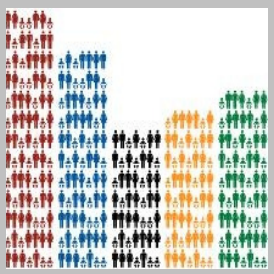
Medicines Price Components in the Philippines

Douglas Ball and Klara Tisocki



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Conflicts of Interest Statement

None of the authors are aware of any conflicts of interest. DB is an independent pharmaceutical consultant working in public health and development. KT is a pharmaceutical consultant currently employed in the European Union Mission to the Department of Health, Philippines. DB and KT are members of HAI Europe and have performed consultancies for HAI Global and other international NGOs in the past.

Executive summary

Background

There are long-standing concerns that the prices of medicines are high in the Philippines relative to other countries in the region and of similar economic status. A study was commissioned to describe and analyze the price components along the supply chain for selected essential medicines. The methodology used was that developed by the World Health Organization and Health Action International and data was collected during the period of December 2008 through to February 2009.

Methodology

Price components were investigated for the originator brand and a generic version of six medicines:

- co-trimoxazole 480mg tablets
- co-amoxiclav 625mg tablets/capsules
- atenolol 50mg tablets
- glibenclamide 5mg tablets
- amlodipine 5mg tablets/capsules
- atorvastatin 20mg tablets/capsules

being sold in public hospital pharmacies, chain and independent retail pharmacies and village pharmacies (Botika ng Barangays; BnBs) in three regions of the Philippines. Paracetamol 500mg tablets were also surveyed, but only at BnBs. The selling price to patients was determined at each outlet and then the price traced back through the supply chain through distributors to manufacturers or importers, using invoices and/or other documents from which validated data could be obtained. Unfortunately, there was some resistance from distributors and manufacturers/importers about divulging information on their prices and pricing structures that limited data collection.

Findings

Transparency: There is a lack of transparency in the pricing of generic and originator brand medicines in the Philippines within the private sector that appears to be underpinned by suspicion of the acts of competitors and the government and a desire to preserve commercial secrets. This unfortunately restricted data collection and the resulting discussion.

Wholesale and retail mark-ups: For generic products, retailer mark-ups ranged from 5% to 355% and distributor mark-ups were of the order of 18 – 117%. In general, these did not appear to be excessive when seen in combination with the actual monetary value i.e. low cost medicines can have high percentage mark-ups but these may be much smaller in monetary terms and the medicine may still be reasonably priced. The manufacturer's selling price is a major contributor to high priced medicines.

VAT: The VAT of 12% adds significantly to the cost of medicines and often has a larger effect than expected when mark-ups are based on the price including VAT from the supplier in the distribution chain.

Public pharmacy mark-ups: Public pharmacies tend to charge fixed retail mark-ups which may be as 'high' as 30%.

Senior Citizens Discount: The method of implementation of the senior citizen's discount (and now that for disabled persons) has the effect of raising medicine prices in such a way that the effect of the discount is largely negated where it is offered and any actual discount that may exist is 'paid for' by patients, not by healthy members of society. This amounts to a tax on the sick.

Promotional discounts and assistance schemes: The current 'high prices' and general low affordability of originator brands for the majority of Filipino patients is allowing the respective pharmaceutical companies to promote their products and their corporate image by offering discounts. Examples include the Sulit card, patient assistance and other programmes for helping patients access their products that are largely promotional tools and may lead to irrational medicine selection by patients and/or their physicians.

Market structure and segmentation: The market structure and market segmentation in the Philippines continues to support the observed pricing structures. If the Bureau of Food and Drugs (BFAD) were to rigorously ensure the quality of generic medicines on the market, this - along with related interventions to promote the use of generic medicines - would help to increase the use and acceptability of low-priced generics.

Recommendations

Interventions are needed to improve medicine pricing mechanisms and affordability. In particular, VAT on essential medicines and the use of regressive mark-ups at public pharmacies should be examined.

Mechanisms to increase utilisation of low-priced generic medicines need to be explored and enhanced. The development of a comprehensive and coordinated national medicines policy is encouraged and potential incentive mechanisms should be studied, both on the supply and demand side, to increase the demand for lower priced generic equivalents by both prescribers and patients.

Improved monitoring and evaluation of regulatory interventions is needed. A reliable medicine price monitoring system should be established for essential medicines to monitor the effects of any policy or regulatory changes intended to affect medicine prices. The effects of current mandatory (e.g. Senior Citizens Discount) and voluntary (e.g. Sulit Card) patient discount schemes and assistance programs on medicine prices and rational use of medicines should be investigated. In addition, more appropriate and equitable means to address poor affordability of medicines should be implemented.

List of Abbreviations and Acronyms

AO	Administrative Order
BFAD	Bureau of Food and Drugs
BHS	Barangay Health Station
BLOM	Botika ng Lalawigan of Oriental Mindoro; see also BnL
BnB	Botika ng Barangay
BnL	Botika ng Lalawigan; see also BLOM
CALABARZON	Cavite, Laguna, Batangas, Rizal and Quezon Provinces
cGMP	current Good Manufacturing Practice; see also GMP
CHD	Center for Health Development
COA	Commission on Audit
COBAC	Central Office Bids and Awards Committee
CPR	Certificate of Product Registration
DEEM	Differential Expenditure Efficiency Measurement
DOH	Department of Health
EDPMS	Essential Medicines Drug Price Monitoring System
EO	Executive Order
EML	Essential medicines list
G	Generic
GDP	Gross domestic product
GMP	Good Manufacturing Practice; see also cGMP
GPR	Government Procurement Reform
GSO	General Services Office
GST	Goods and Services Tax
HAI	Health Action International
HIV	Human Immunodeficiency Virus
ILHZ	Inter Local Health Zone
IQR	Interquartile range (range between 1st and 3rd quartile)
LGU	Local Government Unit
MeTA	Medicines Transparency Alliance
MIMAROPA	Oriental Mindoro, Occidental Mindoro, Romblon and Palawan Provinces
MPR	Medicine price ratio
MSH	Management Sciences for Health
NCR	National Capital Region
NGO	Non-governmental organization
NMP	National Medicines Policy
NSO	National Statistics Office
OB	Originator brand
OECD	Organization for Economic Co-operation and Development
PHAP	Pharmaceutical & Healthcare Association of the Philippines
PhilGEPS	Philippines Government Electronic Procurement System
PhilHealth	Philippines Health Insurance Corporation; see also PHIC
PHIC	Philippines Health Insurance Corporation; see also PhilHealth
PITC	Philippines International Trading Corporation
PMU50	Pharmaceutical Management Unit-50
PNDF	Philippines National Drug Formulary
PO	Purchase Order
PPP	Purchasing Power Parity
PWI	Procurement Watch Inc.
PHP	Philippine peso
Q1	First quartile (25th percentile)
Q3	Third quartile (75th percentile)
QC	Quality Control
RA	Republic Act
RDF	Revolving Drug Fund
ROP	Republic of the Philippines
RHU	Rural health unit
TB	Tuberculosis
UNICEF	United Nations Children's Fund
USD	United States Dollar
VAT	Value Added Tax
WHO	World Health Organization
WPRO	Western Pacific Regional Office

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1. Introduction

The Philippines is an archipelago of over seven thousand islands situated to the south-east of China in the Pacific Ocean, just north of the equator. Almost all areas of the Philippines experience a tropical climate characterised by warm to hot temperatures and high humidity year round. The total land area is estimated at around 300,000 sq. km.

The Philippines has a colorful history reaching from the original indigenous inhabitants, through almost 400 years of Spanish colonisation (1521-1898) and about 50 years of control by the United States of America (USA) (1898-1946 including a period of occupation by the Japanese during World War II) until its independence was officially recognised on 4 July 1946. The country stands out as a Christian, largely Roman Catholic, country in the midst of the surrounding Buddhist and Hindu nations of South-East Asia. English is widely spoken, and Filipino or Tagalog are the standardised indigenous language with many different dialects commonly spoken.

Upon independence, the Philippines was established as a republic and adopted a bicameral political system with the Congress consisting of the Senate (24 senators elected nationally) and a House of Representatives (up to 250 members) consisting mostly of popular representatives elected at the local level. The president is the head of state and government and is elected by popular vote to a single six year term.

Administratively, the country is broken down into 17 regions, 81 provinces, 136 cities, 1,494 municipalities, 41,995 barangays (as of end of 2007). Local government units (LGUs) run the provinces (under a governor), cities and municipalities (under a mayor) and the barangays (under a barangay captain and council) under the Local Government Code of 1991. The capital city of the Philippines is Manila, actually a conglomeration of 16 cities and the Municipality of Pateros and often referred to as Metro Manila or the National Capital Region (NCR). The population of NCR is close to 12 million, although there are residential suburbs extending beyond the boundaries into neighboring provinces.

1.1 Socio-demographic and Health Situation

The population of the Philippines is estimated to be 92.23 million in 2009, with an official inflation rate of 8.0% in December 2008, an unemployment level of 6.8% (underemployment 17.5%) and functional literacy of 84% (NSO website 2009). The top four causes of morbidity reported in 2006 were pneumonia, diarrheal disease, bronchitis and hypertension (NSO 2008), with tuberculosis also among the top ten. About 30% of Filipinos are considered as living in poverty according to government statistics (NSO 2008).

The Philippines is classified by the World Bank as a developing country with a lower-middle-income economy, which according to the International Monetary Fund has a per capita gross domestic product (pcGDP) of $3,383 (2007; PPP-adjusted; www.imf.org). Relevant health demographic and health financing data are shown in Table 1 although it should be noted that significant health inequalities exist between urban and rural areas and even between different urban or rural areas (see section 1.2 Health System). Expenditure on health as a proportion of GDP is around 3.3% and per capita government spending on health is $88 (PPP-adjusted) (Table 1; Figure 1 & Figure 2). There is substantial out-of-pocket expenditure on health and on medicines.

Figures 1 and 2 provide some comparison of health expenditure in the Philippines versus other countries in the Asian region.

Table 1. Demographic and health indicators for the Philippines

Demographic indicators	
Gross national income per capita (PPP international $)	3,430
Population (in thousands) total	86,264
Population annual growth rate (%)	2
Population in urban areas (%)	63
Population living below the poverty line (% living on < US$1 per day) (2003)	14.8
Population proportion under 15 (%)	36
Population proportion over 60 (%)	6
Adult literacy rate (%) (2003)	92.6
Health personnel & status indicators	
Physician density (per 10,000 population) (2002)	12
Pharmaceutical personnel density (per 10,000 population) (2002)	6
Nursing & midwifery personnel density (per 10,000 population) (2002)	61
Dentistry personnel density (per 10,000 population) (2002)	6
Infant mortality rate (per 1,000 live births) both sexes	24
Life expectancy at birth (years) both sexes	68
Maternal mortality ratio (per 100,000 live births) (2005)	230
Prevalence of HIV among adults aged <15 years (per 100,000 population) (2005)	<100
Incidence of tuberculosis (per 100,000 population per year)	287
Health expenditure indicators	
Total expenditure on health as a percentage of gross domestic product	3.3
General government expenditure on health as a percentage of total government expenditure	6.4
General government expenditure on health as a percentage of total expenditure on health	39.6
Private expenditure on health as a percentage of total expenditure on health	60.4
Private prepaid plans as a percentage of private expenditure on health	10.6
Out-of-pocket expenditure as a percentage of private expenditure on health	80.2
Social security expenditure on health as a percentage of general government expenditure on health	27.2
Per capita government expenditure on health (PPP int. $)	88
Per capita government expenditure on health at average exchange rate (US$)	18

All data from the WHO Statistical Information System (www.who.int/whosis) and from 2006 unless otherwise indicated.

Figure 1. Regional comparison of expenditure on health as a percentage of GDP

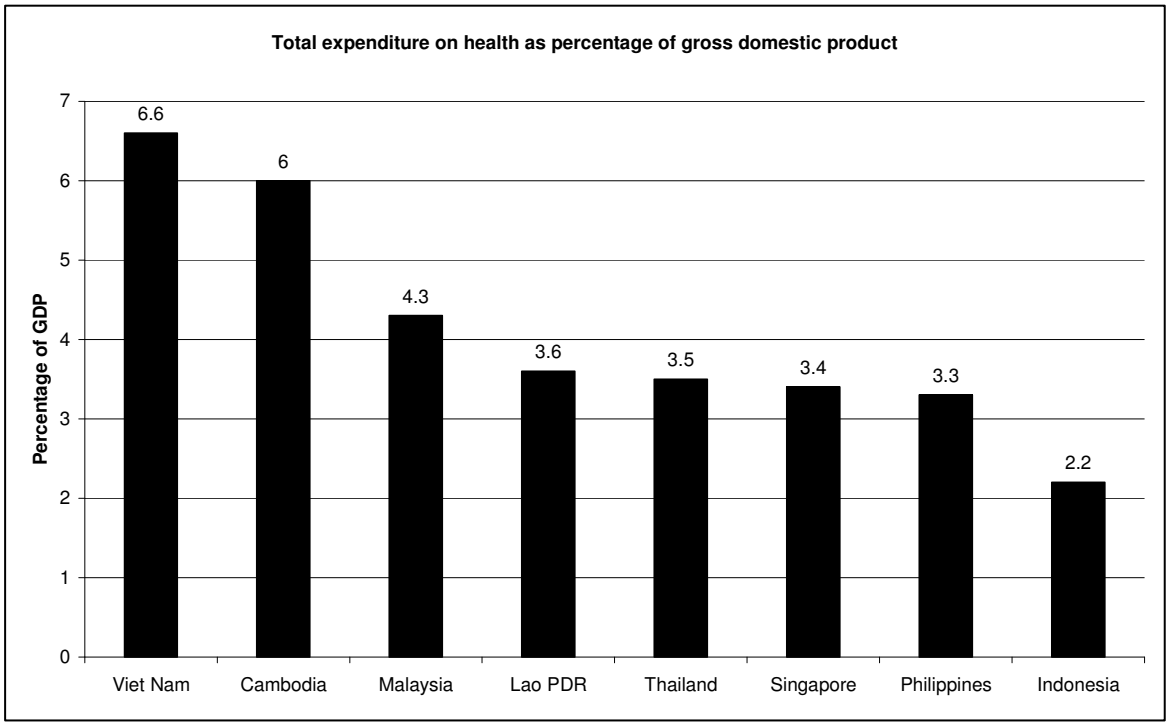
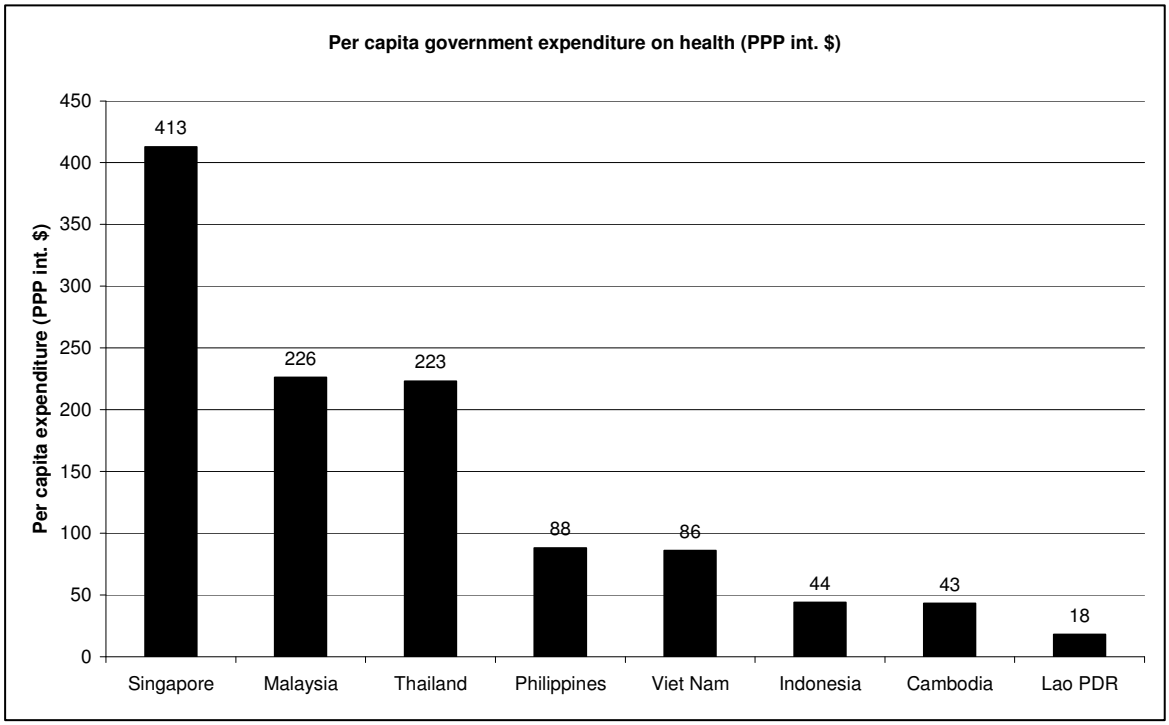


