Submission to the Productivity Commission

The Health Workforce

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Setting the scene

About SHPA

The Society of Hospital Pharmacists of Australia (SHPA) is the professional body that represents pharmacists and pharmacy technicians working in hospitals and many related parts of the health system. Members are drawn from a diverse range of pharmacy and health practice settings including public and private hospitals, community pharmacy, academia, research, industry, government, consultant pharmacy and a range of quality use of medicines projects, clinical governance and medicines management programs.

The SHPA vision is "Excellence in medicines management through leading edge pharmacy practice and research".

The SHPA mission involves:

- **S**upporting the continuing professional development of our members
- **H**aving strong membership within hospitals and all other quality use of medicines settings
- **P**artnering with key medicines stakeholders
- **A**dvocating for the safe and effective use of medicines across the continuum of care

About hospital pharmacy

Pharmacists in hospitals are actively involved in all aspects of medicines use, without the need for referrals. They are members of the health care team and:

- work closely with patients to help them get the most from their medicines
- work on hospital wards alongside doctors and nurses as part of the health care team
- work in specialist areas e.g. emergency department, pre-admission clinics, intensive care, cancer treatment, paediatrics, renal, psychiatry, drug information services (and as providers of national medicine "Help Lines" for health professionals and consumers)
- visit patients in their homes to provide information and support after discharge from hospital
- dispense medicines and make special medicines, including specialized formulations for non-sterile and sterile products (cytotoxics, injections, parenteral nutrition formulae for adults and neonates, eye drops, clinical trial drugs, special situations, novel problems)
- participate in clinical trials of new medicines and research to improve medicine use
- manage or supervise other staff
- manage multi-million dollar budgets for medicines

Safe and effective medicine use is the core business of hospital pharmacists.

By working to ensure that medicine therapy is optimum, safe and cost-effective, the provision of pharmacy services serves the interests of individual patients and also the wider community.

Clinical pharmacy services can save lives, improve patient care and reduce the length of hospital stay for many people. With the focus on individual patients, comprehensive and accountable clinical pharmacy services are an essential component of contemporary healthcare practice.[1]

SHPA uses the medicines management pathway concept to describe the interplay between individual and systematic services that are needed to support the safe and effective use of medicines. Hospital pharmacists have established roles at all steps of the pathway, with dispensing of medicines being only one step.[2] Understanding how and why services are delivered in the acute setting today is essential to ensure that innovation will enable care to be safer, as well as more cost-effective.

About the SHPA submission

SHPA notes that the Productivity Commission Study "is to be undertaken in the context of the need for efficient and effective delivery of health services in an environment of demographic change, technological advances and rising health costs."

SHPA supports innovation in health service delivery, and in particular for medicines and pharmacy services. SHPA recognises that in future, more acute care will be delivered from a community base or in the home. When the word hospital is used in this document, it may also be construed to mean a **"virtual hospital"** to encompass various future acute care practice settings, where consumers may need more complex care from their health professionals, including hospitalisation.

Hospital pharmacy managers are continually investigating avenues to improve patient safety, minimise medication incidents, reduce labour-intensive distribution functions and facilitate accountability of medication use. This includes increasing the number of pharmacy support staff and extending the role of pharmacy support staff into new areas.

In this submission, SHPA will **focus on pharmacist issues in the hospital sector**, both public and private, acknowledging that in future these services may be delivered via different **"virtual hospital"** models. However, it must be understood that the types of services needed are likely to require a similar health professional skill set to that found in hospitals today.

SHPA notes that a separate submission will be made on the pharmacist workforce, as a whole. SHPA has participated in its development and supports the notion of the value of the current network of community pharmacies to be leveraged in future visions of health care delivery.

Much of the information in this document will also be relevant in other current and future pharmacy practice settings and SHPA welcomes further questions from the Productivity Commission on how to make those linkages, or to interpret and adapt the ideas contained in this submission.

SHPA supports the larger goal of a healthy and dynamic pharmacy sector. Australia needs to be able to educate and train sufficient pharmacists for current and future roles and to maintain workforce participation throughout life to maximise the payback from this investment.

Internationally and in Australia, on average 15% of pharmacists work in hospitals. Workforce shortages for hospital pharmacists have been evident for several years both in Australia and overseas.[3] **Staffing vacancy rates** (average 10-14% in recent years, up to 100% in some locations) **are reported to be the most important issue impairing the ability of Australian hospital pharmacists to improve outcomes for patients in hospitals.**

For this reason, SHPA has already been working pro-actively with others (e.g. DHS Victoria funded staff) and independently using its own scarce internal resources, to participate in and undertake research in order to better understand and to address these pressing hospital pharmacist workforce issues.

- The focus has been on gathering the necessary evidence to formulate strategies for the improved recruitment and retention of pharmacists in our hospitals.
- SHPA considers that there is now enough evidence to move from "studying the problem" to implementing strategic solutions as part of a nationwide action plan.
- **The number of hospital pharmacists is small** relative to doctors and nurses, so the financial resources to achieve these actions are modest, especially if undertaken on a **national** basis, which makes good sense for many strategies, to reduce duplication of effort.

Specific initiatives for hospital pharmacy are required because the current dynamic is unhealthy. The overall workforce shortage has "sucked" pharmacists from the relatively inflexible public hospital sector to create a downward spiral that is explained further in this document. Initially, the public hospital pharmacy sector needs support. The SHPA recommendations made have been framed as a positive contribution in the context of an overall strategy for pharmacy.

It is important to attract new graduates, to make hospital pharmacy "attractive" career long and for pharmacists to be competent and encouraged to move through different practice settings during their careers.[4] **Workforce initiatives for one pharmacy practice setting cannot be considered in isolation. It is a dynamic workforce and the sectors are not mutually exclusive.**

Whilst the standard pharmacist qualification is required to work in a hospital, research shows that exposure to hospital practice during the undergraduate years and/or pre-registration training in a hospital is a strong indicator of future work practice. Anecdotally, if pharmacists lack this exposure there is a degree of intimidation to enter this work area later in their career.

SHPA commends Health Ministers for placing the health workforce issues on the agenda of the Productivity Commission.

This submission provides "dot points" from research undertaken in Australia which underpins the SHPA recommendations contained herein. The goal has been to maintain brevity in this submission. However, further detail and / or explanation can be provided on request.

A similar range of recommendations are summarised in the **following table** that is currently being followed up with the **plethora** of government bodies in all jurisdictions working on workforce matters, few of which have any funding to resource recommendations.

At the outset, it must be stated that the complexity of the health funding system is an **overarching constraint** in moving to remedy the workforce situation. Currently SHPA must work jurisdiction by jurisdiction, leveraging various projects to move ahead. With the hospital pharmacy workforce numbers being relatively small, there is huge opportunity to take up some recommendations on a **nationally** consistent basis. This, in itself would be a 'quick win' productivity gain.

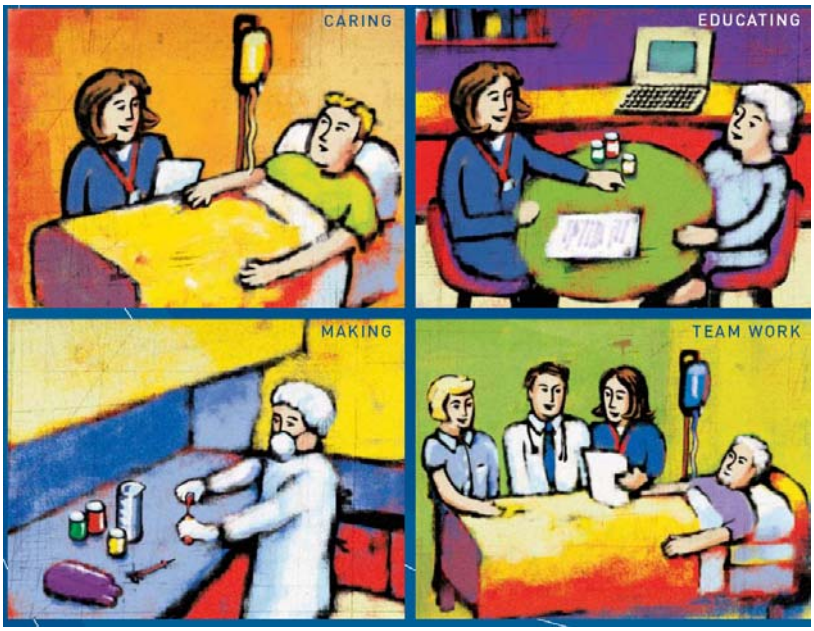
It is hoped that this Productivity Commission Study may enable resources to be committed for well developed recommendations to be instituted on a national basis. This makes good sense and will be most cost-effective and avoid resource duplication, which to date, has not been possible.

Solutions to the health workforce issues require the goodwill, collaborative resolve and integrated actions of governments at all levels, professional bodies, the higher education sector, regulatory authorities and health professionals themselves. SHPA is committed to achieving this objective.

Consumer services related to medicines use, medication safety and reducing adverse events require a full complement of pharmacists and pharmacy support staff in our hospitals.

