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*Abstract*

Many health care systems have looked to mid-level workers as a way of dealing with a growing shortage of professional human resources, while managing tighter budgets. Although initially opposed by the pharmacy profession, a category of support personnel was recognised formally by the South African Pharmacy Council (SAPC) as pharmacist's assistants, and has been an ever-growing part of health care delivery in both the public and private sectors since the late 1980s. The way in which such support personnel are trained and utilised was changed substantially in the post-apartheid era. Accredited private providers now cater for all such training in South Africa. Training is done in practice sites approved by the SAPC, with an assessment done on site or in assessment centres. Pharmacy legislation has provided for two categories of pharmacist's assistant – basic and post-basic level. An appropriate scope of practice has been developed for each cadre. Of note, post-basic assistants can work under indirect supervision in some settings. This concession is particularly important in primary care services at district level. Funding for pharmacist's assistant training can be accessed through the skills development system. There are currently 3 063 pharmacist's assistants or learner assistants registered with the SAPC. There are still considerable barriers to the efficient and effective utilisation of pharmacist's assistants, particularly in the public sector. A post structure and career path for assistants is urgently needed. This will be particularly true after 1 July 2005, when the Pharmacy and Medicines Acts become binding on the State.

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# pharmacist's assistant

## a case study of a mid-level worker option

### Introduction

In any health system in which human resources are at a premium, the use of mid-level workers (also referred to as sub-professionals) is a tempting policy option. If key health care professionals are in short supply or expensive, and certain routine, repetitive tasks normally undertaken by such professionals can be safely and efficiently delegated to suitably trained alternative cadres of mid-level workers, then exploration of this option would seem appropriate. This situation is particularly likely to occur if the tasks normally undertaken by the professional in question have changed over time. If these tasks have become more routine, requiring less cognitive skills or professional judgment, then such tasks are perhaps suited for delegation to an appropriate sub-professional group. The gain then is not just in efficiency – getting the same job done at a lower cost – but the use of mid-level workers may also free the professional to undertake more complex tasks. Professionals freed in this way may contribute to the effectiveness of health interventions, to improved quality of care or by addressing problem areas that have hitherto been neglected because of staffing and time pressures.

This chapter reviews the use of the pharmacist's assistant<sup>a</sup> as a case study of the use of mid-level workers. First, some attention is given to the development of this cadre locally, to the underlying forces that shaped the programme and to the barriers that had to be overcome. Then, the current status of the legislation relating to pharmacist's assistants is reviewed and available data on their training and deployment are presented. Finally, problems encountered over time and the immediate challenges for the future are outlined.

<sup>a</sup> For many years the official spelling was 'pharmacists' assistant', but since the grammatically incorrect version became entrenched in the Medicines Act, Pharmacy legislation has used the spelling 'pharmacist's assistant'.

### Background – initial developments and problems

The origins of a mid-level worker cadre in pharmacy date back to the earliest national legislation, enacted in 1928. In colonial as well as Union days, the training of pharmacists was essentially by apprenticeship, with two periods of full-time study at a College of Pharmacy. It was thus necessary to regulate the practice of those engaged in such on-the-job training, as well as to cater for those who failed to complete the training and gain entry to the Register of Pharmacists. Even after the passage of the Pharmacy Act in 1974, a category of 'unqualified assistant' was provided for, in order to allow those persons who had embarked upon training as pharmacists but not completed the entire training to practise in a limited capacity. This group continued to be recognised, but was not specifically encouraged or catered for in any deliberate manner.

The genesis of the modern pharmacist's assistant can be traced to the late 1960s, when the policy of 'grand apartheid' was being developed. It was realised that health facilities, notably hospitals, in areas to be designated as 'homelands' would, in all likelihood, be unable to attract professional pharmacists from the race group for which the 'homeland' was intended. An approach was thus made to the South African Pharmacy Board, arguing for the creation of a mid-level worker category that could provide the necessary pharmaceutical services in such areas. At the time, there was only the category of 'unqualified assistant', referred to earlier, which allowed those persons who had embarked upon training as pharmacists but had not completed the entire training to practise in a limited capacity. As in many other parts of the world, the idea of a formalised category of 'technicians' was not greeted with enthusiasm by all

pharmacists. While hospital pharmacists in the public sector were perhaps more favourably inclined to the idea, those in retail (or community) pharmacy were more likely to see a mid-level cadre as a threat to jobs. This period coincided with a major shift away from individual compounding of medicines by pharmacists towards the use of mass-manufactured proprietary products, which demanded major changes in pharmacy practice. This issue was debated repeatedly in the Pharmacy Board (later to become the South African Pharmacy Council, SAPC), only being resolved in the late 1980s. By this time, there were already a considerable number of such 'technicians' employed in State-operated hospitals, both in the nominally independent or self-governing 'homelands' and in South Africa itself.

Immediately prior to the immediate post-apartheid legislative reform process that began in 1995, the Pharmacy Act recognised four categories of pharmacist's assistants:<sup>1</sup>

- Pharmacists' Assistant (General) – those who had served an indentured apprenticeship under the Medical, Dental and Pharmacy Act of 1928; those who had obtained a recognised qualification as an assistant abroad; those that had qualified as pharmacists abroad, but whose qualifications were not recognised; and those registered as pharmacy students
- Pharmacists' Assistant (Public Sector)
- Pharmacists' Assistant (Private Sector)
- Pharmacists' Assistant (Industry).