Figure 2. Regional comparison of per capita government expenditure on health

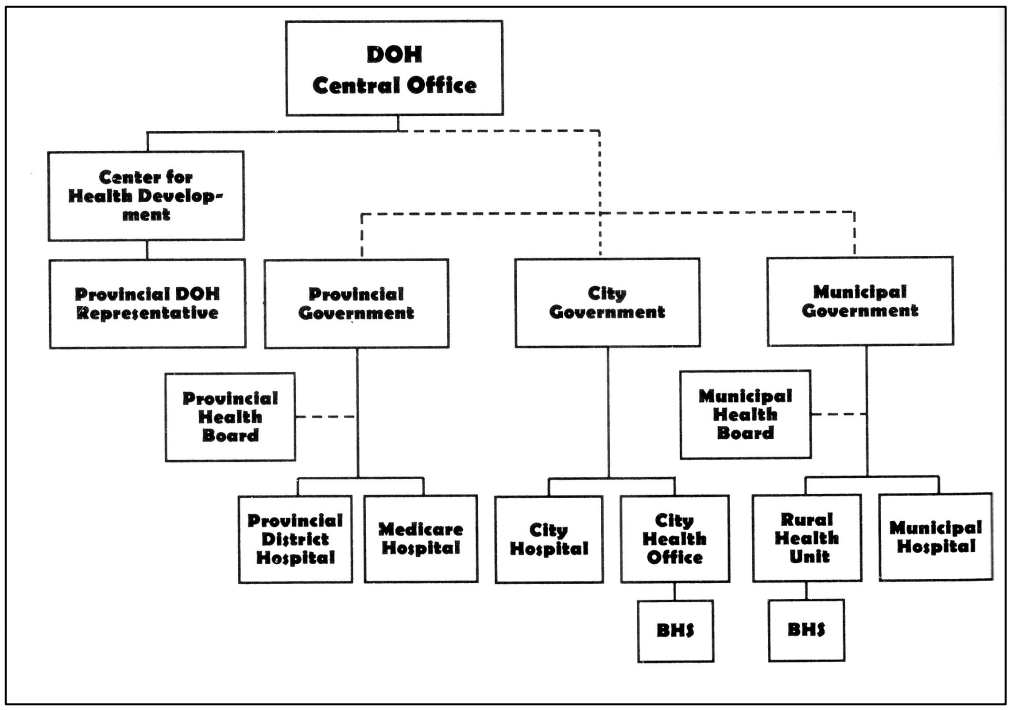


1.2 The Health System

The central public health body is the Department of Health (DOH), which is responsible for policy development, implementation and regulation. It also directly oversees the operations of specialised hospitals, regional hospitals and medical centers (DOH-retained hospitals; 72 in total). A Center for Health Development office (CHD) provides the DOH with a presence in each of the 17 regions to provide regional oversight and manage DOH operations.

Various strategies and reforms have been implemented within the health sector over the years, but one which continues to impact significantly on health care delivery is the devolution of health services in 1992. With this reform, the operation of health services were devolved from central government to local government units (LGUs) i.e. provincial and city/municipal authorities. Under the devolved system, the provincial government implements health programmes in the province and runs provincial and district hospitals while city and municipal offices are in charge of health programmes within cities and municipalities and run rural health units (RHUs), barangay health stations (BHSs) and, where they exist, the city or municipal hospitals (Figure 3). A lack of adequate management skills at the LGU level with communication breakdowns between the various levels of government led to a decline in utilisation of services (Grundy et al. 2003) and resulted in variation and inequities in the provision of health care across LGUs. Further reforms have been instituted to try and address the limitations of the devolved health system and Inter Local Health Zones (ILHZs) were established to facilitate the coordination of health activities between neighboring municipalities, their province and the DOH-retained services within the associated region.

Figure 3. The devolved health system of the Philippines



From DOH (2002)

According to the WHO Country Health Profile for the Philippines, factors impeding the effective delivery of health care can be summarised as follows (WHO WPRO 2006):

1) inadequate health care financing;
2) over-reliance on tertiary rather than primary care, combined with ineffective public health programmes;
3) migration of trained health workers;
4) high medicine prices, with high out-of-pocket payments, and irrational medicines use;
5) non- or inadequate enforcement of pharmaceutical and other regulations; and
6) insufficient prevention and control of new and non-communicable diseases.

Much of the health care in the Philippines is provided through the private sector with around 60% of spending on health care coming from out-of-pocket payments (WHO CHIPS 2006) and there are many private clinics and hospitals of varying sizes. In 2006, there were 703 public hospitals and 1,068 private hospitals although bed capacity was higher in the public sector (NSO 2008). Public health facilities and services are perceived as of lower quality in all aspects than those in the private sector leading to the bypassing of public primary care facilities and overutilisation of government hospitals and private health care institutions for primary care (World Bank 2001). Despite extensive migration of health professionals, physician density is 12 per 10,000 population and pharmacist density at 6 per 10,000 inhabitants (Table 1) but there is inequity in the distribution of health services and health personnel between urban and rural areas, with Metro Manila in particular having a high concentration of health facilities and personnel.

A degree of public health insurance was introduced in the Philippines by the establishment of Medicare in 1969, which focused on coverage of hospital care with payment of costs paid up to a preset limit for members, who were mostly employed workers. In 1995, the Philippine Health Insurance Corporation (PhilHealth) replaced Medicare and has worked to increase coverage of poor and indigent Filipinos. Current membership is reported as 73% of the population with about 2.9 million indigent families enrolled (PhilHealth 2009). Four categories of membership exist, formally employed workers, indigents, retirees, and individually paying members, and reimbursement is based on in-patient care with caps for each service, including medicines (Obermann *et al.* 2006, Wagner *et al.* 2008). Outpatient benefits, such as those for maternal care and tuberculosis, are extremely limited and there is currently no coverage for outpatient medicines (Wagner *et al*. 2008). Unregulated pricing of medicines in hospitals and the PhilHealth reimbursement cap can leave patients with substantial out-of-pocket expenditures (Obermann et al. 2006).

1.3 Medical and pharmaceutical education

The Philippines has a very high adult literacy rate of over 90%. Medical, pharmacy and nursing education can be pursued at a number of universities and other training institutions, both public and private. There has been an increase in the number of training facilities to meet growing demand from those who see medical-related education as a means to obtain overseas employment. Migration of health workers has been significant in the Philippines, being both a problem for local health systems and an economic bonus in terms of remittances from overseas workers. The Faculties of Pharmacy at the University of the Philippines (public) and the University of Santo Tomas (private, established 1871) are among the largest and most renowned training institutions for pharmacists. Training is largely along the lines of a traditional pharmacy curriculum, and clinical or ward pharmacy activities are not common. Graduates can expect to work in drug stores and pharmacies, in hospital practice, in

regulatory positions at the Bureau for Food and Drugs or in the private distributor/manufacturer setting.

1.4 Provision of medicines in the Philippines

The Philippines has an established pharmaceutical industry dating back to 1900. According to industry statistics, in 2007 there were 471 registered pharmaceutical companies with almost 50% of these being 'foreign'-owned (PHAP 2008) and largely representing the multinational pharmaceutical companies. The Philippines pharmaceutical market was valued at around US$2 billion in 2007, representing about 4% of the Asia Pacific market (excluding Japan) with two thirds directed at prescription medicines (PHAP 2008). The top 20 pharmaceutical companies represent over 80% of the market, with most of the locally owned pharmaceutical manufacturers involved in the production of generic medicines. Over 16,000 pharmaceuticals are registered with the Bureau of Food and Drugs, the medicines regulatory authority which is part of the Department of Health but operates largely autonomously.

As of the end of 2008, there were 275 licensed pharmaceutical manufacturers and 448 drug traders producing or importing medicines that were being distributed through 4,165 licensed pharmaceutical wholesalers (distributors). The distributors, who may be the parent manufacturer/trader in some instances, supply the medicines to about 30,000 retail outlets, of which roughly 21,000 are private drugstores, 1,700 are hospital pharmacies (private and public) and the remainder are community drug stores (e.g. Botika ng Barangay; see section 1.5.4) (based on list of BFAD-licensed outlets end 2008). More than 60% of the distribution market operates through Zuellig Pharma Inc and its wholly-owned subsidiary Metro Drug Inc (PHAP 2008). These companies mostly deal with multinational companies and specific 'branded-generics' (of higher cost and supposedly 'assured' quality based mostly on the manufacturer name). The largest local manufacturer, United Laboratories, is also associated with 'branded-generics' and undertakes its own distribution.

Originator brands, 'branded-generics' and generics

In this report, original brand name medicines are identified as "originator brands". All other medicines are considered "generics" i.e. equivalent products containing the same active ingredient which are usually produced by competitors when the patent on the originator brand expires or is not enforced (the originator brand parent company or a subsidiary may also produce generics of their product). These generic equivalents may be marketed under a brand name (often called "branded generics") or the generic name of their active ingredient. In the Philippines, certain generic equivalents made by some pharmaceutical companies are viewed as being of superior quality to similar generic products and have higher demand and are sold at higher prices. These are referred to colloquially as 'branded-generics'. Where this recognition is made in the text, the phrase is placed in single quotation marks and hyphenated to distinguish from the other accepted meaning described above.

Due to the inefficiencies in delivery of primary care, almost 90% of medicine sales (by value) occur through private retail outlets with the remainder through hospitals and around 70% of these through private hospitals due to the limited budgets of public facilities (Kanavos 2002, PHAP 2008; Figure 4). Chain drugstores dominate - about 60% of the market - of which Mercury Drug Corporation is the dominant player with about 7,000 pharmacies accounting for more than 50% of the market and 70% of

the chain operations (PHAP 2008). Chain pharmacies are more likely to sell products of multinational companies and 'branded-generics' than cheaper generic counterparts.

The pharmaceutical market is highly segmented with richer Filipinos utilising private drugstores and hospitals and tending to use originator brands and 'branded-generics'. Middle classes follow suit but with some use of public facilities, and the poor obtain their medicines from drugstores, public facilities and community outlets and rely to a greater extent on cheaper generics (Kanavos 2002).

Some of the reasons underlying this market segmentation and dominance of expensive originator brands and 'branded-generics' are as follows (Kanavos 2002):

A. Inadequate assurance of quality of generics by the Bureau of Food and Drugs (BFAD)
B. Strong marketing by dominant manufacturers and distributors and support of their products by the prescribing physicians.
C. Lack of competition from public and NGO outlets, which concentrate on providing cheaper generics to the poor.
D. Information imbalance with patients relying on physician advice and lacking knowledge of competing products.

This market segmentation and the distribution channels that operate in the Philippines' pharmaceutical sector need to be appreciated due to the effects they have on access to essential medicines and pricing structures. For example, if low-priced generics are not stocked by chain pharmacies or private hospitals, or if the public sector market share is not increased, then the majority of the population will not have access to them (Figure 4).

Figure 4. Pharmaceutical distribution channels in the Philippines

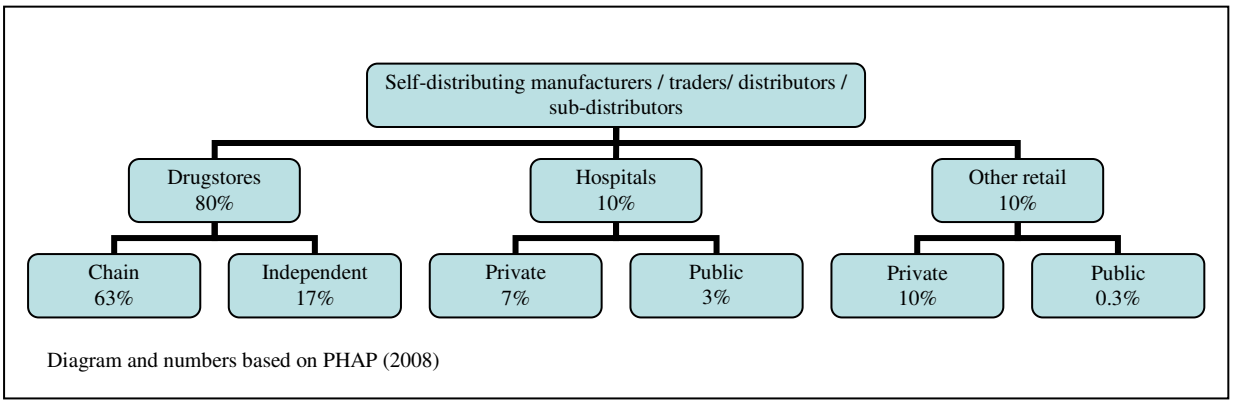


Diagram and numbers based on PHAP (2008)

Medicines must be registered with the BFAD prior to marketing which issues them with a Certificate of Product Registration (CPR). A limited number of over-the-counter medicines may be sold through suitably licensed general retail outlets without a pharmacist, while most medicines are restricted to sale through retail pharmacies or drugstores which should be staffed by a licensed pharmacist. Valid physician prescriptions should be presented for sale of prescription medicines but, in practice, many pharmacies will sell most prescription medicines on demand.

Medicines are commonly sold as individual units e.g. by tablet, capsule or bottle without additional packaging or labeling. Physicians do not dispense apart from certain vaccines. However, physicians

may have business and financial interests in specific pharmacies. Many government doctors will also operate private practices to supplement their income.

1.5 Medicine prices in the Philippines

Medicines are generally seen as expensive in the Philippines compared to neighbouring countries apart from Japan (Kanavos et al. 2002, Batangan et al. 2005, Pabico 2006). As an example, Table 2 shows the comparative retail prices of selected medicines across five developing countries and Canada in 1995 and Table 3 compares 2005 trade prices between the Philippines, India and Pakistan for certain originator brand products. While some of these discrepancies may be explained by exchange rate variations and different sources of list prices, these would not account for the differences seen.

In 2005, Batangan and colleagues conducted a medicine price survey utilising the standardised methodology developed by the World Health Organization (WHO) and Health Action International (HAI) in which local prices are compared to international reference prices (the Philippines was also one of the countries in which the methodology was pilot tested in 2002). They found, among other things, that prices for originator brand medicines sold from private retail outlets were on average 15 times greater than the reference price, while lowest-priced generic equivalents were more than six times the reference price.

Table 2. Comparative Retail Prices of 100 Units (Tablets/Capsules) of 12 Commonly Used Medicines in Five Developing Asian Countries and Canada, July-September 1995 (in US$)

Medicine name	Strength	Canada	India	Indonesia	Nepal	Pakistan	Philippines
Amoxicillin	250 mg	8	9	10	8	5	22
Amoxil® (amoxicillin)	250 mg	14	10	40	9	8	29
Tagamet ® (cimetidine)	200 mg	25	-	56	-	14	95
Co-trimoxazole	480 mg	6	5	7	3	3	20
Septrin® (co-trimoxazole)	480 mg	6	-	25	3	5	53
Odofenac	50 mg	30	2	48	2	7	25
Voltaren® (diclofenac)	50 mg	46	2	52	-	18	37
Erythromycin	250 mg	6	12	10	10	5	20
Erythrocin® (erythromycin)	250 mg	9	11	37	11	7	35
Adalat ® (nifedipine)	5 mg	28	2	18	-	2	40
Inderal® (propranolol)	40 mg	15	8	74	-	28	25
Zantac® (ranitidine)	150 mg	81	3	150	3	39	95

After Pabico (2006) with original source Lim (1997).

