Annexure D and E (Combined)

Report: Staffing Norms for Pharmacies Project

August 2011

Contents

Overview

The development of staffing norms for pharmacies that are both appropriate and acceptable to all parties has been a topic of intense debate for a number of years. Although the debate has been particularly prominent with respect to public institutional pharmacies, it has not been limited to a single sector. Numerous models have been proposed with varying degrees of success. The extent of the debate is such that the South African Pharmacy Council (SAPC) published the results of a research project on this topic as far back as 1998.

The debate has gained momentum in the light of an initiative by the National Department of Health to determine human resources for health and, by extension, requirements for the production of health care workers including those in the pharmacy profession. As a result the SAPC has embarked upon a further project, which constitutes the background to this report.

The purpose of this report is to provide an overview of the work done by a Task Team that has been established by the SAPC and to propose an interactive model that can be used by individual pharmacies to determine their own staffing requirements. The proposed model is based upon inputs that have been obtained from various sources, namely:

- Models that have previously been developed;
- International literature that has been published on this topic;
- Policy documents that have been published over time. Some of these documents have been officially released, while others have been published as discussion documents;
- Previous work that was done by the SAPC; and
- The results of research that was performed by the SAPC on the activities and the utilisation of different categories of staff in various pharmacy types.

In terms of the compilation of a synopsis of the models that have been developed to date, a secondary purpose has been the development and documentation of a comprehensive “database” of such models together with an understanding of the various advantages, disadvantages and reasons for the successes or failures of these models.

The fundamental difference between the model to which this report pertains and most of the models that have been developed previously is that the proposed model explicitly recognises the fact that even though the need for specific ratios between different staff categories and certain minimum staff requirements cannot be ignored, they will be impacted upon by the different mixes of services that are rendered by different pharmacies. Therefore, the model attempts to find a balance between certain minimum requirements, some of which are prescribed by Law, and the operational requirements in individual pharmacies.

It is also noted that, while some of the ratios that have been applied in the model that is being proposed through this report are determined by Law, others have been derived from the available literature and the results from the research that was recently commissioned by the SAPC. With respect to the latter it is specifically noted that the results were based upon current practice, as opposed to “ideal” practice. It follows that the proposed model will be an evolving one that will be improved as it is practically put to the test, pharmacy practice patterns change and input data improves.

Historical approaches

As has been stated above the debate around staffing requirements in pharmacies is not a new one and various approaches to the development of an "ideal" model for the determination of staffing norms in pharmacies and more specifically public sector institutions have been developed to date.

This section of the report provides a brief overview of the various models that have been used to date, followed by some considerations on the possible advantages and disadvantages of each of the models.

Personnel Administration Standard (PAS) Model

The PAS model was developed during the 1980s by the then Department of Public Service and Administration and was at the time prescribed for the determination of staffing establishments for institutions. It, based upon specific norms, took into account the pharmacists' time with respect to:

a. In-patient medicine supply to the wards;
b. Out-patient medicine supply;
c. The percentage of production work carried out by different management levels of pharmacy staff; and
d. Relief and lost time.

This model also recognises the various types of functions in the pharmacy, such as:

a. Acquisition of supplies;
b. Internal pharmacy activities such as bulk compounding and pre-packing; and
c. Issuing of supplies to in- and out-patients and wards (dispensing)

It recognises that issuing of supplies comprises the largest component and thus will account for 70% of the required pharmacists.

Despite the fact that the PAS model has never been fully implemented across all provinces, it appears that the ratios between operational and managerial staff have been broadly accepted. This is evidenced by the fact that the ratios that are currently being applied and have been proposed as part of the Occupational Specific Dispensation (OSD) are very similar if not equal to the ratios that have been proposed by the PAS model.

The table below provides an overview of the main advantages and disadvantages of the PAS model.

Advantages	Disadvantages
Relatively simple model to understand	Satellite service points are not adequately catered for
Statistics required for the calculations are, in theory, readily available	The model does not cater for variations in the case mix of the patients who are treated in a particular institution
The model does contain some ratios for the different categories of staff that work in public sector institutional pharmacies	The model dates back to 1982 and it is unlikely that it is still relevant to modern pharmacy practice
The model at least to a degree caters for	

Advantages	Disadvantages
variations between different levels of institutions (e.g. academic vs. regional hospitals)	
The model does to an extent cater for a differentiation between in- and outpatient services by taking into account the number of prescriptions dispensed.	