Those in the 'General' category could perform the functions of both the private and public sector assistants, but not of those registered in the industry category. This latter category was controlled largely by the Pharmaceutical Manufacturers' Association (PMA), with its own set of in-house training courses in pharmaceutical production technology. The public and private sector categories were also trained in-house, but followed a curriculum laid down by the SAPC. All three categories (public, private sector and industry) wrote examinations set by the SAPC. The period of training lasted a minimum of two and a maximum of four years, and had to be undertaken in a pharmacy registered for that purpose by the SAPC. The training materials supplied by the SAPC were a series of study guides, covering the following areas:

- legal considerations relating to pharmacy
- medicines and the human body
- dispensing practice.

While a major move forward, the system of training and registration in effect from the late 1980s had a number of problems:

- Firstly, the SAPC was responsible for recognition of the qualifications involved as well as provision of all course materials.<sup>b</sup>
- Secondly, those assistants employed in private hospitals were expected to train and register as Pharmacist's Assistants (Private Sector), even though the training was geared to community pharmacy practice.
- Thirdly, once registered in a sector, assistants could only transfer to another sector if they underwent retraining for a minimum of six months.
- Finally, there was limited articulation with the training of pharmacists, except that pharmacy students who failed to complete their training could obtain some credit in that they could re-register as pharmacists' assistants (trainee) and complete the in-house training component in 18 months.<sup>c</sup>

As far as the pharmacist's assistants in the public sector were concerned, the most pressing problem was that their registration was not recognised by the State, in that there was no specific post structure or career path in place. Over the years, assistants had been employed in a variety of posts, most designated as 'auxiliary service officers'. This catch-all category covers in-house trained staff in various administrative areas in hospitals, not only in the pharmacy. Thus, even when they completed the SAPC training and registered as pharmacist's assistants (Public Sector), their job descriptions, rank and salaries did not necessarily change. As will be demonstrated, this remains a major challenge even eight years after the Pharmacy Act was fundamentally amended.

Another burning issue was that of the ratios of assistants to pharmacists. In general, no pharmacist could undertake the training of more than two first-year assistants (or one assistant and one pharmacist intern). The SAPC also expressed an opinion that "In the work situation a ratio of two qualified registered pharmacist's assistants to one pharmacist shall be regarded as the norm". Critically, these pharmacist's assistants could only perform their functions under the personal supervision of a pharmacist.

<sup>b</sup> In the industrial sector, training materials relating to industry-specific sections were provided by the PMA, but these assistants still had to study the material supplied by the SAPC.

<sup>c</sup> Pharmacy students could also register as assistants under prescribed conditions if their studies were interrupted. A similar provision has been made in the current regulations.

## The post-apartheid system

Following the change of government in 1994, an Interim Pharmacy Council was established in 1995 and charged with developing comprehensive changes to the Pharmacy Act. The Pharmacy Act was amended in 1997 and again in 2000.

### The legal provisions

The necessary sections of the Pharmacy Act were amended in 1997.<sup>2</sup> These sections, together with the relevant sets of Regulations published in terms of the Act, came into effect in November 2000 and brought about major changes to the way in which pharmacist's assistants were trained and registered. There are now two major categories of assistants, with a 'learner' category for each:<sup>d</sup>

- pharmacist's assistant (basic)
- pharmacist's assistant (post-basic).

Learners enjoy the scope of practice of the category for which they are being trained, under the supervision of a pharmacist. Those who had previously qualified as pharmacists' assistants were immediately recognised as pharmacist's assistants (post-basic). Transitional arrangements for those in training at the time were also provided.

Table 1 shows the scopes of practice of pharmacists and the two categories of assistants (basic and post-basic).

The major difference in the scopes of practice of the post-basic assistants compared to the basic level is therefore the ability to read and prepare prescriptions, following their interpretation and evaluation by a pharmacist, and the provision of information to the patient regarding the correct use of the medicine supplied. Post-basic assistants can also participate in sterile work and can order medicine. Some of the differences are however in conflict with the relevant provisions of the Medicines and Related Substances Act (Act 101 of 1965), as amended.<sup>4</sup> Some of the contradictions remain unresolved and will become more important as the Pharmacy and Medicines Acts become binding on the State after 1 July 2005. For example, small-scale manufacturing, as opposed to extemporaneous compounding, is not allowed by the Medicines Act.

The Medicines Act makes no provision for the different categories of assistant and only contemplates personal supervision of all assistants by a pharmacist. In contrast, the Practice Regulations to the Pharmacy Act provide for indirect supervision of pharmacist's assistants (post-basic) under very particular circumstances. Regulation 12 reads as follows: "Notwithstanding the provisions in regulation 11, a pharmacist's assistant registered in the category pharmacist's assistant (post-basic) may perform the acts or provide services as prescribed in sub-regulations 11(5), 11(6), 11(8) and 11(9), as well as the reading and preparation of a prescription, the selection, manipulation or compounding of medicine and the labelling and supply of medicine in an appropriate container under the indirect personal supervision of a pharmacist: provided that such indirect personal supervision will take place only under the following circumstances:

1. the services are provided or acts are performed at a primary health care clinic or any other facility as approved by council;
2. only re-packaged medicines or patient ready packs are provided;
3. written and up-dated protocols and standard operating procedures are available describing clearly the responsibility of the pharmacist's assistant and pharmacist under whose indirect personal supervision the pharmacist's assistant performs the acts and provides the services; and
4. the pharmacist under whose indirect personal supervision the pharmacist's assistant performs the acts and provides the services visits the pharmacist's assistant at the primary health care clinic or other facility as approved by council for purposes of supervision and support, which visits must be documented and take place at least once a month".