Table 3. Comparative trade prices of selected originator brand products in the Philippines, India and Pakistan in 2005 (in Philippines pesos)

Medicine	Active ingredient	Manufacturer	Philippines	India	Pakistan
Ponstan 500 mg tab	Mefenamate	Pfizer	22	3	1.4
Lopid 300 mg cap	Gemfibrozil	Bayer	36	12	3
Buscopan 10 mg tab	Hyoscine	Pfizer	10	2	0.6
Bactrim 400/80 mg tab	Co-trimoxazole	Boehringer	16	1	1
Adalat Retard 20 mg tab	Nifedipine	Roche	38	1	4
Lasix 40 mg tab	Furosemide	Aventis	9	0.5	1
Plendil ER 5 mg tab	Felodipine	AstraZeneca	36	5	8
Diamicron 80 mg tab	Gliclazide	Servier	11	7	5
Ventolin 50 mcg inh	Salbutamol	Glaxo	315	123	62
Voltaren 50 mg tab	Diclofenac	Novartis	18	1	4
Isordil 5 mg SL tab	Isosorbide DN	Wyeth	10	0.2	0.2
Imodium 2 mg cap	Loperamide	Janssen	11	3	2
Fortum 1 g inj	Ceftazidime	Glaxo	980	390	304

Data based on MIMS 2005, Philippines; IDR 2005, India; Red Book 2005, Pakistan respectively.
After ROP (2007)

The situation in public facilities was not any better, and in many cases the medicines cost more from government hospital pharmacies than private drugstores. The study also attempted to assess the components that made up the final selling price of the medicines. Due to difficulties in sourcing primary data, the researchers used unvalidated secondary sources which indicated that the cumulative markup on an imported medicine would range from 89.5% to 273%.

Indeed, the high prices of medicines in the Philippines have been the subject of a number of studies and papers (e.g. Kanavos et al. 2002, Batangan 2005, Balasubramaniam 1996, Lim 1997), so far apparently without major impact. This is not to say that action has not been taken by the Philippines government in an attempt to make essential medicines affordable and accessible to the poor.

1.5.1 The Generics Act 1988

In 1988, the government of the Philippines under President Aquino introduced Republic Act 6675 (RA 6675/1988), known as the Generic Drug Act of 1988 in an attempt to increase the use of generic medicines and reduce medicine prices. The Act and its subsequent Administrative Order (AO 51/1998) aimed to increase use of generic medicine names throughout the supply chain from importation/manufacture through to prescription and dispensing, to increase the availability of low-priced generic medicines, to encourage use of generic medicines together with attendant advantages in health service training and operation. According to the Generics Act (RA 6675/1988) and associated regulations (AO 51/1988) all public establishments should procure medicines by generic name and according to “generic use”. However, originator brand or other medicines “identified by brand names” may be procured “where price and availability constraints make it necessary”. This is intended for circumstances in which the branded medicines are the only products available or offered at more advantageous prices than purely generic medicines. Further to this, Executive Order 49 of 1993 (EO

49/1993) limited public procurement to those medicines listed in the Philippines National Drug Formulary. However, these measures did not appear to have the desired effect, and medicine prices have remained high. This is commonly attributed to intensive marketing by the dominant manufacturers and importers of originator brands and 'branded-generics' coupled with the existing market imbalances and failures (DOH 2005).

1.5.2 National Drug Policy – Pharmaceutical Management Unit-50

One of the projects of the Arroyo administration in the Philippines was the "Half-Priced Medicines Program" of 2000 in order to increase availability and access to cheaper medicines in the Philippines. The National Drug Policy – Pharmaceutical Management Unit-50 (Pharma-50 or PMU-50; the 50 relating to 50% cheaper medicines) is an *ad hoc* unit established in the Department of Health (DOH) to oversee the programme's implementation (DOH 2009) as the DOH does not otherwise have a permanent pharmaceutical policy unit. A number of initiatives were instituted including parallel drug importation, establishment of pharmacies to sell cheaper generics, establishment of village pharmacies in remote or disadvantaged communities, promotion of the use of generic medicines, the Philippine National Drug Formulary (PNDF) and an Essential Medicines Drug Price Monitoring System (EDPMS) (DOH 2009). The Philippines does not have a comprehensive National Medicines Policy but the PMU-50 takes its direction and authority from the policy statements made as part of the Generics Act 1988 (RA 6675/1988) and subsequent legislation.

1.5.3 Parallel drug importation

Facilitated by the above legislation and initiatives, the government instructed the Philippines International Trading Corporation (PITC) under the Department of Trade and Industry, through its subsidiary PITC Pharma, to undertake parallel importation of selected originator brands with the aim of selling them at half the price of the same brands currently available in the Philippines. These, mostly sourced from India and Pakistan, were initially made available to public hospital pharmacies and later on to certain private retail outlets which PITC Pharma established and/or entered into contract with (franchised under Botika ng Bayan; 'ng' pronounced 'nang') (PITC 2009). There were over 1,400 of these outlets in 2007 (Arroyo 2007). PITC Pharma was also tasked with procuring low cost generic medicines for sale through these retail outlets, the DOH hospitals and through village pharmacies (Botika ng Barangays).

1.5.4 Botika ng Barangays

A Botika ng Barangay (BnB) is a community-based and owned retail outlet licensed under BFAD and authorised to supply a list of over-the-counter (non-prescription) medicines as well as a short list of essential prescription medicines (Table 4). These outlets are commonly run by Barangay Councils but may also be operated by community supported NGOs or other non-profit organisations. Each should have a supervising pharmacist who visits at least every two weeks. A BnB is established with an 'operating capital' of PHP25,000 provided from PITC Pharma in the form of an initial supply of medicines valued at this amount (the same package is provided to each newly established BnB). The sales from these medicines go towards a revolving fund for the replenishment of stock as well as a stipulated percentage for the operations of the BnB. Replenishment was initially supposed to be through PITC Pharma but this has been broadened to allow replenishment through other means including licensed distributors. There are designated BnB coordinators within each CHD of the DOH to oversee their operations and monitor compliance with prescribed record-keeping and procedures.

Table 4. List of medicines authorised for sale in Botika ng Barangay community outlets

Category	Generic name
Analgesic/antipyretics	Paracetamol
Antacid	Aluminium hydroxide+magnesium hydroxide
Anthelmintics	Pyrantel embonate
	Mebendazole
Antialleric/antipruritic	Diphenhydramine Chlorphenamine
Non-steroidal anti-inflammatory drugs (NSAIDs)	Mefenamic acid Ibuprofen Aspirin 300mg tab
Antithrombotic	Aspirin 80mg tab
Anti-vertigo	Meclozine
Bronchodilator/anticough	Lagundi (V*itex negundo*)
Diuretic/anti-urolithiasis	Sambong (*Blumea balsamifera*)
Antitussive	Dextrometorphan
Antimotility	Loperamide
Electrolytes	Oral rehydration salts
Laxative/cathartic	Bisacodyl Senna concentrate Castor oil
Antiscabies, antilice and antifungal	Benzylbenzoate Crotamiton Sulfur

Category	Generic name
Antianemic	Ferrous sulfate
Antifungals	Benzoic acid/salicylic acid
	Clotrimazole
	Miconazole
Vitamins	Vitamins C, B_1+B_6+B_{12}, A, multivitamins
Vitamins & minerals	Folic acid+ferrous sulfate Zinc sulfate
Minerals	Calcium lactate Calcium carbonate
Disinfectants	Hydrogen peroxide Ethyl alcohol Povidone iodine
Anti-infectives*	Amoxicillin Cotrimoxazole
Other prescription drugs*	
▪ Antidiabetic	Metformin
▪ Antidiabetic	Glibenclamide
▪ Antihypertensive	Metoprolol
▪ Antihypertensive	Captopril
▪ Antiasthmatic	Salbutamol

*requiring prescription by a physician and should be dispensed by supervising pharmacist
From Department Memorandum 38/2008 (DOH 2008) which specifies the strengths and dosage forms which may be made available.

1.5.5 Health franchise outlets

Some NGOs have taken similar steps to increase accessibility of lower cost generics by establishing franchise outlets e.g. Botika Binhi, HealthPlus outlets. These operate along similar lines to BnBs or as non-profit pharmacies with revolving funds, their own supply chain or distribution network and, in some cases, offering a wider range of health services.

1.5.6 P100 Program

In 2008, PMU-50 launched the P100 programme in conjunction with PITC Pharma under which the latter would make designated packs of selected essential medicines available for a price of P100 or less inclusive of any mark-ups (Table 5).

1.5.7 The Cheaper Medicines Act 2008

To complement these measures, RA 9502/2008, the Universally Accessible Cheaper and Quality Medicines Act of 2008 (colloquially, “the Cheaper Medicines Act”), became effective on July 4, 2008, amending RA 6675/1998 and other legislation in an attempt to further address the situation by making the laws TRIPS-compliant (and permitting parallel importation and compulsory licensing) and potentially increasing competition in the market by facilitating entry of externally produced generic medicines.

Table 5. List of drugs for P100 project and their selling prices (December 2008)

	Medicine	Treatment course	# of dosage units	P100 selling price (pesos)
1	Allopurinol 100 mg tab	1 tab once a day	30	50
2	Amlodipine 10 mg tab	1 tab once a day	6	100
3	Amlodipine 5 mg tab	1 tab once a day	12	100
4	Amoxicillin 500 mg cap	3x a day for 7 days	21	70
5	Ascorbic Acid 500 mg tab	1 tab once a day	30	50
6	Atenolol 50 mg tab	1 tab once a day	14	70
7	Cefalexin 500 mg cap	3x a day for 7 days	21	100
8	Ciprofloxacin 500 mg tab	2x a day for 7 days	14	50
9	Clindamycin 150 mg cap	4x a day for 7 days	28	100
10	Co-amoxiclav 625 mg tablet	2x a day for 7 days	14	-
11	Cotrimoxazole 800 mg/160 mg tab	2x a day for 7 days	14	25
12	Felodipine ER 10 mg tab	1 tab once a day	3	100
13	Felodipine ER 2.5 mg tab	1 tab once a day	7	100
14	Felodipine ER 5 mg tab	1 tab once a day	5	100
15	Glibenclamide 5 mg tablet	1 tab once a day	30	25
16	Metformin 500 mg tablet	3x a day	90	100
17	Metoprolol 100 mg tablet	1 tab once a day	30	100
18	Metoprolol 50 mg tablet	2x a day	90	100
19	Metronidazole 500 mg tab	3x a day for 7 days	30	50
20	Omeprazole 20 mg capsule	1 tab once a day	15	75
21	Ranitidine 150 mg tab	1 tab once a day	28	75
22	Salbutamol 2 mg/2.5 mL nebules	3-4 x a day or as needed	9	100
23	Simvastatin 10 mg tab	1 tab once a day	15	75
24	Simvastatin 20 mg tab	1 tab once a day	18	100
25	Simvastatin 40 mg tab	1 tab once a day	4	100

(taken from a leaflet available from a P100 outlet; December 2008)

1.6 Medicine price monitoring

Given the concerns about the high prices of medicines in the Philippines, various attempts have been made at monitoring medicine prices. The following information on medicine price monitoring is available from the DOH website:

1. Of unclear origin, but probably emanating from the Procurement and Logistics Service of DOH (entitled "Drugs and Supplies Price Monitoring [historical data]"), this page provides prices of medicines as well as a wide range of other supplies from 2001. The supplier, source, date and mode of procurement are given in addition to the price. http://home.doh.gov.ph/drugs_price_mon/all_supplies.htm

2. This data from the Procurement and Logistics Service of DOH (under which COBAC operates) provides information on the prices of "Drugs, Medicines and Vaccines" over the years 2000 to 2003. The procurement method yielding the price is not given but it could be assumed to be public bidding. http://www2.doh.gov.ph/pls/drugs_price.htm

3. Information from PMU-50 entitled "Essential Drug Price Monitoring" compares private retail outlet prices i.e. selling prices, with those from private hospital pharmacy and public hospital pharmacy for a list of essential medicines. Monthly price bulletins are given for 2004 and 2005

only. Each presents the prevailing (presumably DOH price) for the three month period ending the month of the report for 'branded' and 'generic' medicines, the range of prices for the month reported and the facility and region with the lowest price. The exact method of reporting is not described, nor whether the data was validated. http://www.doh.gov.ph/ndp/price_monitoring

4. An initiative between PhilHealth and PMU-50/DOH to increase transparency in medicine prices through the publication of a Drug Price Reference Index with minimum and maximum prices for a range of PNDF medicines is apparent. Unfortunately the price list does not give the method of obtaining the prices, it is undated (although it appears to have been created in 2006) and does not appear to have been revised or repeated.
   http://www.doh.gov.ph/fourmulaone/dpri; http://www.doh.gov.ph/files/pharma50_final_dpri.pdf

The more recent attempts at monitoring prices have been spearheaded by the PMU-50 unit at DOH. This unit (or another to supersede or complement it) has the mandate, under the Cheaper Medicines Act (RA 9502/2008), to establish an electronic price monitoring system to support the regulation of medicine prices. Plans are already underway for implementing this, with the intention to collect pricing information from pharmaceutical traders (importers), manufacturers, distributors, retailers as well as procurement prices from public entities.

1.7 Public procurement of medicines

Government procurement of medicines in the Philippines is subject to the Government Procurement Reform Act (RA 9184/2003; GPR Act) which stipulates the procedures and methods to be used in public procurement. All procurement is supposed to be undertaken as competitive bidding except under "highly exceptional circumstances". Conditions are set for the use of alternative methods of procurement including limited source bidding (for specialised goods), direct contracting (single source, proprietary or critical goods), repeat orders (superior winning bids of prior bidding), shopping (emergency procurement under PHP50,000 [about USD1,000] or ordinary supplies under PHP250,000 [about USD5,000]), and negotiated procurement (following two failed biddings and other circumstances). The Act also initiated a central electronic system for advertising tenders and posting notices of awards – the Philippines Government Electronic Procurement System (PhilGEPS) (http://www.philgeps.net). While the GPR Act went some way to increasing transparency in public procurement in general, it is still recognised that corruption is a challenge in the Philippines, within procurement and beyond, which still needs to be effectively dealt with (Quimson 2006).

Central DOH procurement: With the devolvement of health care in 1992, procurement of medicines was largely made the responsibility of local government units, with DOH-retained hospitals and some CHDs performing their own public bidding. The DOH, through the Central Office Bids and Awards Committee (COBAC), undertakes limited central procurement of medicines for vertical programmes e.g. tuberculosis, vitamin A supplementation, National Filariasis Elimination Program. PITC Pharma performs central procurement of medicines for the Botika ng Barangay programme and the P100 project, while vaccines for the Expanded Program on Immunization are procured by UNICEF under the terms of a Memorandum of Agreement.

Local government procurement: LGUs, whether at provincial or city/municipal level, are required by the GPR Act to establish bids and awards committees. These function in conjunction with the General Services Office (GSO) to perform procurement of medicines for the health facilities under their remit. In some cases, city hospitals may undertake their own procurement. Local government

procurement faces many challenges including limited budgets for medicines, full budgets not being received, difficulties in quantification, delays in procurement and delivery of medicines through the GSO and corrupt practices (Anon 2003; Hartigan-Go & Carameng 2007).

Procurement in the Philippines has been the subject of a number of studies. Some of these have specifically examined the processes of medicines procurement.

Procurement Watch Inc: Procurement Watch Inc. (PWI) is a local non-governmental organisation (NGO) that aims to increase transparency, accountability and efficiency in public procurement by observing selected public biddings and providing capacity building services on procurement and monitoring of procurement activities (http://www.procurementwatch.org.ph/index.htm). Initial attempts by PWI to monitor public bidding by LGUs in Metro Manila under the new GPR Act were unsuccessful due to suspicion on the part of the procuring authorities and incomplete implementation of the procurement reforms at local government level (PWI 2002). Later, PWI developed a methodology for measuring the efficiency of public procurement by examining the processes of procurement relative to the GPR Act, and comparing the prices awarded in the bid to those available in the market. This Differential Expenditure Efficiency Measurement (DEEM) tool was piloted at a DOH-retained hospital in Metro Manila during 2006 (Paredes 2008). The procurement of all goods during 2005 was examined, including medicines. Difficulties were encountered in determining real market prices of medicines but it was generally found that the hospital was paying prices similar to the list prices of distributors (suggesting no benefit in performing bidding). There were some cases where it was found that procurement rules were not being followed although the conclusion was that there were no major governance issues. The DEEM tool has since been simplified but has not been used again (C. Belasario, personal communication 2009).