Patient Day Equivalent (PDE) Model

The PDE model for pharmacies was developed through a staffing norms research project that was conducted by the SAPC in 1998.

It is based upon a methodology whereby the average numbers of patient days are by taking into account the numbers of in- and out-patients calculated for each institution. Each PDE is equated to an average workload for the various categories of staff in a pharmacy, which then, in theory, makes it possible to calculate the numbers of staff required through a relatively simple multiplication exercise.

The numbers of required pharmacists were calculated by converting the numbers PDE's into Full Time Equivalents (FTE's). The conversion ratios of PDE's into FTE's amongst others took into account the hospital types and patient case mixes. In addition, the model attempted to cater for aspects such as leave and sick leave, additional service points, indirectly supervised clinics and provided for additional pharmacists where for example pre-packing etc is done for the clinics.

One of the shortcomings of this model was the fact that it focussed upon the determination of the numbers of pharmacists that would be required and the determination of the numbers of support staff that were required then became a by-product of that.

The most prominent criticism of the model was that it was based upon best practice and, as a result, generated idealistic staffing requirements. By extension it was deemed to be unaffordable.

Despite this it appears that fairly broad consensus exists around the concept of PDE's and the application of the concept to the determination of pharmacy services that are required with respect to in-patient services. On the other hand, differences in opinion exist around the application of the PDE model with respect to:

- Out-patient services (i.e. the rate of conversion of the numbers of out-patients to an in-patient equivalent); and
- The conversion rates of PDE's to FTE's.

The table below provides a summary of the main advantages and disadvantages of the PDE model.

Advantages	Disadvantages
Relatively simple model to understand	The types of services that are being rendered vary between institutions and the model only to an extent caters for such variations
Statistics required for the calculations are, in theory, readily available	Satellite service points are not adequately catered for

Advantages	Disadvantages
The model does attempt to cater for the different levels of institutions	Consensus on the calculation of a PDE equivalent for out-patient (physical dispensing) services has not yet been reached
The model does contain some ratios for the different categories of staff that work in public sector institutional pharmacies	The model does not cater for variations in the case mix of the patients that are treated in institutions that are categorised under the same level of care
	The model does not explicitly cater for "ideal" proportions of the different categories of staff that work in public sector institutional pharmacies.
	The determination of the number of PDE's per FTE as well as the numbers of support staff that will required are based upon so-called best practice, which is not always practically feasible.
	The number of PDE's per FTE emanates from the 1998 SAPC report, which was at the time regarded to be overly "idealistic".

In short, even though the PDE model was based on sound approaches, it was deemed to be idealistic and resulted in too high staffing requirements that were believed to be unaffordable.

KwaZulu Natal (KZN) Model

The KwaZulu-Natal (KZN) Model was developed specifically for Public Institutional Pharmacies in the KwaZulu-Natal Province and has since been piloted in at least one other province. The model is based largely upon a number of predetermined (assumed) ratios, such as the required number of pharmacists per in-patient bed and the number of items that a pharmacist can dispense per day. The model does not take the full scope of practice of pharmacists into account and largely focuses on the production aspects of public sector institutional pharmacy practice. The model also assumes fixed ratios between pharmacists and pharmacist's assistants.

The main advantages and disadvantages of the KZN Model are shown in the table below.

Advantages	Disadvantages
Relatively simple model to understand	The types of services that are being rendered vary between institutions and the model does not cater for such variations
Statistics required for the calculations are, in theory, readily available	Satellite service points are not adequately catered for
The model does cater for work performed by managing pharmacists (but is "lean" on the ratios for other categories of staff, such as support staff)	Consensus on the calculation of a PDE equivalent for out-patient services has not yet been reached
	The model does not cater for variations in the case mix of the patients that are treated in a particular institution

Advantages	Disadvantages
	The model is primarily focussed upon the operational aspects of public sector institutional pharmacies and does not fully cater for work that is required in addition to the operational requirements.