The acts referred to in sub-regulations 11(5), 11(6), 11(8) and 11(9) are "the distribution and control of stock of Schedule 1 to Schedule 7 medicines or scheduled substances", "the ordering of medicine and scheduled substances up to and including Schedule 7 according to an instruction of a person authorised in terms of the Medicines Act to purchase or obtain such medicine or scheduled substance", "the provision of instructions regarding the correct use of medicine supplied" and "the provision of information to individuals in order to promote health". Although this provision is not limited to State-operated primary health care clinics, no other facilities have as yet applied for or obtained permission to use assistants in this manner.

<sup>d</sup> Pharmacy students are initially registered as assistants in the basic category (gaining post-basic status after the second year) for the purposes of practical training only, and will not be considered in any depth in this chapter.

**Table 1: Scopes of practice of pharmaceutical personnel**

Categories of persons		
Pharmacist's assistant (basic)	Pharmacist's assistant (post-basic)#	Pharmacist
<p>The following, under personal supervision of a pharmacist:</p> <ul style="list-style-type: none"> <li>✧ the sale of Schedule 1 medicines or scheduled substances</li> <li>✧ assist with the compounding, manipulation or preparation of a non-sterile medicine or scheduled substance according to a formula and standard operating procedures approved by the responsible pharmacist</li> <li>✧ assist with the manufacturing of a non-sterile medicine or scheduled substance according to a formula and standard operating procedures approved by the responsible pharmacist</li> <li>✧ the re-packaging of medicine</li> <li>✧ the distribution and control of stock of Schedule 1 to Schedule 6 medicines or scheduled substances</li> <li>✧ the provision of information to individuals in order to promote health.</li> </ul>	<p>The following, under personal supervision of a pharmacist:</p> <ul style="list-style-type: none"> <li>✧ the sale of Schedule 1 and Schedule 2 medicines or scheduled substances</li> <li>✧ assist with the compounding, manipulation or preparation of a non-sterile or sterile medicine or scheduled substance according to a formula and standard operating procedures approved by the responsible pharmacist</li> <li>✧ assist with the manufacturing of a non-sterile or sterile medicine or scheduled substance according to a formula and standard operating procedures approved by the responsible pharmacist</li> <li>✧ the re-packaging of medicine</li> <li>✧ the distribution and control of stock of Schedule 1 to Schedule 7 medicines or scheduled substances</li> <li>✧ the ordering of medicine and scheduled substances up to and including Schedule 7 according to an instruction of a person authorised in terms of the Medicines Act to purchase or obtain such medicine or scheduled substance</li> <li>✧ the reading and preparation of a prescription, the selection, manipulation or compounding of the medicine, the labelling and supply of the medicine in an appropriate container following the interpretation and evaluation of the prescription by a pharmacist</li> <li>✧ the provision of instructions regarding the correct use of medicine supplied</li> <li>✧ the provision of information to individuals in order to promote health.</li> </ul>	<ul style="list-style-type: none"> <li>✧ the provision of pharmaceutical care by taking responsibility for the patient's medicine related needs and being accountable for meeting these needs, which shall include but not be limited to the following functions: evaluation of a patient's medicine related needs by determining the indication, safety and effectiveness of the therapy; dispensing of any medicine or scheduled substance on the prescription of a person authorised to prescribe medicine; furnishing of information and advice to any person with regard to the use of medicine; determining patient compliance with the therapy and follow up to ensure that the patient's medicine related needs are being met; and the provision of pharmacist initiated therapy*</li> <li>✧ the compounding, manipulation, preparation or packaging of any medicine or scheduled substance or the supervision thereof*</li> <li>✧ the manufacturing of any medicine or scheduled substance or the supervision thereof*</li> <li>✧ the purchasing, acquiring, importing, keeping, possessing, using, releasing, storage, packaging, repackaging, supplying or selling of any medicine or scheduled substance or the supervision thereof*</li> <li>✧ the application for the registration of a medicine in accordance with the Medicines Act*</li> <li>✧ the formulation of any medicine for the purposes of registration as a medicine</li> <li>✧ the distribution of any medicine or scheduled substance</li> <li>✧ the repackaging of medicines</li> <li>✧ the initiation and conducting of pharmaceutical research and development</li> <li>✧ the promotion of public health.</li> </ul>

Source: Regulations to Pharmacy Act (Minister of Health Regulations relating to Practice of Pharmacy Government Notice No. R. 1158, Government Gazette No. 21754 20 November 2000)

Notes: # these documents make mention of Schedule 7 medicines. The schedules to the Medicines Act have subsequently been renumbered. Medicines that were previously in Schedules 6 and 7 are now listed in Schedule 6. Medicines previously listed in Schedules 8 and 9 are therefore now listed in Schedules 7 and 8 respectively.

\* These are 'the acts specially pertaining to the profession of a pharmacist', as defined in the Regulations.<sup>3</sup>

Although provision is made for exceptions, the general rule is that no pharmacist may supervise more than three pharmacist's assistants. In addition, the Regulations provide that no pharmacist may indirectly supervise more than five pharmacist's assistants (post-basic), in terms of regulation 12.

## Training of pharmacist's assistants

In accordance with its role as an Education and Training Quality Assurance Body (ETQA) and as host of the Standards Generating Body (SGB) for pharmacy, the SAPC is no longer the provider of training materials or the examiner of trainee assistants.<sup>e</sup> Instead, the SAPC approves providers of training and the relevant courses, based on Unit Competency Standards. These Unit Standards provide the 'outcomes' or competencies required of assistants presenting themselves for assessment. The Unit Standards are shown in Table 2.