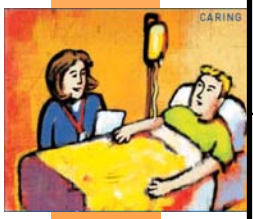
Images from "HOSPITAL PHARMACY – a world of possibilities"

This campaign of booklets and website careers information is to support pharmacy students to learn about hospital pharmacy and that it is an option for them at any time of their careers.[4]



To attract NEW pharmacy graduates

career path



Pharmacist

To make hospital pharmacy attractive career long

Overview of recruitment and retention strategies for hospital pharmacy

Refer to 2004 SHPA Report for related background research underpinning these recommendations (www.shpa.org.au/pdf/whatsnew/nhwsf_response.pdf)

WHAT	HOW	Opportunity for national collaboration?
Create new pre-registration training places in hospitals (using sequestered funding for up to 50% of pharmacy graduates) ★	**START NOW AND INCREASE IN INCREMENTS** to have more places in all jurisdictions until there are places for up to 50% of graduates (also need funding for one clinical supervisor for 10 pre-reg places), then monitor outcomes and review	**YES** *SHPA has experience and can assist with national coordination / implementation to avoid duplication in each jurisdiction and so that this can start ASAP*
Market hospital pharmacy actively to all 3,000 current pharmacy undergraduates ★	**QUICK WIN** Support SHPA's aim to conduct regular talks at all pharmacy schools as part of the "Hospital Pharmacy – a world of possibilities" campaign	**YES** *This program has started with seed funding from SHPA – but needs a funded national annual promotion campaign*
Incentives for newly qualified pharmacists (2-5 years post graduation) to work in public hospitals ★	**QUICK WIN** Pro-rata yearly refund of HECS debt for pharmacists who work in public hospitals	**YES** *Suitable to be developed and administered as a national scheme*
Advertise job opportunities on the SHPA national job register, which is 'marketed' to all pharmacy students and pharmacists as a 'one-stop shop' ★	**QUICK WIN** Easy to put in place to support the current workforce Also good for **CAREER LONG** recruitment	**YES** *SHPA national job register for hospital pharmacy could be funded for all public hospitals on a national basis*
Appropriate award structure and adequate remuneration for hospital pharmacy to be "competitive" with other sectors	**UPDATE ASAP** Restructure awards in next EBAs. Learn from changes in South Australia to improve both recruitment and retention for **CAREER LONG** applicability	**NO** *This must be undertaken in each jurisdiction unless a federal award for hospital pharmacy could be created (which would be welcome)*
Create formal re-entry programs for hospital pharmacy practice to entice 5,000 non-working pharmacists or those who have not worked in hospitals	**START IMMEDIATELY** Needs to be developed, so work needs to start now (but can leverage off some existing courses) and be applicable **CAREER LONG**	**YES** *SHPA could develop a national deliverable package to avoid each jurisdiction "re-inventing wheels"*
Maintain an adequate workforce to provide hospital pharmacy services, which includes using the skills of qualified pharmacy technicians who are better trained ★	**ONGOING** Continue salary packaging and the recruiting of overseas pharmacists (holiday visa, permanent) **START IMMEDIATELY** Promote and facilitate improved training of the **pharmacy technician workforce** using the new national competencies **QUICK WIN** **Fund LOCUM relief for rural hospital pharmacy services** under the existing national rural and remote workforce development program, which currently only applies to community pharmacy	**YES** *These are all suitable for national collaboration, development and implementation*
Create family friendly and flexible working conditions with professionally rewarding roles for part-time staff	**ONGOING** Actively encourage improved and flexible working conditions to retain staff Collaborate and share good news stories via SHPA website as *working lives* series, to be promoted widely building on the "Hospital Pharmacy – a world of possibilities" campaign	**YES** *The NHS in the UK has created a working lives series. SHPA could develop and maintain this nationally*

Summary of SHPA recommendations

1. Shortages of hospital pharmacists and its impact

- Introduce a system of **national** registration for pharmacists and use this to obtain timely workforce participation data.
- Develop a plan for pharmacy that addresses the needs of the hospital sector on a **national** basis, rather than duplicating the same work jurisdiction by jurisdiction.
- Fund places for pre-registration pharmacists on a **national** basis, with the aim for places for 50% of all pharmacy graduates. **Increasing the number of pre-registration training places in Australia's hospitals should be a key recruitment strategy.**
- Fund pharmacist clinical educator positions on a national basis to support the clinical education of the increased numbers of undergraduate and post-graduate (pre-registration) pharmacists in hospitals.
- Fund a national re-entry program, including placements, for pharmacists that covers all sectors, including hospital practice. **A re-entry program specific to the hospital sector may be required to attract pharmacists with previous hospital experience and provide community pharmacists with a structured program to enter the hospital sector.**
- Increase the attractiveness of the hospital sector by establishing child care facilities at all Australian public hospitals, to facilitate return to work and increased overall participation rates.
- Establish a separate national system for hospital based training to facilitate the registration of overseas pharmacists through the APEC process.
- Continue promotion of hospital pharmacy as an "option at any time of your career" to all pharmacy students with funding to support promotion at each pharmacy school each year. (Refer www.shpa.org.au/careers/careers.html)

2. Mal-distribution of hospital pharmacists

- Support a **national** website for all hospital pharmacist vacancies. SHPA has already established this via a Victorian sponsored project that is being promoted to pharmacy students nationally. The website is operational for NT, QLD and VIC, but is currently funded on a jurisdiction by jurisdiction basis. (Refer www.shpa.org.au/docs/jobs.html).
- **Nationally fund 50-100 pre-registration pharmacist training positions in rural hospitals under a new paradigm that encourages pharmacists to be competent and confident to work in all practice settings to support rural communities.**
- Fund a national **locum** pharmacist system that is specific for, or at least inclusive of hospital pharmacy.

3. Changing role for public and private sectors

- A key strategy to build a pharmacy workforce able to deliver the services required by an ageing population with complex medicine needs across the continuum of care (all health care settings) is **exposure to hospital based training**.
- **Ensure that funding systems are integrated. When funding new services (e.g. Australian government funded home medicines review) ensure that inefficiencies and inequities are not created for patients being treated under jurisdictions (e.g. public hospital discharge patients requiring a visit post-discharge), or via the private hospital sector.**

  This is essential to prevent **"unintended" service gaps for consumers**. Complementary funding is needed for community liaison pharmacists based in hospitals to undertake medication management reviews for consumers at "high risk" of medication mis-adventure within 7 days of discharge from hospital to home or residential aged care homes. This should be funded on a **national** basis.

4. Skills mix of hospital pharmacy staff

- Incentives need to be developed to retain pharmacists in hospitals during their formative years. A tactic could be the **reimbursement of HECS** fees for pharmacists working in public hospitals 2-5 years post-graduation. This has flexibility to be applied where needed in areas of skills shortage. This incentive can "turned on/off" fairly easily.
- Adequate remuneration and a **national award** for pharmacist and pharmacy support staff would reduce wasted time in developing jurisdictional solutions that are different e.g. different grading systems for support, technician and pharmacist staff.
- **Restructure a national award** so that first grade salaries are comparable to community sector e.g. award system in South Australia. Starting from a higher base level ensures that the hospital pharmacist's salary keeps pace with their experience and level of expertise throughout their career.
- Development of a **senior clinician career path** is required, rather than the only route of promotion being to management, as in most awards.
- Access to salary packaging needs to be maintained in all jurisdictions.
- Incentives need to be developed to recruit and /or train pharmacists in all areas of **specialised skills shortage**, on a national basis (not just rural and remote areas).
- Support newly qualified staff to encourage them to stay in the hospital sector, by funding a mentoring system.
- A national workforce plan for pharmacy technicians and other support staff needs to be developed which will work towards:

  -increasing the number of suitably trained pharmacy support staff;

  -a more regulated entry system for pharmacy support staff;

  -putting in place appropriate training and education for all those working in hospital pharmacy;

  -developing and enforcing professional standards that are applied across Australia; and

  -providing new opportunities for technicians through a nationally portable qualification, development of skills that improve the variety and scope of their current role and improved career paths.

5. Productivity

- Continue support for the national e-health agenda, national medicine directory / code and develop software to support the distribution of medicines via both the PBS and current hospital processes.
- Establish some tests sites for central robotics to support dispensing in hospitals to save labour.
- Ensure that any extension of **prescribing rights is competency based** to protect consumers.
- Examine some hospital pharmacy test sites and explore options to enable pharmacy technicians to work inside the pharmacy department, if the supervising pharmacist is temporarily outside the department, but remains accessible via telephone.
- **Immediately reduce "red-tape"**, then develop a fiscally responsible, national system for funding medicines. This would need to be a hospital PBS (or other name) that recognises the needs of the hospital patient population base. **It should minimise unproductive "red-tape", yet ensure financial accountability and responsibility, and eliminate "cost-shifting" between jurisdictions.**

6. Quality

- A **national** action plan for hospital pharmacists is funded and implemented.
- Immediate changes to services to ensure that **clerical and bureaucratic obligations** do not reduce productivity and remove time available for the direct clinical care of patients by pharmacists.
- Establish a mechanism whereby cost-effective, evidence based service improvement models that have been developed as projects can be resourced to be delivered on a national basis.