Time Based Model (TBM)

One of the outputs of the activity based research project that was during 2009 commissioned by the SAPC was the development of a model whereby pharmacies could determine their own staffing requirements according to the types and frequencies of services provided in the pharmacy. The TBM model was developed during 2009 and is based upon surveyed durations and frequencies of each type of service that is provided by the various categories of staff in the different pharmacy sectors. Given the fact that the available working time of each category of staff is known (eight hours per day or forty hours per week), it is possible to, based upon the duration and frequencies of services provided, calculate the number of required staff in each category.

The survey data was based upon the activities that took place within pharmacies as such and did, as a result, not differentiate between dispensing services and, for example, services rendered in the wards. However, the proportion of time spent in the pharmacy in relation to the proportion of time spent on other services such as ward work, pre-packaging, stock management and the like was surveyed. Based upon these proportions it was then possible to generate specific assumptions with respect to the productive time spent by pharmacists.

The main advantages and disadvantages of the TBM Model are shown in the table below.

Advantages	Disadvantages
Input data emanates from a properly structured research project that was conducted by the SAPC	Averaging across pharmacy and hospital types
The model differentiates between in-patient/ward services and dispensing services	In some sectors the some sample sizes in the data that was collected were small and the resultant statistics may therefore not be sufficiently accurate
The model is based upon actual services provided	The model does not fully take into account the effects of associated services such as ward rounds, pre-packing and training
The model is based upon actual durations of services provided	The model does not fully take into account variations in the numbers of service points in a particular institution
The model can be adjusted to cater for certain pre-defined variables	The model is based upon current practice as opposed to desired practice and would entrench existing inefficiencies, especially in terms of the utilisation of lower level staff
	The surveyed data represents the activities in pharmacies per se and does therefore, with respect to institutional pharmacies, not adequately differentiate between, for example,

Advantages	Disadvantages
	in-patient and out-patient activities

The key learning from the various models that have been developed to date has been that although it is possible to determine certain elements of staffing requirements through fixed ratios too many variations in the types and frequencies of services that are provided exist between pharmacies. Therefore, an "ideal" model will require a degree of flexibility that will allow for adjustments to be made in accordance with specific circumstances.

Associated issues

The fact that a generally acceptable model for the determination of staffing requirements in pharmacies has not yet been found, the development of such a model is confounded by various other issues. Of these, the most pertinent issues are:

- An apparent inability and/or unwillingness to collect, collate and submit data that will be required for the development and maintenance of suitable models;
- Clinical activity and quality of care data, as opposed to patient numbers, is seldom captured;
- The natural tensions that exist between "ideal" staffing numbers and budgetary constraints;
- The shortages of suitably qualified staff that are causing prolonged vacancies for funded positions. That is, even if a suitable model were to be found and agreed to, it might not be possible to implement it; and
- The introduction of confounding, but not always practical, issues that are introduced as a result of international debates on the same topic. Examples of such issues include the need to include certain quality metrics in the ultimate model.

It is noted that the above issues are real issues that will impact upon the acceptance of the model that is ultimately developed. An ideal model will ultimately have to cater for these and other issues, but their mere presence and absence of satisfactory responses to them should in themselves not hamper the implementation of an albeit initial model.

It follows that such an initial model should provide sufficient flexibility to enable catering for various associated issues going forward.

Proposed model

It from the work that was performed by the Staffing Norms Task Team became clear that none of the existing models adequately fulfils the need to objectively determine the staffing requirements in any given pharmacy, regardless of the sector within which it is operating. However, each of the existing models has positive aspects associated with it and as such it became apparent that the development of a hybrid model that leverages off the positive aspects of the existing models could provide a workable way forward.