Different combinations of these competencies are required in various categories of pharmacy (community, hospital, wholesale, manufacturing). For example, while all basic level

assistants must be competent in BL4-8, those practising in community pharmacy must also demonstrate competency in BL1 and BL3. Those practising in hospitals must show also competency in BL2.

The current approved providers are as shown in Table 3. As can be seen, the range of providers and courses is limited in some categories.

A minimum of 12 months in-service training must be provided under the supervision of a tutor approved by the SAPC. The place in which this training takes place – either a community, hospital (institutional), wholesale or manufacturing pharmacy – must also be approved by the SAPC for this purpose. A ratio of 3 pharmacist's assistant (learner basic) or 2 pharmacist's assistant (learner post-basic) per tutor pharmacist is specified. The SAPC has also registered assessors who determine whether learner assistants have achieved the competencies stated. Strict criteria for the approval of providers, course materials and assessors have been provided by the SAPC.

**Table 2: Unit Standards for pharmacist's assistants**

Categories of assistant	
Pharmacist's assistant (basic)	Pharmacist's assistant (post-basic)
UNIT BL1: Provision of health advice, information and pharmacy products directly to the public	UNIT PBL1: Issuing of pharmacy products
UNIT BL2: Provision of pharmacy products in hospital pharmacy	UNIT PBL2: Stock control
UNIT BL3: Pharmacy marketing	UNIT PBL3: Manufacturing / compounding of pharmaceutical products
UNIT BL4: Stock control	UNIT PBL4: Packing and / or pre-packing of pharmaceuticals
UNIT BL5: Manufacturing / compounding of pharmaceutical products	UNIT PBL5: Control and distribution of finished pharmaceutical products
UNIT BL6: Packing and / or pre-packing of pharmaceuticals	UNIT PBL6: Collect information for research purposes
UNIT BL7: Control and distribution of finished pharmaceutical products	
UNIT BL8: Collect and organise information for research purposes	

Source: SA Pharmacy Council; 2005

<sup>e</sup> In terms of the National Qualifications Framework, Standard Generating Bodies (SGBs) are responsible for generating unit standards and qualifications related to the relevant field of learning. Education and Training Quality Assurance Bodies (ETQAs) are responsible for quality assurance of the delivery of standards and qualifications. For more details see <http://www.saqqa.org.za>

**Table 3: Approved providers of pharmacist's assistant training (✓)**

Provider	Pharmacist's assistant (basic)				Pharmacist's assistant (post-basic)			
	Community	Institutional	Wholesale	Manufacturing	Community	Institutional	Wholesale	Manufacturing
Health Science Academy	✓	✓	✓	✓	✓	✓	✓	✓
University of Limpopo (Medunsa)	✓	✓	✓		✓	✓		
S Buys Training and Development Academy	✓	✓			✓	✓		
Purchase Milton and Associates Academy (Sibanye)	✓	✓	✓		✓	✓	✓	
School of Comprehensive Health Education*	✓	✓			✓	✓		
Community Development Unit	✓	✓			✓	✓		
Intec College*	✓	✓			✓	✓		

Source: SA Pharmacy Council; 2005

Note: \* these providers operate in terms of a licence agreement with S Buys (Pty) Ltd.

At first glance, the training of pharmacist's assistants would appear to be a model for the operation of the National Qualifications Framework, as governed by the South African Qualifications Authority (SAQA). As will be seen, however, some of the problems that bedeviled the former system have persisted, including a lack of articulation between assistant training and professional education of pharmacists.

One way in which congruency with the broader Skills Development policy has been achieved, has been the registration of the two learnerships with the Health and Welfare Sector Education and Training Authority (HWSETA), as shown in Table 4.