7. Job satisfaction

The same recommendations as for **Skills mix of hospital pharmacy staff** are valid here.

Background research

Summary of recruitment and retention issues for hospital pharmacy

SHPA's research on retention and recruitment strategies for the Hospital Pharmacy Workforce[5,6] highlights the following points:

- SHPA members working in public hospitals state that the current staffing crisis is overwhelmingly the most important issue that impacts their ability to provide patient care.
- 400-500 pharmacist FTE need to be recruited to the hospital sector in the next two to five years.
- One in three hospital pharmacists has post-graduate qualifications; they are a skilled resource and hard to replace, therefore retention strategies are crucial to retain the current workforce.
- Job satisfaction requires a well staffed department, the ability to take leave and support for the pharmacist's role within hospitals as well as professional development. These are crucial retention factors for pharmacists in the hospital sector.
- Adequate remuneration is crucial to support the recruitment and retention of younger pharmacists in hospitals.
- Family-friendly and flexible working arrangements and formal re-entry programs for hospital pharmacists are crucial to ensure maximal participation in the workforce.
- Increasing the number of pre-registration pharmacist training places in hospitals is a key recruitment strategy.
- Promotion and facilitation of formal training for pharmacy technicians is fundamental to being able to free up the time of pharmacists.
- The paper also includes tactical actions SHPA believes may assist with the retention and recruitment of hospital pharmacists, specifically:

  Retention tactics/incentives

  - Restructuring of relevant awards and funding the restructure of these awards.
  - Maintain access to salary packaging.
  - Offer mentor programs and / or offer residency programs.
  - Support flexible working arrangements and professional development activities.
  - Improve the pharmacy technician workforce (appropriately qualified workforce and improved utilisation across all hospital types).
  - Fund locum pharmacy services in rural and remote areas.
  - Provide incentives for pharmacists to work in hospitals outside metropolitan areas.
  - Be aware of and make allowances for the impact of new strategies on the hospital pharmacy workforce e.g. the introduction of the PBS into the public hospital sector.

  Recruitment tactics/incentives

  - Increase the number of hospital based pre-registration training positions. Ideally 50% of graduates should have access to hospital based training.
  - Improved access to suitable hospital based training for APEC candidates.
  - Waive HECS fee (pro-rata or total) for pharmacists who work in public hospital for first 2-5 years after their qualification.
  - Web based (one-stop national site) advertising of hospital pharmacist positions.
  - Formal re-entry programs to attract pharmacists with previous hospital experience and provide community pharmacists with a structured program to enter the hospital sector.

Summary of demand issues for hospital pharmacy

On average, 15% of Australian pharmacists work in the hospital sector. The most recent study of the demand and supply of pharmacists undertaken by HCI in early 2003 estimated a minimum increase in demand for hospital pharmacists of 10% over the period 2000-2010.[7] Their medium demand model estimated a 60% increase in demand for hospital pharmacists over the same time period.

The report noted some factors that would reduce the demand for pharmacists, but all involved the transfer of distribution services (e.g. dispensing services undertaken by pharmacy technicians, use of robotics). It is likely that such changes in service delivery will be used as an opportunity to meet the current unmet demand for pharmacist services or improve the pharmacy services offered at the hospital.

The first national survey of the hospital pharmacy workforce in 2001 identified that 14% of establishment positions were vacant (estimated 259 vacancies). SHPA has estimated that the current (2003) Australian public hospital workforce is 2,000 pharmacists filling 1,640 full time equivalent positions (FTE) with 10% of establishment positions vacant. This equates to 100 FTE of vacancies being filled between 2001-2003. This coincided with an 18% increase in pharmacy graduate numbers.

It is anticipated that there will be demand to create a further 100 hospital pharmacist positions in the next two years and 18% of the total hospital pharmacist workforce (up to 360 pharmacists) are planning to leave the sector in the near or distant future.

The introduction of the Pharmaceutical Benefits Scheme (PBS) to the public hospital sector has had an impact on the demand for pharmacists. Early data from Victoria, the first state to introduce the PBS in public hospitals, has shown the PBS is a more labour intense delivery system for medicines in the hospital setting. This is already well recognised and documented in private hospitals. When costing the impact of this policy change the Australian Government estimated that 5% of total PBS volume would eventually be supplied through public hospitals. This implies a need for more than 200 additional pharmacists FTE.

Together these imply that 400-500 pharmacist FTE (480 – 600 pharmacists) need to be recruited to the hospital sector in the next two to five years; this equates to a 24-30% increase in demand well within the demand calculated by HCI (10% as a minimum, 60% with using a medium demand model).

The range of clinical pharmacy services offered to patients varies enormously across and within hospitals. The SHPA Standards of Practice for Clinical Pharmacy define the three components of a basic clinical pharmacy service and the ten components of a comprehensive clinical pharmacy service.

At least 6% of Australian hospitals with a pharmacy service do not offer any clinical pharmacy services to any overnight patients; 32% of hospitals offer no clinical pharmacy services to approximately 40% of their overnight patients; and only 5% of hospitals offer a comprehensive clinical pharmacy service to all overnight patients at their hospital.

These **gaps** in service provision and inequity of access to clinical pharmacy services are a major concern as a recent economic assessment of clinical pharmacy services for **24,866 inpatient episodes in eight Australian public hospitals** identified that pharmacists initiated **1,399 changes** to drug therapy or patient management.[8]

Fifteen (1.1%) of these changes were life saving.

The remaining changes also improved patient care, including:

- 25% *prevented* major permanent injury, a longer stay in hospital or readmission, patient morbidity at discharge or significant financial loss for the hospital.
- 38% *prevented* major temporary injury causing a longer stay in hospital or re-admission, the cancellation or delay of treatment and financial loss for the hospital.
- 30% *prevented* minor injuries that require minor treatment and minor financial loss to the hospital.

Other key findings of the study included:

- improving patient care was the clear focus of the majority of pharmacist interventions
- in financial terms, every dollar spent on a pharmacist for an intervention in medication management, saved the hospital $23
- when annualized, the savings resulting from the interventions quantified at the eight hospitals was $4,444,794

SHPA believes that the current, poorly quantified gap in access to clinical services is, and will continue to drive workforce redesign where more distribution services will undertaken by hospital pharmacy technicians and hospital pharmacists are freed to provide a greater range of clinical services to a greater number of patients.

It is possible that an additional 200 pharmacists FTE could be redirected to clinical services if an additional 200 suitably qualified pharmacy technicians FTE were available.

SHPA estimates that to meet current consumer expectations / need and future demand the Australian hospital sector requires that either an additional 400-600 pharmacists, or 200-400 pharmacists and 200 qualified pharmacy technicians, need to be recruited over the next five years.

There is a well recognised and increasingly acknowledged role for hospital pharmacists as part of the health care team, to implement the Australian Pharmaceutical Advisory Council's National Guidelines to achieve the continuum of quality use of medicines between hospital and the community. (Refer www.health.gov.au/internet/wcms/publishing.nsf/Content/nmp-pdf-naguqum-cnt.htm).

Furthermore, as part of a uniform set of steps across the country to improve patient safety in public hospitals, Australia's Health Ministers have directed that to help safer use of medicines, by the end of 2006, every hospital will have in place a process of pharmaceutical review of medication prescribing, dispensing, administration and documenting processes for the use of medicines. This will require much involvement of hospital pharmacists.
(Refer www.health.gov.au/internet/wcms/publishing.nsf/Content/health-mediarel-yr2004-jointcom-jc001.htm).

In summary, the skills of hospital pharmacists are in increasing demand with many extended roles in clinical risk management associated with clinical pharmacy services and the improvement of medication safety, as well as supporting roles across the continuum of care.

1. Shortages of hospital pharmacists and its impact

1.1. Key points

Key findings of the SHPA 2003 snapshot of the hospital pharmacy **workforce**[6] in 101 public hospitals in Australia were:

- overall 107.33 (10%) of the 1054.06 of establishment pharmacist full time equivalent positions were vacant. This is an improvement from the 2001 figure of 14%;
- the vacancy rate for pharmacists has markedly improved in South Australia (23% to 2%) but worsened in Queensland (11% to 23%);
- one in three hospital pharmacists work part time;
- one in three hospital pharmacists has a post graduate qualification;
- less than 40% of pharmacy technicians currently employed have any formal qualification as a pharmacy technician or pharmacist;
- more than half of the hospitals surveyed are planning to introduce new pharmacy services in the next two years; most are related to improving clinical services and medication safety. This will require an additional 100 pharmacist FTE.
- Ongoing retention and recruitment strategies to meet anticipated demand and further reduce the number of vacancies in hospital pharmacy will be required.