OECD baseline assessment: The OECD baseline assessment of the Philippine public procurement system (OECD 2006) examined procurement in general. It found that in the GPR Act there was an adequate legal framework and regulations with an established complaints procedure. However, it was inefficient with oligopolies existing in the market, there was a lack of consistent application of the Act, and no standardised record-keeping across LGUs. In addition, it found that there was no analysis of procurement data on a national scale, which was compounded by the fact that PhilGEPS was not used consistently by LGUs and there was no posting of bid awards information. The report noted that many constraints influenced private sector participation in public procurement, and therefore affected competition levels such as, delayed bureaucratic payment processes, politician interference in bidding especially at LGU level, and problematic conditions being attached to procurement requirements.

COA performance audit: The Philippine Commission on Audit (COA) carried out a performance audit of the DOH procurement system for vaccines and medicines in 2005 to ensure that "vaccines were made available at the right quantity and drugs and medicines for other programmes are acquired at the right costs, time, quantity and quality" (COA 2006). The audit found that the DOH central office procurement was not completely effective in achieving these goals. In particular, vaccine quantification did not appear to match utilisation, medicines supply of BnBs was often performed without determining demand in advance, public bidding was delayed, supplier performance was not monitored and appropriate procurement methods and procedures were not always followed, for example, one CHD split its purchase requirements so as to perform shopping instead of bidding.

IBRD/World Bank case study: A case study of the DOH medicine procurement system in 2003 by Parafina at the Ateneo School of Government on behalf of the International Bank for Reconstruction and Development under the World Bank (Parafina 2003) looked at central procurement of anti-tuberculosis medicines and procurement at four CHDs. It found prolonged delays in delivery with companies often delaying receiving purchase orders (POs) so as to be able to combine orders before production and avoid the penalty of not delivering within 30 days. Marked price differences, that reached more than 1,000% for the same item, were seen within and across CHDs. These could not be explained by the CHD location, temporal factors or volume of procurement but appeared to be related to the suppliers manipulating prices and the operation of the bidding process i.e. inefficiencies and influence of corruption. For example, in one case the same distributor provided co-trimoxazole 800mg/160mg tablets to one CHD at P2.07/tablet while charging P9.80/tablet (373% difference) to another, in spite of both being the subject of bidding processes, the higher price being awarded for a greater volume and the bids taking place at the same time. The author recommended coordination in DOH medicines procurement, consultation with the pharmaceutical industry on drug pricing and the imposition of ethical rules for procurement agency staff. It was noted that monitoring and sharing of price information could have helped prevent purchasing at unreasonable prices.

Good governance case studies: In a publication of case studies with regard to good governance in healthcare in the Philippines, some of the difficulties encountered in local government procurement of medicines are highlighted (Hartigan-Go & Carameng 2007). The cases describe various scenarios of approving payment without knowing whether supplies had been received, suppliers providing a 'percentage' to the local chief executive or otherwise trying to influence procurement decisions, local chief executives interfering with the bidding process to ensure a particular supplier wins the award, accepting deliveries due to insistence of superiors even though the specifications were not met, pressure to sign for procurements or bid awards, 'ghost deliveries' when fewer medicines are delivered than are invoiced, delayed payment disbursements from the Department of Budget Management, and delayed procurement and delivery of medicines from a centralised LGU GSO operating a pooled procurement. A common underlying theme is the pressure from local chief executives or managers to take part in subversion of usual procedure with the threat of loss of employment (or even one's life in some cases) if one does not comply.

WHO good governance in procurement: The WHO undertook a study examining transparency in the registration, selection and procurement of medicines across four countries, Lao, Malaysia, the Philippines and Thailand, as part of its Good Governance for Medicines Project (WHO 2006). The methodology involved interviews with key informants to address indicators of transparency and governance. With regard to public procurement in the Philippines, although not explicitly stated, the study only appeared to examine DOH central office procurement by COBAC. The existence of the GPR Act meant that the Philippines scored well on the framework for transparent procurement and key informants generally considered that COBAC was following the laid down procedures. The Philippines vulnerability to corruption score was calculated at 8.5 on a 10 point scale, indicating 'minimal' vulnerability. However, given the fact that only COBAC procurement was assessed and the assessment was based purely on interviews without validation of documentation, the reliability of this measure is questionable.

WHO/HAI survey: In the study by Batangan and colleagues using the WHO/HAI methodology, the procurement prices at one tertiary government hospital were examined (Batangan et al. 2005). Of the 34 medicines being surveyed, procurement prices were available for 21, 17 as originator brand and 4

as generic equivalents. The prices of originator brand medicines were on average 14 times the international reference prices, while those of generics were five times the international reference prices. These results were very similar to the prices seen in private retail pharmacies. There was significant variation in the prices for both originator brands and generics relative to the reference prices. However, given the devolved nature of public procurement in the Philippines, it is not possible to infer whether the observations at this hospital are typical for other hospitals or LGUs.

1.8 Objectives of this study

Medicine prices are a significant barrier for access to essential medicines among the poor in the Philippines where most expenditure on medicines is paid out-of-pocket. While there has been some examination of the prices medicines in the Philippines, the methodology employed in some of the older work is either unclear or open to criticism. The WHO and HAI developed a standardised methodology for surveying medicines prices (and availability) in 2003 (WHO/HAI 2003) which was recently revised in the light of the experiences of surveys in more than 50 different countries (WHO/HAI 2008) (http://www.haiweb.org/medicineprices). The study of Batangan and co-workers (2005) was performed using the original methodology which provided an important contribution to the evidence-base of local medicine prices. However, as mentioned previously, the methodology relating to determination of medicine price components was updated in the latest revision of the methodology with a stronger focus on the validation of data from documentation in the supply chain. In the light of this limitation, it was decided that further investigation of the price components of medicines was needed.

The objective of this study was to describe and analyze the price components along the supply chain of a small number of essential medicines commonly used by Filipinos.

2. Methods

The basis of the survey was the standardised methodology of the World Health Action and Health Action International (WHO/HAI 2008) with data being collected during the period of December 2008 through to February 2009. The WHO/HAI methodology investigates price components through case studies of a small selection of essential medicines. Starting at the point of sale in a retail outlet, the price data is traced back through wholesalers/distributors, importers and government agencies using invoices and interviews to determine the components which go towards making the final price. The components are divided into stages and ideally the presentation of results should follow this framework to facilitate comparison across studies (see box below).

'Stages' in components of medicine prices (WHO/HAI, 2008)

Stage 1: The Manufacturer's Selling Price. This is the manufacturer's or supplier's selling price, plus freight to the purchasing country. For locally produced goods, the manufacturer's selling price, plus (possibly) domestic transport to purchasing entity.

Stage 2: Landed Cost. The Landed costs include all other costs that arise from procuring medicines. This includes banking fees for foreign currency purchases, inspection charges (either pre- or post-shipment), port fees (docking, storage, handling, insurance in port), customs clearing, import tariff, and importer's mark-up. Any fees collected centrally are listed here: e.g. the Pharmacy Board fee. For locally produced products, if there is a local preference discount it is applied here.

Stage 3: Wholesaler's resale price. The Wholesaler's resale price is based on the Landed costs, and includes the wholesaler's additional expenses: local transport to the wholesaler's warehouse, storage, handling, overhead expenses and profit margin. Many of these might be included in the Wholesale mark-up: it is important not to count them twice. In the public sector, this is the Central Medical Stores' selling price.

Stage 4: Retailer's resale price. The Retailer's resale price is based on the Wholesaler's resale price, and includes the retailer's additional expenses: local transport to the retailer, storage, handling, overhead expenses and profit margin. Many of these expenses might be included in the Retailer's mark-up: it is important not to count them twice. In the public sector, this is the Regional Medical Stores' selling price.

Stage 5: Cost to patient. The Cost to patient includes the Retailer's resale price plus a dispensing fee and any sales taxes (VAT or GST). In many public sector programs the patient does not pay and this cost is understood to reflect the cost to the health system.

2.1 Selection of medicines

In this study, the price components of the originator brand and generic equivalent of six medicines were examined in three regions – Region I (to the north extremity), NCR and Region VII (to the south extremity).

Six medicines of public health importance (listed in the PNDF), based on those in the public sector procurement price survey (Ball et al 2009), likely to be available at the facilities to be surveyed and requiring a prescription were selected, with the following factors also taken into consideration:

- Two medicines should be available in Botika ng Barangays. Initially glibenclamide 5 mg tablets and cotrimoxazole suspension were selected. However, after a pilot data collection in NCR, availability of the latter appeared problematic, resulting in cotrimoxazole 400mg/80mg tablets being substituted for the suspension. In addition, paracetamol 500mg tablets were surveyed as a product which should be universally available at BnBs even though not a prescription medicine nor included in the main procurement survey.

- Atorvastatin 20mg tablets were selected as a product still under patent with no competitors in the market even though not listed in the PNDF.

The medicines which were surveyed were:

Medicine	Dosage form	Strength	Originator brand
Co-trimoxazole	capsule/tablet	400+80mg	Bactrim
Amoxicillin+Clavulanate	capsule/tablet	500+125mg	Augmentin
Atenolol	capsule/tablet	50mg	Tenormin
Glibenclamide	capsule/tablet	5mg	Daonil
Amlodipine	capsule/tablet	5mg	Norvasc
Atorvastatin	capsule/tablet	20mg	Lipitor
Paracetamol[1]	capsule/tablet	500mg	Panadol

[1]Surveyed at BnBs only

For each medicine the originator brand and a generic equivalent (preferably the lowest-priced on the day) were assessed although in some cases they may not have been present at the facility.

2.2 Selection of facilities

To address the variety of retail outlets from which patients may obtain their medicines and which could influence price components, four different types of outlets were surveyed:

- Public health facility
- Chain pharmacy (one company with multiple branches)
- Privately-owned independent pharmacy
- Botika ng Barangay (BnB)

For the sake of efficiency, it was intended to cluster the selection of retail outlets around the main public health center in each region i.e. the pharmacy in the main general hospital would be the public health facility, and then the closest chain and independent pharmacy would be selected as well as the closest BnB.

Difficulties encountered in facility selection

- Initial attempts to secure the cooperation of independent retail pharmacies to participate in the survey were unsuccessful in spite of assurances of confidentiality of data. Owners were often not present in the pharmacy and refused to participate when approached by telephone. While there were no issues in revealing selling prices, there appeared to be a high degree of suspicion when it

was explained that cost prices would also be surveyed. Pharmacists and owners appeared to believe that the information might in some way be used by their competitors to the latter's advantage. In the end, independent pharmacies in Region I and NCR were identified through personal approach and were remote from the main public health facility.

- As the chain pharmacy with the major market share, Mercury Drug Corporation was approached to participate but refused. Due to the difficulties encountered with independent pharmacies and Mercury, the Philippine Pharmaceutical Association was approached to see if they could identify pharmacy owners or chains willing to participate. Through their efforts, arrangements were then made with a smaller chain of pharmacies to be included in the study.

- BnBs tend to serve communities with difficult access to medicines and/or health services. Therefore, most BnBs surveyed were not close to the main public health facility but were usually quite remote, although still based within the municipality in which the main public health facility was situated.

2.3 Data collection

Appointments were made in advance with the various retail outlets and data on their selling price and cost price of the originator brand and a generic equivalent of the six medicines were entered into standard data collection form. Semi-structured interviews were also conducted about the make-up of any margins or mark-ups. Retail selling prices were obtained from price lists where available or price tags on boxes. Cost prices were obtained from supplier invoices. The details of the supplier were noted and the suppliers were then approached to participate in the survey where a similar process was used, with price data being validated from invoices and/or delivery notes. Many distributors and manufacturers/importers were either suspicious of the survey or did not wish to divulge information which they saw as being commercially sensitive and refused to participate in the study or, in some cases, even meet with the survey team. In a few cases, even though distributors had refused to participate, approaches were made to manufacturers/importers to determine whether they would be able to share any information about their products which had been identified from the retail outlets. The Pharmaceutical and Healthcare Association of the Philippines assisted in contacting member companies about the study and, in some cases, identifying contact persons to approach.

2.4 Data analysis

Background pharmaceutical policy information was gathered to assist in the interpretation of the findings (Annex 1).

Price component data were entered into the Microsoft Excel workbook developed by WHO/HAI for analysis of price component survey data, (www.haiweb.org/medicineprices/manual/documents.html). However, due to the incomplete nature of the data, further analysis was performed in a separate Excel workbook. In the Philippines, retail sales are usually performed on a dosage unit basis i.e. per tablet, capsule, bottle, and this formed the basis of the approach for analysis rather than full packs.

2.5 Ethical clearance and endorsement

The study was wholly funded by HAI Global and was endorsed by the Bureau of International Health Cooperation (BIHC), the Office of the Secretary and the Pharmaceutical Management Unit (PMU-50) of the Department of Health, Republic of the Philippines.

Each retailer, distributor, trader or other agency was provided with a letter of introduction stipulating that any information would be held in complete confidence, a short study proposal and invited to participate in the study. They were free to accept or reject participation.

2.6 Confidentiality

Since confidentiality was required to obtain permission to access data in most cases, no retailers, distributors, traders or other agencies are named in the report. Where any information has been directly linked to a particular company or entity it is done so with their implicit knowledge and permission.

3. Results and Analysis

3.1 General

Unfortunately, due to suspicion amongst distributors, manufacturers and importers/traders, coupled with concerns related to release of trade secrets which might harm commercial interests, it was not possible to determine all the price components for any of the medicines. The data that was collected is summarised in Table 6 through to Table 12.

While retail mark-ups were ascertained for most medicines, only seven distributor margins were elucidated (for five medicines). In one case, the distributor was a direct subsidiary of the manufacturer and so some estimation of the supply chain for this product can be made (generic co-trimoxazole in Region VII; Table 7). The data and general information is presented in the reverse order of the stages identified in the WHO/HAI methodology (WHO/HAI 2008) (see box in 2. Methods).

3.2 Stage 5: Cost to the patient

There are no fixed dispensing fees for pharmacy services added to the cost of the medicines. However, VAT is charged at a rate of 12% which the patient has to pay. Players in the supply chain, including the retailer, should be able to offset the input-VAT 'charged' by their supplies with the output-VAT that they 'charge' to those they sell on to. However, the original VAT is incurred at the first stage of the supply chain and distributors and retailers often charge their mark-up based on the VAT inclusive price rather than the cost excluding VAT. This has the effect of increasing the price paid by the patient.

Through the Senior Citizen's Act (RA 9257/2004) and associated regulations (AO 117/2004) senior citizens are allowed a 20% discount on the retail price of medicines (as of 2009, disabled persons are also eligible for a 20% discount; RA 9504 and Revenue Regulations 1/2009). This should be provided by all outlets which are theoretically able to offset some of the cost of this (7%) through their VAT returns. However, since there is no specific budgetary provision for this, the remaining 13% is largely borne by the retailers who increase their mark-ups on medicines as a result so as to not make a loss (see data below; distributors and manufacturers may shoulder some of the cost). The end result is an increase in the price of medicines for all patients, although some retailers make the distinction between medicines that senior citizens are more likely to use e.g. drugs for arthritis, dementia, and apply differential mark-ups. Many small drugstores and retail outlets refuse to give senior citizen discount and refer patients to the chain drugstores which they believe are more able to bear the financial cost of this discount. This means that the latter have a higher patient burden of senior citizens which impacts on their price setting.

