

# *Supply-Side Readiness of Primary Health Care in the Philippines*



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## Table of Contents

<b>Acknowledgements .....</b>	<b>2</b>
<b>Table of Contents.....</b>	<b>3</b>
<b>Acronyms.....</b>	<b>6</b>
<b>Executive Summary .....</b>	<b>9</b>
<b>I. Introduction.....</b>	<b>13</b>
<b>II. Analytical Approach.....</b>	<b>21</b>
<i>Data.....</i>	<i>21</i>
<i>Methods.....</i>	<i>22</i>
<b>III. Findings.....</b>	<b>25</b>
1. <i>General Service Readiness .....</i>	<i>25</i>
2. <i>Maternal and Child Health.....</i>	<i>45</i>
Antenatal Care.....	46
Family Planning .....	52
Immunization .....	56
Child Health.....	62
3. <i>Noncommunicable Diseases (NCD) Prevention and Treatment.....</i>	<i>68</i>
Diabetes Mellitus.....	69
Cardiovascular Disease.....	72
Chronic Respiratory Disease .....	77
Cervical Cancer Screening.....	80
4. <i>Tuberculosis.....</i>	<i>83</i>
5. <i>Variations in Service Readiness .....</i>	<i>86</i>
<b>IV. Discussion, Limitations, and Areas for Further Work.....</b>	<b>97</b>
<b>References.....</b>	<b>101</b>
<b>Annexes.....</b>	<b>103</b>
<b>Annex 1: Standards for Accreditation of PhilHealth’s PCB Package Providers; Diagnostic and Service Availability.....</b>	<b>103</b>
<b>Annex 2: Standards for Accreditation of PhilHealth’s PCB Package Providers; Infrastructure and Supplies Requirements .....</b>	<b>104</b>
<b>Annex 3: RHU Personnel.....</b>	<b>105</b>
<b>Annex 4: Provinces and Municipalities Included In This Survey .....</b>	<b>105</b>
<b>Annex 5: Indicators in WHO SARA Guidelines and National Guidelines, and Data Availability.....</b>	<b>107</b>

## Tables

Table 1. Top causes of YLL due to premature mortality in the Philippines, 1990 and 2013 .....	14
Table 2. Contents of the PCB Package .....	16
Table 3. Details of LGU income classification at the municipality level .....	24
Table 4. General service readiness tracer indicators: SARA and from survey .....	25
Table 5. General service readiness score by LGU income classification .....	32
Table 6. General service readiness score by region .....	33
Table 7. RHU personnel compared with PCB requirements (left) and DOH national requirements (right) .....	40
Table 8. RHU and DOH-deployed personnel, average by region .....	43
Table 9. RHU and DOH-deployed personnel by LGU income class .....	43
Table 10. Access to maternal health services, 2014 <sup>a</sup> .....	46
Table 11. ANC tracer indicators: SARA guidelines and indicators used for assessment. ....	47
Table 12. ANC service readiness score by LGU income classification .....	51
Table 13. ANC service readiness score by region .....	51
Table 14. Family planning tracer indicators: SARA guidelines and indicators used for assessment.....	52
Table 15. Family planning service readiness score by LGU income group .....	55
Table 16. Family planning service readiness score by region .....	55
Table 17. Immunization coverage by region, 2014 .....	56
Table 18. Immunization tracer indicators: WHO SARA guidelines and indicators used for assessment.....	57
Table 19. Immunization service readiness score by LGU income group .....	61
Table 20. Immunization service readiness score by region .....	61
Table 21. Access to child health and nutrition services by region, 2014.....	62
Table 22. Child health: SARA guidelines and indicators used for assessment .....	63
Table 23. Child health service readiness score by LGU income classification .....	66
Table 24. Child health service readiness score by region.....	67
Table 25. Top ten causes of mortality in the Philippines, 2009.....	68
Table 26. DM tracer indicators: SARA guidelines and indicators used for assessment... ..	70
Table 27. DM service readiness score by LGU income group .....	72
Table 28. DM service readiness score by region .....	72
Table 29. CVD tracer indicators: SARA guidelines and indicators used for assessment. ....	73
Table 30. CVD service readiness score by LGU income classification .....	76
Table 31. CVD service readiness score by region .....	76
Table 32. CRD tracer indicators: SARA guidelines and indicators used for assessment. ....	77
Table 33. CRD service readiness score by LGU income group .....	79
Table 34. CRD service readiness score by region .....	79
Table 35. CCS tracer indicators: SARA guidelines and indicators used for assessment . ....	81
Table 36. CCS service readiness score by LGU income classification .....	82
Table 37. CCS service readiness score by region .....	82

## Figures

Figure 1. Breakdown of health care utilization by facility type, Philippines .....	15
Figure 2. Financing sources and amounts for preventive and outpatient curative care, 2012–2014.....	19
Figure 3. Supply-Side Readiness Assessment Framework.....	23
Figure 4. Basic infrastructure by region .....	28
Figure 5. Power outages - Frequency and duration by region .....	29
Figure 6. General service readiness: Basic equipment .....	30
Figure 7. General service readiness: Infection prevention.....	30
Figure 8. General service readiness: Diagnostic capacity .....	31
Figure 9. General service readiness: Essential medicines .....	32
Figure 10. Regional variation in the availability of basic infrastructure .....	34
Figure 11. Regional variation in the availability of basic equipment.....	35
Figure 12. Regional variation in infection prevention.....	36
Figure 13. Regional variation in diagnostic capacity.....	37
Figure 14. Regional variation in essential medicine availability.....	38
Figure 15. LGU health personnel and DOH deployment, by region.....	44
Figure 16. LGU health personnel and DOH deployment, by income class.....	44
Figure 17. ANC service readiness: Medicines and commodities availability .....	49
Figure 18. ANC service readiness: Diagnostics availability .....	49
Figure 19. RHU staff who have undergone BEMONC training .....	50
Figure 20. Family planning service readiness: Medicines and commodities availability	54
Figure 21. Immunization service readiness: Equipment availability.....	59
Figure 22. Immunization service readiness: Medicines and commodities availability ....	60
Figure 23. Child health service readiness: Diagnostics availability .....	64
Figure 24. Child health service availability: Medicines and commodities availability ....	65
Figure 25. DM service readiness: Diagnostics availability and medicines and commodities availability.....	71
Figure 26. CVD service readiness: Diagnostics availability .....	75
Figure 27. CVD service readiness: Medicines and commodities availability .....	75
Figure 28. CRD service readiness: Medicines and commodities availability and equipment availability.....	78
Figure 29. CCS service readiness: Equipment availability and diagnostics availability..	81
Figure 30. Equipment availability and medicines and commodities availability .....	85
Figure 31. Regional variation in ANC service readiness.....	88
Figure 32. Regional variation in FP service readiness.....	89
Figure 33. Regional variation in immunization service readiness.....	90
Figure 34. Regional variation in child health service readiness .....	91
Figure 35. Regional variation DM service readiness.....	92
Figure 36. Regional variation in CVD service readiness.....	93
Figure 37. Regional variation in CRD service readiness.....	94
Figure 38. Regional variation in CSS service readiness.....	95
Figure 39. Regional variation in TB service readiness.....	96