Key findings related to the **type** of hospital pharmacy services[9] being provided in public hospitals in Australia were:

- the average amount of time pharmacists spend on clinical activities (cognitive services mainly directed to individual patients) was 47%;
- the average percentage of time spent on distribution activities (includes all dispensing and specialised hospital manufacturing) was 37% and management activities (includes system approaches to the safe and effective use of medicines) was 16%;
- in Victoria, the state with considerable uptake of the PBS, the percentage of time spent on distribution activities by pharmacists has slightly increased in the last two years. There has also been a change in the use of pharmacy technicians, 24% of their time devoted to supporting clinical services and management activities;
- the role of pharmacy technicians is changing; more than 30 full time equivalent positions were involved in supporting clinical pharmacy activities;
- the vast majority (94%) of hospital pharmacy services offer some form of clinical service to some or all of their overnight patients; however only 75% offer clinical services to some or all of their same day patients;
- the clinical service delivery model used ranges considerably across and within states and hospital peer groups; 55% of hospital pharmacy services have a mixed clinical service model in their hospital;
- 7 hospitals offer a seven day a week clinical pharmacy service and 19 hospitals have clinical pharmacy services available in emergency departments and 10 in pre-admission clinics.
- 32 hospital pharmacy services offer non-admitted or discharge patients access to medicines through the Pharmaceutical Benefits Scheme (PBS);
- 32% of hospital pharmacy services offer a comprehensive distribution service to non-admitted patients and 28% offer a comprehensive service to discharge patients;
- access to the PBS is not the only factor driving the level of service delivered, 66% of hospitals with access to PBS offer a comprehensive service to non-admitted patients and 75% a comprehensive service to discharge patients;
- the distribution service delivery model used for inpatients ranges considerably across and within states and hospital peer groups. Australian public hospitals generally use a hybrid distribution

model for inpatients where a ward-based system is supported by an individual patient-based system.

General points are:

- Workforce shortages for hospital pharmacists have been evident for several years both in Australia and overseas.
- This shortage is more acute in the public hospital sector, which is inflexible with salary/conditions in response to supply/demand pressures.
- Access to a comprehensive clinical pharmacy service improves patient outcomes; pharmacy resources within Australian hospitals are insufficient to met current demand and the current shortage is exacerbating the issue.
- Such a shortage has negative impact on patient care (increasing risk to consumers) as well as further spiralling negative effects on job satisfaction and increased pharmacist vacancies (see Figure 1).

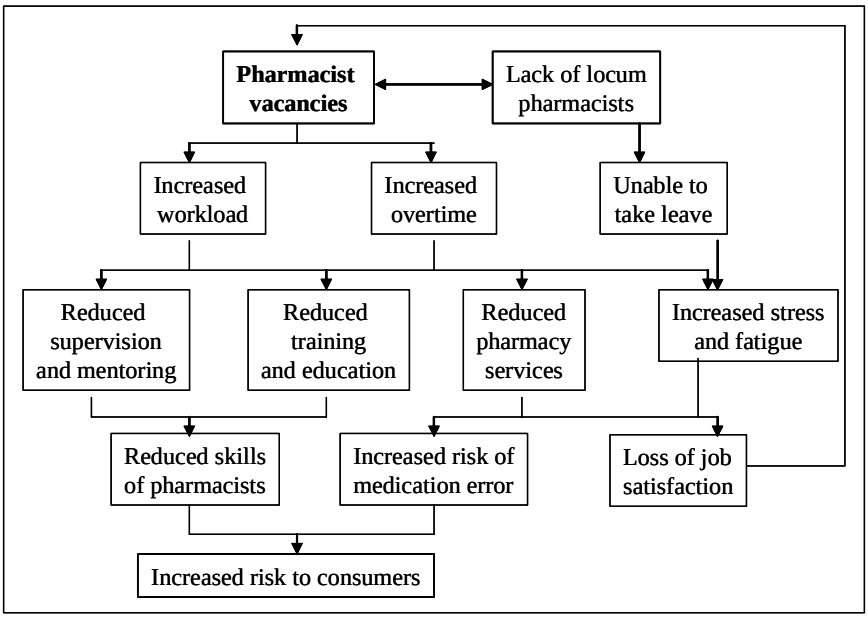


Figure 1: Impact of workforce shortage (from S.Kainey)

- One American study noted that none of the competency requirements adopted for pharmacy colleges and schools in America requires graduates to master any of the five clinical services associated with improved patient outcomes. (Two of these five clinical pharmacy services are listed as performance criteria in *The Competency Standards for Pharmacists in Australia 2003*, the other three are listed as supplementary performance criteria which describe an enhanced level of expertise. Generally newly qualified pharmacists would not be expected to meet supplementary performance criteria.) The authors suggest that the student's individual skill set is determined by preceptors at the clinical sites where students undertake training and is dependent on the clinical services offered at the sites. **This highlights the need for undergraduate students and pre-registration pharmacists to have considerable exposure to the hospital practice setting prior to their registration as a pharmacist, in order to be "job-ready".**
- SHPA strongly supports increased hospital based pre-registration training. SHPA supports and facilitates hospital based training for all undergraduate pharmacy students in most states, ensuring exposure to the hospital sector, and is also actively involved in promoting hospital based pre-registration training.
- SHPA has identified that 75% of newly qualified pharmacists who have worked in hospital undertook their pre-registration training in a hospital and that a positive experience during this pre-registration year is an important factor in their decision to work in hospital after qualification.

- Hospital pharmacists frequently work in community pharmacies and many pharmacists move from the hospital to the community sector. Relatively few pharmacists move from the community to the hospital sector. This is probably linked to the gap in remuneration between the sectors; this gap is a greater issue for newly qualified pharmacists. There is no real barrier to community pharmacists practising in hospital, in fact the introduction of the PBS into public hospitals has increased similarities between the sectors. However many pharmacists believe that they require post graduate qualifications to work in the hospital sector. **SHPA is working to change this perception and assure pharmacy graduates that hospital pharmacy is an option at any time during their career.**[4]
- Eighty percent of hospital pharmacists work in principal referral or specialist hospitals. The majority of hospital pharmacists work in metropolitan areas (> 85%); this is not surprising as most hospital services are located in densely populated areas. Many pharmacists in rural areas, particularly hospitals with less than 2-3 FTE, experience difficulties in taking annual leave and attending continuing education and professional development activities. This greatly impacts on job satisfaction. **The availability of locum and relieving pharmacists is a crucial issue for pharmacists in rural areas.**
- SHPA strongly supports the national competency standards for pharmacists. It considers that only individuals who have achieved registration with the relevant Pharmacy Board, with appropriate work based experience, should be classified and employed as pharmacist. **Therefore SHPA supports current registration requirements and the Australian Pharmacy Examining Council (APEC) process for pharmacists who have been educated overseas, as being fundamental to protect consumers.**

1.2. Exacerbations caused by system constraints

- There has been an increase in number of places available at pharmacy schools across Australia in response to the ongoing shortage of pharmacists, but this has not been matched with funding for clinical placements as undergraduates or post-graduate (pre-registration) training places. With more professional services being offered via community pharmacy and other pharmacy practice settings; this is a cogent reason to train more pharmacists in hospital practice and to ensure that the knowledge from hospital practice is brought to community-based services such as home medicine reviews and medicine reviews in residential and aged care facilities.
- To be "job ready", pharmacy graduates are required to undertake undergraduate training and a pre-registration training year prior to registration as a pharmacist. It has been estimated that nearly 1,150 pharmacy students will be graduating in 2005. There has not been a corresponding increase in the number of training positions funded in the hospital sector. There are approximately 170-200 pre-registration positions available in hospitals across Australia; this equates to one position for every six graduates. **SHPA has identified that pre-registration exposure to hospital practice is the major driver for newly qualified pharmacists choosing to work in hospital, thus increasing the number of pre-registration training places in Australia's hospitals should be a key recruitment strategy for the hospital sector.**[5]
- Workforce participation data are difficult to compile and usually several years behind. In recent years, SHPA has undertaken (self-funded) its own national surveys of hospital pharmacy vacancy rates in order to formulate actions based on evidence. Although pharmacists are registered, there is no national system, so pharmacists may be registered in several jurisdictions and reliable numbers of registered pharmacists are not easily obtainable.
- Workforce planning for pharmacy is dominated by the need for community based services as less than 15% of pharmacists work in the hospital sector. Any planning for the hospital sector usually occurs at a hospital or state level. A national workforce plan for hospital pharmacists is needed as to address the vacancy rates as well as to adequately plan for the implementation of existing government policies on access, equity, medication safety, quality use of medicines or continuum of care.
- The feminism of pharmacy, as for other health professions, has changed the male/female ratios dramatically. This must be recognised in planning the way forward and to ensure that female pharmacists maintain contact within the workforce to sustain overall participation rates.

