SURVEY ON DRUG AVAILABILITY IN PUBLIC HEALTH FACILITIES IN THE PHILIPPINES 2011

Final Report

Prepared by:

JESUS N. SAROL JR., PhD

Acronyms

BIHC	Bureau of International Health and Cooperation
DOH	Department of Health
EU	European Union
HC	City health centers
HSPSP	Health Sector Policy Support Program
HSRA	Health Sector Reform Agenda
NCPAM	National Center for Pharmaceutical Access and Management
NCR	National Capital Region
PNDF	Philippine National Drug Formulary
PSU	Primary sampling unit
RHU	Rural health units
SSU	Secondary sampling unit SSU
WHO	World Health Organization
4Ps	Pantawid Pamilyang Pilipino Program

Table of Contents

Background

The Health Sector Reform Agenda (HSRA) was launched in 1999 in order to meet the challenges in the Philippine health setting. Reforms were needed to improve the delivery, regulation and financing of health care in the country. After an initial phase characterized by delayed implementation of the HSRA, a need for an accelerated and more focused approach was decided. Thus, the Department of Health (DOH) adopted FOURMULA I for Health (F-1), an implementation framework for the years 2005 to 2010 that stressed on service delivery, regulation, health care financing and governance. Critical health interventions that can be achievable and high-impact with the backing of effective management, infrastructure and financing arrangements were identified to be undertaken as part of this strategy. Implementation of the F1 strategy was piloted in sixteen (16) pilot provinces.

The European Union (EU) provided its initial support to the HSRA by funding technical assistance under the Health Sector Policy Support Program (HSPSP) Phase I in 2006. The second phase of this EU support started in 2011. Financing agreement between the EU and Philippine government is based on a set of general and specific conditions. Under the general conditions, satisfactory implementation of national health policy and strategy, progress in maintaining a policy of macroeconomic stability and progress in the implementation of the program to improve and reform public finance management have to be met. One of the specific conditions stipulates that performance has to be assessed against six indicators, of which availability of essential drugs in public health facilities at all levels according to national drug formulary is one. Targets for performance indicators are based on the annual improvement from baseline values of the level of percent drug availability in public health facilities.

The use of surveys is essential in determining levels of drug availability in populations. These surveys establish baseline data and measure the changes and trends in drug availability in public health facilities resulting from interventions implemented. A survey commissioned by the EU was conducted to determine level of drug availability such among public health facilities in 2010. This survey was entitled "Establishment of a Baseline for the Performance Indicators of Health Sector Policy Support Programme Phase II" (Dichosa, Sarol, Mabulay and Domingo 2010). This baseline survey also provided for a recommended survey methodology and operational measurement of drug availability in health facilities from which subsequent surveys should ensure the possibility of comparing results for evaluating changes in performance indicators.

The World Health Organization (WHO) has also developed a process of pharmaceutical monitoring and assessment to measure outcomes on access (affordability and availability of key medicines and geographical accessibility of dispensing facilities) and rational use of quality medicines including some indication of quality of medicines and pharmacies. One such study, called the Philippine Pharmaceutical Situation: 2009 WHO Health Facility Survey on Medicines, was done in the Philippines (Batangan and Juban 2010). There were strong similarities in the operational definition of drug availability in public health facilities between the WHO and EU-funded study methodologies. For instance, both methods employed the use of a basket of selected essential medicines listed under the National Drug Formulary, and determining the availability of each drug in this basket to calculate percent availability. However, rules for sampling procedures for the selection of public health facilities differed greatly between the two study designs. The EU-funded study tried to obtain a representative national sample of public health facilities whereas the WHO method involved purposive selection of such facilities. The results of the 2010 EU-funded study showed an average of 25% of essential drugs availability in public health facilities; the WHO study yielded 27% in the public sector facilities (Batangan and Juban 2010). It should be pointed out that the WHO methodology did not only measure drug availability in public health facilities, but also in private facilities and in households.

It has been almost two years since the baseline survey on essential drug availability in public health facilities was conducted. To monitor progress in this indicator under HSPSP Phase II, new surveys had to be implemented. For the proposed study, it was desired that the selected indicator of essential drug availability could be validly used to compare the baseline levels for purposes of measuring performance. The methodology for the EU-funded study was chosen. Minimal changes in the sampling design and data collection tools was introduced if justified by improvement in design and enhanced validity. An additional indicator, the median drug availability described under the WHO methodology, was also be obtained.

Objectives of the Survey

The general objective of this survey is to measure the current availability of essential drugs in public health facilities at all levels according to the Philippine National Drug Formulary (PNDF 8th edition) and to compare these figures with the baseline values. Availability will be expressed as a single percentage (%) of available drugs out of a list of most commonly used pharmaceuticals found in the World Health Organization/Health Action International list which is consistent with the PNDF.

Specific objectives for the survey:

1. To determine the mean percentage of essential drugs available in rural health units (RHUs)/city health centers (HCs) and Level I public hospitals
2. To determine the mean percentage of essential drugs available in Level II to IV public hospitals
3. To determine the mean provincial level percentage of essential drugs available in RHUs/ HCs and Level I public hospitals
4. To determine the mean provincial level percentage of essential drugs available in Level II to IV public hospitals
5. To determine the difference between the current mean and 2009 mean percentage of essential drugs available in the RHUs/HCs and Level I public hospitals
6. To determine the difference between the current mean and 2009 mean percentage of essential drugs available in Level II to IV public hospitals
7. To determine the difference between the current mean and 2009 mean provincial level percentage of essential drugs available in RHUs/HCs and Level I public hospitals
8. To determine the difference between the current mean and 2009 mean provincial level percentage of essential drugs available in Level II to IV public hospitals

Methodology

Sampling Design

Study Population

As in the 2009 baseline survey, there were two categories of public facilities:

Group A - Rural health units (RHUs), city health centers (HCs) and Level I public hospitals
Group B - Level II, III and IV public hospitals

Three different populations of interest were identified in this survey. The first population of interest consisted of the drug facilities in the rural health units, city health centers and Level I public hospitals in the Philippines. For each RHU drug facility or primary level care public hospital in the sample, the percentage of drugs available was obtained using a shorter checklist of essential drugs for these health facility levels. The combined populations of Level II to IV public hospitals formed the second population of interest. Similarly, the percentage of essential drugs available was collected from each of these facilities in the sample, but now using a longer checklist of essential drugs than that for RHUs/HCs and Level I public hospitals. The population of provinces was the third population of interest. The data on each sample province was the mean percentages of essential drugs available of all health facilities in the province.

Unit of Observation	Variable to be studied
Rural health unit/health center or Level I public hospital	Percentage of essential drugs available in either a RHUs or Level I public hospital
Level II to IV public hospital	Percentage of essential drugs available in a Level II to IV public hospital
Province	Mean percentage of essential drugs available in all RHUs and Level I public hospitals of the province Mean percentage of essential available drugs in all Level II to IV public hospitals of the province

Sampling Design: Stratified Two-Stage Cluster Sampling Design

This survey employed a stratified two-stage cluster sampling design. Province was the primary sampling unit (PSU). Cities were not treated as separate entities for selection in the first stage but were considered as parts of the provinces which geographically encompassed their boundaries. After a province was selected in the first stage, health facilities were randomly

selected at the second stage (SSUs). Separate sampling of health facilities from the two categories was done within the same randomly selected province.

Stratification

Stratification of provinces was based on average annual income level of the province. Provinces were grouped according to the prescribed classification by the Department of Finance (Department Order D.O. No.23-08: Prescribing the New Income Brackets for the Re-classification of Provinces, Cities and Municipalities - Effective July 29, 2008).

Class	Average Annual Income
1st	P 450M or more
2nd	P 360M or more but less than P 450M
3rd	P 270M or more but less than P 360M
4th	P 180M or more but less than P 270M
5th	P 90M or more but less than P 180M
6th	Below P90M

Since there were few provinces that belonged to the 3rd to 6th Classes, these categories were lumped together as one stratum. Furthermore, NCR was considered a separate stratum, given its size and distinct characteristics. Thus the strata were as follows: 1) Income Level 1 provinces; 2) Income Level 2 Provinces; 3) Income Level 3-6 Provinces; and 4) NCR.