## Acronyms

Acronym	Meaning
<b>ACE</b>	Angiotensin Converting Enzyme
<b>AGE</b>	Acute Gastroenteritis
<b>AIDS</b>	Acquired Immune Deficiency Syndrome
<b>ANC</b>	Antenatal Care
<b>AO</b>	Administrative Order
<b>ARI</b>	Acute Respiratory Infection
<b>ARMM</b>	Autonomous Region of Muslim Mindanao
<b>BCG</b>	Bacillus Calmette-Guérin
<b>BEmONC</b>	Basic Emergency Obstetric and Neonatal Care
<b>BHS</b>	Barangay Health Station
<b>BHW</b>	Barangay Health Worker
<b>BNS</b>	Barangay Nutrition Scholar
<b>BP</b>	Blood Pressure
<b>CAR</b>	Cordillera Administrative Region
<b>CBC</b>	Complete Blood Count
<b>CD</b>	Communicable Disease
<b>ComPacks</b>	Complete Treatment Packs
<b>COPD</b>	Chronic Obstructive Pulmonary Disease
<b>CRD</b>	Chronic Respiratory Disease
<b>CCS</b>	Cervical Cancer Screening
<b>CVD</b>	Cardiovascular Disease
<b>DALY</b>	Disability-adjusted Life Year
<b>DM</b>	Diabetes Mellitus
<b>DMPA</b>	Depot Medroxyprogesterone Acetate (Injectable Contraceptive)
<b>DOH</b>	Department of Health
<b>DOTS</b>	Directly Observed Therapy-Short Course
<b>DPT-Hib-HepB</b>	Pentavalent Vaccine: Diphtheria, Pertussis, Tetanus, Haemophilus Influenza B and Hepatitis B
<b>DTTB</b>	Doctors to the Barrios
<b>EMR</b>	Electronic Medical Record
<b>EPI</b>	Expanded Program for Immunization
<b>FBS</b>	Fasting Blood Sugar
<b>FHSIS</b>	Field Health Service Information System
<b>FIC</b>	Fully Immunized Child
<b>FP</b>	Family Planning
<b>Hb</b>	Hemoglobin
<b>HFEP</b>	Health Facilities Enhancement Program
<b>HIV</b>	Human Immunodeficiency Virus
<b>HPV</b>	Human Papillomavirus
<b>HRH</b>	Human Resources for Health
<b>I3QUIP</b>	Philippines Impact of Incentives and Information on Utilization and Quality of Primary Care
<b>ICS</b>	Inhaled Corticosteroids
<b>IHME</b>	Institute of Health Metrics and Evaluation
<b>IMCI</b>	Integrated Management of Childhood Illness
<b>IPV</b>	Inactivated Polio Vaccine



<b>IPT</b>	Intermittent Preventive Treatment
<b>IRA</b>	Internal Revenue Allotment
<b>ITN</b>	Insecticide-treated Net
<b>IUCD</b>	Intrauterine Contraceptive Device
<b>IUD</b>	Intrauterine Device
<b>LGU</b>	Local Government Unit
<b>MCH</b>	Maternal and Child Health
<b>MCP</b>	Maternity Care Package
<b>MDG</b>	Millennium Development Goal
<b>MDR</b>	Multi-drug Resistant
<b>MMR</b>	Maternal Mortality Rate
<b>MNCHN</b>	Maternal, Newborn and Child Health and Nutrition
<b>MOP</b>	Manual of Operations
<b>NCD</b>	Noncommunicable Disease
<b>NCR</b>	National Capital Region
<b>NDHS</b>	National Demographic and Health Survey
<b>NDP</b>	Nurse Deployment Program
<b>NIP</b>	National Immunization Program
<b>NNS</b>	National Nutrition Survey
<b>OPV</b>	Oral Polio Vaccine
<b>ORS</b>	Oral Rehydration Salts
<b>PCB</b>	Primary Care Benefit
<b>PCV</b>	Pneumococcal Conjugate Vaccine
<b>PhilHealth</b>	Philippine Health Insurance Corporation
<b>PhilPEN</b>	Philippine Package of Essential NCD Interventions
<b>RHM</b>	Rural Health Midwife
<b>RHMPP</b>	Rural Health Midwives Placement Program
<b>RHU</b>	Rural Health Unit
<b>RNHEALS</b>	Registered Nurses for Health Enhancement and Local Service Project
<b>SARA</b>	Service Availability and Readiness Assessment
<b>SDG</b>	Sustainable Development Goal
<b>STI</b>	Sexually Transmitted Infection
<b>SW</b>	Shortwave
<b>TB</b>	Tuberculosis
<b>TsekAp</b>	Tamang Serbisyo sa Kalusugan ng Pamilya
<b>TT</b>	Tetanus Toxoid
<b>UHC</b>	Universal Health Coverage
<b>UTI</b>	Urinary Tract Infection
<b>URTI</b>	Upper Respiratory Tract Infection
<b>VIA</b>	Visual Inspection with Acetic Acid
<b>WHO</b>	World Health Organization
<b>WHO PEN</b>	WHO's Package of Essential NCD Interventions
<b>YLL</b>	Years of Life Lost



## Executive Summary

Health indicators in the Philippines currently lag well behind what would be expected given the nation's level of economic development. The country has a substantial and rapidly growing noncommunicable disease (NCD) burden while continuing to struggle with long-standing health challenges, including poor maternal and child health (MCH) outcomes and lagging communicable disease (CD) indicators. Immunization rates are at their lowest point in 10 years, maternal mortality remains very high, and one in three Filipino children suffer from malnutrition. The resulting epidemiologic profile is complex, and an adequate response requires a robust primary health care system. With the introduction and subsequent expansion of national social health insurance, administered by the Philippine Health Insurance Corporation (PhilHealth), the central government has sought to ensure access to high-priority health services, including a number of services delivered through primary care.

This policy paper examines the capacity of rural health units (RHUs), the facilities charged with spearheading the country's public primary health care system, to provide high-quality primary care in the Philippines. Using the World Health Organization's (WHO) Service Availability and Readiness Assessment (SARA) as an organizing framework, we first present an overview of general service readiness, then examine seven high-priority health conditions, which are categorized into MCH conditions (antenatal care [ANC], family planning [FP] care, immunization, and child health); NCD conditions (diabetes mellitus [DM], chronic cardiovascular disease [CVD], chronic respiratory diseases [CRDs], and cervical cancer screening [CCS]); and CDs (tuberculosis [TB]). For each condition, the SARA framework specifies tracer indicators that can be used to assess the readiness to deliver services within critical domains (for example, equipment, diagnostics, or medicines and commodities). Using data collected from 240 RHUs across 14 regions, we present the current capacity of the primary health care system to deliver health services.