Many multinational companies offer special schemes to get patients started on (and to stay on) treatments with their originator brands. An example is Pfizer's Sulit Card whereby patients can receive the following discounts: Zoloft® (sertraline) 25%; Neurontin® (gabapentin) 40%; Celebrex® (celecoxib) 25%; Viagra® (sildenafil) 40%; Envacar® (guanoxan) 40%; Norvasc® (amlodipine) 50%. These schemes are usually run in conjunction with Mercury drugstores and sometimes other chains, but not with independent pharmacies.

Generally speaking, drugstores do not offer discounts on large sales, although there is always the opportunity for negotiation with independent outlets.

Table 6. Price component data for atenolol 50mg tablets as (a) originator brand and (b) generic equivalents sold from different retail outlets in three regions

ATENOLOL

ORIGINATOR BRAND							
	Selling price (PHP)				Markup (%)		
	Manufacturer/ importer	Distributor 1	Distributor 2	Retail outlet	Distributor 1	Distributor 2	Retail outlet
Public hospital							
Region I	-	-	-	-	-	-	-
Region VII	-	-	-	-	-	-	-
NCR	-	-	-	-	-	-	-
Independent retail pharmacy							
Region I	nd	29.96	-	31.50	nd	-	5.1
Region VII	nd	nd	30.57	32.75	nd	nd	7.1
NCR	-	-	-	-	-	-	-
Chain retail pharmacy							
Region I	nd	27.74	-	32.45	nd	-	17.0
Region VII	nd	27.74	-	32.45	nd	-	17.0
NCR	nd	27.74	-	32.45	nd	-	17.0
BnB‡							
Region I	-	-	-	-	-	-	-
Region VII	-	-	-	-	-	-	-
NCR	-	-	-	-	-	-	-

GENERIC							
	Selling price (PHP)				Markup (%)		
	Manufacturer/ importer	Distributor 1	Distributor 2	Retail outlet	Distributor 1	Distributor 2	Retail outlet
Public hospital							
Region I	nd	2.11	-	2.65	nd	-	25.6
Region VII	nd	nd	1.99	2.35	nd	nd	18.1
NCR	-	-	-	-	-	-	-
Independent retail pharmacy							
Region I	nd	nd	8.09	8.50	nd	nd	5.1
Region VII	-	-	-	-	-	-	-
NCR	nd	nd	8.09	8.75	nd	nd	8.2
Chain retail pharmacy							
Region I	nd	-	6.44	6.65	nd	-	3.3
Region VII	nd	-	6.44	6.65	nd	-	3.3
NCR	nd	-	6.44	6.65	nd	-	3.3
BnB‡							
Region I	-	-	-	-	-	-	-
Region VII	-	-	-	-	-	-	-
NCR	-	-	-	-	-	-	-

nd – no data (source unavailable or unwilling to participate)

‡Not surveyed for this medicine.

Table 7. Price component data for co-trimoxazole 400mg/80mg tablets as (a) originator brand and (b) generic equivalents sold from different retail outlets in three regions

CO-TRIMOXAZOLE

ORIGINATOR BRAND							
	Selling price (PHP)				Markup (%)		
	Manufacturer/ importer	Distributor 1	Distributor 2	Retail outlet	Distributor 1	Distributor 2	Retail outlet
Public hospital							
Region I	-	-	-	-	-	-	-
Region VII	-	-	-	-	-	-	-
NCR	-	-	-	-	-	-	-
Independent retail pharmacy							
Region I	nd	-	18.16	19.00	nd	-	4.6
Region VII	nd	nd	18.16	19.50	nd	nd	7.4
NCR	nd	nd	nd	20.00	nd	nd	nd
Chain retail pharmacy							
Region I	nd	-	16.45	19.50	nd	-	18.5
Region VII	nd	-	16.45	19.50	nd	-	18.5
NCR	nd	-	16.45	19.50	nd	-	18.5
BnB							
Region I	-	-	-	-	-	-	-
Region VII	-	-	-	-	-	-	-
NCR	-	-	-	-	-	-	-

GENERIC							
	Selling price (PHP)				Markup (%)		
	Manufacturer/ importer	Distributor 1	Distributor 2	Retail outlet	Distributor 1	Distributor 2	Retail outlet
Public hospital							
Region I	nd	nd	1.00	1.25	nd	nd	25.0
Region VII	nd	0.78	-	0.90	nd	-	15.4
NCR	-	-	-	-	-	-	-
Independent retail pharmacy							
Region I	nd	nd	1.65	3.00	nd	nd	81.8
Region VII	0.55	0.65	-	1.50	18.2	-	130.8
NCR	nd	nd	nd	6.00	nd	nd	nd
Chain retail pharmacy							
Region I	nd	-	5.08	5.25	nd	-	3.3
Region VII	nd	-	5.08	5.25	nd	-	3.3
NCR	nd	-	5.08	5.25	nd	-	3.3
BnB							
Region I[†]	nd	0.69	1.05	1.50	nd	53.3	42.9
Region VII[††]	nd	nd	1.40	2.00	nd	nd	42.9
NCR	-	-	-	-	-	-	-

nd – no data (source unavailable or unwilling to participate)

[†]The current stock was from City Health Office and being provided free of charge. Invoices were available for the last paid delivery. Historic selling price used.

[††]Co-trimoxazole 800mg/160mg tablets were surveyed instead of 400mg/80mg tablets at this facility

Table 8. Price component data for co-amoxiclav 500mg/125mg tablets as (a) originator brand and (b) generic equivalents sold from different retail outlets in three regions

CO-AMOXICLAV (AMOXICILLIN+CLAVULANIC ACID)

ORIGINATOR BRAND							
	Selling price (PHP)				Markup (%)		
	Manufacturer/ importer	Distributor 1	Distributor 2	Retail outlet	Distributor 1	Distributor 2	Retail outlet
Public hospital							
Region I	-	-	-	-	-	-	-
Region VII	-	-	-	-	-	-	-
NCR	-	-	-	-	-	-	-
Independent retail pharmacy							
Region I	nd	-	92.7	98	nd	-	5.7
Region VII	nd	-	92.7	98.75	nd	-	6.5
NCR	-	-	-	-	-	-	-
Chain retail pharmacy							
Region I	nd	-	92.7	106.25	nd	-	14.6
Region VII	nd	-	92.7	106.25	nd	-	14.6
NCR	nd	-	92.7	106.25	nd	-	14.6
BnB‡							
Region I	-	-	-	-	-	-	-
Region VII	-	-	-	-	-	-	-
NCR	-	-	-	-	-	-	-

GENERIC							
	Selling price (PHP)				Markup (%)		
	Manufacturer/ importer	Distributor 1	Distributor 2	Retail outlet	Distributor 1	Distributor 2	Retail outlet
Public hospital							
Region I	nd	nd	23.19	29.00	nd	nd	25.1
Region VII	nd	nd	13.19	15.80	nd	nd	19.8
NCR	-	-	-	-	-	-	-
Independent retail pharmacy							
Region I	nd	nd	63.15	67.00	nd	nd	6.1
Region VII	nd	17.50	38.00	47.50	nd	117.1	25.0
NCR	nd	nd	69.50	76.00	nd	nd	9.4
Chain retail pharmacy							
Region I	nd	-	64.53	70.00	nd	-	8.5
Region VII	nd	-	64.53	70.00	nd	-	8.5
NCR	nd	-	64.53	70.00	nd	-	8.5
BnB‡							
Region I	-	-	-	-	-	-	-
Region VII	-	-	-	-	-	-	-
NCR	-	-	-	-	-	-	-

nd – no data (source unavailable or unwilling to participate)

‡Not surveyed for this medicine.

Table 9. Price component data for amlodipine 5mg tablets as (a) originator brand and (b) generic equivalents sold from different retail outlets in three regions

AMLODIPINE

ORIGINATOR BRAND							
	Selling price (PHP)				Markup (%)		
	Manufacturer/ importer	Distributor 1	Distributor 2	Retail outlet	Distributor 1	Distributor 2	Retail outlet
Public hospital							
Region I	-	-	-	-	-	-	-
Region VII	-	-	-	-	-	-	-
NCR	nd	-	21.12	25.35	nd	-	20.0
Independent retail pharmacy							
Region I	nd	-	42.25	44.50	nd	-	5.3
Region VII	nd	nd	42.25	45.00	nd	nd	6.5
NCR	nd	-	nd	47.00	nd	-	nd
Chain retail pharmacy							
Region I	nd	-	43.51	44.75	nd	-	2.8
Region VII	nd	-	43.51	44.75	nd	-	2.8
NCR	nd	-	43.51	44.75	nd	-	2.8
BnB‡							
Region I	-	-	-	-	-	-	-
Region VII	-	-	-	-	-	-	-
NCR	-	-	-	-	-	-	-

GENERIC							
	Selling price (PHP)				Markup (%)		
	Manufacturer/ importer	Distributor 1	Distributor 2	Retail outlet	Distributor 1	Distributor 2	Retail outlet
Public hospital							
Region I	nd	nd	5.00	6.25	nd	-	25.0
Region VII	-	-	-	-	-	-	-
NCR	-	-	-	-	-	-	-
Independent retail pharmacy							
Region I	nd	nd	11.00	11.75	nd	-	6.8
Region VII	-	-	-	-	-	-	-
NCR	nd	nd	12.15	13.50	nd	-	11.1
Chain retail pharmacy							
Region I	nd	-	16.17	17.55	nd	-	8.5
Region VII	nd	-	16.17	17.55	nd	-	8.5
NCR	nd	-	16.17	17.55	nd	-	8.5
BnB‡							
Region I	-	-	-	-	-	-	-
Region VII	-	-	-	-	-	-	-
NCR	-	-	-	-	-	-	-

nd – no data (source unavailable or unwilling to participate)
‡Not surveyed for this medicine.

Table 10. Price component data for glibenclamide 5mg tablets as (a) originator brand and (b) generic equivalents sold from different retail outlets in three regions

GLIBENCLAMIDE

ORIGINATOR BRAND							
	Selling price (PHP)				Markup (%)		
	Manufacturer/ importer	Distributor 1	Distributor 2	Retail outlet	Distributor 1	Distributor 2	Retail outlet
Public hospital							
Region I	-	-	-	-	-	-	-
Region VII	-	-	-	-	-	-	-
NCR	-	-	-	-	-	-	-
Independent retail pharmacy							
Region I	-	-	-	-	-	-	-
Region VII	nd	-	9.95	10.75	nd	-	8.0
NCR	nd	nd	9.95	15.95	nd	nd	60.3
Chain retail pharmacy							
Region I	nd	-	9.95	15.95	nd	-	60.3
Region VII	nd	-	9.95	15.95	nd	-	60.3
NCR	nd	-	9.95	15.95	nd	-	60.3
BnB							
Region I	-	-	-	-	-	-	-
Region VII	-	-	-	-	-	-	-
NCR	-	-	-	-	-	-	-

GENERIC							
	Selling price (PHP)				Markup (%)		
	Manufacturer/ importer	Distributor 1	Distributor 2	Retail outlet	Distributor 1	Distributor 2	Retail outlet
Public hospital							
Region I	nd	nd	0.76	0.95	nd	nd	25.0
Region VII	nd	nd	0.45	0.50	nd	nd	11.1
NCR	-	-	-	-	-	-	-
Independent retail pharmacy							
Region I	nd	0.80	1.50	4.00	nd	87.5	166.7
Region VII	nd	nd	9.95	10.75	nd	nd	8.0
NCR	nd	nd	0.95	4.00	nd	nd	321.1
Chain retail pharmacy							
Region I	nd	-	7.27	8.20	nd	-	12.8
Region VII	nd	-	7.27	8.20	nd	-	12.8
NCR	nd	-	7.27	8.20	nd	-	12.8
BnB							
Region I[†]	nd	0.55	0.77	1.00	nd	40.0	29.9
Region VII	nd	nd	0.60	0.75	nd	nd	25.0
NCR	-	-	-	-	-	-	-

nd – no data (source unavailable or unwilling to participate)

[†]The medicine was not in stock but invoices were available from the supplier. Historic selling price data used.

Table 11. Price component data for atorvastatin 20mg tablets as (a) originator brand and (b) generic equivalents sold from different retail outlets in three regions

ATORVASTATIN

ORIGINATOR BRAND							
	Selling price (PHP)				Markup (%)		
	Manufacturer/ importer	Distributor 1	Distributor 2	Retail outlet	Distributor 1	Distributor 2	Retail outlet
Public hospital							
Region I	-	-	-	-	-	-	-
Region VII	-	-	-	-	-	-	-
NCR	-	-	-	-	-	-	-
Independent retail pharmacy							
Region I	nd	-	72.00	76.00	nd	-	5.6
Region VII	nd	nd	71.97	76.75	nd	nd	6.6
NCR	-	-	-	-	-	-	-
Chain retail pharmacy							
Region I	nd	-	74.13	75.75	nd	-	2.2
Region VII	nd	-	74.13	75.75	nd	-	2.2
NCR	nd	-	74.13	75.75	nd	-	2.2
BnB‡							
Region I	-	-	-	-	-	-	-
Region VII	-	-	-	-	-	-	-
NCR	-	-	-	-	-	-	-

GENERIC							
	Selling price (PHP)				Markup (%)		
	Manufacturer/ importer	Distributor 1	Distributor 2	Retail outlet	Distributor 1	Distributor 2	Retail outlet
Public hospital							
Region I	-	-	-	-	-	-	-
Region VII	-	-	-	-	-	-	-
NCR	-	-	-	-	-	-	-
Independent retail pharmacy							
Region I	-	-	-	-	-	-	-
Region VII	-	-	-	-	-	-	-
NCR	-	-	-	-	-	-	-
Chain retail pharmacy							
Region I	-	-	-	-	-	-	-
Region VII	-	-	-	-	-	-	-
NCR	-	-	-	-	-	-	-
BnB‡							
Region I	-	-	-	-	-	-	-
Region VII	-	-	-	-	-	-	-
NCR	-	-	-	-	-	-	-

nd – no data (source unavailable or unwilling to participate)

‡Not surveyed for this medicine.

Table 12. Price component data for paracetamol 500mg tablets as (a) originator brand and (b) generic equivalents sold from Botika ng Barangay retail outlets in three regions

PARACETAMOL

ORIGINATOR BRAND							
	Selling price (PHP)				Markup (%)		
	Manufacturer/ importer	Distributor 1	Distributor 2	Retail outlet	Distributor 1	Distributor 2	Retail outlet
BnB							
Region I	-	-	-	-	-	-	-
Region VII	-	-	-	-	-	-	-
NCR	-	-	-	-	-	-	-

GENERIC							
	Selling price (PHP)				Markup (%)		
	Manufacturer/ importer	Distributor 1	Distributor 2	Retail outlet	Distributor 1	Distributor 2	Retail outlet
BnB							
Region I	nd	0.33	0.5075	2	nd	53.8	294.1
Region VII	nd	0.2393	0.38	0.5	nd	58.8	31.6
NCR	nd	nd	0.22	1	nd	nd	354.5

nd – no data (source unavailable or unwilling to participate)

3.3 Stage 4: retailer's resale price

When interviewed, most retailers claimed to make small mark-ups (around 5-8%) on originator brands and larger mark-ups on generics. However, from the case studies, it is evident that there is variation depending on the product.

Due to the large market share of the Mercury chain, it is often claimed that smaller chains and independents price their products slightly below the selling price at Mercury drugstores. This is generally true for originator brands. The picture is more complicated with generic equivalents due to the presence of 'branded-generics' and a wider choice of products. There was no clear pattern except that the government hospital pharmacy had the lowest generic price in each case. Table 13 provides the selling prices of originator brands and generic equivalents at Mercury (centralised pricing) and the other pharmacies surveyed.

3.3.1 Originator brands

At independent drugstores, retail mark-ups on originator brands varied from 4.6 – 8.0% except for the pharmacy in NCR which charged 60% on originator glibenclamide, apparently to match the price at the chain pharmacy which also applied the same mark-up (Table 10).

The chain pharmacy mark-ups on originator brands varied from 2.2 – 60% and were distinct for each product. The chain pharmacy operated central pricing (which appears to be common for all major chains) and determines the price based on achieving an overall margin, not a product-specific margin. This allows it to build in increased margins "senior citizen-intensive" items, or to have loss leaders

that are off-set by higher margins on other products. The chain pharmacy that participated aimed for a gross margin of 13-15%.