The purpose of stratification of provinces according to income level was to ensure that the bigger strata in terms of number of health facilities were adequately represented in the national sample, thus achieving better precision for the overall estimates. It was evident that income class classification of provinces was highly correlated with population size, which also correlated with number of health facilities (RHUs and hospitals). The total sample size for Group A facilities (RHUs and Level I hospitals) was proportionately allocated to each stratum of province according to the total number of health facilities in this category in all provinces in a specific stratum.

Selection of Primary Sampling Units

For all strata except NCR, a total of eighteen (18) provinces were chosen as primary sampling units. This number was distributed proportionately according to the estimated number of rural health units and city health centers in the province. Thus, 13 provinces were drawn from

Income Level 1 provinces, 3 from Income Level 2 provinces and 2 from Income Level 3 provinces.

Primary sampling units were chosen using the tabulated data for estimated number of RHUs/HCs. (The ideal number would have been the total RHUs, HCs and Level I public hospitals; however, the information on number of Level I hospitals was not readily available and this precluded the use of this information in the sampling process.) Selection of provinces within stratum was according to probabilities proportionate to size, where size is the estimated number of RHUs/HCs in the province.

Selection of Secondary Sampling Units in Provinces

The two-stage cluster sampling design shall be such that the selection of primary sampling units will be the same for both study populations, that is, the random selection of primary sampling units (provinces) is done only once, and from the same primary selected unit, separate random selection of the secondary sampling units for the two categories (Group A and B) of health facilities will be done.

RHUs/HCs and Level I public hospitals. For each selected province at the first stage, the list of all RHUs, HCs and Level I public hospitals in the province was generated. Fifteen (15) RHUs/HCs and Level I public hospitals were drawn by simple random sampling from this list. In cases where the number of RHUs/HCs and Level I public hospitals in a selected province was less than 15, then all facilities in this list were included in the survey for that particular province.

Level II to IV public hospitals. The selection of Level II to IV public hospitals from the provinces selected earlier was independent of the sampling of RHUs. The list of all Level II to Level IV was also generated for these provinces. Five (5) hospitals from this list in each selected province were drawn at random. If there were 5 or less hospitals available, all hospitals were included in the sample.

Sampling Design for NCR Facilities

Due to its size and distinct characteristics, NCR was considered a separate stratum for this survey. Simple random sampling of public health facilities was done for NCR. A list of all health centers and Level I public hospitals in NCR was obtained. Twenty-two (20) facilities from this list were selected by simple random sampling for inclusion in the survey. Similarly a list of all Level II to IV public hospitals in NCR was generated. The same number (20) of these hospitals was randomly drawn from this list.

While NCR was treated as a separate stratum, it was considered as a province for purposes of the data analysis. That is, the mean percentage of essential drugs available in health facilities was computed for NCR and taken as one observation in the analysis of drug availability at the province level.

Replacement of Sample Provinces and Health Facilities

Four provinces were initially included in the sample but were eventually replaced. Maguindanao and Lanao del Norte were due to security problems. The replacements were Surigao del Sur and Misamis Occidental, respectively. Batanes was replaced by Kalinga and Palawan by Albay for reasons of accessibility. These replacements were based on the geographical location and the income level category of the provinces.

Within provinces, replacements of health facilities were undertaken. In Agusan del Norte, a faulty sampling frame was used. One hospital, Cabadbaran District Hospital, was inadvertently listed in both samples as Level I and Level II hospital. It was eventually decided to categorize include this hospital as Level II facility. In the same province, two different names in the list of sample RHUs, Santiago RHU and Arsenia Centeno RHU, actually referred to the same hospital. Thus two replacements had to be made. Furthermore, the actual number of RHUs in Agusan del Norte was 15 instead of 13 in the sampling frame used. The remaining two hospitals were added to the sample to attain the minimum sample size requirement for the province. In Nueva Vizcaya and Cagayan, one RHU in each, namely Alfonso Castaneda RHU and Calayan RHU had to be replaced for reasons of difficulty of reaching the RHUs. Two city health centers Central People's Health Center (Caloocan) and Kalingang Kalusugan Klinik (Quezon City), and one Level II hospital (Ospital ng Makati Acute Care Center) in the original sample had to be replaced because these were no longer existent at the time of the survey. One of the replacement health centers had to be dropped eventually because of delay in securing permissions to conduct the data collection in this health center. In Bohol, the surveyors discovered late that they had visited Ubay I RHU instead of Ubay II RHU. The latter was admitted as replacement for Ubay I RHU. Another problem encountered with the sampling frames used in this survey was the unupdated names of the facilities. No replacements of the health facilities were made for facilities with new names.

Table 1. Coverage of of Health Facilities by Province and Level[1]

Province	Date of Survey	Actual # of Health Facilities		
		RHUs/Level 1	Levels 2-4	Total
1. Agusan del Norte	April 23-27	15(2R, 2A)	3	18
2. Batangas		15	5	20
3. Misamis Oriental		15	5	20
4. Nueva Ecija		15	5	20
5. Bohol	April 30 - May 5	15(1R)	5	20
6. Kalinga		15	1	16
7. Misamis Occidental		15	5	20
8. Nueva Vizcaya		15(1R)	2	17
9. Tarlac		15	4	19
10. Antique	May 7-12	14(1D)	3	17
11. Cagayan		15(1R)	5	20
12. Ilocos Norte		15	5	20
13. Negros Oriental		15	5	20
14. South Cotabato		15	1	16
15. Albay	May 14-19	15	4	19
16. Capiz		15	4	19
17. Surigao del Sur		15	4	19
18. Zamboanga del Norte		15	3	18
19. NCR	May 14 – June 4	19(1R, 1D)	20(1R)	39
TOTAL		288	89	377

[1] Numbers in parenthesis represent number and type of deviations from the original sample list. R refers to replacements, A for additions and D for dropped health facilities.

Sample Size

Rural Health Units, Health Centers and Level I Public Hospitals in Provinces

The sample size for RHUs/HCs and Level I public hospitals was computed as follows. This survey specified an absolute margin of error of ±4.0% with 95% confidence on the estimated mean percentage of essential drugs available in RHUs/HCs for the country. From the 2009 baseline survey of public health facilities, the standard deviation of the percentage of available drugs was 16.3%. Intracluster correlation of 0.22 was calculated from this survey. Given the specifications and assuming the obtained values from the 2009 study, the required sample size of 256 was obtained. This incorporated a design effect of 4.0 since the number of secondary sampling units is set to 15. The total sample size of the RHUs and primary level public hospitals

was 288, which is greater than the required sample size of 256 to meet a precision of ±4.0% with 95% confidence.

Other factors were also taken into consideration, especially in determining the number of primary sampling units (i.e. provinces) and number of facilities (RHUs/primary level public hospitals and secondary/tertiary hospitals per province. Within provinces, the standard deviation was 14.5% for the percentage of available drugs for RHUs and primary level public hospitals from the baseline survey. For a desired (absolute) margin of error of ±5% (with 95% confidence) at the province level, the required sample size is 15 health facilities. In this calculation, finite population correction was applied using an average of 28 health facilities per province.

One of the objectives was to determine the mean province level percentage of drug availability. The baseline survey yielded a standard deviation of 8.7% of the province level percent drug availability. To obtain a desired margin of error of ±3.0% with 95% confidence, 19 provinces was required for the sample size.

NCR Health Centers and Level I Public Hospitals

For NCR, the health centers and Level I public hospitals were considered the primary sampling units. NCR was treated as a separate stratum for sampling purposes but considered as another province where an estimate of the mean percentage of available drugs in health facilities was also desired with specified precision. The variation of percentage of available drugs was found to be less than 5% within NCR. Twenty (20) health centers and primary level hospitals would be sufficient to meet a margin of error of ±2.5% with 95% confidence in NCR.