This analysis identified both strengths and weaknesses in the delivery of primary care in the Philippines. Basic equipment, including adult and child scales, blood pressure (BP) apparatuses, sterile gloves, thermometers, and stethoscopes, were all commonly available. Basic medicines and commodities are also widely available. For example, very few stock-outs were identified for tetanus toxoid (TT), bacillus Calmette-Guérin (BCG), and oral polio vaccine (OPV), oral and injectable contraceptives, mebendazole, oral rehydration salts (ORS), amoxicillin, co-trimoxazole, and paracetamol. Selected therapies for the NCDs were also generally available, including the diabetes drugs metformin and sulfonylureas; angiotensin converting enzyme (ACE) inhibitors, diuretic, beta-blockers, calcium channel blockers, metformin, and angiotensin receptor blockers for CVD; and beta2-agonists and beta-blockers for asthma. The average overall scores for both FP and TB were nearly 100 percent.

There were, however, a number of important gaps. The survey identified issues with the basic infrastructure and equipment at the facilities: 49 percent of RHUs had experienced some power outage in the week leading up to the survey, and 20 percent of facilities did not have refrigerators for vaccines. While there were some shortages in the availability of drugs and commodities (for example, the relatively newly introduced pneumococcal and rotavirus vaccines were each available at fewer than half of the facilities, as was inhaled

corticosteroids [ICS] for asthma), the main gaps were in diagnostic capacity. Hemoglobin (Hb) testing was available at only 30 percent of RHUs and fecalysis was available at 77 percent. Fasting blood glucose testing was available at just 70 percent of RHUs visited overall, and at only 25 percent of RHUs in the Cordillera Administrative Region (CAR) and 38 percent of RHUs in Region 10. Similar gaps were found in the ability to conduct urine analysis: 77 percent of RHUs overall could provide this test and only 31 percent of RHUs in CAR and 56 percent in Region 5 could do so. Only 4 percent of RHUs had a peak expiratory flowmeter in place for asthma diagnosis on the day of the survey and only one-fourth of RHUs had staff trained on CCS at the time of the survey. Overall scores for CRD, CCS, and immunization are low, at 70 percent, 61 percent, and 79 percent, respectively.

There was also substantial regional variation in readiness to provide some services, with some regions consistently under- or over-performing compared to their neighbors. CAR performed at or below the sample mean in all but three domains, as did Region 2. Meanwhile, Region 10 and CARAGA performed better than others on almost all the domains. This has important implications for equity in the distribution of and access to national resources. Although immunization and diabetes services are intended to be universally available, regional immunization scores varied from 70 percent to 85 percent, and diabetes scores ranged from a low of just 67 percent in CAR to a high of 98 percent in Region 3.

Across the regions, facilities in relatively more prosperous local government units (LGUs) outperformed those in relatively less prosperous LGUs. RHUs located in first or second income class municipalities tended to have better basic infrastructure, more basic equipment, and higher diagnostic capacity than RHUs in fifth and sixth income class municipalities. RHUs located in first class LGUs perform well above the sample means for all categories except FP (which has a very high overall average score of 97 percent) and have the top performance for several categories, while RHUs located in the sixth class LGUs have the lowest performance in five of the nine health service categories (ANC, FP, immunization, diabetes, and TB), and are above the sample mean for only one category—CRD.

The findings presented in this analysis suggest that much remains to be done to ensure that entitlements for primary care are met. The Philippines has made remarkable strides in ensuring PhilHealth coverage. Efforts are needed to ensure that the public sector is able to deliver on the entitlements promised by the insurer. The country currently subsidizes coverage for 45 million poor people, and has repeatedly enacted plans to expand the benefit package over the past decade. While national guidelines for the provision of care are generally well aligned with—or more comprehensive than—international norms, there are systematic gaps in the availability of key inputs, particularly those related to diagnostic testing. And, despite national efforts to make RHUs the main point of care for the health conditions considered here, these service delivery gaps fundamentally limit the public primary care system's ability to deliver services.

While this is an important finding, we note that this report does not present a comprehensive picture of the health system, but must rather be placed in the broader health context. Private providers are responsible for more than 50 percent of health service delivery in the Philippines. If new investments are to maximize efficiency gains, efforts to

understand and expand the public system must leverage these existing resources. By highlighting the existence and location of supply-side deficiencies, this work can help target future efforts to understand why these deficiencies exist. The current analysis can also be complemented with utilization data to better understand gaps in utilization of health services, and the extent to which a failure to use services represents access barriers that can and should be resolved by the public sector.



## I. Introduction

Health indicators in the Philippines currently lag well behind what would be expected given the country's level of economic development. Immunization rates are at their lowest point in 10 years, maternal mortality remains very high, one in three Filipino children suffer from malnutrition, and the noncommunicable disease (NCD) burden is growing (Food and Nutrition Research Institute 2008, 2013; Philippine Statistics Authority 2013). The resulting epidemiologic profile is complex, and an adequate response requires a robust primary health care system. With the introduction and subsequent expansion of the social health insurer, administered by the Philippine Health Insurance Corporation (PhilHealth), the central government has sought to ensure access to a number of high-priority health services, including at the primary level. However, much of the responsibility for implementing the publicly funded health system is at the local level, where capacity and resources differ. This paper seeks to understand the extent to which basic service delivery units (specifically rural health units [RHUs]) have the capacity to deliver the primary health care services mandated by the government.

### *Philippines Health Sector: Health Status, Financing, and Service Delivery Arrangements*

The Philippines' health challenges are substantial. With an estimated maternal mortality rate (MMR) of 114 deaths per 100,000 live births, the 2015 MMR was more than double the Millennium Development Goal (MDG) 5 target (World Bank 2016). One-third of children under the age of five are stunted in the country and, given the high prevalence and large population, the Philippines is in the global top 10 countries in terms of the burden of stunting (Food and Nutrition Research Institute 2013). In the 2013 National Demographic and Health Survey (NDHS), vaccination rates were at their lowest point in 10 years, and national programs for vaccination have not met their coverage targets since 2000 (Philippine Statistics Authority 2013). Communicable diseases (CDs), such as tuberculosis (TB), account for a considerable proportion of disability-adjusted life years (DALYs), even while the country must also address the rapid emergence of NCDs—now the dominant cause of death in the Philippines. In 2013, the leading cause of years of life lost (YLL) in the Philippines was ischemic heart disease, and diabetes ranked seventh (IHME 2013). Tellingly, NCDs account for the fastest-growing share of the health burden. YLL due to ischemic heart disease increased by 43 percent between 1990 and 2013, while diabetes increased by an alarming 266 percent (IHME 2013). By contrast, YLL from the most important communicable and maternal health issues all decreased over this time (Table 1). Given this backdrop, attainment of the health-related targets of the Sustainable Development Goals (SDGs), which include a global MMR target of 70 deaths per 100,000 live births and reducing by one-third premature mortality due to NCDs, is likely to require intensified efforts.