Table 13. Retail selling prices of available generic and originator brand medicines from various retail outlets including Mercury Drug Corporation pharmacies.‡

	Unit selling price (PHP)							
	Originator brand				Generic equivalent			
Medicine	Gvt. hospital	Indep. retail	Chain retail	Mercury	Gvt. hospital	Indep. retail	Chain retail	Mercury
Atenolol 5mg tab	-	31.50	32.45	33.50	2.65	8.50	6.65	6.75
Co-trimoxazole 860mg tab	-	19.00	19.50	19.50	1.25	3.00	5.25	9.50
Co-amoxiclav 625mg tab	-	98.00	106.25	97.75	29.00	67.00	70.00	44.25
Amlodipine 5mg tab	-	44.50	44.75	46.25	6.25	11.75	17.55	11.00
Glibenclamide 5mg tab	-	-	15.95	16.00	0.95	4.00	8.20	7.00
Atorvastatin 20mg tab	-	76.00	75.75	78.25	-	-	-	-

‡Based on Region 1 as most complete data set. Assuming chain retail and Mercury retail prices are the same throughout the country (use central price setting and computer link). Region 1 Government hospital prices were higher than the prices observed in public hospitals in Region VII and NCR when medicines were available.

Public pharmacies tend to use consistent mark-ups (range 0-30%) across all items regardless of cost (with a few exceptions). The public hospital in NCR added on 20% to originator brand amlodipine when private drugstores added 2.8 – 6.5%. However, due to a preferential price to the hospital, the product was still retailing at a lower price than the drugstores. Some of the public facilities visited, compared their prices to those of nearby private retail pharmacies and adjusted their mark-ups so as to be just below the prevailing market price but this was not consistent and there was sometimes a lack of awareness of private retail prices and almost always a lack of awareness of prices at other public facilities.

3.3.2 Generics

Retail mark-ups on generic products ranged from 5.1 to 355% (median 25%, IQR 8.5 – 31.6%). Public hospital pharmacies marked-up about 10 - 25% depending on the mark-up policy. Independent pharmacies charged 5.1 – 321% with no clear pattern while the pharmacy chain marked-up prices within the range of 3.3 – 12.8%.

Botika ng Barangays showed some of the highest mark-ups (25.0 – 355%) even though they are supposed to have a regulated 30% mark-up. Some of the high mark-ups were a result of the BnB having a minimum selling price of PHP 1 per tablet/capsule (thus high mark-ups on medicines costing much less than this) and one BnB increased its price of fast-moving items to recover losses due to expiry of slow-movers (BnBs have no control over the range of products initially supplied and cannot return expiring products for a refund).

It is important that the above retail mark-ups are seen in the context of the actual values of the selling prices (see Tables 21 – 27). Those attracting higher mark-ups are low-priced items, such that the monetary value of the mark-up is relatively small. The small mark-ups of the chain pharmacy are being applied to high cost 'branded-generics' and are of a more substantive monetary value. For example, generic co-trimoxazole at a public pharmacy attracted a mark-up of 25% on PHP 1 (25c value), whereas the 3.3% mark-up of the chain pharmacy on a distributor price of PHP 5.08 was worth 17c.

Generally speaking, the benefits of any 'specials' offered by distributors such as rebates, volume discounts, early payment discounts, deals (e.g. 3+1 [pay for 3, get 1 free], 15+1) are not passed on to patients but add to the operating margin of the pharmacy. However, the participating chain pharmacy claimed that they do pass on the benefits of deals (only)and that they also benefit from a 'data margin' whereby they receive a benefit for making their sales data available.

3.4 Stage 3: Wholesaler's resale price

3.4.1 Generics

Very little information was available about the mark-ups and margins of distributors. Where data was available it was for generic products (Table 7; Table 8; Table 10; Table 12). The mark-ups included all costs and overheads as well as the profit margin and those observed were 18.2% and 53% (co-trimoxazole), 117% (co-amoxiclav), 87.5% (glibenclamide) and 53.8% (paracetamol; two cases). The distributor for co-amoxiclav claimed they were able to have such a high mark-up on a relatively high-cost product because it had recently come off patent and there were not many competing generic products on the market (the selling price of this product was lower than in the independent drugstores of the two other regions surveyed in spite of this mark-up and a higher retail mark-up (Table 8).

Many medicines appeared to be supplied through multiple steps i.e. there was more than one distributor involved in supplying the medicine to the outlet. This was more common with generic medicines than originator brands (and 'branded-generics') which tend to use exclusive distribution arrangements with Zuellig Pharma, Metro Drug Corp. or their own distribution partner. However, there were cases where retailer-distributors, downstream from the 'exclusive' distributor, sold the products on to other retailers.

Such multi-stage supply chains can only be expected to add to the final selling price since each player will be charging their own mark-up. It might be expected that such arrangements would be more common for remote regions where a regional distributor purchases the medicine from a distributor in the capital to sell to local drugstores or hospitals. However, three generic medicines from the independent retail pharmacy surveyed in NCR also were supplied through secondary distributors. In Tables 21 to 27, every attempt has been made to indicate where a secondary distribution step was present (an 'nd' indicates where a step in the supply chain is believed to exist but no data was available whereas the absence of such a step is indicated by a dash). However, the presence of secondary distributors could not always be validated due to a lack of participation from other distributors in the chain.

3.4.2 Originator brands

Although no validated data was available for specific originator brands, aggregated data was made available by the Pharmaceutical and Healthcare Association of the Philippines and one multinational company (Table 14 and Table 15). These suggest that the major distributors, which often have exclusive distribution arrangements with multinational companies for their originator products, operate with a margin of around 5-6% but it could be as high as 11-13% for some companies.

3.4.3 PITC Pharma

Information made available from PITC Pharma was that their mark-up structure for add-on costs after procurement was:

▪ Warehousing and forwarding fee	7%
▪ Territorial distribution fee[1]	6.5% (not applied to BnBs)
▪ Final VAT	5%
▪ Administrative cost	18%

[1]Not applied to BnBs

Table 14. Hypothetical pricing structure in the Philippines for multinational pharmaceutical companies.[1]

Component	Add-on cost (%)	Add-on cost (currency units)	Cumulative value (currency units)	Contribution to final price (%)
VAT	12.0 %	10.7	100	10.7 %
Retailer	13.6 %	10.7	89.3	10.7 %
Distributor	6.4 %	4.7	78.6	4.7 %
Product cost[2]	-	19.0	73.9	19.0 %
Research[2]	-	13.3	-	13.3 %
Admin, selling, promotion[2]	-	25.1	-	25.1 %
Profit before tax	-	16.5	16.5	16.5 %

[1] This table indicates that for a pharmaceutical product with a final sales price of 100 currency units, the manufacturer's selling price is 73.9 units (made up of product cost, research and administration/selling/promotional costs) of which 16.5 units is profit before tax and 57.4 units represent putative costs.

[2] Total of 73.9% of final price due to these three components with 25.

Based on Gloor (2009), PHAP presentation to MeTA National Forum. Some values in the original table did not compute and have been changed (original table add-on costs for distributor and retailer were 6% and 12% respectively).

Table 15. Hypothetical pricing structure for Tenormin® (atenolol) 50mg tablets (100 pack) through three different supply structures in 2008

		Chain[1]			Mercury[2]			Government[3]		
	Component	Margin (PHP)	%	Price (PHP)	Margin (PHP)	%	Price (PHP)	Margin (PHP)	%	Price (PHP)
Stage 1	Manufacturer's selling price			21.17			23.73			15.22
Stage 2	Landed cost	0.73	3%	21.90	0.73	3%	24.46	0.73	5%	15.95
Stage 3	Wholesaler's resale price	1.13	5%	23.04	-	0%	24.46	1.86	12%	17.81
Stage 4	Retailer's resale price	5.94	26%	28.97	5.45	22%	29.91	7.01	39%	24.82
Stage 5	Cost to patient	3.48	12%	32.45	3.59	12%	33.50	2.98	12%	27.80
2008 volume (tablets) 1,325,500										

Table and data made available by AstraZeneca Philippines Inc. and used with permission. Not validated against documentation.

[1]Smaller chain pharmacies supplied through Zuellig distribution network.

[2]Product supplied directly to Mercury pharmacies from holding warehouse (operated by Zuellig) thus incur no additional wholesaler/distribution fee

[3]Product is offered to government facilities at discounted price. Note that although this table indicates a retailer mark-up of 39% by government, the maximum allowable mark-up is 30% and no public health facilities were found to be exceeding this limit with many having a lower mark-up.

Table 16. Hypothetical price components for an imported medicine using minimum and maximum values (Batangan *et al.* 2005)

Type of Charge	Minimum figures			Maximum figures		
	Amount of charge	Price of dispensed quantity	Cumulative % mark-up	Amount of charge	Price of dispensed quantity	Cumulative % mark-up
Cost, insurance, freight price	n/a	100.00	0.0	n/a	1000.00	0.0
Finance/banking fees	1.0%	101.00	1.0	1.6%	1016.10	1.6
Quality control testing fee	0.5%	101.55	1.6	0.6%	1022.30	2.2
Import tariff/duty	3.8%	105.44	5.4	3.8%	1061.55	6.2
National corporate taxes	3.3%	108.92	8.9	5.70%	1122.06	12.2
Transport costs	10.2%	120.00	20.0	20.0%	1346.48	34.7
Wholesale mark-up	17.5%	141.00	41.0	65.0%	2221.68	122.2
Retail mark-up	20.0%	169.20	69.2	50.0%	3332.53	233.3
VAT	12.0%	189.51	89.5	12.0%	3732.43	273.2

3.5 Stage 2: Landed Cost

No validated information was available on the landed cost. Based on data submitted by one multinational company, import duties on the finished product together with port clearance fees, BFAD testing charges and delivery to the warehouse probably add around 3-5% to the manufacturer's selling price. It was difficult to obtain information on what import duties would be from the Bureau of Customs. Batangan and colleagues (2005) reported import duties of 3.84% (there are no exemptions), together with finance/banking fees of 1.0 – 1.6%, quality control testing fees in the range 0.5 – 0.61% and national corporate taxes of 3.3 – 5.7% (Table 16). They also reported a transport fee of 20%, which was not mentioned in any of the interviews from the current study, with all levels saying that transport (even from the port) was built into the applied mark-ups.

While there is little validated information about import duties and other charges for importers, these appear to contribute relatively little to the price. However, because they are incurred at the start of the supply chain, they have a greater effect than might otherwise be apparent. However, if they were removed or reduced it would be difficult to ensure any savings would result in lower prices given the market structure.

3.6 Stage 1: Manufacturer's selling price

Little is known about the manufacturer's selling prices. AstraZeneca Philippines have three different selling prices depending on the distribution channel which the product is to move through – smaller chain pharmacies, Mercury pharmacies, or government pharmacies (Table 15). Based on the data from AstraZeneca and the Pharmaceutical and Healthcare Association of the Philippines, the manufacturer's selling price contributes around 65 - 75% of the final selling price for originator brand products.

For generic products, only one product had sufficient data to explore the contribution of the manufacturer's selling price – co-trimoxazole tablets sold in Region VII from an independent retail

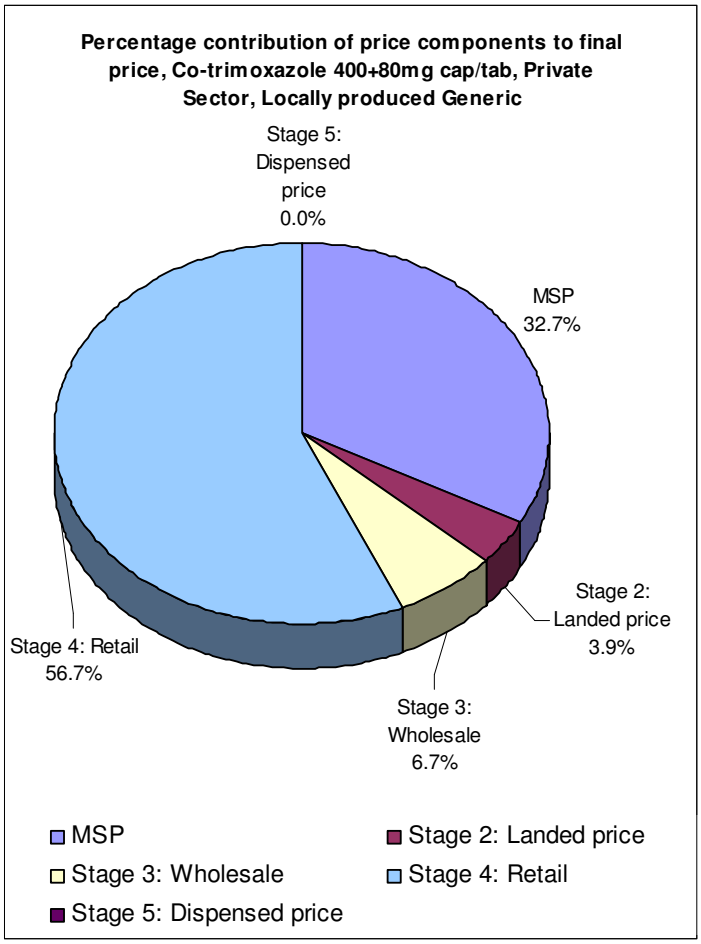
pharmacy (Table 17; Figure 5). In this example, the manufacturer's selling price contributed 33% of the final price with the retail mark-up contributing the largest portion of 56%. Note that in this example VAT was incurred immediately on the manufacturer's selling price, not presented as 12% of the final price since all mark-ups were based on the cost price including VAT.

Table 17. Price component break-down for locally-produced generic co-trimoxazole tablets

Co-trimoxazole; locally produced Generic; Field data				
	Price (PHP)	Add-on cost (PHP)	Mark-up (%)	Contribution to final price (%)
Stage 1 / MSP	0.49	0.49	0.0 %	32.9 %
Stage 2 / landed price [1]	0.55	0.06	12.0 %	3.95 %
Stage 3 / wholesale price	0.65	0.10	18.2 %	6.6 %
Stage 4 / retail price	1.49	0.84	130.8 %	56.5 %
Stage 5 / dispensed price	1.49	0.00	0.0 %	0.0 %
Total cumulative mark-up 204%				

[1] VAT was added at this point in the case study since all subsequent mark-ups were based on prices including VAT

Figure 5. Percentage contribution of price components to the final price of locally produced generic co-trimoxazole tablets (400mg+80mg) sold in a private retail pharmacy



4. Stories from the field

Various observations were made during the field visits, and pharmacists and other contact persons shared some of their experiences which provide a deeper insight of the issues affecting medicine price components in the Philippines. Some of them are captured here. Quotations should be considered as paraphrased versions of what the person said.

"We know our prices are too high when we get them so we sell them on without any mark-up – else the patients will go to the retail pharmacies where they are cheaper" – provincial hospital pharmacist

"We have to give senior citizens the 25% discount so our mark-ups on the medicines they use have to be at least 25%." – retail pharmacist

"Everyone just sets their prices a little lower than Mercury so as to compete with them." – retail pharmacist, distributor

"We've started our own brand of OTC medicines – we get a local company to make them, we employ med reps to push them and pay 'pin' money to pharmacy assistants to promote them. We just copy what the big companies do." – distributor

"Private hospitals have mark-ups of 100% or more on their medicines. That is why there are so many pharmacies outside of these hospitals – it is cheaper for a relative to go and buy the medicines outside" – distributor

"The PITC generics were just a few centavos cheaper than the other generics and the packaging was poor and patients complained, so I stopped getting them." – retail pharmacist (ex-Botika ng Bayan)

"Smaller retail pharmacies do not offer the senior citizen discount. They just tell the patient to go to Mercury or one of the chain pharmacies." – pharmacist

"We use a 25% mark-up on medicines so that we can give senior citizens their 20% and still have 5% for ourselves." – DOH pharmacist

"We round prices up to the nearest 50c due to the difficulty in getting small coins from banks." – retail pharmacist

"If generic products are not movers we do not stock them since there is no method to return them to the distributors if they expire, unlike with the brand products" – retail pharmacist

5. Discussion

5.1 General discussion

Unfortunately, the lack of validated data on price components of medicines in the Philippines limits the conclusions that may be drawn. However, the following are worthy of mention:

1. There is a lack of transparency in the pricing of generic and originator brand medicines in the Philippines within the private sector which appears to be underpinned by suspicion of competitors and the government, a desire to preserve commercial secrets that could give a competitive edge and to prevent accusations of profiteering where this may exist.