Level II to IV Public Hospitals in Provinces

For the calculation of sample size for secondary and tertiary hospitals, these facilities were found to be slightly less heterogenous than RHUs/health centers within provinces and cities. The overall standard deviation was 12.5% in the baseline survey. A specification of ±3.0% margin of error for estimating mean percentage of available drugs with 95% confidence yielded a sample size of 67 under simple random sampling design. The intracluster correlation from the baseline study was 0.099. With a sample size of 5 hospitals per province, the derived design effect was 1.4, yielding total required of 93 hospitals for the sample. The total sample size in this study was 90, a little less than the 93 hospitals required to meet the precision specifications for the total population.

NCR Secondary and Tertiary Public Hospitals

It is known that NCR has more several tertiary public hospitals than selected provinces. A bigger variability among these hospitals in NCR in terms of drug availability than within a province was seen in the baseline survey. The standard deviation of percentage of available drugs was 16.7% in NCR. Given this, the required number of secondary and tertiary hospitals to meet ±6% margin of error with 95% confidence was 19 hospitals (incorporating finite population correction with total population of 48 hospitals). The sample size in this study was 20 hospitals.

Data Collection

Field Team

The survey team consisting of 1 biostatistician, 1 over-all field team leader, 1 research assistant and 10 surveyors was assembled for the field survey operations. Training on survey procedures was done prior to actual data collection. To ensure full coverage of samples in the field during limited time for field visits, careful planning for the visits was done at the Department of Health Bureau of International Health and Cooperation (BIHC). Administrative support to the team was provided by staff from BIHC. The National Center for Pharmaceutical Access and Management (NCPAM) coordinated with Regional Centers for Health Development and sought assistance in the facilitating the health facility visits, providing accommodations for surveyors during provincial assignments and their transportation to the health facilities, especially those in far flung areas.

Field Deployment

Data collection activities started on April 23 and ended on June 4, 2012. There were five teams with two surveyors each. Every week, each team was assigned a province to visit. Specific details of visit were coordinated with the Botica ng Barangay coordinator, Provincial Health Team Leader and/or the Provincial Health Officer.

Upon reaching the health facilities to be observed, the surveyors first sought the hospital director or rural health officer for courtesy call during which the purpose of the visit and data collection procedures were explained. The pharmacist, or in his/her absence, any person authorized to dispense drugs (e.g. nurse or rural health midwife), was then given the list of drugs and requested to bring out samples of the listed drugs that were available in the facility.

The surveyor then inspected the drugs for their formulation and expiry date and recorded their availability in the data collection forms.

Data Collection Tool

Observation method was used in collecting the data. Data collection forms containing checklists of the key generic medicines were used (Annex A). The checklists were based on the basket lists of essential drugs that were prepared by NCPAM. Two separate lists were created: one for the list of medicines for rural health units/health centers and Level I public hospitals and another list for the medicines for Level II to IV public hospitals. The said baskets of medicines were identified based on the global list used by World Health Organization and European Commission in their past surveys. The basket of medicines was selected based on the following:

1) listed on the Philippines National Drug Formulary, current edition
2) medicines expected to be available at all public health care facilities
3) medicines that are indicated for the most common causes of morbidity in the country.

The medicines included are either in tablet, capsule, syrup, suspension form, salt/salt formulation or inhaler form.

In addition to these essential medicines, a list of family planning commodities was included in the forms. The availability of these family planning commodities in the health facilities was also desired to be obtained in this survey.

Data Processing

Field data were checked for completeness and consistency. Prior to encoding, the survey team met to discuss problematic issues with regard to data collection and arrive at an agreement on how to code the data. Examples of these situations were the classification of drugs that were restricted to indigents under the government's 4Ps Program (Pantawid Pamilyang Pilipino Program) and that of drugs that were sold in pharmacies (botica ng barangays) in RHUs (i.e. enterprising RHUs). Data were then encoded with the agreed coding scheme using Epi Info software. An encoding program was created with checking features to minimize encoding errors. Double data encoding was done to further minimize their occurrence. The electronic

file of the data was saved and backed-up daily at the end of each day in an external memory device.

Data Analysis

The EPI-INFO record files were then converted to STATA data sets for statistical analysis. To prevent errors from manual calculations, a STATA program was written to calculate the percent drug availability for each health facility. This variable was then summarized using frequency tabulations and descriptive statistics using unweighted analysis. The analysis of the percent drug availability of the health facility data was done for each category, that is, for RHUs/HCs and Level I public hospitals and for Level II to IV public hospitals.

The results are presented in tables of summary statistics and graphs. Ninety-five percent (95%) confidence intervals for the mean percent drug availability were calculated.

Since the sampling design was a two-stage cluster design with probabilities proportionate to size, weighted analysis of the percent drug availability was also performed. The weights were the inverses of the sampling probabilities that were based on the sampling frames used in the study.

Province level drug availability was derived for the two groups of facilities for each province. The province level drug availability was the mean of the percent drug availability of the health facilities in the province. This was done separately for the two levels of health facilities. Summary measures of the province level drug availability were then generated using unweighted analysis.

Unweighted analysis was done using STATA Ver 10.1. For the weighted analysis, standard errors of the mean percent drug availability were calculated using the Taylor linearized variance estimation. All weighted analyses were produced using STATA Ver 10.1, specifically using the SVY features of the software.

Calculation of Sampling Weights for Each Health Facility

The sampling of the first stage clusters, that is, the provinces for those outside of Metro Manila, was done with probabilities proportionate to size. The sampling frame used was the list of provinces categorized into the three income levels as described in the sampling design section. In the absence of the actual numbers of RHUs/HCs and Level I hospitals in the province at the time of sampling, the number of municipalities/cities in the province was used for the

probabilities of selection. The first stage sampling probability, $\mathrm{p_{1si}}$, for each province was calculated as follows:

$$\mathrm{p}_{1si} = \frac{\mathrm{N_{si}}}{\mathrm{N_s}} * \mathrm{k_s}$$

where $\mathrm{N_{si}}$ = the number of municipalities/cities in province *i*

$\mathrm{N_s}$= number of municipalities/cities in stratum *s* (income level) where the province belonged and

$\mathrm{k_s}$ = number of provinces selected in the stratum *s*

After the provinces were selected, the listing of all RHUs/HCs and Level I hospitals was obtained. From this information, actual probabilities of selection at the second stage, $\mathrm{p_{2si}}$ were computed as follows:

$$\mathrm{p_{2si}} = \frac{n_{si}}{\mathrm{N'_{si}}}$$

where n_{si}= the sample size of RHUs/HCs and Level I hospitals in province *i* in stratum *s* (this was either 15 or the total number of RHUs/HCs and Level I hospitals in province *i* if less than 15); $\mathrm{N'_{si}}$= the number of RHUs/HCs and Level I hospitals in the sampling frame for province *i* in stratum *s*.

For the hospital pharmacy facilities, the same provinces randomly selected for the sampling of RHUs/HCs and Level I public hospitals were used. The second stage probability of selection of Level II to IV public hospitals $\mathrm{p_{2si(2)}}$, was calculated as

$$\mathrm{p_{2si(2)}} = \frac{n_{si(2)}}{\mathrm{N'_{si(2)}}}$$

where $n_{si(2)}$ = the sample size of Level II to IV public hospitals in province *i* in stratum *s* (this was either 5 or the total number of Level II to IV public hospitals in province *i* if less than 5); $\mathrm{N'_{si(2)}}$ = the number of Level II to IV public hospitals in province *i* in stratum *s*.

For NCR, the probabilities of selection of health centers and Level I public hospitals were

$$\mathrm{p_{M1}} = \frac{19}{\mathrm{N'_{M1}}}$$

where $\mathrm{N'_{M1}}$ = number of health centers and Level I public hospitals in the sampling frame for NCR. The sample size of the health centers and Level I public hospitals was 19.

The probabilities of selection of Level II to IV public hospitals in NCR were

$$p_{M2} = \frac{20}{N'_{M2}}$$

where N'_{M2} = number of Level II to IV public hospitals in the NCR list.