**Table 1. Top causes of YLL due to premature mortality in the Philippines, 1990 and 2013**

1990		2013		
Ranking		Ranking	% Change (1990–2013)	
1.	Lower respiratory infection (CD)	1.	Ischemic heart disease (NCD)	43
2.	Neonatal pre-term birth (CD)	2.	Lower respiratory infection (CD)	-68
3.	Ischemic heart disease (NCD)	3.	Cerebrovascular disease (NCD)	48
4.	TB (CD)	4.	TB (CD)	-36
5.	Measles (CD)	5.	Neonatal preterm birth (CD)	-55
6.	Diarrheal disease (CD)	6.	Congenital anomalies (NCD)	-2
7.	Other neonatal issues (CD)	7.	Diabetes (NCD)	266
8.	Cerebrovascular disease (NCD)	8.	Interpersonal violence (I)	-2
9.	Intestinal infectious diseases (CD)	9.	Road traffic accidents (I)	39
10.	Congenital anomalies (NCD)	10.	Neonatal encephalopathy (CD)	0
13.	Interpersonal violence (I)	11.	Intestinal infectious diseases (CD)	-55
17.	Neonatal encephalopathy (CD)	12.	Diarrheal diseases (CD)	-71
21.	Road traffic accidents (I)	20.	Other neonatal (CD)	-76
31.	Diabetes (NCD)	21.	Measles (CD)	-80

*Source:* Adapted from the Institute of Health Metrics and Evaluation (IHME).

*Note:* CD: Communicable, maternal, neonatal, and nutritional diseases; NCD: Noncommunicable diseases; I: Injuries.

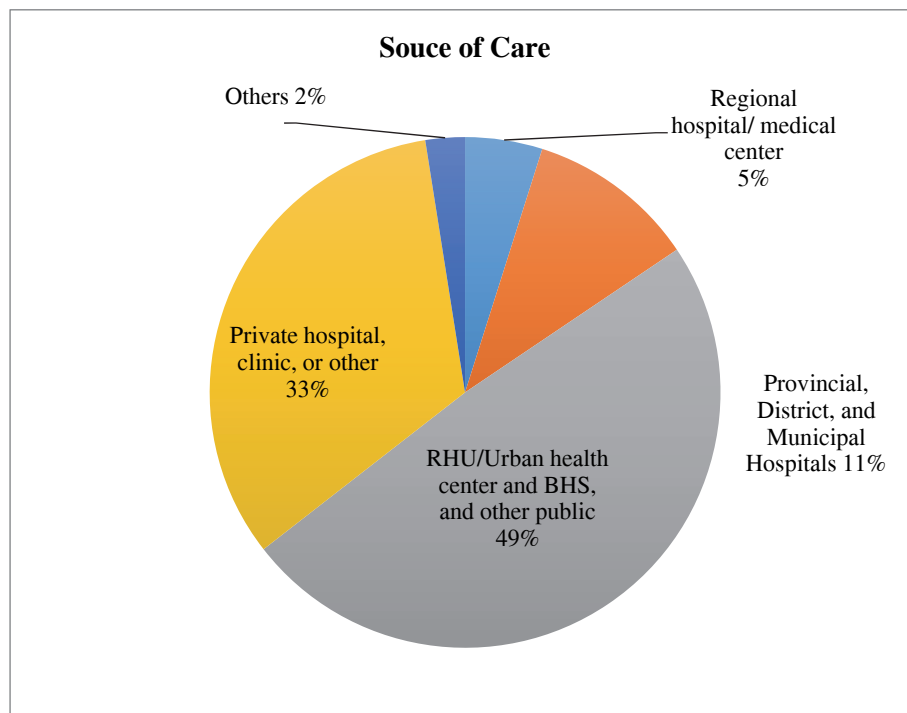
The ongoing and emerging health challenges place a strong pressure upon primary health services in the Philippines. Primary health care is well placed to cost-effectively identify, manage, refer, and/or cure these issues, and should be geographically accessible to the majority of the population. A consensus was reached among high-level health sector stakeholders in the Universal Health Coverage (UHC) Stocktaking event held in Manila from October 7 to 11, 2013, that access of every Filipino to primary health care was one of the most immediate needs if the country is to achieve UHC and, ultimately, its health outcome goals.

The country has mixed public-private provision of primary health care. While the majority of care is delivered by the public sector, private providers are also an important source of care. One out of nine (11 percent) Filipinos visited a health care provider in the 30 days prior to the 2013 NDHS (Philippine Statistics Authority 2013). Approximately two-thirds of these visits took place in the public sector (7 percent) with the remaining one-third (4 percent) visiting private providers. However, the importance of the private sector varies by service type: while contraceptives were equally likely to come from either the public or the private sector and approximately 45 percent of hospital stays were in the private sector, women were more than twice as likely to deliver in the public sector (43 percent of births) as in the private sector (19 percent).<sup>1</sup> Use of the private sector is more common in urban areas and among individuals from higher socioeconomic strata (Philippine Statistics Authority 2013). Overall, RHUs and barangay health stations (BHSs) are the most utilized (49 percent) (Figure 1).

<sup>1</sup> Nearly 40 percent of women deliver outside of a facility.



**Figure 1. Breakdown of health care utilization by facility type, Philippines**



*Source: National Demographic Health Survey, 2013*

With the decentralization of the health sector more than two decades ago, public sector delivery of care in the Philippines has been primarily the responsibility of local government units (LGUs), that is, municipalities, cities, and provinces, who have a substantial degree of autonomy. Provinces are responsible for managing the local hospital systems, while cities and municipalities are responsible for managing RHUs or city health centers (both often referred to as RHUs or health centers) and Barangay Health Stations (BHSs) (also referred to as health centers). While the primary role of the Department of Health (DOH) should be regulatory and advocacy, it has continued to operate 70 secondary and tertiary hospitals, which serve as referral hospitals in the local hospital systems. With this fragmented scope of responsibilities, integration of health services through referral systems among the different levels of facilities necessitates agreements between the different local government levels, as well as with private facilities. The DOH has been promoting such linkages and rationalization of health delivery, but in practice there is no adequate referral and gatekeeping system in place. Bypassing of primary care facilities is common, with patients citing dissatisfaction with the quality of care or lack of supplies at public facilities as important motivating factors in their decision to attend higher-level facilities for primary health concerns (Romualdez et al. 2011).