Having considered and debated the various issues that have been outlined in the preceding sections, the Staffing Norms Task Team has developed a consensus view on the approach that should be followed. The salient features of the consensus view are that the:

- PDE approach is most suitable for the determination of pharmacists' workload with respect to in-patients. This is subject, however, to the proviso that the final model has to, through an appropriate risk-adjustment factor, allow for variations in staffing requirements in the different levels of public sector institutions, such as academic hospitals, regional hospitals and district hospitals. Further adjustments may also be required to cater for different types of services, such as oncology, that are being rendered in the various institutions;
- TBM approach is the most suitable for out-patient services and that the durations of the various services will be determined from the 2008 survey data. This approach includes the fact that the durations of the various services as well as the category of staff by whom the services are currently being rendered are based upon current practice, which is not necessarily equal to best practice;
- PAS model, despite the fact that it is in many respects outdated, provides realistic guidelines with respect to managerial structures that are required in larger institutions. It is specifically noted that these represent guidelines only and that final adjustments will have to be made in accordance with specific circumstances in each institution;
- PDE approach provides insofar it concerns in-patient services acceptable guidelines with respect to the ratios between pharmacist and support staff;
- Staff that are in training will not be taken into account when determining the operational requirements of a pharmacy;
- Final model has to take into account the legal requirement of at least one full-time pharmacist per full-time service point, which includes the fact that in larger hospital settings different types of services are provided within the same pharmacy and as such would increase the numbers of full-time pharmacist that will be required;
- Maximum productivity factor that can be assumed for pharmacists and support staff is 65%. This has been confirmed by the survey data that was collected during 2008 as well as literature that has been published in this regard;
- Durations of dispensing services that have emanated from the SAPC survey data have been confirmed by published literature; and
- Ratios of support staff, such as pharmacist's assistants, will be determined in accordance with the ratios with respect to the maximum numbers of staff that may be supervised by a pharmacist as prescribed in the Regulations relating to the practice of pharmacy published in terms of the Pharmacy Act 53 of 1974.

Based upon this consensus view it is therefore proposed that it is possible to develop a model that is based upon a combination of the apparently acceptable components of the models that have been developed to date, namely that:

- The PDE model provides the best available description of staffing requirements with respect to in-patient services;
- The PDE model provides the best available description of ratios between pharmacists and support staff with respect to in-patient services;
- The TBM model enables the calculation of the staffing requirements with respect to outpatient (dispensing) services; and
- The PAS model as accurately as possible describes the required ratios between production and supervisory staff.

In terms of the ratios of support staff it is noted that going forward an acceptable methodology will have to be sought to remove the services that fall outside the official scopes of practice of the various categories from the survey data. The current reality is that operational requirements necessitate some "stretching" of the official scopes of practice, which is not ideal, but in light of the current resource constraints unavoidable.

Methodology

Having regard for the various confounding factors the proposed model is broadly based upon the following methodology:

- With respect to in-patient services:
    - Staffing requirements are based upon the outputs of the PDE model, adjusted for the category of hospital (Tertiary, Regional or District) that the pharmacy is situated in. Therefore the numbers of required staff are in essence determined by the:
        - Level of the hospital
        - Number of beds
        - Bed occupancy
    - The ratios between production and supervisory pharmacists are derived from the PAS model and the relevant legal requirements.
- With respect to out-patient services:
    - Staffing requirements are based upon the data that was obtained from the activity based observational research project that was performed by the SAPC.
    - The ratios between supervisory and production pharmacists are derived from the ratios that were proposed in the PAS model.
    - The ratios between pharmacists and support staff are derived from the data emanating from the SAPC research project and the relevant legal requirements.
- The model recognises the fact that the day to day operation of any pharmacy requires a range of "non-patient" activities, such as stock control, pre-packaging, annual leave, sick leave, lunch, tea and other breaks and the like. The model specifically caters for these factors through the use of a productivity factor that estimates the percentage of available hours of which a pharmacist can realistically be productive. It follows that if the numbers of staff that are calculated through the model are indeed appointed the need for replacement staff such as *locum tenentes* will be obviated.
- The model assumes that staff, such as pharmacist interns, that are in training are not part of the production capacity of a pharmacy and therefore the staff complement is calculated exclusive of this category of staff.
- The model specifically caters for all the services for which a pharmacist may levy a fee. Although Public Sector Institutional pharmacies do not levy specific fees data has been collected according to the various service types and the model calculates the staffing requirements accordingly.
- Particularly with respect to Public Sector Institutional Pharmacies the model caters for more than one dispensing outlet per institution. In this instance a dispensing outlet has been defined to include outlet points such as standalone out-patient pharmacies and satellite clinics.