Finally, sampling weights were derived by getting the reciprocal of the product of the first stage and second stage probabilities of selection.

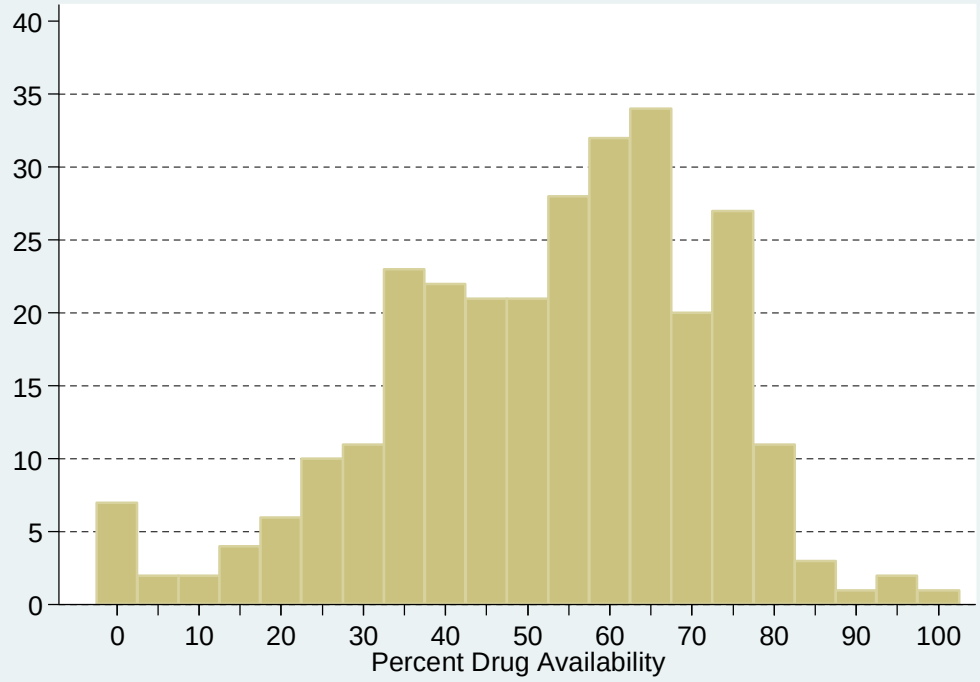
Results

Essential Drug Availability in Rural Health Units, Health Centers and Level I Public Hospitals

Figure 1 shows the distribution of percent drug availability in RHUs/HCs and Level I public hospitals. Only 15% of the health facilities had at least 15 (75%) of the 20 drugs in the list. Nearly half (49.3%) had between 55% to 75% of the essential drugs available. These numbers were equivalent to 11 to 15 drugs in the list. Only 1 health facility out of the 288 had 100% drug availability. On the other hand, 7 health facilities (2.4%) were recorded with 0 drugs.

Mean percent drug availability of all RHUs/HCs and Level 1 hospitals was 52.5% with standard deviation of 19.6%. Half of these facilities had less than or equal to 55% drug availability.

Figure 1. Distribution of Percent Drug Availability in RHUs/HCs and Level 1 Hospitals



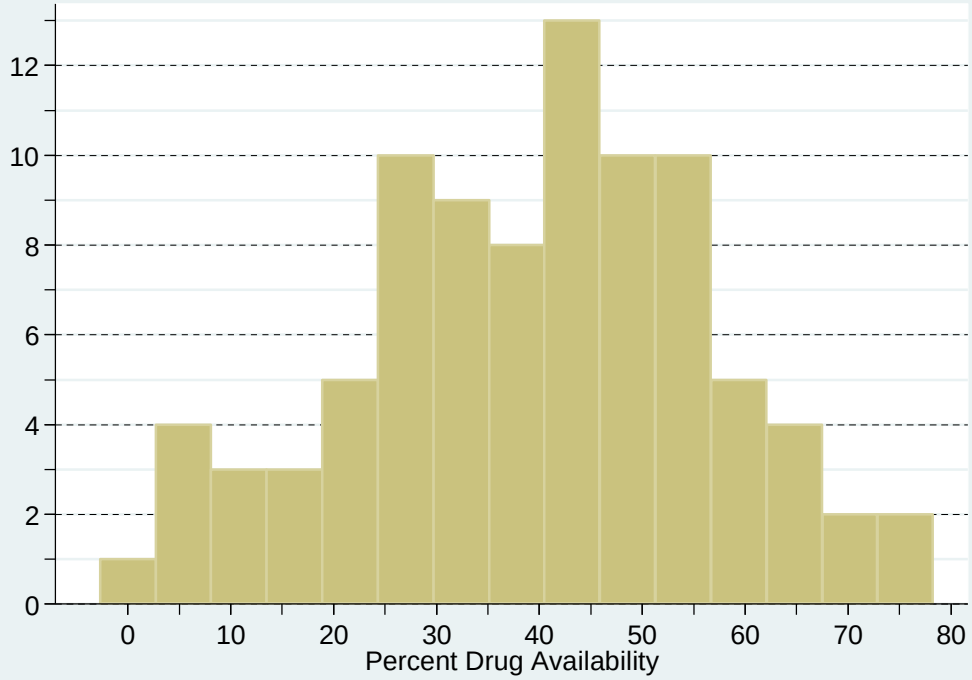
Essential Drug Availability in Level II to IV Public Hospitals

The distribution of the percent drug availability in Level II to IV public hospitals is shown in Figure 2. Around 37.1% of these hospitals had between 40.5% to 54% drug availability, or between 15 to 20 drugs in the list available. Approximately another third (30.4%) had 9 to 14

drugs available, equivalent to 24.3% to 37.8% drug availability. There were 16 hospitals (18.0%) that had even less than 9 drugs available, with 1 hospital recorded 0. None of the hospitals had the complete set of drugs in the basket list of 37 drugs. The highest drug availability was only at 73.0% (=27 drugs), reported in two hospitals.

Due to the substantial proportion of hospitals at the lower values, the mean drug availability (unweighted) was pulled down to 38.5%. Standard deviation was 17.1%. Median level of the drug availability in Level II to IV public hospitals was 40.5%.

Figure 2. Distribution of Percent Drug Availability in Level 2 to 4 Hospitals



Province Level Drug Availability

Province level drug availability was obtained by getting the mean percent drug availability across all health facilities in the province for each category of health facilities. The drug availability in the lower level category of health facilities for the provinces is shown in Figure 3. The province level drug availability in RHUs/HCs and Level I public hospitals had mean of 52.3% with standard deviation of 9.2%. Misamis Occidental stood out among the sampled provinces with the highest province level drug availability in RHUs/HCs and Level I public hospitals. This province had an average of 70.7% drug availability in this category of health facilities. The next highest level was in Surigao del Sur with a far 62.3 %. The lowest province level drug availability

among the sampled provinces was 32.5% in Antique, followed by 39.7% in Cagayan and 40.0% in Misamis Oriental. Half of the provinces had at least 53.0% drug availability.

For the higher category of health facilities, the mean drug availability in provinces ranged from 8.1% to 48.6% (Figure 4). The 8.1% province level drug availability in Antique was clearly an outlier. Its three public hospitals that were considered Level II to IV had only between 2 to 4 essential drugs in the list. The next lowest provincial levels of drug availability clustered between 24% to 32%. Kalinga, Cagayan, Agusan del Norte, Nueva Ecija and Batangas were included in this range. Twelve of the 19 provincial had mean drug availability of 40.5% or above. South Cotabato was listed with the highest drug availability at 48.6%. However, this value was accounted for by only 1 hospital in this province. A more impressive result would be the mean of 48.1% for 5 hospitals in Misamis Oriental. This was followed by Surigao del Sur with province level drug availability of 46.6%

The mean of the province level drug availability among Level II to IV hospitals was 37.5 (sd=10.5%) with median of 40.8%.