Despite the frequent bypassing of primary care facilities, RHUs and BHSs remain the most heavily utilized facilities, and generally serve as patients' first point of contact with health services. BHSs are staffed by volunteer community or barangay health workers (BHWs), and midwives, while the RHUs are staffed by doctors, nurses, midwives, medical technologists, sanitary inspectors, nutritionists, and volunteer health workers (Romualdez et al. 2011).

Although referral arrangements are encouraged by the DOH, there are no formal standards to help structure these arrangements, nor are there licensing requirements for public or private primary care facilities. However, some specific health programs espoused by the DOH outline specific capacity requirements with regard to staff, equipment, and supplies. For example, operational manuals on immunization, family planning (FP), and maternal and child health (MCH) detail the basic facility requirements needed to deliver these services. Standards are likewise defined in accreditation requirements and clinical guidelines for PhilHealth’s specific benefit packages.

One important example of the latter is PhilHealth’s Primary Care Benefit (PCB) Package, which targets PhilHealth’s indigent members and is delivered through RHUs and BHSs. The PCB is a special benefit package that has been established to increase access to primary care services among this population. In exchange for a fixed payment per enrolled family, PCB providers are expected to deliver a set of services, including basic primary care consultations, specified diagnostic examinations, and priority essential medicines (see Table 2).

**Table 2. Contents of the PCB Package**

PCB Package; Launched 2012		
Primary preventive services	Diagnostic examinations	Drugs and medicines
<ul style="list-style-type: none"> <li>• Consultation</li> <li>• Cervical cancer screening (CCS): Visual inspection with acetic acid (VIA)</li> <li>• Regular blood pressure (BP) measurements</li> <li>• Breastfeeding program and education</li> <li>• Periodic clinical breast examinations</li> <li>• Counseling for lifestyle modification</li> <li>• Counseling for smoking cessation</li> <li>• Body measurements</li> <li>• Digital rectal examination</li> </ul>	<ul style="list-style-type: none"> <li>• Complete blood count (CBC)</li> <li>• Urinalysis</li> <li>• Fecalalysis</li> <li>• Sputum microscopy</li> <li>• Fasting blood sugar (FBS)</li> <li>• Lipid profile</li> <li>• Chest X-ray</li> </ul>	<ul style="list-style-type: none"> <li>• Asthma, including nebulization services</li> <li>• Acute gastroenteritis (AGE), with no or mild dehydration</li> <li>• Upper respiratory tract infection (URTI) and pneumonia</li> <li>• Urinary tract infection (UTI)</li> </ul>

Source: PhilHealth 2012.

While the PCB Package targets indigent members, a number of primary care services are available to the broader PhilHealth beneficiary base through the MDG-related benefit packages for maternity care, malaria, TB, human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS), voluntary surgical contraception, and animal bite treatments. Each of these packages requires different accreditation procedures. Thus, a facility might be accredited to deliver the Maternity Care Package (MCP) care but not the TB Directly Observed Therapy-Short Course (DOTS) package, depending on the available personnel, infrastructure, and supplies. For these packages, both public and private facilities and different levels of facilities may apply for accreditation. PhilHealth, however, actively pursues that each LGU has at least one public health facility accredited

for PCB, MCP, and TB DOTS. As of 2015, 96 percent of LGUs have at least one PCB-accredited RHU, 79 percent LGUs have at least one MCP-accredited facility, and 78 percent LGUs have at least one TB DOTS-accredited facility (PhilHealth 2015).

Whether or not accredited by PhilHealth for any benefit package, the RHU is the facility through which Municipal or City Health Offices deliver the primary and public health services for which they are tasked by the national devolution of health service delivery. The discussion of service readiness for different types of health services in the latter sections outlines the standards and guidelines, if any, of the DOH and PhilHealth for such services. A Municipal or City Health Office may have more than one RHU, especially in geographically large LGUs or LGUs with extremely remote barangays, but there is typically a facility, designated the main RHU, that is located within the town proper. The Municipal Health Officer is generally also the RHU physician. Service availability may differ between RHUs. For example, different RHUs also offer different health services and PhilHealth benefit packages and, while many RHUs operate just like other government offices—eight hours per day, Monday through Friday—some RHUs operate 24 hours per day, seven days per week.

### ***Financing RHU Services***

Direct spending for health by an LGU from its General Fund is subject to the overall budgetary constraints within each LGU and must compete locally with other sectors for funds, thereby resulting in variations in health spending from one LGU to the next. From 2011 to 2014, the health sector comprised, on average, 9 percent of expenditure of cities and municipalities (Department of Finance: Bureau of Local Government Finance, n.d.). Except for a few municipalities or cities that are operating hospitals, almost all health spending goes to the operation of RHUs for delivery of primary and public health care services. A case study of LGUs showed that such health spending for primary and public health care services were in the range of PHP 2 million to PHP 5 million in municipalities and approximately PHP 19 million in cities (Lavado 2016).

As with the other LGU offices, hiring of Municipal Health Office and RHU personnel is managed by the LGU. Spending for equipment, supplies, and operating expenses in the RHU also go through the spending procedures of the LGU, which usually consists of preparing an Annual Procurement Plan and requesting for the execution of any purchase, including emergency purchases not contained in the procurement plan. All procurement must go through the General Service Office of the LGU through a bids and awards committee and must follow national rules and regulations on procurement. In RHUs that collect user fees, any revenues revert to the General Fund.

Approximately 60 percent of LGU health spending for RHUs are on salaries and benefits of health personnel. Except in years with expenses on major equipment and infrastructure, the rest of the health budget is spent for the operating expenses of the RHU such as for utilities, supplies, and medicines.

The DOH and PhilHealth also provide critical financial, in-kind, and human resource support to RHUs. For example, the DOH has staff deployment programs to augment the existing health workforce in RHUs. Although intended as stopgap measures to fill critical needs, these programs have been ongoing for a number of years. Public health goods such as vaccines are provided by the national government, procured centrally by the DOH, and distributed in-kind to the various RHUs and BHSs through the DOH regional offices. Similarly, the DOH distributes medicines under a variety of programs for medicine access, such as the Complete Treatment Packs (ComPacks), which contain complete treatment regimens for common diseases, including hypertension and diabetes. ComPacks are intended to ensure access to high-priority medicines by the poor, although the system has struggled with both leakage of the program benefits to the non-poor and stock-outs of the priority drugs. The DOH has also poured significant resources on equipment and infrastructure for public health care facilities, including RHUs. Over the past five years, the DOH has used its Health Facilities Enhancement Program (HFEP) to accelerate the supply-side readiness to provide health services. While the HFEP shows promise in improving health facilities resourcing, the program has been struggling with issues related to the transparency of allocation processes and decisions (that is, which facilities get which infrastructure and equipment) and with implementation challenges related to monitoring, delivery of equipment, and construction projects, among others.