Therefore, the proposed model represents a hybrid of various models that have previously been developed in that it uses a range of fixed ratios and the results of the SAPC research study to calculate the staffing requirements of individual pharmacies based upon their specific sets of activities. With respect to institutional pharmacies, the model separately calculates the staff that is required for in- and out-patient services and the blends the results in order to achieve optimal staff capacitating.

In practical terms this means that each pharmacy will have to enter its own activity data in order to determine its staffing requirements.

Model inputs

In terms of the methodology that has been outlined above the proposed model has two categories of inputs:

- ***Fixed inputs*** that have been derived from the various sources of information and/or data; and
- ***Variable inputs*** that have to be provided by each pharmacy using the model.

Fixed inputs

The fixed inputs pertain to various fixed ratios (obtained from various sources) and durations of services (obtained from the SAPC activity based research study). These inputs are "hard coded" into the model and users of the model will not be able change them. However, the fixed inputs differ by sector, i.e.:

- Community Pharmacies
- Public Sector Institutional Pharmacies
- Private Sector Institutional Pharmacies

Therefore, by selecting the appropriate sector in the model the user will be able to trigger the relevant fixed inputs.

The fixed inputs to the model are listed in annexure A to D to the report.

With respect to the ratios between supervisory and production staff in especially public sector institutional pharmacies, it is specifically noted that the output of the model only provides a guideline. It follows that these ratios will have to be adjusted according to the specific requirements in each institution.

Variable inputs

The variable inputs pertain to the aspects that vary between pharmacies and have to with respect to a specific pharmacy be input by the user of the model. These variables have for ease of use been limited to basic statistics that should be reasonably available for any pharmacy.

There are essentially two categories of variable inputs:

- Statistics with respect to the services that have been rendered by the pharmacy over a one month period. These statistics are then together with the fixed inputs used to determine the numbers and categories of staff that are required to perform the services that have been input into the model.
- Statistics with respect to current staff levels that are merely used to provide the user with a comparison between the current staff levels and the required staff levels as determined by the model.

By changing the variable inputs users should also be able to consider various scenarios and combinations of services.

Conclusion

Various attempts have been made at the development and implementation of a commonly acceptable model for the determination of staffing norms in pharmacies. The successes of these attempts have been varied, which has been due to different combinations of confounding factors, such as:

- Over ambitious results;
- The natural tensions between required staff and available funding;
- Equally natural tensions between required staff and available suitably trained staff;
- Differences in opinions held by different stakeholders; and
- The reality that large variations exist with respect to the combinations of services that are provided by individual pharmacies and that specific pharmacies will, depending upon these combinations, have different staffing requirements.

The objective of this further project by the SAPC is the development of a practical model that will strive to find a balance between the tensions that exist. To this end a model has been developed that:

- Leverages off work that has previously been performed; and
- As far as is possible enables catering for the specific needs of individual pharmacies, based upon the range and frequencies of services that are already being rendered in that pharmacy. In so doing, the model attempts to progress the debate out of a theoretical into a practical space.

In addition to the above it is conceivable that the model can be used a data collection tool through which the broader Human Resources requirements can be determined.

Glossary

Full Time Equivalent	A **full-time equivalent**, is a unit to measure employed persons in a way that makes them comparable although they may work a different number of hours per week
In-patient services	Services that are provided to patients that have been admitted to hospital, including ward services such as the management of ward stock
Level of Hospital	Community Health Centre District Regional Tertiary Specialised
Non patient activities	Stock control Pre-packaging Annual leave Sick leave Lunch, tea and other breaks
Out-patient services	Services that are provided to patients that have not been admitted to hospital, but included the dispensing of take home medicines
Patient day equivalent	PDE is calculated by adding the number of inpatients plus 1/2 of day patients plus 1/3 of outpatient and emergency room visits. (The PDE is a measure of the volume of patients but because not all patients spend a full day (from midnight to midnight) at the hospital, (there are day patients, outpatients, and emergency room visits that add to the workload of the hospital), this formula is used to calculate the equivalent number of 24-hour patients.)
Productivity factor	Productivity factor that estimates the percentage of available hours of which a pharmacist can realistically be productive