Figure 3. Province Level Drug Availability in RHUs/HCs and Level 1 Hospitals

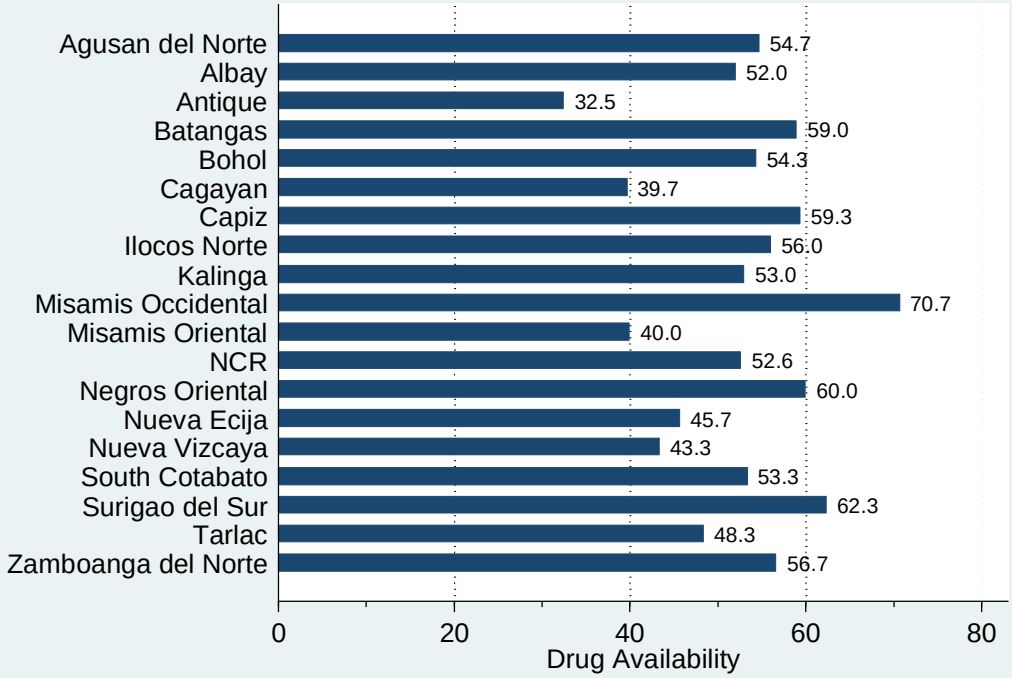
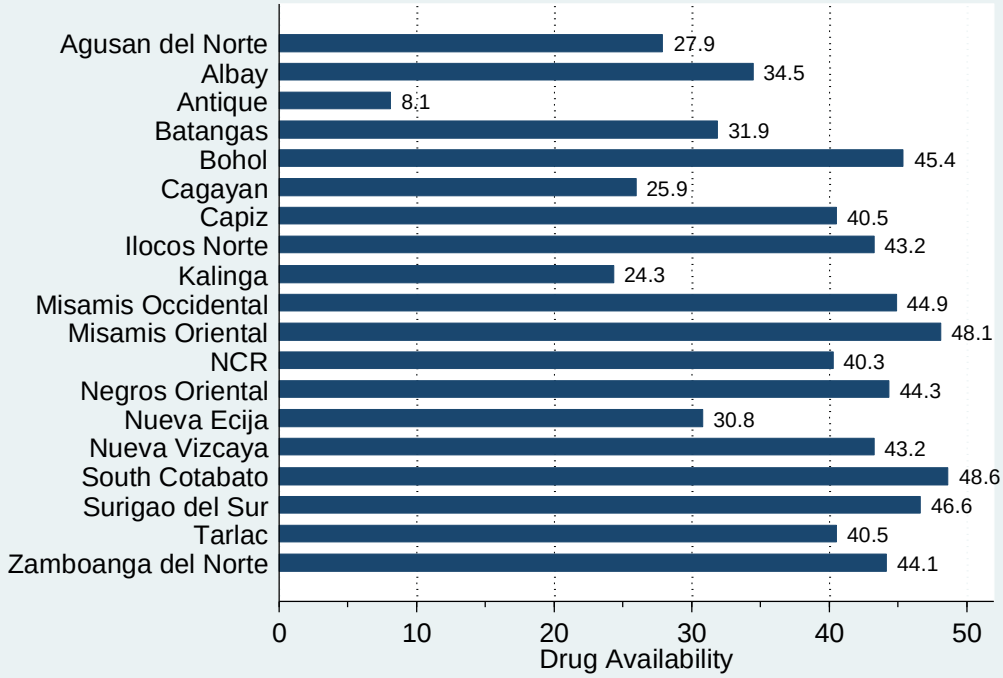


Figure 4. Province Level Drug Availability in Level 2 to 4 Hospitals



Comparison of Results of the 2009 and 2011 Drug Availability Studies

There was clearly a large improvement in the availability of drugs from 2009 to 2011. Table 1 shows the comparison of mean percent drug availability between the 2009 and this study. In 2009, the mean percent drug availability in RHUs/HCs and Level 1 hospitals was 24.8%. This was more than doubled in this study, which yielded mean of 51.7%. The limits of the 95% confidence limits are too far from each other, indicating very highly significant differences between the two results.

Similarly, the mean percent drug availability also increased in Level II to IV public hospitals but to a lesser degree than in the other category. In 2009, the mean obtained was 25.8%. This increased to 37.8% in 2011. The differences are also very highly significant.

Mean provincial level drug availability were expectedly close to the means at the health facility levels. The increases in provincial level drug availability for both categories of health facilities were likewise highly statistically significant. This can be deduced from the wide distances between limits of the 95% confidence interval in mean values for the two studies (Table 2). The

variation in drug availability between provinces were much less than the differences between studies.

Table 1. Comparison of Mean Percent Drug Availability Between 2009 and 2011 Studies (Weighted Analysis)

	2009			2011		
Facility Level	Number	Mean	95% Confidence Interval	Number	Mean	95% Confidence Interval
RHUs/HCs and Level I Public Hospitals	234	24.8%	21.0% - 28.5%	288	51.7%	47.9%-55.4%
Level II to IV Public Hospitals	65	25.8%	22.3% - 29.4%	89	37.8%	33.6%-41.9%

Table 2. Comparison of Mean Provincial Level Drug Availability Between 2009 and 2011 Studies (Unweighted Analysis)

	2009			2011		
Facility Level	Number	Mean	95% Confidence Interval	Number	Mean	95% Confidence Interval
RHUs/HCs and Level I Public Hospitals	16	25.1%	20.4% - 29.7%	19	52.3%	47.9%-56.7%
Level II to IV Public Hospitals	16	26.3%	21.4% - 31.3%	19	37.5%	32.5%-42.6%

Availability of Drugs in Basket List

For each drug in the basket list, the percentage of health facilities where the drug was available and unexpired was determined. This determined which of the drugs were readily available for patient requisition. Paracetamol 500 mg tablet was the most common drug found. An estimated 88% of all RHUs/HCs and Level I public hospitals had this drug available. However, more than 70% of these health facilities did not have its syrup or suspension formulation with

125 mg/5 mL. The anti-biotic drugs Amoxicillin 500 mg capsule and co-trimoxazole in both suspension (200 mg + 40 mg suspension, 60 mL) and tablet (800 mg + 160 mg tablet) form, as well as the drug for hypertension, Metoprolol (50 mg tablet), were also commonly found. These were available in more than 70% of these health facilities. The drug that was least found was Furosemide in 40 mg tablet form. Less than 10% of the health facilities produced this drug during the survey visits. Ferrous sulfate tablets, alone in its equivalent to 60 mg elemental iron without other component , was also not common. Its formulations in combination with folic acid or in different strength were more often found in the health facilities.

Table 3. Availability of Essential Drugs in Basket List in Rural Health Units/Health Centers and Level I Public Hospitals.