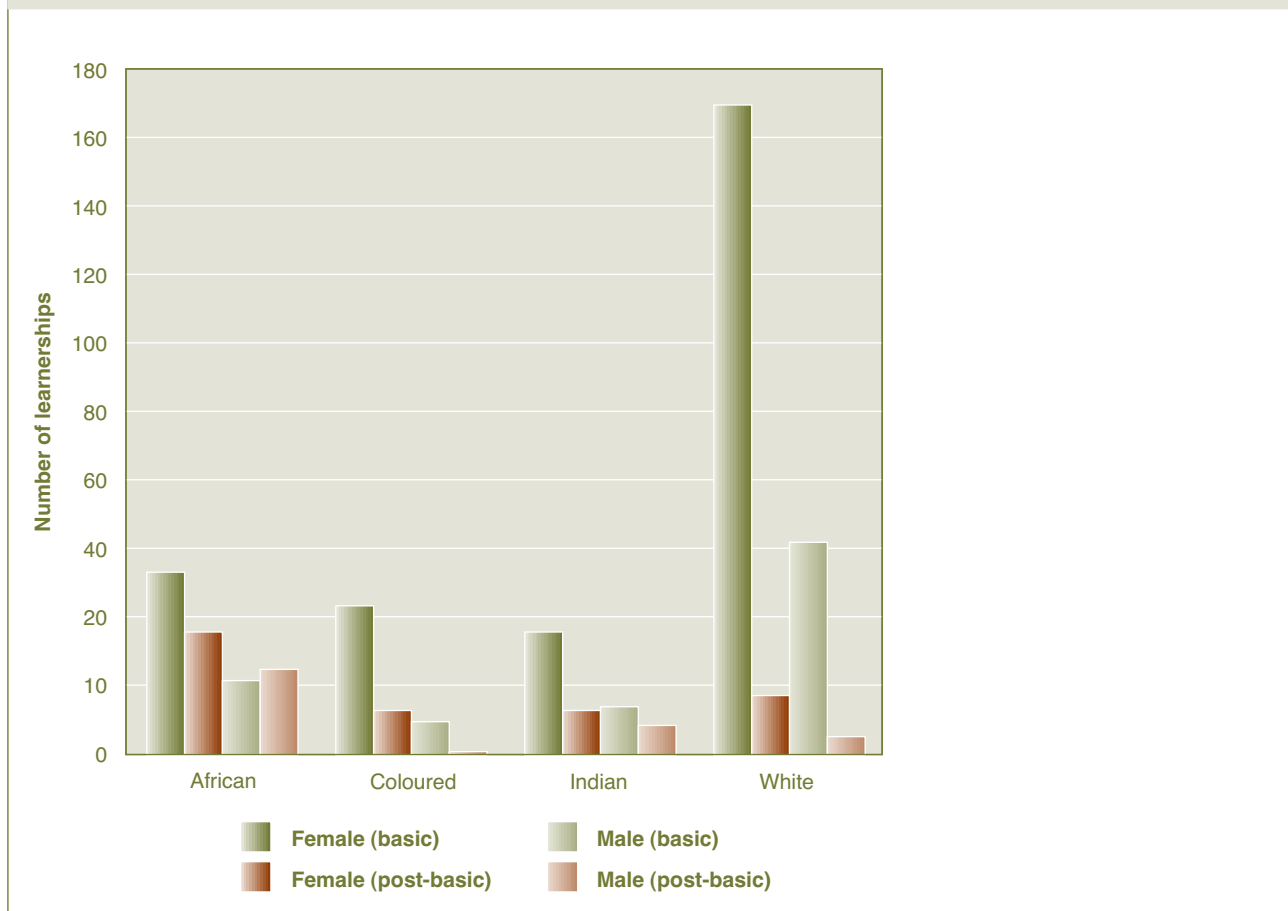
This registration has enabled employers of such learners to claim the costs of training from the skills development levies paid. The distribution of learnerships registered in the 2003/04 financial year is shown in Figure 1. A total of 369 basic and 136 post-basic learnerships were registered in that year. Of the total of 505 learners funded through the SETA mechanism, 49.9% were White (mostly female). Only 24.8% were African, with just over half of these being women. The pharmacy learnerships represented only 9.7% of those registered by the HWSETA, where the majority were in the field of nursing training.

**Table 4: Registered learnerships for pharmacist's assistants**

Learnership Title	SAQA Qualification	Learnership Number
Certificate Pharmacist Assistant Basic at Level 3	Certificate: Pharmacist Assistant Basic	11Q000002131203
Post-Basic Pharmacist Assistant at Level 4	Post-Basic Pharmacist Assistant	11Q000001081204

Source: Health and Welfare Sector Education and Training Authority; 2005



**Figure 1: Race and sex distribution of registered pharmacist's assistant learnerships in 2003/04**

Source: HWSETA Annual Report 2003/04<sup>5</sup>

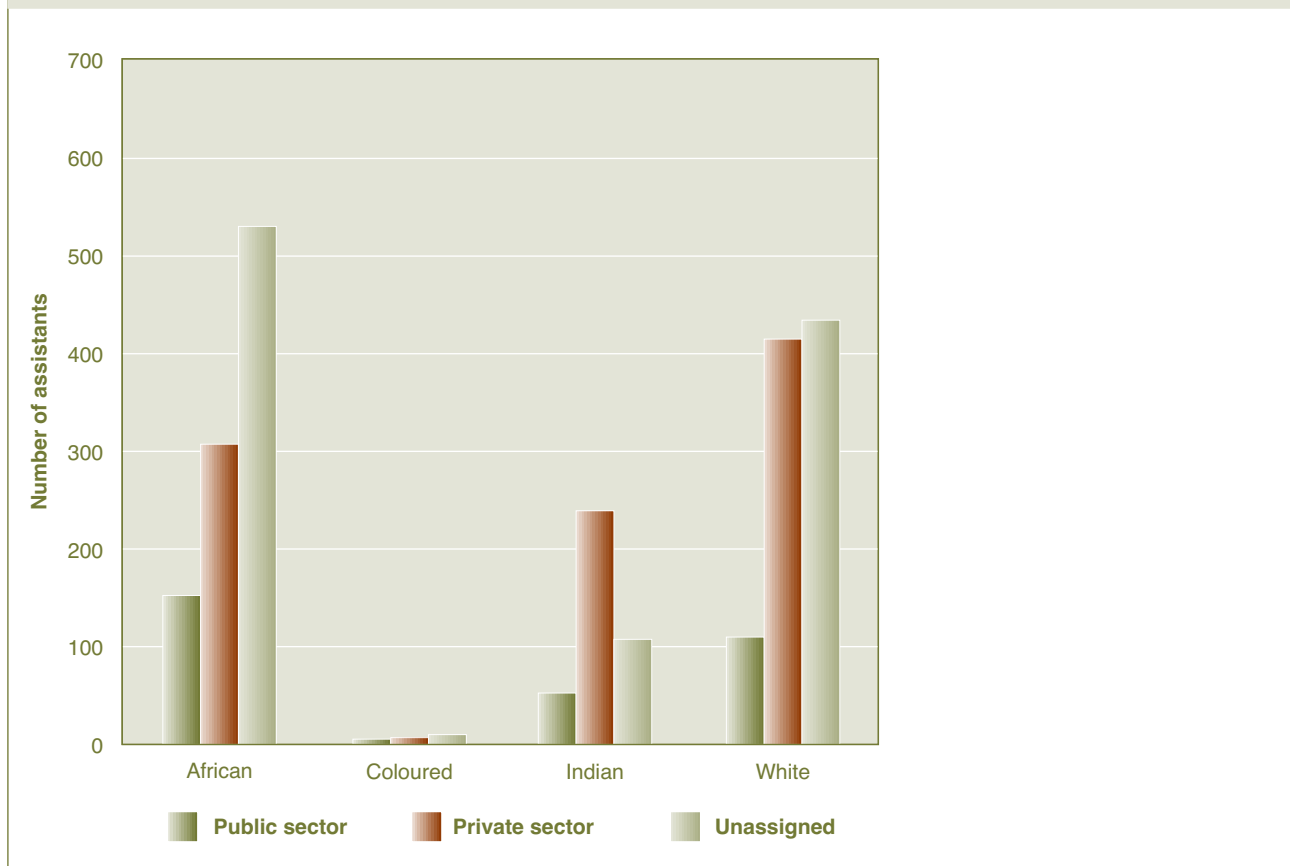
## Currently registered assistants and learners