Annexure A: General Norms

Norm description	Value	Unit
General		
Days per year	365.25	days
Weekend days	104	days
Public Holidays	11	days
Working hours per day	8	hours
Annual leave (working days)	22	days
Avg sick leave days per annum	8	days
Pharmacists per assistant manager	6	
Assistant Managers per Deputy Manager	4	
Deputy Managers per Manager	2	
In-patient services		
Tertiary Hospitals	1 Production Pharmacist for every 60 PDE's	
Regional Hospitals	1 Production Pharmacist for every 65 PDE's	
District Hospitals	1 Production Pharmacist for every 75 PDE's	
Pharmacist's Assistant (all categories) per Pharmacist	1.06	

Note: The ratios with respect to out-patient services have been derived from the activity times in annexure B to D.

Annexure B: Mean Activity Times – Public Sector Institutional Pharmacies

		Pharmacist	Pharmacist's assistant
Code	**Terminology**	**Mean**	**Mean**
0001	Dispensing procedure (Total)	230.82	164.08
0002	Compounding of an extemporaneous item for a specific patient. It refers to the compounding of any non-sterile pharmaceutical product prepared as a single item for a patient (a new product is manufactured) including the necessary documentation.	433.15	373.76
0003	Preparation of a sterile product including the preparation of the documentation, equipment, and the area for the preparation of sterile products.	497.22	337.00
0004	Preparation of an intravenous admixture or parenteral solution, including the preparation of the documentation, equipment, the area for the preparation of the sterile products and the quality control of the final product.	648.42	416.83
0005	Preparation of a total parenteral nutrition preparation (TPN), including the preparation of the documentation, equipment, the area for the preparation of the sterile products and the quality control of the final product	N/A	N/A
0006	Preparation of cancer chemotherapy for intravenous, intramuscular or intrathecal administration, including the preparation of the documentation, equipment, the area for the preparation of the sterile products, the admixing and reconstitution thereof for dispensing in a large/small volume parenteral, or a syringe for a specific patient.	1,069.47	452.20
0007	Performance of a consultation to establish the pharmaco-kinetic dosing of a medicine and perform therapeutic drug monitoring. This includes the review of the data collected, the necessary calculations, review and the formulation of recommendations and the necessary consultation with the prescriber. This code does not include dispensing	N/A	N/A
0008	Provision of information concerning a particular patient's condition or medicine following evaluation by the pharmacist in a situation where no dispensing activity occurs.	395.37	N/A
0009	The application of pharmaceutical expertise to help maximise drug efficacy and minimise drug toxicity in individual patients by contributing to the care of the individual patient through the provision of drug information and assisting in problem solving in the ward environment for individual patients, where no dispensing activity occurs.	392.38	N/A
0010	PCDT: A face-to-face consultation with a patient where a pharmacist personally takes down a patient's history, performs an appropriate health examination including observations, and plans appropriate interventions/treatment, which may include referral to another health care professional, where the pharmacist is qualified and registered as a PCDT pharmacist.	N/A	N/A
0011	Pharmaceutical care: Reviewing of the patient's overall medication requirements, as requested by the patient or the patient's health care professional, to ensure the effective use of medicine in response to a diagnosis made by another health care professional in order to maximise therapeutic outcomes. It involves analysing the patient's medication record to assess the appropriateness and cost effectiveness of treatment to ensure rational drug use, and to identify possible interactions and adverse drug reactions. It also involves developing a plan of action in collaboration with other health care professionals and the patient. It may involve a consultation with the patient. Full records must be kept in accordance with the GPP standard. If the consultation is combined with the dispensing of a medicine, a dispensing fee can be charged	N/A	N/A
0012	Blood glucose	N/A	N/A
0013	Blood cholesterol and/or tri-glycerides	N/A	N/A
0014	Urine analysis	N/A	N/A
0015	Blood pressure monitoring	N/A	N/A
0016	HIV and AIDS pre-testing counselling	N/A	N/A
0017	HIV and AIDS testing and post-test counselling	N/A	N/A
0018	Pregnancy screening	N/A	N/A
0019	Peak flow measurement	N/A	N/A
0020	Reproductive health service	N/A	N/A
0021	Administration of an intra-muscular or sub-cutaneous injection.	N/A	N/A
0022	Administration of immunisation.	N/A	N/A