Revenues from PhilHealth for accredited benefit packages are put in an LGU-specific PhilHealth Trust Fund. Twenty percent of this fund is earmarked for the service providers (RHU physician and other health personnel). These funds may have been substantially augmenting the salaries that these staff receive from the LGU, although there is no known documentation on the distribution of these funds. The remaining funds in the trust fund are earmarked for the facility's operating expenses. Half of the PCB payments (net of professional fee) are earmarked for medicines. However, with issues in reporting and payment delays—especially for the PCB Package—funds from PhilHealth have not been a consistent source of funding for the RHUs.

### ***Overall Financing for Primary Health Care***

While there are no specific data on expenditure for primary health care, overall health expenditure data (for all types of health care at all types of providers, including pharmacies and private and public facilities) strongly suggest that out-of-pocket spending is substantial, even for primary health care, and that medical expenditures are particularly high.

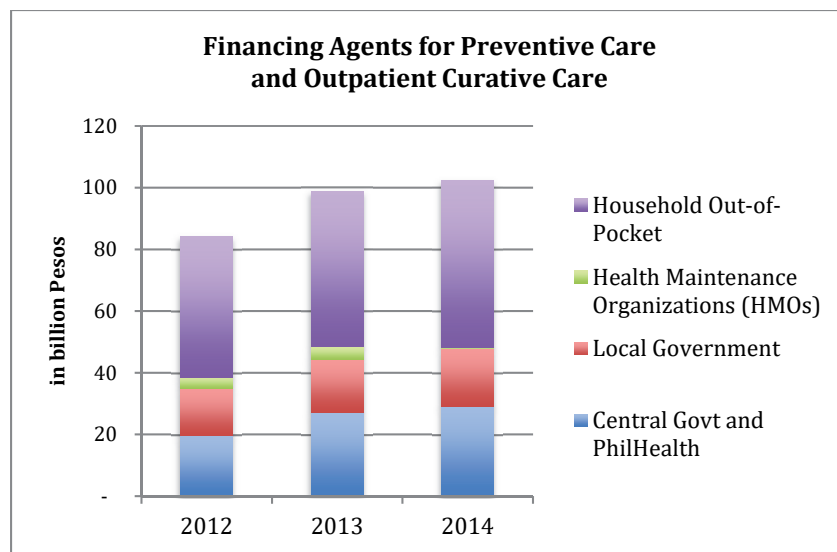
Current data do not permit us to perfectly track financing for primary health care to the major funding sources. Primary health care falls into two distinct health care function categories of the Philippine National Health Accounts: preventive care and outpatient curative care,<sup>2</sup> and both of these care categories might also include higher-level care delivered in an outpatient setting. Nevertheless, these two categories serve as a useful proxy to examine expenditure for primary health care. Together, they comprised 18 percent to 19

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<sup>2</sup> PhilHealth capitation payments for the PCB rendered in RHUs, for example, are categorized as Outpatient Curative Care, while LGU expenditure for RHUs are classified under Preventive Care. Other health care function categories include Inpatient Curative Care, Rehabilitative Care, Ancillary Services, Medical Goods, Governance and Health System, and Financing Administration.

percent of all health expenditure in 2012–2014. Figure 2 links the expenditure on these categories to their funding source for the period 2012–2014. Household out-of-pocket payments accounted for more than half of all spending on primary care, local governments spent for almost 20 percent, health maintenance organizations and private corporations cover 4 percent, and national government and PhilHealth accounted for between 23 percent and 28 percent. It can be noted that considering that PhilHealth has almost the same share as LGUs, it becomes even more imperative that issues with the capitation payments be addressed such that this substantial funding from PhilHealth can become an integral part of LGU finances in ensuring the readiness of supply side for primary care delivery.

**Figure 2. Financing sources and amounts for preventive and outpatient curative care, 2012–2014**



Source: Racelis 2016.

Some medicines for primary health care may also form part of the health care function classified as medical goods, which comprised 35–37 percent of all health expenditure. The proportion of these medical goods that contributes to primary health care cannot be estimated. It is notable, however, that 99 percent of medical goods were paid for by household out of pocket, further emphasizing the burden of out-of-pocket expenses in health care financing.

The government aims to reduce fragmentation in the financing of primary and preventive health services by expanding the share of primary health care financed by PhilHealth, with the long-term vision (per the Health Financing Strategy 2010–2020) that PhilHealth would pay for personal primary care services, while LGUs maintain responsibility for community-level public health. Expanding the scope of PhilHealth’s PCB and modifying the provider payment method for the package is a step in that direction. An upgraded version of the PCB, known as Tsekap, expands the package to cover more conditions, more diagnostic tests, and more medicines.<sup>3</sup> Also, building upon the PCB Package, the Tsekap is a blended payment system that combines ‘capitation’ (per family) payment with

<sup>3</sup> PhilHealth Circular No. 002-2015: Governing Policies on the Expanded Coverage of the PCB Package: Tamang Serbisyo sa Kalusugan ng Pamilya (Tsekap) was issued in February 2015 but has not been implemented to date; a formal advisory deferring Tsekap was issued in November 2015.

performance incentives to deliver certain obligated services, namely monitoring the BP of hypertensive patients, monitoring the blood sugar level of diabetes patients, cervical cancer screening (CCS), and breast examination. These revised incentives aimed to ensure that the RHUs obtain and monitor the health profiles of target beneficiaries, and follow up with patients with chronic conditions. There are plans to integrate still other primary and preventive services into the PhilHealth benefit package; for example, the Immunization Act in 2011 already foresees that immunization should eventually be financed by PhilHealth. Moreover, the package is intended to be made available to all PhilHealth members, and to expand the network of providers to include both public and private primary care providers.

The government is also working to improve the efficiency of services paid for by PhilHealth. The government is currently rolling out the mandatory use of electronic medical records (EMRs) at the primary care level. Once fully implemented, EMRs will allow PhilHealth to obtain health profiles and monitor services rendered by the primary care providers.

Although there are a number of resources available to the health sector at the local level—including its own budget, in-kind contribution, budget transfers from the DOH, PhilHealth, and collection of user fees—health sector spending is saddled with inefficiencies stemming from overlapping allocations. Meanwhile, the political priority placed on health varies between regions. This affects budgetary allocations which can be difficult to predict from the central level. While there are national guidelines and standards in place, and technical assistance is available from the DOH, implementation capacity varies from region to region. This has resulted in substantial, but not well-documented, variability in the availability of health care services and resources.