There are currently only 29 pharmacist's assistant (basic) registered with the SAPC. Another 1 279 are registered as pharmacist's assistant (learner basic). A further 516 are registered as pharmacist's assistant (learner post-basic) and 1 239 have achieved registration as pharmacist's assistant (post-basic). This last group includes the pharmacist's assistants trained under the previous system and given recognition as competent at this level. In total, these 3 063 assistants and learners represent roughly one support person per 3 registered pharmacists in practice. This number is already a considerable resource.

Disaggregated data on the exact category of pharmacy employing each of these assistants is not easily obtained. Figure 2 shows the distribution of the above registered assistants and learners between the public and private sectors.



**Figure 2: Distribution of registered pharmacist's assistants and learners 2005**



Source: SA Pharmacy Council: 2005

With so many of these assistants and learners reported by the Council as 'unassigned' (45.6%), it is difficult to comment on the sectoral spread of this human resource. It is striking to note, however, that 40.8% are employed in the private sector. The number of registered learners (1 795) far exceeds the number funded through the HWSETA (505). It is not just the private sector, however, that has accessed this source of funding. For example, most training in the Western Cape has been HWSETA funded.<sup>f</sup> The Western Cape has identified some personnel currently employed in the pharmacies who do not meet the entry requirements for training as assistants. These staff have been afforded the opportunity to undergo adult basic (ABET) level training in order to access the assistant course. The province currently has 24 registered post-basic assistants, 59 in post-basic level training. Another 38 have completed the basic level training, of whom at least 20 will need post-basic training. In addition, they have 79 in basic

level training, with the intention to train at least 40 of these to post-basic level. The greatest difficulty has been to provide assistant training in local authority facilities, mostly because of a lack of access to tutor pharmacists in those settings. Other provinces are also accessing HWSETA funding and providing ABET opportunities where necessary.

What is striking about the current register though, is the very small number of assistants registered at the basic level. The majority of assistants are either post-basic qualified (perhaps reflecting the growth in the register prior to 2000) or still learner basic level. There are thus too few assistants ready to undertake the largely logistic roles in wholesaling and manufacturing settings as well as in larger hospital stores, but also too few ready to carry the considerable dispensing load in both private and public sector settings.

<sup>f</sup> Personal communication: V Thompson.

## International comparisons

Well established processes for the utilisation of pharmacy technicians exist in the United Kingdom. They work mainly in pharmacies, with some employed by dispensing doctors and for primary care organisations. In such settings they are not necessarily supervised by a pharmacist. Perhaps the most telling difference is provided for in the Code of Ethics for Pharmacy Technicians.<sup>6</sup> This code states that "Pharmacy technicians are responsible for their own actions regardless of whether or not they are in a position to control or influence the practice, business or institutional arrangements within which they are practising". Pharmacy technicians in the UK are currently identifying extended roles in direct patient care.<sup>7</sup> It is this concept of independent practice which has been a sticking point in many jurisdictions.

In the United States of America (USA) there are approximately 250 000 pharmacy technicians, with 70% of these employed in community pharmacies and 20% in hospitals.<sup>8</sup> Three driving forces behind a dramatic increase in this number in recent years have been identified: a shortage of pharmacists, momentum towards the implementation of pharmaceutical care services (demanding pharmacist cognitive services) and increased concern about safe medication use. The key issue debated, however, is still that of independent practice; for example, whether a technician can check another technician's dispensing actions. The greatest challenge in the USA is to standardise training and standards. Almost 250 different institutions offer pharmacy technician training in 42 states, with no single accreditation body or standard. Some states recognise a wide range of technician competencies, while others are still far more restrictive. What many pharmacy professional associations in the USA still oppose is the idea of pharmacy technician 'licensure'. In this context, licensure is seen as the process whereby "an agency of government grants permission to an individual to engage in a given occupation upon finding that the applicant has attained the minimal degree of competency necessary to ensure that the public health, safety, and welfare will be reasonably well protected".<sup>8</sup> The reason for this opposition is that these organisations believe that the pharmacist must retain responsibility and accountability for the quality of services provided in a pharmacy. In the USA a pharmacy technician can generally not perform the following pharmacists' tasks: drug utilisation review, clinical conflict resolution, contact a prescriber concerning clarification or modification of therapy, patient counselling, dispensing process validation, prescription transfer and compounding. A higher level of technician, referred to as 'certified', can similarly not perform

the first five of these tasks, as well as receipt of a telephonic or electronic prescription (unless the original is recorded for later verification by a pharmacist). Opposition still exists to creating a third, higher level of technician.