- The hospital pharmacy workforce is predominately female. One in three hospital pharmacists work part-time and 5% of SHPA membership works less than 45 days per year. This has implications for staff retention, a perceived lack of opportunity for promotion (the majority of senior management positions are held by male pharmacists) and the attraction of female pharmacists back to the sector when they wish to re-enter the workforce.
- A range of re-entry courses are held across Australia however most focus on community practice and are costly to the pharmacist concerned. Formal re-entry programs, including placements, should form part of the recruitment strategy for the hospital sector.
- Overseas trained pharmacists, APEC candidates often experience difficulty in obtaining suitable pre-registration positions. Currently there are no hospital based pre-registration positions funded for APEC candidates and hospital based training may not be the best option for all candidates. However there may be a case for hospital based pre-registration training for some APEC candidates and SHPA would support the funding of hospital based training positions to facilitate the registration of overseas pharmacists through the APEC process.

1.3. SHPA Recommendations

- Introduce a system of **national** registration for pharmacists and use this to obtain timely workforce participation data.
- Develop a plan for pharmacy that addresses the needs of the hospital sector on a **national** basis, rather than duplicating the same work jurisdiction by jurisdiction.
- Fund places for pre-registration pharmacists on a **national** basis, with the aim for places for 50% of all pharmacy graduates. **Increasing the number of pre-registration training places in Australia's hospitals should be a key recruitment strategy.**
- Fund pharmacist clinical educator positions on a national basis to support the clinical education of the increased numbers of undergraduate and post-graduate (pre-registration) pharmacists in hospitals.
- Fund a national re-entry program, including placements, for pharmacists that covers all sectors, including hospital practice. **A re-entry program specific to the hospital sector may be required to attract pharmacists with previous hospital experience and provide community pharmacists with a structured program to enter the hospital sector.**
- Increase the attractiveness of the hospital sector by establishing child care facilities at all Australian public hospitals, to facilitate return to work and increased overall participation rates.
- Establish a separate national system for hospital based training to facilitate the registration of overseas pharmacists through the APEC process.
- Continue promotion of hospital pharmacy as an "option at any time of your career" to all pharmacy students with funding to support promotion at each pharmacy school each year. (Refer www.shpa.org.au/careers/careers.html)

2. Mal-distribution of hospital pharmacists

2.1 Key points

Shortages of hospital pharmacists are more acute in rural and regional areas, as well as outer metropolitan areas. Some regions of Queensland have not had pharmacists in hospitals for several years. The most important factors in the job satisfaction and retention of pharmacists identified by Victorian hospital pharmacists in both metropolitan and rural areas were:

- the availability of sufficient and suitably qualified staff;
- hospital management's support for the practice of hospital pharmacy;
- professional development opportunities; and
- access to organised continuing education.

Hospital pharmacists in **rural areas indicated that the availability of locum** and relieving pharmacists was a crucial issue for them.

2.2 Exacerbations caused by system constraints

Due to cost constraints traditional advertising of vacant positions may not be done more than once, yet positions are vacant for months and years. Long term advertising is needed. Whilst this is available on some jurisdictional health websites, these are not broadly known or accessed. Therefore, pharmacists who may be searching for positions do not know that they are even available. Pharmacists, including those job-seeking from overseas, need a "one-stop" shop that they can browse throughout their careers.

Rural support via the nationally funded system of the Rural and Remote Pharmacist Workforce Development Program (RRPWDP) is **limited** to community pharmacy (http://beta.guild.org.au/rural/).

There is a need to nationally fund 50-100 pre-registration pharmacist training positions in **rural hospitals under a new paradigm that encourages pharmacists to be competent and confident to work in all practice settings to support rural communities.**

The pharmacists of the future should be trained and skilled to take on a variety of roles across the continuum of care, in particular **for rural communities.**

They should be competent in community and hospital practice, as well as supporting medicines management reviews in residential aged care facilities, and undertaking home medicines reviews for the community. Where aboriginal health services are also close by, pharmacy services should be provided to support their quality use of medicines services. (Refer to scenarios described in SHPA submission to RRPWDP review July 2004 at www.shpa.org.au/pdf/whatsnew/rrpwdp_jul04.pdf).[10]

Components of the scheme should include:

- National funding to allow pre-registration pharmacists to be registered with an education provider for the whole pre-registration year. For example, Monash University currently offers a web based education program for pre-registration pharmacists. If all rural pre-registrants nationally (in both hospital and community) were funded and enrolled in that program their basic education needs would be covered.
- National funding for a national rural clinical supervisor would be needed to provide specialised one on one assistance and web based supervisory support on a national basis.
- National funding to attend the SHPA weekend seminars on introductory clinical pharmacy practice could be covered.
- Support for broader hospital training, the position should contain a three-month rotation to a metropolitan hospital/s, preferably the hospital/s with existing linkages associated with the medical intern or resident 'rural' rotations of each jurisdiction. This would assist to develop a **wider professional network** and to learn about a range of services that they could draw on to assist their future practice in rural areas.

- Encouragement for hospital pharmacist pre-registrants to spend part of the week in the hospital and part of the week in the local community practice throughout the year.

Some pre-registrant pharmacists on successful completion of the year could be offered a one year extension to take on a **locum relief role for the region**.

During times when the locum is not required, s/he could work at the base hospital. From this base, she could go out on visits to aboriginal health services and pharmacy depots to support services to these areas.

This one year extension program should have built-in incentives to encourage the pharmacist to stay on. This could include a salary loading and also **refund of HECS payments**, say for 2-5 years post registration. **This may develop into a mechanism to establish a cohort of rural pharmacist locums for all pharmacy practice settings**.

In addition, cover by these **locums** could also be used to permit the current pharmacist workforce to attend weekend clinical seminars, conferences or other professional development support, which is recognised as being an important retention factor, and is offered by the RRPWDP yet is almost impossible to attend at present, without locum back-up being available.

2.3 SHPA Recommendations

- Support a **national** website for all hospital pharmacist vacancies. SHPA has already established this via a Victorian sponsored project that is being promoted to pharmacy students nationally. The website is operational for NT, QLD and VIC, but is currently funded on a jurisdiction by jurisdiction basis. (Refer www.shpa.org.au/docs/jobs.html).
- **Nationally fund 50-100 pre-registration pharmacist training positions in rural hospitals under a new paradigm that encourages pharmacists to be competent and confident to work in all practice settings to support rural communities.**
- Fund a national **locum** pharmacist system that is specific for, or at least inclusive of hospital pharmacy.

3. Changing role for public and private sectors

3.1 Key points

Understanding the medicines management pathway

The medicines management pathway describes the cognitive and physical steps involved in the use of medicines with a focus on the consumer. The pathway is applicable to all medicines, independent of the setting, health professionals involved and funding source. An understanding of the pathway is essential when deciding on changes to the system and the potential impact on the safe and effective use of medicines.[2]

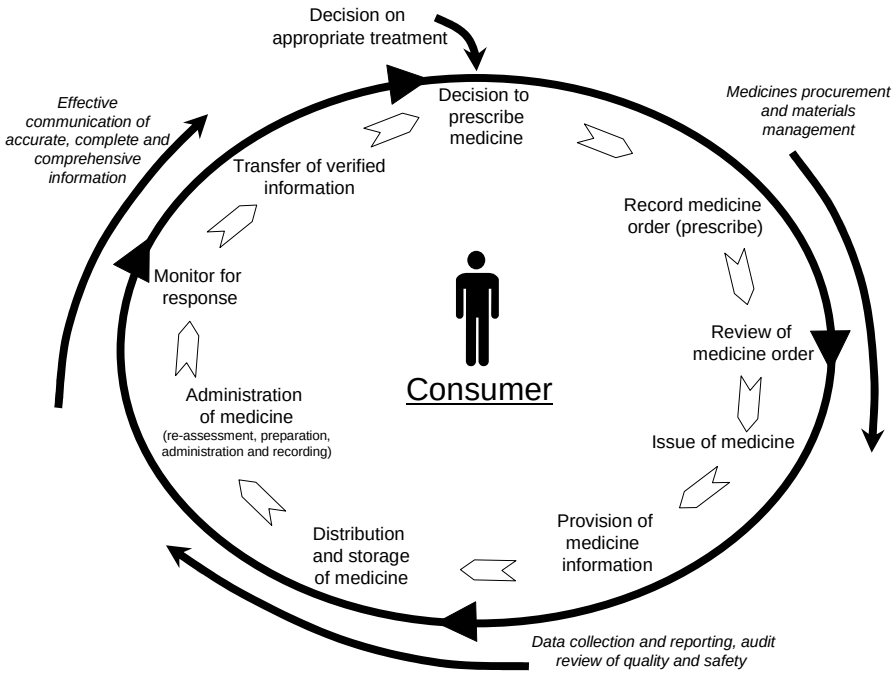


Figure 2: The medicines management pathway[2]

As health care changes, more complex services are being delivered in private hospitals and in the community sector, including at home.

It should be recognised that the genesis of many new pharmacist professional (cognitive) services was the acute teaching hospital sector e.g. medicine management reviews, clinical pharmacist interventions, use of medicine dose administration aids, hospital in the home, post acute care pharmacy services, community liaison pharmacists, medication safety services, outreach and medication liaison pharmacist services at discharge.