### ***Objective and Structure of the Paper***

This study assesses the ability of the Philippines' public primary health care facilities to provide preventive, diagnostic, and curative care for selected tracer conditions, with a focus on priority programs delivered at RHUs. We first provide an overview of general readiness to deliver health care services, and then consider a number of specific services divided into MCH services, NCD services, and TB. On the MCH side, these include antenatal care (ANC), FP services, the Expanded Program for Immunization (EPI), and child health.<sup>4</sup> Among NCDs, we examine the availability of services for diabetes mellitus (DM), cardiovascular disease (CVD), chronic respiratory disease (CRD), and CCS across the country. Finally, we also examine the ability to provide TB detection and treatment services. This paper relies on the World Health Organization's (WHO) recommendations for Service Availability and Readiness Assessment (SARA) to establish a list of supply-side requirements for each of these conditions.

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<sup>4</sup> Basic Emergency Obstetric and Neonatal Care (BEmONC) services is another component of MCH that would have been important to include in this analysis. However, the survey on which the data was based did not include some of the key indicators that are required to measure the supply-side readiness of BEmONC, and therefore this component was dropped from the study as it only provided an incomplete picture. The discussion on general service readiness nevertheless captures some BEmONC indicators such as availability of emergency transport and emergency medicines.

The remainder of the study is structured as follows: Section II explains the analytical approach and describes the data used for this study. Sections III.1 and III.4 present findings related to tracer general service readiness, MCH indicators, NCD, and TB indicators, respectively. Each section includes a brief background on the relevant demographic and epidemiologic context, describes government programs and guidelines related to the key tracer conditions, compares the available data to the WHO's SARA-recommended indicators, and presents an overview of the overall availability and readiness to provide services in the study sample of LGUs. Section III.5 aggregates the results of the previous sections into composite measures of supply-side readiness. Section IV concludes with a summary and some policy implications.

## **II. Analytical Approach**

### ***Data***

This report relies on data originally collected to serve as a baseline for a study on the implementation of PhilHealth's PCB Package, conducted by Onishi et al. (2016), and includes facility survey and health worker interviews at each RHU. Data were collected at one RHU in each of the 240 LGUs across 14 regions in 2014.<sup>5</sup> Random selection into the survey occurred at the municipality level, stratified by region and province. To be eligible for inclusion in the survey, municipalities must have had at least one PCB-accredited RHU at the time of the survey. Three regions were excluded from the baseline, namely the National Capital Region (NCR) which constitutes Metro Manila, the Autonomous Region of Muslim Mindanao (ARMM) because its health system is organized differently,<sup>6</sup> and Region 8 because it had been severely affected by Typhoon Haiyan in late 2013, shortly before data collection.

The sample comprised a total of 1,120 eligible LGUs across 30 provinces; eight LGUs were randomly selected in each province. Within each selected LGU, the main RHU was visited. In provinces with less than eight eligible LGUs, the balance was randomly drawn from a nearby province within the same region. Informed consent was obtained from all participating LGUs. While a number of LGUs refused to participate, these were not significantly different from the participating LGUs across a number of characteristics considered.<sup>7</sup> The final sample included 16 LGUs for all regions other than Regions 6 and 7 where a total of 24 LGUs were selected for each region. A full list of LGUs visited is provided in Annex 4 of this report.

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<sup>5</sup> Data analysis was designed to be representative at the national and regional levels. Approximately half of provinces are represented.

<sup>6</sup> The ARMM does not have health services decentralized at the municipality level and therefore the interventions are not relevant. The NCR was taken out as each municipality and city was considered too large (with too many RHUs) and therefore was deemed inefficient to include in the study.

<sup>7</sup> Philippines Impact of Incentives and Information on Utilization and Quality of Care (I3QUIP): Baseline Survey Report, 2016.

The survey asked for availability and details of priority primary care services, both those that are delivered as part of the PCB, as well as those that are covered outside of the PCB such as maternal care and TB detection and treatment. Most RHUs reported offering maternal health services: 88 percent offered normal delivery care, 99 percent offered ANC, and 93 percent provided FP services; 98 percent of the RHUs provided TB diagnostics services.<sup>8</sup>

## ***Methods***

The study uses the WHO's Service Availability and Readiness Assessment (SARA) as an organizing framework and guide to the inputs needed to deliver health services. SARA is a framework for monitoring and assessing key aspects of service delivery in a health system along three dimensions: (a) service availability; (b) service readiness; and (c) service utilization (WHO 2014). Availability focuses on physical access to and distribution of health facilities. Readiness considers distribution of different types of inputs needed to deliver high-quality services. These inputs are categorized into a number of domains, including infrastructure, equipment, and diagnostics and medicines. Utilization considers the uptake of services through inpatient and outpatient visits at public and private facilities. Due to data availability, this report primarily focuses on the second dimension, service readiness, that is, whether or not RHUs have the basic infrastructure, equipment, diagnostic capacity, medicines, and commodities to provide services in general and for specified conditions.

SARA includes checklists to evaluate the readiness and availability of general services as well as the specific infrastructure and supply needs for a number of specific services, including the maternal, child, NCD, and communicable health issues considered here. The checklists are not intended to reflect an exhaustive list of inputs needed to deliver services, but offer a succinct list of items that can be realistically captured during survey visits while also reflecting the broader system. While the bulk of this report focuses on service readiness, we also provide an overview of Rhu staffing levels, an important component of service availability.

SARA functions as an organizing framework for the study in the sense that it provides ways to classify health services into different categories which form the main sections of this study, namely (a) general service readiness, (b) MCH, (c) NCDs, and (d) TB. Within MCH are four subcategories: ANC, FP, immunization, and child health. The section on NCDs also includes four subcategories: DM, CVD, CRD, and CCS. More importantly, though, SARA provides a guide to use available data to learn about the readiness of the RHUs to deliver primary health care services. Operationally, domain-specific SARA indicators were reviewed and compared against available data. Because this analysis was not an ex ante objective of the survey data which underlies this report, not all SARA indicators were included. However, we believe there is sufficient overlap between the SARA guidelines and the available data to yield important information about supply-side