Despite this opposition, empirical data and pilot projects show the benefits of increased utilisation of pharmacy support personnel. Perhaps of greater local relevance, pharmacy technicians proved to be even more accurate than pharmacists in checking unit dose medication cassettes in two California hospitals.<sup>9</sup> Checking these cassettes is a repetitive task, ideally suited to delegation to a mid-level worker.

By contrast, South Africa seems well positioned to make optimal use of pharmacy support personnel, having put in place a nationally accredited training system and a clear set of competencies, linked to a specific scope of practice for each of two categories of pharmacist's assistants. In addition, policy makers and legislators have recognised the need for an extended practice model in some settings. Indirect supervision by a pharmacist could be used to extend the reach of pharmaceutical services beyond hospitals and into primary health care, reducing dependence on prescribing nurses with dispensing licenses. Many barriers, however, remain and need to be overcome.

## Barriers to utilisation of pharmacist's assistants

Although there was great enthusiasm for the new pharmacists' assistant training system introduced in the late 1980s, particularly in those provinces that had traditionally made greatest use of in-house trained support personnel, this was tempered by the realisation that much depended on the post structure and career path provided for such personnel. Persistent failure on the part of the national Department of Health (DoH) to pay sufficient attention to this issue has ensured that it remains contentious to this day. Another problem is that many pharmacy assistants (designated as auxiliary service officers [ASOs] in the public service), though not trained to even the basic level, have for many years been expected to perform the tasks reserved for post-basic assistants. In particular, they have been used to read and prepare prescriptions and counsel patients on how to take their medication. If these assistants do in fact obtain the post-basic qualification, their salaries do not change at all. Some see greater promotion prospects in auxiliary positions outside of the pharmacy and are lost to the service.

Having completed the necessary training, assistants complain that all they have gained is an annual invoice from the SAPC, not greater recognition as was promised. Although these fees are currently relatively low (R380.76 to register, then R186.96 per annum), there is considerable opposition to paying them.

That the Medicines and Pharmacy Acts become binding on the State in July 2005 is an important spur to action. Development of a suitable post structure and career path is currently underway at the national DoH. The following proposal has been sent for provincial input prior to being tabled at the Provincial Health Restructuring Committee (PHRC) and then the relevant Bargaining Chamber:

- ▶ pharmacist's assistant (learner basic), employed at any type of public hospital – to be paid on salary level 3 (annual salary R41 949 to R48 099, before bonus, pension and home owner allowance);
- ▶ qualified pharmacist's assistant (basic), employed at any type of public hospital – to be paid on salary level 4 (annual salary R49 227 to R57 170);
- ▶ pharmacist's assistant (learner post-basic), employed at any type of public hospital – also to be paid on salary level 4 (annual salary R49 227 to R57 170);
- ▶ qualified pharmacist's assistant (post-basic), employed at regional hospitals – to be paid on salary level 5 (annual salary R58 236 to R67 614) in a post promotion system;
- ▶ qualified pharmacist's assistant (post-basic), employed at academic hospitals – to be paid on salary level 6 (annual salary R72 096 to R83 703) in a post promotion system; and
- ▶ qualified pharmacist's assistant (post-basic), employed under indirect supervision in primary care settings – to be paid on salary level 7 (annual salary R89 805 to R104 268) in a post promotion system.

To place this in some context, pharmacist interns are currently employed at level 6 and pharmacists commence at level 7. Many current ASOs, however, are already at the maximum notch of level 6, regardless of their qualifications. Easy passage of this proposal is therefore not a foregone conclusion.

The lack of properly designated posts and a career path for assistants is not the only barrier to greater utilisation of this cadre. Many pharmacists are still concerned about delegating tasks for which they feel accountable. To some, pharmacist's assistants still remain a threat rather than an

opportunity. They also find the task of tutoring learner assistants onerous. There has been considerable pressure to relax the ratio requirements of assistants to tutors, as is provided for in the regulations on the basis of individual motivation. There are indications, however, that where such requirements are relaxed, the quality of the training may suffer. The system as implemented is complex and requires intensive supervision by the tutor. Whether this is appropriate, given the still massive unmet need for pharmaceutical personnel, remains an open question. There are also complaints that the standards of the different providers still vary too much, as do the standards set by the external assessors. Those without the necessary school-leaving qualifications have been promised access by virtue of recognition of prior learning (RPL). Although offered by some providers, the use of RPL has proven difficult to implement. Many assistants have been employed for years in quite restricted environments, such as bulk compounding or pre-packing units, and find it difficult to attain the necessary competencies across all areas of work.

The post structure outlined above recognises that post-basic assistants employed in primary care clinics under indirect supervision carry additional responsibilities. The level of training required to prepare an assistant to fulfil this role may exceed that currently offered to this level of staff. Basic level assistants are certainly appropriate for many tasks in wholesaling and manufacturing pharmacies. In community and hospital pharmacies, however, the greater need is for post-basic assistants who are able to assist in dispensing. An issue which remains unaddressed is that of articulation with pharmacist training. A post-basic assistant employed under indirect supervision would presumably be well suited to consider some sort of 'bridging' training to attain professional status. A precedent exists in nursing training for such a course. One way of closing the gap would be to develop a third level of assistant, better trained to take on a more independent role. This step would be as controversial here as it has been in the USA. It must, however, also be accepted that experience with post-basic assistants in such positions remains extremely limited. For most South Africans attending a primary care clinic, access to pharmaceutical services is limited to what can be provided by a licensed prescriber, almost invariably a professional nurse.