Key Medicines (Generic Name)	Number of Health Facilities Where Drug was Available	Percent of Health Facilities Available (Unweighted)	Percent of Health Facilities Available (Weighted)
Amoxicillin 500 mg capsule	229	79.5	79.9
Captopril 25 mg tablet	132	45.8	43.7
Cefalexin 500 mg tablet	170	59.0	61.0
Ciprofloxacin 500 mg tablet	146	50.7	45.4
Co-trimoxazole 200 mg + 40 mg suspension, 60 mL	208	72.2	71.2
Co-trimoxazole 800 mg + 160 mg tablet	229	79.5	75.2
Ferrous sulfate tablet (equiv to 60 mg elemental iron)	39	13.5	14.3
Furosemide 40 mg tablet	34	11.8	9.3
Glibenclamide 5 mg tablet	157	54.5	55.8
Hydrochlorothiazide 25 mg tablet	130	45.1	44.9
Loperamide 2 mg capsule	89	30.9	29.9
Metformin 500 mg tablet	166	57.6	57.2
Metoprolol 50 mg tablet	226	78.5	76.6
Metronidazole 125 mg/5mL (as benzoate) suspension, 60 mL	143	49.7	49.5
Metronidazole 500 mg tablet	200	69.4	66.2
Oral rehydration salt (ORS 75-replacement)	144	50.0	52.1
Paracetamol 125 mg/5 mL syrup/suspension, 60 mL	88	30.6	29.3
Paracetamol 500 mg tablet	251	87.2	88.4
Ranitidine 150 mg tablet	89	30.9	31.9
Simvastatin 20 mg tablet	146	50.7	51.7
Median drug availability		50.7	51.9

Median drug availability was at 51.9%. This meant that half of the essential drugs in the list could not be found in 50% or greater percentage of the RHUs, HCs and Level I public hospitals.

Compared to the RHUs/HCs and Level I hospitals, availability of essential drugs were lower for Level II to IV hospitals (Table 4). Median drug availability of the drugs was only at 34.8%. This meant that half or more of the drugs in the list were available in less than 35% of the hospitals.

Among the more available drugs, paracetamol (500 mg tablet), amoxicillin (500 mg capsule), and co-trimoxazole (800 mg + 160 mg tablet) were the most commonly found. More than 70% of the hospitals had stocks of these drugs. The cardiovascular drug captopril (25 mg tablet) and anti-biotic cefalexin 500 mg tablet, were also available in a large proportion of Level II to IV hospitals. These drugs were similarly found present in the RHUs, HCs and Level I hospitals.

Six of the essential drugs for this category of health facilities were not available for more than 90% of the hospitals. One drug, Beclomethasone 0.05 mg/dose (as dipropionate) inhaler, was total absent in all Level II to IV hospitals in the sample. Hydrochlorothiazide (25 mg tablet), was available in only 2.9% of the Level II to IV hospitals. This drug was often found in the RHUs/HCs and Level I hospitals. The other drugs that were not commonly present were acyclovir (200 mg tablet), carbamazepine (200 mg tablet), dexamethasone (0.5 mg tablet), and nifedipine (20 mg MR (retard) tablet). Salbutamol inhaler (0.1 mg dose) and Isosorbide dinitrate (10 mg tablet) and ferrous sulfate (equivalent to 60 mg elemental iron and without combination) were also quite not readily available.

Table 4. Availability of Essential Drugs in Basket List in Level II to IV Public Hospitals

Key Medicines (Generic Name)	Number of Health Facilities Where Drug was Available	Percent of Health Facilities Available (Unweighted)	Percent of Health Facilities Available (Weighted)
Acyclovir 200 mg tablet	4	4.5	3.6
Amoxicillin 500 mg capsule	67	75.3	77.3
Atenolol 50 mg tablet	17	19.1	18.8
Amlodipine 50 mg (as besylate or camsylate) tablet	45	50.6	44.1
Beclomethasone 0.05 mg/dose (as dipropionate) inhaler	0	0.0	0.0
Captopril 25 mg tablet	65	73.0	72.6
Co-amoxiclav 625 mg tablet	50	56.2	53.5
Carbamazepine 200 mg tablet	8	9.0	7.5
Cefalexin 500 mg tablet	67	75.3	77.5
Ceftriaxone 1 gram vial	64	71.9	72.3
Chloramphenicol 125 mg/5 mL suspension	27	30.3	29.0
Chloramphenicol 500 mg capsule	33	37.1	33.1
Ciprofloxacin 500 mg tablet	62	69.7	70.3
Co-trimoxazole 200 mg + 40 mg suspension, 60 mL	39	43.8	42.1
Co-trimoxazole 800 mg + 160 mg tablet	62	69.7	66.8
Dexamethasone 0.5 mg tablet	3	3.4	3.0
Dicloflenac 50 mg capsule/tablet (as sodium or potassium)	35	39.3	38.0
Doxycycline 100 mg capsule	24	27.0	26.8
Ferrous sulfate tablet (equiv to 60 mg elemental iron)	12	13.5	13.7
Furosemide 40 mg tablet	24	27.0	26.6
Glibenclamide 5 mg tablet	24	27.0	24.9
Gliclazide 80 mg tablet	22	24.7	20.6
Hydrochlorothiazide 25 mg tablet	2	2.2	2.9
Isosorbide dinitrate 10 mg tablet	15	16.9	15.3
Loperamide 2 mg capsule	22	24.7	25.5
Metformin 500 mg tablet	53	59.6	55.1
Metoprolol 50 mg tablet	40	44.9	46.0
Metronidazole 125 mg/5mL (as benzoate) suspension, 60 mL	41	46.1	46.3
Metronidazole 500 mg tablet	62	69.7	69.7
Nifedipine 20 mg MR (retard) tablet	5	5.6	5.7
Omeprazole 20 mg capsule/tablet	45	50.6	52.8
Oral rehydration salt (ORS 75-replacement)	27	30.3	28.1
Paracetamol 125 mg/5 mL syrup/suspension, 60 mL	28	31.5	35.5
Paracetamol 500 mg tablet	80	89.9	91.6
Ranitidine 150 mg tablet	49	55.1	54.5
Salbutamol 0.1 mg dose, 200 doses (as sulfate) inhaler	9	10.1	11.9
Simvastatin 20 mg tablet	36	40.4	34.6
Median drug availability		37.5	34.6

Family Planning Commodities

The availability of family planning commodities in public health facilities was also included in the survey. The presence of the following items in the facilities was determined: oxytocin, oral contraceptives (low dose combined oral contraceptive or progestin only pills), depot-medroxyprogesterone acetate (DMPA) injectables, intra-uterine device (IUD) and cycle beads for Standard Days Method (SDM). Condoms were not included in the assessment.

DMPA injectables and IUD were the most common family planning items in RHUs, HCs and Level I public hospitals (Table 5). Around half of these facilities had available oxytocin (47.5%) and oral contraceptive pills (48.3%). Cycle beads for SDM were available for 36%.

Family planning commodities were, however, not commonly stocked in Level II to IV public hospitals. These were not available in 90% of these facilities (Table 6).

Table 5. Availability of Family Planning Commodities in Rural Health Units/Health Centers and Level I Public Hospitals

Family Planning Commodity	Number of Health Facilities Where Commodity Was Available	Percent of Health Facilities Available (Unweighted)	Percent of Health Facilities Available (Weighted)
Oxytocin	159	55.2	47.5
Pills (low dose COC, progestin only pills)	140	48.6	48.3
Depot- medroxyprogesterone acetate (DMPA)	185	64.2	61.7
Intra-uterine devices	162	56.3	56.8
Standard Days Method cycle beads	106	36.8	36.3

Table 6. Availability of Family Planning Commodities in Level II to IV Public Hospitals

Family Planning Commodity	Number of Health Facilities Where Commodity Was Available	Percent of Health Facilities Available (Unweighted)	Percent of Health Facilities Available (Weighted)
Pills (low dose COC, progestin only pills)	10	11.2	9.5
Depot- medroxyprogesterone acetate (DMPA)	10	11.2	9.8
Intra-uterine devices	9	10.1	8.1
Standard Days Method cycle beads	4	4.5	3.0

Expired Drugs

During the survey, one or two of the drugs from the list that the health facilities had available were already expired. Twenty-four facilities (8.3%) among the RHUs, HCs and Level I public hospitals had expired drugs presented during the visits (Table 7). Most of the these were found with one drug that only expired ones were available. Two health facilities had two expired drugs.