Pharmacists working in hospitals have an established role at all steps of the medicines management pathway. With more professional services being offered via community pharmacy and other pharmacy practice settings, the medicines management pathway concept with the consumer as the central focus, will play an increasingly greater role across the continuum of care.

This is a cogent reason to train more pharmacists in hospital practice and to ensure that the knowledge from hospital practice is brought into discussion about community-based services such as home medicine reviews and medicine reviews in residential and aged care facilities.

More roles for pharmacists will be developed in future Divisions of General Practice (or Primary Care), in nursing homes and residential Aged Care Homes and for other community based services. No doubt, there will be opportunities to further expand what are currently hospital-type services into these practice settings.

3.2 Exacerbations caused by system constraints

The funding systems for medicine costs and pharmacy services vary. The community sector is funded by the Australian government via the PBS and HIC. Public hospitals are funded by the state/territories. Private hospitals use a mix of Australian government funding, private health insurance, hospital funding and consumer self-funding.

This makes it extremely difficult, if not impossible to develop seamless services for consumers.

This results in **"unintended" service gaps for consumers** e.g. funding for a home medicine review is not available directly from a private or public hospital as they are unable to make a claim for reimbursement, due to process differences. The only way to achieve this is via a community pharmacy location, after a general practitioner referral.

Valuable research data from a Victorian government study of post-discharge medication management reviews initiated from public hospitals gives good information for a new service model. The study design stratified patients into three "risk" categories on discharge. "High risk" patients were visited by a community liaison pharmacist based at the hospital, within 7 days of discharge to home or an aged care home. Medium risk patients were referred for a home medicines review via the GP and community pharmacy. Low risk patients were referred to the district nursing service for follow-up.

3.3 SHPA Recommendations

- A key strategy to build a pharmacy workforce able to deliver the services required by an ageing population with complex medicine needs across the continuum of care (all health care settings) is **exposure to hospital based training**.
- **Ensure that funding systems are integrated. When funding new services (e.g. Australian government funded home medicines review) ensure that inefficiencies and inequities are not created for patients being treated under jurisdictions (e.g. public hospital discharge patients requiring a visit post-discharge), or via the private hospital sector.**

  This is essential to prevent **"unintended" service gaps for consumers**. Complementary funding is needed for community liaison pharmacists based in hospitals to undertake medication management reviews for consumers at "high risk" of medication mis-adventure within 7 days of discharge from hospital to home or residential aged care homes. This should be funded on a **national** basis.

4. Skills mix of hospital pharmacy staff

4.1 Key points

- One in three hospital pharmacists have post-graduate qualifications and more than 50% have more than 10 years hospital experience. **This makes the current workforce difficult to replace therefore retention strategies are crucial to retain pharmacists already working in the hospital sector.**
- Low income is more of an issue for pharmacists with fewer years of hospital experience; 26% of 20-30 year olds or 21% of pharmacists with less than 10 years experience give this as their reason for leaving the hospital sector. It becomes a less important factor the longer a pharmacist works in the hospital sector. The major reason new graduates, who had never worked in a hospital, would not work in a hospital is that remuneration is too low. **Adequate remuneration is crucial to support the recruitment and retention of younger pharmacists in hospitals**.
- Shortages of pharmacists with specialised expertise exist currently e.g. oncology pharmacists for cancer teams, sterile preparation pharmacists.
- The percentage of hospital pharmacist time devoted to clinical services is currently 47%, with 39% of time spent on distribution activities (this includes the specialised hospital manufacture of medicines e.g. injections, cancer chemotherapy, intravenous feeding for neonates / adults; and the dispensing medicines to non-admitted and admitted patients). If the role of **adequately trained hospital support staff could be expanded across all hospitals**, with a corresponding drop in amount of time pharmacists spend on distribution activities to 25%, the equivalent of 200 pharmacists FTE could be freed up to increase clinical services.[11]

  This would require an immediate increase in both the number of pharmacy technicians and the number of suitably pharmacy technicians with Certificate III or IV qualifications. The promotion and facilitation of formal training for pharmacy technicians is fundamental to being able to free up the time of pharmacists.

  Whilst national competencies for pharmacy technicians are a welcome **first step**, it must be recognised that the education and training for hospital pharmacy technicians in Australia is only starting and has a long way to go to compare favourably with our UK counterparts.[12]
- The bulk of the pharmacy technician workforce is employed in principal referral hospitals. The role of pharmacy technicians is evolving in these hospitals and strategies are required to ensure that a suitably qualified technician workforce is available to meet the demand for this workforce across all hospital types.
- SHPA considers that achievement of standard competencies to Certificate III and IV levels is the **first step** in expanding the role of pharmacy support staff in many hospitals in the short term. However, in the future an even higher level of competency will be required to maximise the utilisation of the pharmacy support staff workforce in Australia, to ensure registered pharmacists are able devote the majority of time to their patient-related clinical roles and Quality Use of Medicines activities.

4.2 Exacerbations caused by system constraints

- SHPA emphasises that support staff should have attained a minimum standard of competency in order to play a more active role in supporting the work of registered pharmacists. Consolidating the role of pharmacy support staff is currently impeded by the ad hoc training and qualifications achieved by individuals despite training being part of the clinical governance framework for hospital pharmacy services.
- Current levels of training are low as technicians can be recruited into jobs “off the street” to be trained in the workplace. This situation is almost impossible for small, rural, or understaffed hospitals to employ support staff as the supervision and training capacity is extremely limited.

- SHPA strongly supports the introduction of national competency standards for pharmacy support staff. It considers that only individuals who have achieved or are undertaking Certificate III or IV in Health Service Assistance with appropriate work based experience, should be classified and employed as hospital pharmacy technicians.

  However **less than 40%** of pharmacy technicians currently employed in hospitals have any formal qualification as a pharmacy technician or pharmacist.

4.3 SHPA Recommendations

- Incentives need to be developed to retain pharmacists in hospitals during their formative years. A tactic could be the **reimbursement of HECS** fees for pharmacists working in public hospitals 2-5 years post-graduation. This has flexibility to be applied where needed in areas of skills shortage. This incentive can "turned on/off" fairly easily.
- Adequate remuneration and a **national award** for pharmacist and pharmacy support staff would reduce wasted time in developing jurisdictional solutions that are different e.g. different grading systems for support, technician and pharmacist staff.
- **Restructure a national award** so that first grade salaries are comparable to community sector e.g. award system in South Australia. Starting from a higher base level ensures that the hospital pharmacist's salary keeps pace with their experience and level of expertise throughout their career.
- Development of a **senior clinician career path** is required, rather than the only route of promotion being to management, as in most awards.
- Access to salary packaging needs to be maintained in all jurisdictions.
- Incentives need to be developed to recruit and /or train pharmacists in all areas of **specialised skills shortage**, on a national basis (not just rural and remote areas).
- Support newly qualified staff to encourage them to stay in the hospital sector, by funding a mentoring system.
- A national workforce plan for pharmacy technicians and other support staff needs to be developed which will work towards:

  -increasing the number of suitably trained pharmacy support staff;

  -a more regulated entry system for pharmacy support staff;

  -putting in place appropriate training and education for all those working in hospital pharmacy;

  -developing and enforcing professional standards that are applied across Australia; and

  -providing new opportunities for technicians through a nationally portable qualification, development of skills that improve the variety and scope of their current role and improved career paths.

5. Productivity

5.1 Key points

Service delivery

The current shortage of pharmacists means that pharmacy managers need to improve productivity. The first three strategies below are related to distribution services (medicines procurement and materials management, record medicine order, issue of medicines and distribution and storage of medicines) and they could free up pharmacists or support staff already undertaking these tasks. Major strategies that could improve the productivity of hospital pharmacy services are:

1. **Improved bar-coding and information technology** support linked to a national medicine directory and coding system. The safety benefits of improved bar-coding will be limited until the development of single code for each medicine used and the routine use of reduce space symbology which allows manufacturers to barcode individual ampoules, blister packs or foil strips.
2. **The use of central robotics and automated medication distribution systems**. The shortage of pharmacists in the United Kingdom has driven the introduction of central robotics. The need to track the cost of medicines for billing has driven the use of automated medication distribution systems in the United States. These systems have considerable start up and ongoing costs and uptake may be limited to large hospitals.
3. **Electronic prescribing** has the potential to support clinical care and improve medication safety however initial changes in work practices would be limited to the distribution process.
4. **Improved use of pharmacy support staff** i.e. optimum use in hospitals with pharmacy technicians and introduction of pharmacy technicians in smaller hospitals. This could release pharmacists to undertake more clinical services or reduce the number of pharmacists required. This strategy is hampered by the availability of suitably qualified support staff.

Understanding prescribing rights

Whilst already underway, there is to further scope to expand the role of hospital pharmacists in emergency departments, pre-admission and outpatient clinics and in disease management roles. This includes limited prescribing functions associated with admission and discharge, management of specific medical conditions, chronic disease, immunisation and consumer education.