## Conclusion and recommendations

South Africa enjoys the advantage of a well-designed national accreditation system for providers of in-service training for pharmacist's assistants in two categories. The necessary legal systems for registering these categories of assistants and regulating their practice also exist. This system is also linked with the country's overall skills development strategy and funding can be obtained from the relevant Sector Education and Training Authority (SETA).

There are, however, still problems. The SETA funding seems to be accessed most easily by White learners, which is of concern. While there are some indications of greater private sector uptake of assistants, some of the greatest needs still exist in the public sector, particularly at primary health care (district) level. Getting appropriately trained post-basic assistants deployed at primary care clinics remains a major challenge. Little will be achieved in the public sector until finality is reached, after nearly 20 years of frustration, regarding a post structure and career path for pharmacist's assistants. Once this issue is resolved, attention must be paid to improving the efficiency of the entire system.

Ensuring consistency in the quality of training materials and assessment remains a challenge. In time, questions should be asked about the level of training necessary for those assistants who are required to practise more independently, under indirect supervision. This may well provide an opportunity to more closely align the training of assistants and the education of pharmacists. For now, it would seem that the ratios of assistants to pharmacists stipulated are appropriate. Close attention must, however, be paid to the effectiveness of the indirect supervision system once it becomes more widely implemented.

Provincial services face a considerable hurdle in July 2005, when health legislation becomes binding on the State. An important part of ensuring compliance will include efficient and effective use of pharmacist's assistants. In the private sector, continued pressure on operating margins will also demand close attention to the option of greater use of mid-level workers, while still addressing the growing issues of quality of care and safety of medication use.

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## References

- 1 South African Pharmacy Council. Information for Pharmacists' Assistants (Trainee) and Pharmacists' Assistants. July 1995.
- 2 Republic of South Africa. Pharmacy Amendment Act (Act 88 of 1997).  
URL: <http://www.polity.co.za/html/govdocs/legislation/1997/act88.pdf>
- 3 Minister of Health. Regulations relating to the Practice of Pharmacy. Government Notice No. R. 1158, Government Gazette No. 21754, 20 November 2000.  
URL: [http://www.pharmcouncil.co.za/documnets/regs\\_practice.doc](http://www.pharmcouncil.co.za/documnets/regs_practice.doc)
- 4 Republic of South Africa. Medicines and Related Substances Act (Act 101 of 1965), as amended.  
URL: <http://www.doh.gov.za/docs/bills/medicine.html>
- 5 Health and Welfare Sector Education and Training Authority. Annual Report 2003/2004.  
URL: <http://www.hwseta.org.za>
- 6 Royal Pharmaceutical Society of Great Britain. Code of Ethics for Pharmacy Technicians. December 2004.
- 7 Graham R. Get involved in delivering holistic health care. *Hosp Pharm* 2004; 11: 208-210.
- 8 Rouse M. White paper on pharmacy technicians 2002: needed changes can no longer wait. *Am J Health-Syst Pharm* 2003; 60(1): 37-51.
- 9 Amrose PJ, Saya FG, Lovett LT, Tan S, Adams DW, Shane R. Evaluating the accuracy of technicians and pharmacists in checking unit dose medication cassettes. *Am J Health-Syst Pharm* 2002; 59: 1183-1188.

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voice of

After 12 years, Ruth Ngbokota is calling it a day, for now. She spends at least nine hours of her day crammed into the overcrowded dispensary at Michael Mapongwana Day Hospital in Khayelitsha.

*"The stress has become unbearable and I don't feel I have the support from middle-management that would go a long way in helping us cope."*

As the only pharmacist, the hospital relies on her to dispense an average of 350 scripts a day. This figure can easily rise to over 400 on a busy day.

"I think I was basically the only pharmacist prepared to work here. They were hard pressed to find nurses to work here, never mind a pharmacist," says the diminutive woman, who was born in the United Kingdom, but immigrated 12 years ago in the hope of making a contribution.

All scripts are generated by hand. A brand new computer is packed away in the corner. There is no printer, no paper and no software.

Ngbokota says that there has never been anyone to 'cover' for her when she wants to go to meetings or when she is off sick.

*"I've now reached the end of my tether. Management has just got worse and worse and I am expected to work with no resources. It's too revolting."*

# a Pharmacist

## Ruth Ngbokota

of Michael Mapongwana Day Hospital, Khayelitsha, Western Cape

*"The levels of absenteeism are extremely high, but it is understandable."*

There have been days when Ngbokota has had to work on her own as overworked staff call in sick.

One of the pharmacy assistants has used up all her sick leave four months into the year, and it's all stress related.

Ngbokota says that it is usually herself and one pharmacy assistant on duty. During her nine years at the hospital, there has never been more than herself and two assistants on duty dispensing a range of medicine from drugs for chronic illness to tuberculosis medication, antiretroviral, dentistry drugs and so on.

She does receive a scarce skills allowance of R1 000 per month, but according to Ngbokota it is not enough to keep her in the job.

Ngbokota claims that "things have just got worse around here", but she has no ambitions to migrate to the private sector.

Ngbokota will be returning with her family to the United Kingdom where she will work in the National Health Service.

"I plan to come back after a number of years, but right now I need a break."

*"I don't feel comfortable making a profit out of people's illness. It's a moral religious stand, but the reward is no longer worth the stress and aggravation."*