		Pharmacist	Pharmacist's assistant
Code	**Terminology**	**Mean**	**Mean**
0027	Emergency post-coital contraception (EPC)	N/A	N/A
0028	Pharmacist Initiated Therapy (PIT)	N/A	N/A

Annexure C: Mean Activity Times – Private Sector Institutional Pharmacies

		Pharmacist	Pharmacist's assistant
Code	**Terminology**	**Mean**	**Mean**
0001	Dispensing procedure (Total)	251.53	233.40
0002	Compounding of an extemporaneous item for a specific patient. It refers to the compounding of any non-sterile pharmaceutical product prepared as a single item for a patient (a new product is manufactured) including the necessary documentation.	305.37	379.10
0003	Preparation of a sterile product including the preparation of the documentation, equipment, and the area for the preparation of sterile products.	N/A	N/A
0004	Preparation of an intravenous admixture or parenteral solution, including the preparation of the documentation, equipment, the area for the preparation of the sterile products and the quality control of the final product.	N/A	N/A
0005	Preparation of a total parenteral nutrition preparation (TPN), including the preparation of the documentation, equipment, the area for the preparation of the sterile products and the quality control of the final product	N/A	N/A
0006	Preparation of cancer chemotherapy for intravenous, intramuscular or intrathecal administration, including the preparation of the documentation, equipment, the area for the preparation of the sterile products, the admixing and reconstitution thereof for dispensing in a large/small volume parenteral, or a syringe for a specific patient.	N/A	N/A
0007	Performance of a consultation to establish the pharmaco-kinetic dosing of a medicine and perform therapeutic drug monitoring. This includes the review of the data collected, the necessary calculations, review and the formulation of recommendations and the necessary consultation with the prescriber. This code does not include dispensing	233.58	N/A
0008	Provision of information concerning a particular patient's condition or medicine following evaluation by the pharmacist in a situation where no dispensing activity occurs.	504.12	N/A
0009	The application of pharmaceutical expertise to help maximise drug efficacy and minimise drug toxicity in individual patients by contributing to the care of the individual patient through the provision of drug information and assisting in problem solving in the ward environment for individual patients, where no dispensing activity occurs.	160.08	N/A
0010	PCDT: A face-to-face consultation with a patient where a pharmacist personally takes down a patient's history, performs an appropriate health examination including observations, and plans appropriate interventions/treatment, which may include referral to another health care professional, where the pharmacist is qualified and registered as a PCDT pharmacist.	N/A	N/A
0011	Pharmaceutical care: Reviewing of the patient's overall medication requirements, as requested by the patient or the patient's health care professional, to ensure the effective use of medicine in response to a diagnosis made by another health care professional in order to maximise therapeutic outcomes. It involves analysing the patient's medication record to assess the appropriateness and cost effectiveness of treatment to ensure rational drug use, and to identify possible interactions and adverse drug reactions. It also involves developing a plan of action in collaboration with other health care professionals and the patient. It may involve a consultation with the patient. Full records must be kept in accordance with the GPP standard. If the consultation is combined with the dispensing of a medicine, a dispensing fee can be charged	N/A	N/A
0012	Blood glucose	N/A	N/A
0013	Blood cholesterol and/or tri-glycerides	330.00	N/A
0014	Urine analysis	N/A	N/A
0015	Blood pressure monitoring	N/A	N/A
0016	HIV and AIDS pre-testing counselling	N/A	N/A
0017	HIV and AIDS testing and post-test counselling	N/A	N/A
0018	Pregnancy screening	N/A	N/A
0019	Peak flow measurement	N/A	N/A
0020	Reproductive health service	N/A	N/A
0021	Administration of an intra-muscular or sub-cutaneous injection.	N/A	N/A
0022	Administration of immunisation.	255.00	N/A