2. In general, the wholesale and retail mark-ups for generic medicines observed in this study did not appear to be excessive when seen in combination with the actual monetary value i.e. low cost medicines can have high percentage mark-ups but these may be much smaller in monetary terms and the medicine may still be reasonably priced. Where higher than 'normal' mark-ups were observed, the resultant final selling price was still competitive or, where few competitors allowed higher mark-ups, the potential for profit should encourage additional competition which should reduce prices in the longer term. If this premise is taken to be true – that wholesale and retail mark-ups are not excessive – and one accepts the hypothetical data of Batangan *et al.* (2005) that bank charges and other fees early in the supply chain are small, then it can be extrapolated that excessive or 'high' prices are largely due to the contributing manufacturer's selling price. This is likely to hold true more for originator brands and 'branded-generics than low-priced generic products which are likely to attract higher margins to make them profitable.

3. The VAT of 12% adds significantly to the cost of medicines and often has a larger effect than expected when mark-ups are based on the price including VAT from the supplier in the distribution chain. Reduction in VAT or zero-rating on selected essential medicines could help to make those medicines more affordable. However, prices would need to be monitored and/or regulated to ensure that the VAT relief was passed on to patients.

4. Public pharmacies tend to charge fixed retail mark-ups which may be as 'high' as 30%. While these may appear 'high' compared to some private outlets, the cost price to the pharmacy on low-priced generics may be lower than to private pharmacies and all hospitals claimed to honor the senior citizen discount, which would reduce the effective margin in such cases to a maximum of 10%. However, there may be value in public pharmacies looking at charging lower mark-ups on high cost items, at least for non-discount patients. This could be regulated through the DOH so as to achieve a degree of uniformity in implementation.

5. The method of implementation of the senior citizen's discount, and now that for disabled persons, has the effect of raising medicine prices such that the effect of the discount is largely negated where it is offered and any actual discount which may exist is 'paid for' by patients, not by healthy members of society. This amounts to a tax on the sick. Reimbursing pharmacies through regular taxation or PhilHealth benefit packages would be a fairer and more competent method of providing such 'discounts'. Removal of the discounts in their current form would need to correspond with lower medicine prices and implementation of an alternative form of 'discount'.

6. The current 'high prices' and general low affordability of originator brands by the majority of Filipino patients is allowing the respective pharmaceutical companies to promote their products and their corporate image by offering discounts e.g. Sulit card, patient assistance and other programmes to help patients access their products. While these may appear beneficent at first sight, they are commonly used as promotional tools to get patients started on their products and, in the case of discount schemes, can result in poor patients being started on expensive originator brands when low-priced generics or alternative therapies more suited to their means are available. Ideally, a health insurance system with outpatient medicine benefits would address the needs of the majority of patients. Further study of this area is called for and it may be that offering patients and consumers discounts on medicines should be barred since it may lead to irrational medicine selection by the consumers themselves or by their physicians.

7. The market structure and market segmentation in the Philippines, aided by monopolies and oligopolies in the supply chain has been discussed previously (Kanavos *et al.* 2002) and was not the direct subject of this study. However, it continues to support the pricing structures and components which are commonly observed in the Philippines and needs to be understood for solutions to be found. For example, simply increasing use of low-priced generics in government hospitals is insufficient since this represents less than 5% of market sales (Figure 4). If BFAD were to rigorously ensure the quality of generic medicines on the market, this – together with appropriate educational and other interventions – would help to increase the use and acceptability of low-priced generics. Regulation of the prices of low-priced generics is unlikely to be as successful in increasing their availability and affordability as creating an enabling environment where competitive market forces can work to reduce prices. Patent-protected originator products may need a different approach due to the lack of competition in this segment.

8. The previous study of medicine prices and availability in the Philippines (Batangan *et al.* 2005; Table 16) reported that wholesale mark-ups ranged from 17.5 % to 65 % and retail mark-ups from 20 % to 50 %. The results of this study have shown that when looking at specific examples, these values may not be relevant and that generic medicines and originator brand products need to be considered separately. Retailer mark-ups ranged from around 2% to 60% for originator products and 5% to 355% for generic products. Distributor mark-ups were of the order of 5% to13% for originator products (non-validated) and 18 – 117% for generics. Batangan and colleagues also reported additional transport costs of 10 – 20%, which were not evident from any of the discussions with agents in the supply chain who all claimed to incorporate transport charges into their mark-ups. However, since it was not possible to trace prices all the way back to origin, it may be that in some cases such charges are incurred.

5.2 Limitations of this study

The WHO/HAI methodology for assessing price components is based on collection of case studies on a few medicines. It is thus not intended to be a comprehensive assessment of price components, for example as might be needed for determining a basis for setting wholesale/retail mark-ups or prices. Except where the survey might be undertaken by a government agency with access to detailed price information, the study relies substantially on the goodwill of retailers, wholesalers and importers/manufacturers to gain access to the necessary information. Unfortunately, in this case, this goodwill was not evident in many cases that greatly reduced the analysis and conclusions of this study.

6. Recommendations

While this study is focused on the price components of selected essential medicines, there are several broader issues that can have an impact on the prices and affordability of medicines in the Philippines. Therefore recommendations emerging from this study are presented in the context of these wider areas of concern.

A. Interventions to improve medicine pricing mechanisms and affordability

- The VAT on essential medicines (e.g. those included in PNDF) should be zero-rated when a reliable medicine price monitoring system is in place to ensure the reduction is passed on to patients.

- Public sector pharmacies should be provided with guidance and/or regulations on the use of regressive mark-ups such that high cost items attract a lower percentage mark-up and higher mark-ups are permitted on lower cost generic equivalents in order to create incentives for procuring and dispensing low cost generics.

B. Increasing generic utilisation

- The Government of the Philippines needs to develop an enabling regulatory environment to promote the prescription and use of low-priced generic medicines. While some action has been taken on this front in the form of the Generics Act (RA 6675/1988) and the Cheaper Medicines Act (RA 9502/2008), it should develop a coordinated national medicines policy to frame the entire pharmaceutical sector and address the competing health and industry objectives in the Philippines.

- Potential incentive mechanisms should be studied, both on the supply and demand side, that would increase cost-competitiveness in the pharmaceutical sector and thus increase the demand for lower-priced generic equivalents both by prescribers and patients.

C. Improved monitoring and evaluation of regulatory interventions

- Means to replace the current senior citizen's and disabled person's discount with more equitable systems supported through regular taxation and/or PhilHealth benefit packages should be investigated.

- A reliable medicine price monitoring system should be established for essential medicines to monitor the effects of any policy or regulatory changes intended to affect medicine prices e.g. changes to VAT or 'discounts'.

- Further study of the patient discount and assistance programmes offered primarily by multinational companies should be conducted to determine the effect they have on appropriate medicine selection decisions and the access to essential medicines. Discounts, rebates and other marketing practices that have proven anti-competitive effects and lead to monopolies or oligopolies in the pharmaceutical sector and thus maintaining high prices should be banned.

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Annex 1. National Pharmaceutical Sector Form

Abridged questionnaire: structures & processes of country pharmaceutical situations

Country: Philippines	**Date (dd/mm/yyyy) : 06 December 2008**	
Questions	Responses	Explanations
NATIONAL MEDICINES (DRUGS) POLICY (NMP) ***Please consult the health ministry, medicines regulatory authority and/or medicine service in answering the questions in this section.***		
1.1 Is there a National Medicines Policy (NMP) document? *If no, skip to 2.*	☐Yes ☒No ☐Don't Know RA 6675/1988 and RA 9502/2008 do set out policy objectives but are not part of a sector wide policy document.	A national medicines (drug) policy document is a written expression of the government's medium to long term goals and priorities for the pharmaceutical sector and the main strategies for attaining them.
a) If yes, is it an official or draft document?	☐Official ☐Draft ☐Don't Know	Mark "official" if the NMP document has been endorsed or officially adopted by the government otherwise mark "draft".
b) What year was it last updated?	Year ____	Indicate the year of last update whether the document is still in draft form or has been officially adopted.
1.2 Is there an NMP implementation plan that sets activities, responsibilities, budget and timeline?	☐Yes ☒No ☐Don't Know	
a) If yes, when was it last updated?	Year ____	
REGULATORY SYSTEM ***Please consult the medicines regulatory authority in answering the questions in this section. Specific information regarding medicines tested for quality control purposes and monitoring of adverse drug reactions may need to be obtained from the quality control laboratory or the responsible agency/department.***		
Regulatory authority		
2.2 Is there an existing formal medicines regulatory authority?	☒Yes ☐No ☐Don't Know	This question is asking if there is a formal regulatory body with existing staff and a specific budget for conducting relevant medicines (drug) regulatory functions. Mark "no" if medicines regulatory functions, such as registration and licensing, are performed on an ad-hoc basis by an office, group or department that performs other pharmaceutical service functions, such as supply management and procurement.
2.3 What are the sources of funding for the medicines regulatory authority: Regular budget from the government:	☒Yes ☐No ☐Don't Know	
Fees from registration of medicines:	☒Yes ☐No ☐Don't Know	
Other:	☒Yes ☐No ☐Don't Know	
2.4 Are there legal provisions requiring transparency and accountability and promoting a code of conduct in regulatory work?	☒Yes ☐No ☐Don't Know	This question is asking whether there are legal provisions (or legislation) requiring the regulatory authority to: Define its policies and procedures in writing and publish the written documentation, Give reasons for decisions to affected parties, Account for its conduct and actions to individuals or groups and ultimately to the public, and Follow a code of conduct in conducting its regulatory functions.
2.6 Is there a medicines regulatory authority website providing publicly accessible information on any of the following: legislation, regulatory procedures, prescribing information (such as indications, counterindications, side effects, etc.), authorised companies, and/or approved medicines?	☒Yes ☐No ☐Don't Know	
Marketing authorization		

Questions	Responses	Explanations
2.7 Are there legal provisions for marketing authorization?	☒Yes ☐No ☐Don't Know	This question is asking if there are legal provisions (or legislation) that describe the legal conditions under which marketing authorization should be conducted. Marketing authorization is an official document issued by the medicines regulatory authority for the purpose of marketing or free distribution of a product after evaluation for safety, efficacy and quality and/or after registration of a product for marketing.
2.8 How many medicinal products have been approved to be marketed? *(count total number of unique dosage forms and strengths)*	Number 16,791	Tablets, capsules, injections, elixirs and suppositories should be counted in different strengths. For example, if Paracetamol (Brand X) 250 mg and 500 mg have been approved to be marketed, they count as two medicinal products because they are two unique strengths. Paracetamol (Brand Y) 250 mg and 500 mg are another two unique products.
2.9 Is a list of all registered products publicly accessible?	☐Yes ☒No ☐Don't Know	Registered products are medicine products that have been evaluated for quality, safety and efficacy and thence authorised for marketing. In order to be publicly accessible, it should be available on the web or to anyone contacting the responsible authority.
Licensing		
2.14 Are there legal provisions for licensing of the following:		This question is asking if there are legal provisions (or legislation) that describe the legal conditions under which manufacturers, wholesalers and distributors and importers and exporters are subjected to evaluation against a set of requirements and issued a permit to operate (license) authorising them to undertake specific activities.
Manufacturers:	☒Yes ☐No ☐Don't Know	
Wholesalers or distributors:	☒Yes ☐No ☐Don't Know	A wholesaler is a company that buys goods from a manufacturer or importer and sells them to retailers. The wholesaler may be an agent for one company only or deal with products from several companies. Manufacturers may also be wholesalers for their own products. In some countries, pharmacies may also have a wholesaler license. Distributors include wholesalers, retail pharmacies and medicine outlets.
Importers or exporters of medicines:	☒Yes ☐No ☐Don't Know	
Quality control		
2.19 Is there a quality management system in place?	☒Yes ☐No ☐Don't Know	This question is asking if there is an officially defined protocol for ensuring the quality of medicines, including testing of medicines to be registered, collection and testing of samples, reporting results, corrective actions to be taken when poor results are found and preventative measures to be taken to reduce future incidence of poor results.
2.20 Are medicine samples tested for the following regulatory purposes: Medicines registration:	☒Yes ☐No ☐Don't Know	
Post-marketing surveillance:	☒Yes ☐No ☐Don't Know	Post-marketing surveillance is testing medicine samples to assess the quality of medicines that have already been licensed for public use.

Questions	Responses	Explanations
2.22 What is the total number of samples quality tested in the last calendar year?	Number 11,057	This should include all samples tested whether in a quality assurance laboratory within the country or outside the country.
2.23 What is the total number of samples tested in the last calendar year that failed to meet quality standards?	Number 187	This should include all samples tested that failed to meet quality standards whether the testing was done in a quality assurance laboratory within the country or outside the country.
2.24 Are there regulatory procedures to ensure quality control of imported medicines?	☒Yes ☐No ☐Don't Know	This question is asking if there are standard operating procedures for ensuring the quality of imported medicine, such as reviewing dossiers, product evaluation and testing of imported medicine products. This may include donated medicines.
Dispensing and prescribing		
2.30 Are there legal provisions for the following:		This question is asking if there are legal provisions (or legislation) that describe the legal conditions under which prescribers and the practice of pharmacy are licensed. Licensing is a system that subjects all persons to evaluation against a set of requirements before they may be authorized to prescribe medicines/practice pharmacy. It may include issuing an official permit and granting authorization to prescribe medicines/practice pharmacy by either the governing authority or the body regulating the exercise of the profession.
Licensing and practice of prescribers:	☒Yes ☐No ☐Don't Know	
Licensing and practice of pharmacy:	☒Yes ☐No ☐Don't Know	
2.31 Is prescribing by generic name obligatory in the:		A generic name (international non-proprietary name - INN) is a non-proprietary or approved name rather than a proprietary or brand name under which a generic medicine is marketed. If prescribing by generic name is obligatory then prescribers are required to prescribe by generic name.
Public sector:	☒Yes ☐No ☐Don't Know	
Private sector:	☒Yes ☐No ☐Don't Know	
2.32 Is generic substitution permitted at:		Generic substitution is the practice of substituting a product, whether marketed under a trade name or generic name, by an equivalent product, usually a cheaper one, containing the same active ingredient at the dispensing level. Mark "yes" if either generic substitution is required or if the dispenser is allowed to make a generic substitution in at least some instances.
Public pharmacies:	☒Yes ☐No ☐Don't Know	
Private pharmacies:	☐Yes ☒No ☐Don't Know	
2.33 Are there incentives to dispense generic medicines at:		Incentives may include dispensing fees or mark-ups which provide financial incentive for dispensers to dispense lower-priced generic medicines.
Public pharmacies:	☐Yes ☒No ☐Don't Know	
Private pharmacies:	☐Yes ☒No ☐Don't Know	
Promotion and advertising		

Questions	Responses		Explanations
2.34 Are there provisions in the medicines legislation/regulations covering promotion and/or advertising of medicines?	☒Yes ☐No ☐Don't Know		This question is asking if there are legal provisions (or legislation) that describe the conditions under which the promotion and/or advertisement of medicines may be conducted. Promotion and advertisement are activities that provide health workers and consumers with information about medicine products, particularly with the intent of encouraging health workers and consumers to use a particular product.
3. MEDICINES SUPPLY SYSTEM ***Please consult the agency/department responsible for the procurement and supply of medicines in answering the questions in this section.***			
3.1 Is public sector procurement pooled at the national level (i.e. there is centralised procurement for the regions/provinces)?	☐Yes ☒No ☐Don't Know		Mark "yes" if public sector procurement is centralised and medicines are procured for the entire public sector by a national procurement body even if in some instances, such as cases of stock outages, public sector facilities procure medicines through other means.
3.2 Who is responsible for public sector medicines procurement and distribution:	*Procurement*	*Distribution*	
Ministry of Health:	☒Yes ☐No ☐DK	☒Yes ☐No ☐DK	
Non-governmental organization (NGO):	☒Yes ☐No ☐DK	☐Yes ☒No ☐DK	Mark "yes" for non-governmental organization (NGO) if government funds or foreign contributions are allocated to NGOs to procure or distribute medicines for the public sector. Non-governmental organizations (NGOs) are non-governmental, non-profit organizations, networks and voluntary associations including charities, community groups, faith-based organizations, professional associations, academia and trade unions.
Private institution contracted by the government:	☐Yes ☐No ☐DK	☐Yes ☒No ☐DK	Mark "yes" for private institution contracted by the government if the government contracts or makes an agreement with a private entity to procure or distribute medicines for the public sector, e.g. if an agreement is made with a private company to distribute medical items and supplies to public sector district warehouses and health facilities.
Individual health institutions:	☒Yes ☐No ☐DK	☒Yes ☐No ☐DK	
3.3 What type of tender process is used for public sector procurement and what is the percentage of the total cost for each:		Percentage of total cost	Competitive tender is a procedure for procuring medicines which puts a number of suppliers into competition. Purchasing is done on the basis of quotations submitted by suppliers in response to a public notice.
National competitive tender:	☐Yes ☐No ☒DK	____%	National competitive tender is open to all or a limited number of local suppliers only.
International competitive tender:	☐Yes ☐No ☒DK	____%	International competitive tender is open to all or a limited number of local and international suppliers though sometimes conditions give preference to either local or international suppliers.
Negotiation/direct purchasing:	☐Yes ☐No ☒DK	____%	In negotiation/direct purchasing the buyer approaches one or a small number of suppliers and either buys at the quoted prices or bargains for a specific service arrangement.