There is a move to broadly extend prescribing rights to more health professionals including pharmacist prescribing, where the prescribing rights of pharmacists are extended beyond “pharmacy only” and “pharmacist only” medicines. This may include the prescribing of a limited range of medicines, prescribing under management guidelines after a diagnosis is made by a medical practitioner (e.g. the prescribing of warfarin), the supply of repeat prescriptions, or for specific medicines where assessment by a medical practitioner is not usually required (e.g. the prescribing of emergency hormonal contraception). This approach has been trialled in hospitals in the United Kingdom and the United States and is under investigation at some hospitals in Australia.

SHPA has called for the introduction of national competency standards and registration for all health professionals involved in the prescribing of medicines.[13] **To ensure consumer safety and the appropriate use of medicines, SHPA believes that all health professionals involved in the prescribing of medicines should demonstrate a minimum standard of competency.** Errors are known to occur throughout the medicines management pathway, with much data to highlight the extent of error at the prescribing, dispensing and administration steps.

Potential side effects of medicines, the complexity of interactions between medicines and the extent of medicine related incidents are widely acknowledged. Consumers have the right to decide on the prescriber of choice for their medicines: a medical practitioner, pharmacist, nurse practitioner or other health professional. However the expectation of the individual consumer as well as the community about the safe delivery of health services supports a cautious approach to deregulation of prescribing rights for medicines. Prudent extension of prescribing privileges to a greater range of health professionals should only be undertaken in the context of competency standards.

Understanding the complexity of the medicines funding system

Health Ministers have already called for an exploration of a single national funding system for medicines. SHPA strongly supports a single national integrated system for funding medicines. This would have many potential benefits, including enhanced data on the use of medicines across all settings and potential reduction in duplication of some of the work of hospital drug & therapeutics committees (DTCs) etc.

The introduction of pharmaceutical reforms under the Australian Health Care Agreements, has meant the introduction of the PBS into the public hospital sector with reduced productivity for pharmacists **as they grapple with the "red tape"** associated with a system designed for community based services.[14] In a discussion paper on the funding of medicines in Australia's hospitals SHPA noted: It is important that any future reform in hospitals maintain the positive features of the current public hospital system.[15, 16] In particular:

- it supports all patients: non-admitted, inpatients and medicines required on discharge;
- the local evaluation and monitoring systems used to promote the quality use of medicines (by positive influence on all steps of the medicines management pathway) and manage the cost of medicines in hospitals;
- the highly efficient distribution systems for medicines currently used in hospitals in Australia; and
- the ability for hospitals to meet the clinical needs of individual patients, this includes access to investigational medicines and access to medicines for non-registered indications.

5.2 Exacerbations caused by system constraints

- Some regulatory issues are problematic, especially in small hospitals or satellite pharmacies in large hospitals, whereby pharmacy technicians are not permitted to work inside the pharmacy unless the registered pharmacist is present. Useful preparatory work, ordering / receipt of goods, receiving prescriptions and telephone messages (e.g. new patients have arrived) could be usefully undertaken if regulations were altered. SHPA is not suggesting that pharmacy technicians undertake work that requires the close supervision of, or the professional judgement of a registered pharmacist. However, some regulatory adjustments for hospitals could be explored.
- **The medicines funding system is an extremely complex topic.** Its very complexity is a cause of concern in the context of the health workforce shortage. The opportunity cost of time spent on "red tape" that could be streamlined, is reduced clinical services for patients. The plethora of current funding schemes (Australian, State/Territory and specific funds) continue to spawn **cost-shifting** activities that are negative for the safe and cost-effective use of medicines.

  A fee-for-service reimbursement system for medicines, such as the community based PBS, is labour intensive in hospital settings and **Australian Health Ministers have already noted opportunities for streamlining the administrative and prescribing aspects. To date, these changes have not been forthcoming and they will likely require the Australian government to *direct* the HIC to change the way that the PBS is used in public and private hospitals**. If changes are **not** made and using the Australian Government's estimate of the number of items that may be dispensed through the PBS, an additional 200 FTE pharmacists would be required for the system to go nationwide in public hospitals.

  Other structural inefficiencies of using the PBS in hospitals relate to the needs of hospitalised patients regarding quantities, range of medicines, need for authority prescriptions (for "standard" hospital care), reduction in local hospital DTCs being used to manage prescribing in hospitals.

  Use of the PBS as a hospital reimbursement method could nullify productivity gains in distribution services obtained through the better use of support staff, robotics etc. Software supporting medicines distribution in most Australian hospitals does not have the capacity to support the PBS. This requires considerable "work around" e.g. double entry of data or the need to extract data daily from the pharmacy's PBS software to provide information to the hospital's system usual IT system. This is labour intensive and may introduce error risks if patient medication lists are incomplete.

  Space does not permit the further exploration of this topic here. **The "take home" message is that we must be able to do better.** Consider the following scenario that has been published in the Journal of Pharmacy Practice and Research 2005; 35; 165.

PBS, ANS, SOS!

To the Editor

Pharmaceutical reform in public hospitals has allowed the hospitals access to subsidised cytotoxic chemotherapy listed on the Pharmaceutical Benefits Scheme (PBS).[1] Pharmaceuticals on the PBS are under various prescribing limitations: some medicines require prior authority approval; some are restricted benefits and many are available without restriction apart from quantity limits.

Under phase two of the reforms, the Commonwealth and Victorian Governments worked together to simplify the requirements for cytotoxic chemotherapy to decrease the workload for oncologists.[1] An Internet-based, real-time, automated authority notification system (ANS) was established. The ANS allows doctors to prescribe using the patient's medication chart. From the chart, pharmacists enter the information into the pharmacy dispensing system. The software flags any item requiring authority approval. An electronic message stating the medicine required and the patients' medical condition, is sent to the Health Insurance Commission (HIC) and an electronic notification then sent back. While the oncologist's workload may have decreased, the impact of the ANS on pharmacy is unknown.

An issue has arisen with the ANS as it does not allow for quantities over the PBS limit to be dispensed. An example of this is a patient receiving 700 mg of irinotecan. Under the previous paper system, the prescriber would obtain an authority for seven vials of 100 mg. This would entail one computer dispensing entry. Using the ANS, only two vials of 100 mg can be processed daily (PBS limit), therefore the pharmacist would need to enter a maximum of two vials daily (up to 700 mg) for four days as four computer-dispensing entries. Increased quantities can only be obtained under the paper system. While it is possible to override the ANS by the doctor obtaining a written authority, this defeats the ideals of the ANS.

We set out to retrospectively determine the impact of the ANS on pharmacy workload at a major teaching hospital by analysing all PBS chemotherapy orders claimed by the hospital pharmacy in February 2005. We tallied the number of computer dispensing entries required to complete the ANS, then determined the number of computer dispensing entries that would have been required using the paper system. During the survey period there were 762 computer-dispensing entries under the ANS and an equivalent of 599 computer-dispensing entries would have been required using the paper system. ***The ANS increased pharmacy's workload for dispensing these drugs by 27%.***

The ANS was introduced to decrease workload for oncologists. No thought, it seems, was given to the impact on pharmacy. An additional issue is that for each item processed, one patient contribution is removed from the HIC reimbursement. In our example, under the paper system, only one patient contribution will be deducted. Using the ANS, the patient would receive four contributions toward their safety net, and the pharmacy would have four contributions removed from their reimbursement. Of more concern is the resulting patient computer profile. In our example, the ANS shows four entries for the one item, creating a confusing computer patient profile.

The ANS in its current form is in need of repair. An urgent SOS must be signalled to authorities. Unless the ANS is improved, public hospital pharmacies should seriously consider returning to the paper system.

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References
1. Pharmaceutical reform in Victoria's Public Hospitals. Available from <www.health.vic.gov.au/pbsreform/clinic.htm>.

5.3 SHPA Recommendations

- Continue support for the national e-health agenda, national medicine directory / code and develop software to support the distribution of medicines via both the PBS and current hospital processes.
- Establish some tests sites for central robotics to support dispensing in hospitals to save labour.
- Ensure that any extension of **prescribing rights is competency based** to protect consumers.
- Examine some hospital pharmacy test sites and explore options to enable pharmacy technicians to work inside the pharmacy department, if the supervising pharmacist is temporarily outside the department, but remains accessible via telephone.
- **Immediately reduce "red-tape"**, then develop a fiscally responsible, national system for funding medicines. This would need to be a hospital PBS (or other name) that recognises the needs of the hospital patient population base. **It should minimise unproductive "red-tape", yet ensure financial accountability and responsibility, and eliminate "cost-shifting" between jurisdictions.**

6. Quality

6.1 Key points

Safe and effective medicine use is the core business of hospital pharmacists. A range of **interdependent** services are provided by pharmacists in hospitals.[17]

Clinical pharmacy is the practice of pharmacy as part of a multidisciplinary healthcare team directed at achieving quality use of medicines and includes:

- participation in the management of individual patients;
- application of the best available evidence in everyday clinical practice;
- contribution of clinical knowledge and skills to the healthcare team;
- identification and reduction in risks associated with medicines use;
- involvement in the education of patients, carers and other health professionals;
- involvement in research.