		Pharmacist	Pharmacist's assistant
Code	**Terminology**	**Mean**	**Mean**
0027	Emergency post-coital contraception (EPC)	N/A	N/A
0028	Pharmacist Initiated Therapy (PIT)	318.65	199.15

Annexure D: Mean Activity Times – Community Pharmacies

		Pharmacist	Pharmacist's assistant
Code	**Terminology**	**Mean**	**Mean**
0001	Dispensing procedure (Total)	294.11	240.54
0002	Compounding of an extemporaneous item for a specific patient. It refers to the compounding of any non-sterile pharmaceutical product prepared as a single item for a patient (a new product is manufactured) including the necessary documentation.	570.50	827.45
0003	Preparation of a sterile product including the preparation of the documentation, equipment, and the area for the preparation of sterile products.	N/A	N/A
0004	Preparation of an intravenous admixture or parenteral solution, including the preparation of the documentation, equipment, the area for the preparation of the sterile products and the quality control of the final product.	N/A	N/A
0005	Preparation of a total parenteral nutrition preparation (TPN), including the preparation of the documentation, equipment, the area for the preparation of the sterile products and the quality control of the final product	1,254.75	1,254.75
0006	Preparation of cancer chemotherapy for intravenous, intramuscular or intrathecal administration, including the preparation of the documentation, equipment, the area for the preparation of the sterile products, the admixing and reconstitution thereof for dispensing in a large/small volume parenteral, or a syringe for a specific patient.	N/A	N/A
0007	Performance of a consultation to establish the pharmaco-kinetic dosing of a medicine and perform therapeutic drug monitoring. This includes the review of the data collected, the necessary calculations, review and the formulation of recommendations and the necessary consultation with the prescriber. This code does not include dispensing	N/A	N/A
0008	Provision of information concerning a particular patient's condition or medicine following evaluation by the pharmacist in a situation where no dispensing activity occurs.	189.99	N/A
0009	The application of pharmaceutical expertise to help maximise drug efficacy and minimise drug toxicity in individual patients by contributing to the care of the individual patient through the provision of drug information and assisting in problem solving in the ward environment for individual patients, where no dispensing activity occurs.	N/A	N/A
0010	PCDT: A face-to-face consultation with a patient where a pharmacist personally takes down a patient's history, performs an appropriate health examination including observations, and plans appropriate interventions/treatment, which may include referral to another health care professional, where the pharmacist is qualified and registered as a PCDT pharmacist.	638.16	N/A
0011	Pharmaceutical care: Reviewing of the patient's overall medication requirements, as requested by the patient or the patient's health care professional, to ensure the effective use of medicine in response to a diagnosis made by another health care professional in order to maximise therapeutic outcomes. It involves analysing the patient's medication record to assess the appropriateness and cost effectiveness of treatment to ensure rational drug use, and to identify possible interactions and adverse drug reactions. It also involves developing a plan of action in collaboration with other health care professionals and the patient. It may involve a consultation with the patient. Full records must be kept in accordance with the GPP standard. If the consultation is combined with the dispensing of a medicine, a dispensing fee can be charged	342.17	N/A
0012	Blood glucose	308.15	N/A
0013	Blood cholesterol and/or tri-glycerides	528.94	N/A
0014	Urine analysis	724.86	N/A
0015	Blood pressure monitoring	261.84	N/A
0016	HIV and AIDS pre-testing counselling	1,417.71	N/A
0017	HIV and AIDS testing and post-test counselling	1,010.16	N/A
0018	Pregnancy screening	536.91	N/A
0019	Peak flow measurement	286.53	N/A
0020	Reproductive health service	391.36	N/A
0021	Administration of an intra-muscular or sub-cutaneous injection.	316.58	N/A
0022	Administration of immunisation.	350.11	N/A

		Pharmacist	Pharmacist's assistant
Code	**Terminology**	**Mean**	**Mean**
0027	Emergency post-coital contraception (EPC)	254.51	N/A
0028	Pharmacist Initiated Therapy (PIT)	188.17	146.84