Table 7. Distribution of RHUs, HCs and Level I Hospitals According to Number of Expired Drugs Found

Number of Expired Drugs Found	Number of Health Facilities	Percent
None	264	91.7
1	21	7.3
2	3	1.0

The commonly found expired drugs were both forms of metronidazole, 500 mg tablet and 125 mg/5ml suspension. Five health facilities each presented only expired supplies of these medicines. Other drugs that were found expired are listed in Table 8.

Table 8. Expired Drugs Found to Be Only Available in RHUs, HCs and Level I Public Hospitals

Number of Expired Drugs Found	Number of Health Facilities	Percent of Total Health Facilities
Furosemide 40 mg tablet	2	0.7
Captopril 25 mg tablet	2	0.7
Metronidazole 125 mg/5mL (as benzoate) suspension, 60 mL	5	1.7
Metronidazole 500 mg tablet	5	1.7
Oral rehydration salt (ORS 75-replacement)l	2	0.7
Co-trimoxazole 200 mg + 40 mg suspension, 60 mL	1	0.35
Amoxicillin 500 mg capsule	1	0.35
Ranitidine 150 mg tablet	1	0.35
Simvastatin 20 mg tablet	1	0.35

Expired drugs were also found in the supplies of Level II to IV public hospitals. Seven hospitals (7.8%) were reported to have presented 1 or 2 expired drugs during the survey (Table 9). The drugs that were found to be expired in these hospitals are listed in Table 10.

Table 9. Distribution of Level II to IV Public Hospitals According to Number of Expired Drugs Found

Number of Expired Drugs Found	Number of Health Facilities	Percent
None	82	92.1
1	6	6.7
2	1	1.1

Table 10. Expired Drugs Found to Be Only Available in Level II to IV Hospitals

Number of Expired Drugs Found	Number of Health Facilities	Percent
Chloramphenicol 500 mg capsule	1	1.1
Ciprofloxacin 500 mg tablet	1	1.1
Doxycycline 100 mg capsule	1	1.1
Furosemide 40 mg tablet	1	1.1
Gliclazide 80 mg tablet	2	2.2
Captopril 25 mg tablet	1	1.1
Simvastatin 20 mg tablet	1	1.1

Discussion

Drug availability in health facilities is an important component in the delivery of health care services. Utilization of public health facilities is affected negatively if people perceive that essential drugs are not available in these facilities. This survey covered 19 provinces that were selected using a stratified cluster sampling design. The design was intended to obtain a representative sample of the country's public health facilities. For security and feasibility reasons, four provinces in the original sample had to be replaced. The reasons for replacements could be related to the level of drug availability in the provinces. It was likely that the levels of drug availability in the replaced provinces were lower than accessible provinces. However, the over-all effect of these replacements on the computed national levels would not be substantial. Replacements were made within the same income level category of the provinces and geographical location. Furthermore, the weights of the replaced provinces were relatively smaller compared to the weights of the other provinces.

This survey is a follow-up study to the 2009 baseline study on drug availability in public health facilities. Both studies used same sampling designs and data collection procedures. This would facilitate more valid comparisons between the two surveys. Operational definitions of drug availability were also similar. However, there were substantial changes in the basket list of drugs. The 2009 study used a list of 18 drugs for RHUs, HCs and Level I public hospitals and 34 drugs for Level II to IV hospitals. Seven drugs in the 2009 list for the first category of public health facilities were replaced by 9 drugs. Nine drugs, which included the previous 7, were replaced by 12 drugs in the list for Level II to IV public hospitals. The notable changes in the list were the replacement of drugs for anti-tuberculosis in the 2009 list, mainly by antibiotics. These changes could have affected the availability levels upward by the inclusion of drugs that were expected to be more available in the health facilities.

The study results showed a large increase in the availability of essential drugs from 2009. From a mean level of 25% in RHUs, HCs and Level I public hospitals, this increased to 52%. On a less but still substantial degree, the levels increased in Level II to IV hospitals from 25% to 38%. All of these increments were statistically significant. The study results also favorably compared to the 27.5% for mean availability for generic drugs in the public sector reported in the 2009 WHO Health Facility Survey (Batangan and Juban, 2010). At the province level of drug availability, the results showed all provinces had at least 32% mean drug availability in the RHUs, HCs and Level I hospitals. In the 2009 survey, only 3 of the 16 provinces attained province level drug availability of more than 30%. This indicated that the improvement in the drug availability levels was felt across almost all provinces, and not selectively. Only one province (Antique) in

the sample had an outlyingly low level drug availability in Level II to IV hospitals. An investigation as to the reason for this should be done.

These changes reflected real improvements in drug availability in the health facilities. The magnitude of these changes were too big to be attributed to the effects of replacement of provinces or changes in the basket list of drugs. A frequent observation during the visits to the health facilities survey was the presence of fresh supplies of drugs coming from the Department of Health. The surveyors often encountered stocks of these drugs in unopened boxes. Many of these drugs were also intended for the 4Ps program of the government.

Some drugs in the list were reported with lower availability in the health facilities. One reason was the preference of the facilities to stock different formulations of this drug. An example is paracetamol 125 mg/5 mL syrup/suspension. Most facilities would usually have the 250 mg/5 mL formulation in stock. The reason given by staff was that a patient can just take half of these amount to achieve the lower dose. Thus, for them it was not necessary to keep stocks of both formulations. Another reason was that a particular drug was no longer recommended accordingly to clinical guidelines. Loperamide and hydrochlorothiazide were cited as examples of this. Many of the pharmacists and health officers, both provincial and municipal, openly expressed their reactions towards the list. They suggested some of the drugs be deleted from the list.

It is positive to note that the incidence of having only expired drugs in health facilities was uncommon. Drug expiry is related to quality of drugs. Very few instances of only expired drugs available were found. In most situations, their occurrences also surprised the staff of the health facilities who did not realize such presence of expired drugs.

An added feature of this survey is the inclusion of availability of family planning commodities in public health facilities. In this survey, family planning commodities were present in only at most 60% of the RHUs, HCs and Level I public hospitals. In Level II to IV hospitals, these items were even less, at most 10%. These results could serve as baseline measures for future surveys and for comparisons with the national level. During the field survey, some staff said that the presence of particular commodities depended on the knowledge and preference of the family planning coordinators. This and other reasons for these low levels of availability of family planning commodities may need to be investigated in another study.

Conclusions and Recommendations

This study showed that the mean percent drug availability in the rural health units, health centers and Level I public hospitals was 52% and in Level II to IV public hospitals, 38%. This reflected significant increases in drug availability levels from 2009 to the present. These improvements were seen across majority of the provinces and not selectively. The presence of expired drugs was not a major concern. Family planning commodities were also available in more than half of the rural health units, health centers and Level I hospitals. However, there is low availability of family planning commodities in Level II to IV hospitals.

For future surveys on drug availability in health facilities, it is suggested that a review of the list of drugs be done to consider replacing those drugs that do not reflect current practices. For more accurate sampling procedures, an updated list of rural health units, city health centers, and hospitals at the different levels should be made available. In this study, many of these facilities were not accounted for in the sampling frame. There is also a need to update the names of these facilities. More time could be allocated to the data collection, especially in inaccessible areas, so as to include a more representative sample in the study.

ANNEX A

Drug Availability Among Public Health Facilities
COVER FORM (FORM 1)

Introductory Statement

Good <morning/afternoon>, I am <*name of surveyor*>, a data collector of the Drug Availability Study being conducted by the Department of Health. I would like to ask your help in checking whether a set of key medicines are available in your drug dispensary. I will show you a list of medicines and if you could please provide me a sample of each of the medicines specified in the list. This survey will take only 30 minutes to 1 hour of your time. Thank you very much for your cooperation.

