals on the use of medications, maintain patient medication stock, follow up on patents after discharge and transitions of care, provide prescribing advice to general practitioners and create guidelines for medication use in palliative care settings.

SHPA's Standards of Practice for the Provision of Palliative Care Pharmacy Services further describe activities consistent with good practice for the provision of pharmacy services to a palliative care unit, service, specialist clinic or hospice [20,21]. The priorities for workforce capacity must enable discussion about the importance of access to clinical pharmacy services for palliative care. Current pharmacy services provided to palliative care patients in Australia are mainly provided on a part-time basis and involve clinical, administrative, educational and medication supply functions[22].

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