Questions	Responses	Explanations
3.6 Is public sector procurement limited to medicines on the Essential Medicines List (EML)?	☒Yes ☐No ☐Don't Know	An Essential Medicines List (EML) is a government-approved selective list of medicines or national reimbursement list. Essential medicines are those that satisfy the priority health care needs of the population. They are selected with due regard to disease prevalence, evidence on efficacy and safety, and comparative cost-effectiveness. Essential medicines are intended to be available within the context of functioning health systems at all times in adequate amounts, in the appropriate dosage forms, with assured quality, and at a price the individual and the community can afford.
4. MEDICINES FINANCING *Please consult the budget/ finance division of the health ministry and/or the pharmaceutical supply group in answering the questions in this section. The hospital/health facility service and/or the national social and insurance services may also need to be consulted.*		
4.1 What is the total public or government expenditure for medicines in US$ for the most recent year for which data are available?	US$? Year ? Impossible to determine due to devolved nature of health system.	This question is asking for the total amount the government has spent on medicines, including government allotment, health ministry expenditure, donor contributions channelled through the government, etc.
4.2 Is there a national policy to provide at least some medicines free of charge (i.e. patients do not pay out-of-pocket for medicines) at public primary care facilities?	☐Yes ☒No ☐Don't Know Certain public health vertical programs e.g. TB and indigents (although may depend on Local Government policy and is usually capped)	If medicines are provided for free but patients must pay service fees, mark "yes" here. If some facilities provide medicines for free but there is not a consistent national policy that applies to all primary public health facilities, mark "no" here. If there is a national policy to provide medicines for free at primary public health facilities, but facilities are not required to abide by the policy and not all facilities provide medicines for free, mark "no" here.
b) Which of the following types of patients receive medicines for free: Patients who cannot afford them:	☒Yes ☒No ☐Don't Know	
Children under 5 years of age:	☐Yes ☒No ☐Don't Know	
Older children:	☐Yes ☒No ☐Don't Know	Mark "yes" for "older children" if children over 5 years of age receive medicines for free, regardless of the age limit, for example mark "yes" if children under 12 receive medicines for free.
Pregnant women:	☐Yes ☒No ☐Don't Know	
Elderly persons:	☐Yes ☐No ☐Don't Know	
4.3 Which fees are commonly charged in public primary care facilities: Registration/consultation fees:	☐Yes ☐No ☒Don't Know	Registration and consultation fees are fees patients must pay for seeing a health professional for a health check-up and/or diagnosis regardless of whether or not medicines are prescribed.
Dispensing fees:	☐Yes ☒No ☐Don't Know	A dispensing fee is a fixed fee that pharmacies are allowed to charge per prescribed item or per prescription instead of or in addition to a percentage mark-up. The dispensing fee is paid to the dispenser and is in addition to the cost of the medicine. Both the dispensing fee and the cost of the medicine may be paid in part or whole by the patient, insurer or government.

Questions	Responses		Explanations
Flat fees for medicines:	☐Yes ☒No ☐Don't Know		Mark "yes" for "flat fees" if either a flat fee for medicines or a flat fee per medicine item is commonly charged. A flat fee for medicines is a fee which remains the same irrespective of the number of medicines or the quantity of each medicine dispensed. Thus, for example, a patient receiving 3 medicines would pay the same as one receiving 1 medicine. Also a patient receiving 20 tablets of one medicine would pay the same as a patient receiving 100 tablets each of 2 medicines. A fee per drug item is a fee where the patient pays one set fee per each medicine irrespective of the number of units (tablets) of that medicine dispensed. Thus, for example, a patient receiving one medicine would pay $1 and a patient receiving 2 medicines would pay $2 and a patient receiving 3 medicines would pay $3 and so on. However, a patient receiving 10 tablets of one medicine would pay the same as a patient receiving 100 tablets of one medicine.
Flat rate co-payments for medicines:	☐Yes ☒No ☐Don't Know		A flat rate co-payment is a fixed amount that a patient must pay either per medicine or per prescription to cover part of the cost of medicines, the other part being paid by an insurer or government.
Percentage co-payments for medicines:	☐Yes ☒No ☐Don't Know		A percentage co-payment is a fixed percentage of the cost of prescribed medicines that a patient must pay to cover part of the cost of medicines, the other part being paid by an insurer or government. The amount a patient pays will depend on the medicine and the number of units of that medicine prescribed.
4.4 Is revenue from fees or the sale of medicines used to pay the salaries or supplement the income of public health personnel in the same facility?	☐Always ☐Frequently ☒Occasionally ☐Never ☐DK University and cooperative pharmacies; Botika ng Lalawigan		Mark "yes" if any percentage of collected fees or medicines sales is used to pay salaries, expenses and/or in any way supplement the income of public health personnel in the same facility.
4.5 Do prescribers dispense medicines?	*Public sector* ☐Always ☐Frequently ☐Occasionally ☒Never ☐DK	*Private sector* ☐Always ☐Frequently ☒Occasionally ☐Never ☐DK Vaccines	In answering this question, mark the degree of frequency doctors or other authorised prescribers dispense medicines in the public and private sectors irrespective of laws permitting or disallowing authorised prescribers to dispense medicines.
4.6 What proportion of the population has health insurance?	☐All ☒Some ☐None ☐DK	☐All ☒Some ☐None ☐DK	Health insurance is any prepayment scheme for health care costs additional to but excluding subsidies funded through the health ministry budget. The purpose of questions 4.6 and 4.7 are to identify how much protection the population has against exposure to the cost of medicines at the time people are sick. This includes: Prepaid financing and Public funding through the (prepaid) health ministry budget.
4.7 Are medicines covered by health insurance?	☐All ☒Some ☐None ☐DK	☐All ☒Some ☐None ☐DK	
4.8 Is there a policy covering medicine	*Public sector*	*Private sector* / *NGO*	In some countries, NGOs, such as

Questions	Responses			Explanations
prices that applies to the public sector, the private sector, or non-governmental organisations?	☒Yes ☐No ☐DK	☐Yes ☒No ☐DK	☐Yes ☒No ☐DK	faith-based missions, provide non-profit or not-for-profit health services. The third column should be completed by ticking any policies applicable to this sector. Non-governmental organizations (NGO) are non-governmental non-profit organizations, networks and voluntary associations including charities, community groups, faith-based organizations, professional associations, academia and trade unions.
a) If yes, which of the following policies covering medicine prices apply: Maximum wholesale mark-up:	☐Yes ☒No ☐DK	☐Yes ☒No ☐DK	☐Yes ☒No ☐DK	A wholesale mark-up is a certain percentage added to a purchasing price to cover the cost and profit of the wholesaler.
Maximum retail mark-up:	☒Yes ☐No ☐DK	☐Yes ☒No ☐DK	☐Yes ☒No ☐DK	A retail mark-up is a certain percentage added to a purchasing price to cover the cost and profit of the retailer.
Duty on imported raw pharmaceutical materials:	☐Yes ☒No ☐DK	☐Yes ☒No ☐DK	☐Yes ☒No ☐DK	A duty/tax on imported raw pharmaceutical materials is a fee assessed by customs or other responsible national authority on imported starting materials, reagents, intermediates, process aids, and solvents intended for use in the production of intermediates or active pharmaceutical ingredients.
Duty on imported finished pharmaceutical products:	☐Yes ☒No ☐DK	☐Yes ☒No ☐DK	☐Yes ☒No ☐DK	A duty/tax on imported finished pharmaceutical products is a fee assessed by customs or other responsible national authority on medicinal products that require no further processing and are already in their final containers.
4.9 Is a national medicine prices monitoring system for retail/patient prices in place?	☒Yes ☐No ☐DK	☐Yes ☒No ☐DK	☐Yes ☒No ☐DK	A national medicine prices monitoring system for retail/patient prices is any means of regularly tracking and comparing over time retail/patient medicine prices in the public, private and/or NGO sectors.
4.10 Are there regulations mandating retail/patient medicine price information to be made publicly accessible?	☒Yes ☐No ☐DK	☒Yes ☐No ☐DK	☒Yes ☐No ☐DK	In order for retail/patient medicine price information to be considered publicly accessible, one or more of the following or similar measures should be taken: prices should be available on the web or to anyone contacting the responsible authority, prices should be periodically published in national newspapers or official publications, prices should be posted in health facilities/pharmacies, etc.
4.11 Are there official written guidelines on medicine donations that provide rules and regulations for donors and provide guidance to the public, private and/or NGO sectors on accepting and handling donated medicines?	☒Yes ☐No ☐DK	☒Yes ☐No ☐DK	☒Yes ☐No ☐DK	Countries may have differing definitions for medicine donations which may include not only products but also monetary gifts earmarked for a particular product from a named source (e.g. manufacturer, organization or other country).
6. RATIONAL USE OF MEDICINES ***Please consult the health ministry (hospital division), professional bodies and/or the education ministry in answering the questions in this section.***				
6.1 Is there a national Essential Medicines List (EML)?	☒Yes ☐No ☐Don't Know			A national Essential Medicines List is a government-approved selective list of medicines or national reimbursement list from which most prescriptions should be made. Essential medicines are those that satisfy the priority health care needs of the population. They are selected with due regard to disease prevalence, evidence on efficacy and safety, and comparative cost-effectiveness.

Questions	Responses			Explanations
a) If yes, how many unique medicine formulations does the national EML contain?	Number: around 2,000			Count similar formulations registered or approved as different products as one formulation, for example Brand X 500 mg Paracetamol tablets and Brand Y 500 mg Paracetamol tablets are counted as one formulation whereas Brand X 250 mg Paracetamol tablets and Brand X 500 mg Paracetamol tablets are counted as two formulations.
c) When was the national EML last updated?	Year: 2008			
d) Is the national EML being used in the following:				Mark "yes" if the EML is currently being used.
Public sector procurement:	☒Yes ☐No ☐Don't Know			
Public insurance reimbursement:	☒Yes ☐No ☐Don't Know			
Private insurance reimbursement:	☐Yes ☒No ☒Don't Know			
e) Is there a committee responsible for the selection of products on the national EML?	☒Yes ☐No ☐Don't Know			This refers to a formally recognised committee with members of different expertise and from different agencies/organizations.
6.2 Are the following types of standard treatment guidelines (STG) produced by the health ministry for major conditions?	*National STG* ☐Yes ☒No ☐DK	*Hospital level STG* ☐Yes ☒No ☐DK	Primary care STG ☐Yes ☒No ☐DK	Mark "yes" if the health ministry or similar national authority produces a collection of treatment guidelines covering prevalent/common disease conditions in the country for use at the national, hospital or primary care levels. If treatment guidelines are produced separately for each disease/condition or organ system, mark "no".
a) If yes, when were the STGs last updated?	Year	Year	*Year*	
6.16 How frequently are the following types of medicines sold over the counter without any prescription:				This question is asking how often antibiotics and injections which require a prescription to be dispensed are sold without a prescription, regardless of laws prohibiting such practice.
Antibiotics:	☐Always ☒Frequently ☐Occasionally ☐Never ☐DK			
Injections:	☐Always ☒Frequently ☐Occasionally ☐Never ☐DK			

Supplementary questions for Medicine Prices and Availability Survey

Questions	Responses	Explanations
1. Retail		
S1.1 How many licensed private retail medicine outlets are there in the country?	Number 29,994	"Licensed" refers to medicine outlets that are subjected to evaluation against a set of requirements and issued a permit to operate (license).
S1.2 What proportion of patients access medicines through: a) public/government sector b) formal private sector c) Other: specify: d) Other: specify:	a) 10% b) 90% c) _____% d) _____%	The formal private sector refers to licensed medicine retail outlets and licensed retail drug stores. Common other sectors include non-government organizations, mission health facilities, or dispensing doctors.
S1.3 Are there public medicine outlets which sell medicines in public health facilities?	☒Yes ☐No ☐Don't Know	
S1.4 Are there private pharmacies which sell medicines in public health facilities?	☒Yes ☐No ☐Don't Know	
2. Medicines financing		
S2.1 What proportion of medicines by *volume* are imported?	52.3% Year 2007	
S2.2 What proportion of medicines by *value* are imported?	68.6% Year 2007	
3. Medicines supply system		
S3.1 Are there regulations for local preference in public procurement?	☒Yes ☐No ☐Don't Know	Local preference purchasing means that domestic companies will be preferred even if their prices are not the lowest.
4. Regulatory authority		
S4.1 Do the fees charged for the registration of medicines differ between:		
a) Originator brands and generic equivalents	☐Yes ☒No ☐Don't Know	
b) Imported and locally produced medicines	☐Yes ☒No ☐Don't Know	
5. Medicine pricing policies		
S5.1 Does the government set the price of some/all originator brand products?	☐Yes ☒No ☐Don't Know	
a) If yes, please describe how this is done (e.g. direct price controls, international reference pricing):		Direct price controls refers to price-setting using a pricing formula, e.g. production costs + a % margin. International reference pricing refers to comparing prices to those in other countries.
S5.2 Does the government set the price of some/all generic products?	☐Yes ☒No ☐Don't Know	
a) If yes, please describe how this is done (e.g. direct price controls, national reference pricing):		National reference pricing refers to setting prices by comparing the prices of similar medicines (by molecule or therapeutic class; originator brand or generics) on the national market.
S5.3 Are prices set in the private sector for medicines on the national Essential Medicines List?	☐Yes ☒No ☐ No national EML	This question is asking whether price-setting is limited to medicines on the national EML.
S5.4 Are prices of medicines set as part of market authorization?	☐Yes ☒No ☐Don't Know	Marketing authorization is an official document issued by the medicines regulatory authority for the purpose of marketing or free distribution of a product after evaluation for safety, efficacy and quality and/or after registration of a product for marketing.
6. Other		
S6.1 Of the medicines included in the survey, are there any which are patent protected or only available as the originator brand product (i.e. single source products)?	☒Yes ☐No ☐Don't Know	
a) If yes, please specify which medicines:	Atorvastatin (Lipitor®)	

S6.2 Please provide the website address (URL) of any websites that publish the following information: a) Pharmaceutical legislation b) Standard treatment guidelines c) Regulatory procedures d) Prescribing information e) Licensed manufacturers f) Medicines approved for marketing g) List of registered products h) Medicine prices (procurement or patient)	 a) www.bfad.gov.ph b) c) www.bfad.gov.ph d) e) f) g) www.bfad.gov.ph h)	