Health Facility Information

Province: _____

Name of Health Facility: _____

Level of Health Facility (check one): ☐ RHU ☐ Level I ☐ Level II ☐ Level III ☐ Level IV

Name of Surveyor: _____

Person Responsible at Health Facility Drug Dispensary:

Name: _____

Position: _____

Instruction for Surveyor:
If the health facility is a Rural Health Unit (RHU) or a Level I public hospital, please use SURVEY FORM 1.
If the health facility is a Level II, III or IV public hospital, please use SURVEY FORM 2.

Result of Visit

Date of Scheduled Visit: _____ (mm/dd/yyyy)

Result (check one) of survey: ☐ Completed; ☐ Partly completed; ☐ Not done

If partly or not completed, why? _____

_____

Date of Scheduled Callback: _____ (mm/dd/yyyy)

Result (check one) of survey: ☐ Completed; ☐ Partly completed; ☐ Not done

If partly or not completed, why? _____

_____

Survey Form 1

Public Health Facility Pharmacy/Drug Dispensary
List A (For RHUs and Level I Public Hospitals)

Key Medicines (Generic Name)	Available (encircle)		Expired* (encircle)				Remarks
1. Amoxicillin 500 mg capsule	No	Yes	No	Yes	NK	NA	
2. Captopril 25 mg tablet	No	Yes	No	Yes	NK	NA	
3. Cefalexin 500 mg capsule	No	Yes	No	Yes	NK	NA	
4. Ciprofloxacin 500 mg tablet	No	Yes	No	Yes	NK	NA	
5. Co-trimoxazole 200 mg + 40 mg suspension, 60 mL	No	Yes	No	Yes	NK	NA	
6. Co-trimoxazole 800 mg + 160 mg tablet	No	Yes	No	Yes	NK	NA	
7. Ferrous sulfate tablet (equiv to 60 mg elemental iron)	No	Yes	No	Yes	NK	NA	
8. Furosemide 40 mg tablet	No	Yes	No	Yes	NK	NA	
9. Glibenclamide 5 mg tablet	No	Yes	No	Yes	NK	NA	
10. Hydrochlorothiazide 25 mg tablet	No	Yes	No	Yes	NK	NA	
11. Loperamide 2 mg capsule	No	Yes	No	Yes	NK	NA	
12. Metformin 500 mg tablet	No	Yes	No	Yes	NK	NA	
13. Metoprolol 50 mg tablet	No	Yes	No	Yes	NK	NA	
14. Metronidazole 125 mg/5mL (as benzoate) suspension, 60 mL	No	Yes	No	Yes	NK	NA	
15. Metronidazole 500 mg tablet	No	Yes	No	Yes	NK	NA	
16. Oral rehydration salt (ORS 75-replacement)	No	Yes	No	Yes	NK	NA	
17. Paracetamol 125 mg/5 mL syrup/suspension, 60 mL	No	Yes	No	Yes	NK	NA	
18. Paracetamol 500 mg tablet	No	Yes	No	Yes	NK	NA	
19. Ranitidine 150 mg tablet	No	Yes	No	Yes	NK	NA	
20. Simvastatin 20 mg tablet	No	Yes	No	Yes	NK	NA	
21. Oxytocin for Basic Emergency Maternal Obstetrics & Neo-natal Care (BEMONC)	No	Yes	No	Yes	NK	NA	
22. Pills (Low dose COC, Progestin only pills)	No	Yes	No	Yes	NK	NA	
23. Injectables (DMPA)	No	Yes	No	Yes	NK	NA	
24. IUD TCU380A	No	Yes	No	Yes	NK	NA	
25. SDM cycle beads	No	Yes	No	Yes	NK	NA	
Remarks on Data Collection Activity:							

*NK – Not known, NA – Not Applicable

Survey Form 2

Public Health Facility Pharmacy/Drug Dispensary

List B (For Level II, III and IV Public Hospitals)

Key Medicines (Generic Name)	Available (encircle)		Expired* (encircle)				Remarks
1. Acyclovir 200 mg tablet	No	Yes	No	Yes	NK	NA	
2. Amoxicillin 500 mg capsule	No	Yes	No	Yes	NK	NA	
3. Atenolol 50 mg tablet	No	Yes	No	Yes	NK	NA	
4. Amlodipine 5 mg (as besylate or camsylate) tablet	No	Yes	No	Yes	NK	NA	
5. Beclomethasone 0.05 mg/dose (as dipropionate) inhaler	No	Yes	No	Yes	NK	NA	
6. Captopril 25 mg tablet	No	Yes	No	Yes	NK	NA	
7. Co-amoxiclav 625 mg tablet	No	Yes	No	Yes	NK	NA	
8. Carbamazepine 200 mg tablet	No	Yes	No	Yes	NK	NA	
9. Cefalexin 500 mg capsule	No	Yes	No	Yes	NK	NA	
10. Ceftriaxone 1 gram vial	No	Yes	No	Yes	NK	NA	
11. Chloramphenicol 125 mg/5 mL suspension	No	Yes	No	Yes	NK	NA	
12. Chloramphenicol 500 mg capsule	No	Yes	No	Yes	NK	NA	
13. Ciprofloxacin 500 mg tablet	No	Yes	No	Yes	NK	NA	
14. Co-trimoxazole 200 mg + 40 mg suspension, 60 mL	No	Yes	No	Yes	NK	NA	
15. Co-trimoxazole 800 mg + 160 mg tablet	No	Yes	No	Yes	NK	NA	
16. Dexamethasone 0.5 mg tablet	No	Yes	No	Yes	NK	NA	
17. Dicloflenac 50 mg capsule/tablet (as sodium or potassium)	No	Yes	No	Yes	NK	NA	
18. Doxycycline 100 mg capsule	No	Yes	No	Yes	NK	NA	
19. Ferrous sulfate tablet (equiv to 60 mg elemental iron)	No	Yes	No	Yes	NK	NA	
20. Furosemide 40 mg tablet	No	Yes	No	Yes	NK	NA	
21. Glibenclamide 5 mg tablet	No	Yes	No	Yes	NK	NA	
22. Gliclazide 80 mg tablet	No	Yes	No	Yes	NK	NA	
23. Hydrochlorothiazide 25 mg tablet	No	Yes	No	Yes	NK	NA	
24. Isosorbide dinitrate 10 mg tablet	No	Yes	No	Yes	NK	NA	

25. Loperamide 2 mg capsule	No Yes	No Yes NK NA	
Key Medicines (Generic Name)	Available (encircle)	Expired (encircle)	Remarks
26. Metformin 500 mg tablet	No Yes	No Yes NK NA	
27. Metoprolol 50 mg tablet	No Yes	No Yes NK NA	
28. Metronidazole 125 mg/5mL (as benzoate) suspension, 60 mL	No Yes	No Yes NK NA	
29. Metronidazole 500 mg tablet	No Yes	No Yes NK NA	
30. Nifedipine 20 mg MR (retard) tablet	No Yes	No Yes NK NA	
31. Omeprazole 20 mg capsule	No Yes	No Yes NK NA	
32. Oral rehydration salt (ORS 75-replacement)	No Yes	No Yes NK NA	
33. Paracetamol 125 mg/5 mL syrup/suspension, 60 mL	No Yes	No Yes NK NA	
34. Paracetamol 500 mg tablet	No Yes	No Yes NK NA	
35. Ranitidine 150 mg tablet	No Yes	No Yes NK NA	
36. Salbutamol 0.1 mg dose, 200 doses (as sulfate) inhaler	No Yes	No Yes NK NA	
37. Simvastatin 20 mg tablet	No Yes	No Yes NK NA	
38. Pills (low dose COC, Progestin only pills)	No Yes	No Yes NK NA	
39. Injectables (DMPA)	No Yes	No Yes NK NA	
40. IUD TCU380A	No Yes	No Yes NK NA	
41. SDM cycle beads	No Yes	No Yes NK NA	
Remarks on Data Collection Activity			

*NK – Not known, NA – Not Applicable