Examples of clinical pharmacy services that have major impact on medication safety and therefore patient safety are:

- The compiling of a complete and accurate medication history for the patient on admission to provide an accurate baseline of medication information which is fundamental to future safe prescribing, dispensing, administration and patient education;
- The prospective review of medication orders before medications are administered;
- Decision support provided by pharmacists to prescribers at the time therapy is initiated or a medication is prescribed;
- Improved communication between hospital and community based healthcare providers to facilitate the transition between hospital and the community at discharge; and
- Patient education and medication counselling.

Clinical pharmacy services can save lives, improve patient care and reduce the length of hospital stay for many people. With the focus on individual patients, comprehensive and accountable clinical pharmacy services are an essential component of contemporary healthcare practice.

As noted earlier the range of clinical pharmacy services offered to patients varies enormously across and within hospitals. Gaps in service provision and inequity of access to clinical pharmacy services is a major concern and impacts on patient outcomes.

Pharmacy distribution services:

- Ensure medicines are available when they are required;
- Maximise the use of individual patient supply systems;
- Store medicines properly to ensure the long term safety of the product and prevent incorrect selection during the dispensing or administration process; and
- Label and package medications appropriately including the use of bar coding to assist with identification checks.

Pharmacy management, policy and procedures include:

- Management of medicine prescribing policies;
- Adverse drug event alert systems;
- Prescribing protocols for high risk medicines;

- The review of current systems and introduction of systems such as electronic prescribing with decision support, bar coding and distribution systems that remove opportunities for error; and
- Educating hospital staff about policies and procedures and their role in improving medication safety.

By working to ensure that medicine therapy is optimum, safe and cost-effective, the provision of pharmacy services serves the interests of individual patients and also the wider community.

Pharmacy managers are continually investigating all avenues that may improve patient safety, minimise medication incidents, reduce the labour-intensive distribution functions and facilitate accountability of medication use. This includes increasing the number of pharmacy support staff used and extending the role of pharmacy support staff into new areas.

In summary, pharmacists are uniquely positioned via their roles in the medicines management pathway to support consumers to obtain maximum benefits from their medicines and to minimise adverse events.

Pharmacists are able to review the entire range of medicines that a consumer is taking, no matter who is prescribing.

This is a unique and positive "gatekeeper" role that brings together most of the aspects of medicines use including the quality and safety, as well as the various governance aspects (funding, HIC, good prescribing protocols etc.).

6.2 Exacerbations caused by system constraints

- Services related to medicines use for consumers, medication safety and reducing adverse events require a full complement of pharmacists and pharmacy support staff in our hospitals.
- SHPA members working in public hospitals state that the current staffing crisis is overwhelmingly the most important issue that impacts their ability to provide patient care.
- 400-600 pharmacists need to be recruited to the hospital sector in the next two to five years.
- Hospital pharmacists are a skilled resource and hard to replace, therefore retention strategies are crucial to retain the current workforce.
- The health funding system also spawns a range of excellent quality improvement projects that cease, once the funding runs out. There is no mechanism to take up good, cost-effective systems on a national basis. If funds are there to support projects or trials, then we need to be able to adopt sensible ideas that emerge e.g. many jurisdictions have projects where pharmacists work in emergency departments and pre-admission clinics. Such evidence could be leveraged for national application, rather than being funded on a hospital by hospital basis.

  Another current example is the Victorian project whereby patents identified at "high risk" are visited by a community liaison pharmacist based at the hospital, within 7 days of discharge to home or an aged care home (mentioned previously see page 19).

6.3 SHPA Recommendations

- A **national** action plan for hospital pharmacists is funded and implemented.
- Immediate changes to services to ensure that **clerical and bureaucratic obligations** do not reduce productivity and remove time available for the direct clinical care of patients by pharmacists.
- Establish a mechanism whereby cost-effective, evidence based service improvement models that have been developed as projects can be resourced to be delivered on a national basis.

7. Job satisfaction

7.1 Key points

Pharmacists who intend staying in hospital sector generally have a high level of job satisfaction and a positive attitude towards their work.

Gender, age, position, or length of experience in the hospital sector are not strong indicators of the likelihood of pharmacists to stay in the hospital sector. The most important factors in the retention of, and job satisfaction identified by Victorian hospital pharmacists in both metropolitan and rural areas were:

- the availability of sufficient and suitably qualified staff;
- hospital management's support for the practice of hospital pharmacy;
- professional development opportunities; and
- access to organised continuing education.

Low income is more of an issue for pharmacists with fewer years of hospital experience; 26% of 20-30 year olds or 21% of pharmacists with less than 10 years experience give this as their reason for leaving the hospital sector. It becomes a less important factor the longer a pharmacist works in the hospital sector.

The major reason new graduates, who had never worked in a hospital, would not work in a hospital is that remuneration is too low. **Adequate remuneration is crucial to support the recruitment and retention of younger pharmacists in hospitals**.

7.2 Exacerbations caused by system constraints

Workforce shortages for hospital pharmacists have been evident for more than a decade in Australia. Pharmacy resources within Australian hospitals are insufficient to met current demand and the current shortage is exacerbating the issue. This shortage is more acute in the public hospital sector, which is inflexible with salary/conditions in response to supply/demand pressures.

The inability to deliver high quality pharmacy services is the major concern of pharmacists currently working in the hospital sector.

The shortage has a negative impact on patient care (increasing risk to consumers) as well as further spiralling negative effects on job satisfaction and increased pharmacist vacancies.

7.3 SHPA Recommendations

The same recommendations as for Section 4.3 are valid here.

References (with net links)

1. SHPA position statement Clinical pharmacists improve patient outcomes - August 2003
www.shpa.org.au/pdf/positionstatement/clin_pharm_ps_aug03.pdf

2. Stowasser DA, Allinson YM, O'Leary KM. Understanding the medicines management pathway. J Pharm Pract Res 2004; 34: 293-6
www.shpa.org.au/pdf/whatsnew/medmxpathjppr1204.pdf

3. SHPA position statement Shortage of hospital pharmacists compromises patient care - August 2003
www.shpa.org.au/pdf/positionstatement/short_ps_aug03.pdf

4. Hospital Pharmacy - a world of possibilities
www.shpa.org.au/hosppharmbrochure.pdf
www.shpa.org.au/hosppharmbklt.pdf

5. SHPA response to National Health Workforce Strategic Framework - April 2004
www.shpa.org.au/pdf/whatsnew/nhwsf_response.pdf
www.shpa.org.au/pdf/whatsnew/ahwoc_recomm.pdf

6. O'Leary KM, Allinson YM. Snapshot of Australian public hospital pharmacy workforce in 2003. J Pharm Pract Res 2004; 34: 104-8.
www.shpa.org.au/pdf/whatsnew/snapshot_jppr.pdf

7. Health Care Intelligence Pty Ltd. A Study of the Demand and Supply of Pharmacists, 2000 – 2010. January 2003
www.guild.org.au/public/researchdocs/demandsupplyexec2003.pdf

8. Dooley MJ, Allen KM, Doecke CJ et al. A prospective multicentre study of pharmacist initiated changes to drug therapy and patient management in acute care government funded hospitals. Br J Clin Pharmacol 2004: 57 4); 513-21
www.shpa.org.au/pdf/whatsnew/bjcp_cpis.pdf

9. O'Leary KM, Allinson YM. Pharmacy clinical and distribution service delivery models in Australian public hospitals. J Pharm Pract Res 2004; 34: 114-21.
www.shpa.org.au/pdf/whatsnew/pharmserv_jppr.pdf

10. Allinson YM. SHPA input into the evaluation of the Rural and Remote Workforce Development Program (RRPWDP) - 2 July 2004
www.shpa.org.au/pdf/whatsnew/rrpwdp_jul04.pdf

11. O'Leary KM. Evidence based core clinical pharmacy services [editorial]. J Pharm Pract Res 2004; 34: 173.

12. SHPA position statement National competency standards for pharmacy technicians - August 2003.
www.shpa.org.au/pdf/positionstatement/prescribing_jun05.pdf

13. SHPA position statement National competencies for the prescribing of medicines - June 2005..
www.shpa.org.au/pdf/positionstatement/prescribing_jun05.pdf

14. SHPA position statement Pharmaceutical Funding Reforms - November 2000 - Proposed Introduction of the Pharmaceutical Benefits Scheme into Public Hospitals
www.shpa.org.au/pdf/positionstatement/pbs.pdf

15. SHPA position statement Funding for Medicines used in Public Hospitals - October 2002
www.shpa.org.au/pdf/positionstatement/medicines_funding_ps.pdf

16. SHPA Discussion Paper Moving Forward - The Funding of Medicines in Australia's Hospitals - May 2004
www.shpa.org.au/pdf/whatsnew/move_forward.pdf

17. SHPA position statement Hospital pharmacy services improve medication safety - August 2003
www.shpa.org.au/pdf/positionstatement/med_safety_ps_aug03.pdf