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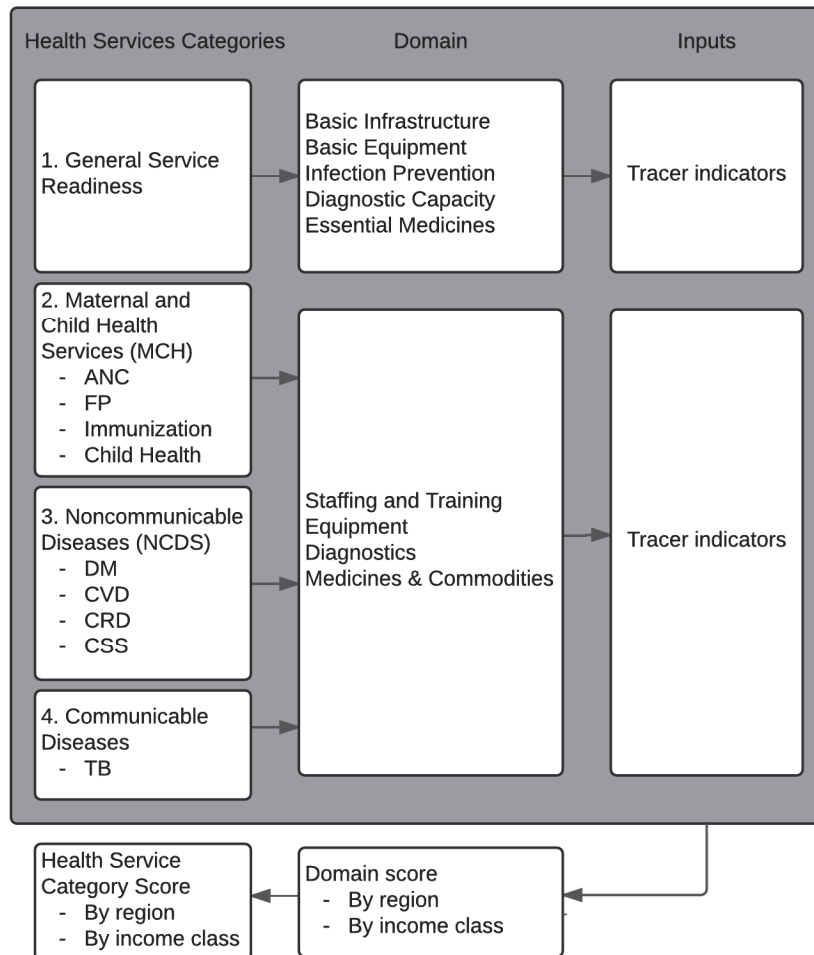
<sup>8</sup> Only 65 percent of the RHUs reported being accredited for MCP and TB DOTS. Higher percentages reported providing the different MCH and TB services, indicating some RHUs offer the services even if not accredited for these benefit packages.



readiness, and can reasonably serve as tracer indicators for supply-side readiness for the respective health service categories.

For general service readiness, information is divided into five domains: basic infrastructure, basic equipment, infection prevention, diagnostic capacity, and essential medicines. For the specific health service categories, we present varying combinations of three domains: equipment, diagnostics, and medicines and commodities. Where available, information on staffing and training is also included. For each domain, we report the aggregate results for the entire study sample.

**Figure 3. Supply-Side Readiness Assessment Framework**



*Note:* General services considered along five domains (basic infrastructure, basic equipment, infection prevention, diagnostic capacity, and essential medicines). Specific services considered along up to four domains (staffing and training, equipment, diagnostics, and medicines and commodities). Tracer indicators assessed for each. Individual indicators were then aggregated to calculate domain scores. Average domain scores are presented by region and income class. Domains are then aggregated to present overall general and specific service readiness scores. Overall scores are presented here by region and income class.

In Section III.5, we compare the aggregate scores of the different health service categories/subcategories by region and by LGU income class. The Philippines government classifies LGUs into six groups according to their average total annual income<sup>9</sup> over the four years immediately preceding the classification (Department of Finance 2008), with first group (termed ‘first class’) having the largest overall income (that is, the richest) and the sixth group (termed ‘sixth class’) having the smallest (that is, the poorest). The six groups are summarized in Table 3. Note that income refers to the LGU’s income and not to the income of the population of that LGU. Wealthier LGUs tend to have more concentrated populations, and thus a larger base from which to collect resources. The main purpose of income classification of LGUs is to determine their financial capability to provide in full or in part the funding requirements of priority needs in their locality. The income class of LGUs is therefore used as a factor in the allocation of national or other financial grants, as well as determining the maximum amount expendable for salaries and wages and in implementing personnel policies.

**Table 3. Details of LGU income classification at the municipality level**

Income Class	Average Annual Income (PHP)	Number of LGUs Nationwide	Number of LGUs in Survey	Proportion of LGUs Surveyed (%)
First	55 million or more	350	52	15
Second	45 million or more but less than 55 million	188	29	15
Third	35 million or more but less than 45 million	264	54	20
Fourth	25 million or more but less than 35 million	394	59	15
Fifth	15 million or more but less than 25 million	272	39	14
Sixth	Below 15 million	22	7	32

To aid in the interpretation of the findings, it is important at the outset to summarize some of the limitations of the analytical approach and underlying data, even though they have already been referred to in the preceding discussion. These limitations all stem from the fact that the facility survey data used for the analysis were not collected for the purpose of doing a supply-side readiness; rather, this study opportunistically uses the availability of an existing health facility survey collected to assess the implementation of the PhilHealth PCB Package. Consequently, one limitation is that the dataset does not contain all the indicators that are usually used to measure supply-side readiness using the SARA framework. It is, however, at least as comprehensive as most health facility surveys collected in developing countries where, for reasons of cost, a relatively small number of indicators (of infrastructure, equipment, supplies and medicines) are collected with the intention of providing an *indication* of the facility’s ability to deliver the health service in question.<sup>10</sup> Second, while some aspects of quality were captured in the facility survey data, they did not provide sufficient information to conduct a comprehensive analysis of quality

<sup>9</sup> Annual income refers to revenues and receipts realized by LGUs from regular sources of Local General Fund, inclusive of internal revenue allotment (IRA). It excludes non-recurring receipts such as national aids, grants, financial assistance, loan proceeds, among others.

<sup>10</sup> Indeed, as described in the baseline report of the I3QUIP study, the instruments of a number of different health facility surveys, including the SARA, were reviewed (and also discussed with the Philippines government) before the indicators included in this survey were selected. Further, the indicators were discussed with the Philippines government (both the DOH and PhilHealth) and deemed good indicators of the services whose availability they were intended to capture.

of services provided and therefore this study is limited to availability of supply-side inputs. Finally, because the survey was designed to measure implementation of the PCB Package, the sample is restricted to those facilities who were already accredited to deliver the PCB Package. As such, supply-side readiness in the RHUs included in the sample is expected to be much better than in the RHUs that are not PCB-accredited. It is also important to note that the study excludes the NCR, ARMM, and typhoon-affected Region 8 where administrative records suggest that health outcomes and service delivery indicators are generally worse.

### III. Findings

#### 1. General Service Readiness

We first provided an overview of ‘general service readiness’, a broad category covering general inputs needed to provide basic medical service, divided into five domains: basic infrastructure, basic equipment, infection prevention, diagnostic capacity, and essential medicines (Table 4). Tracer indicators from each domain are aggregated to create a domain-specific score for each RHU. These scores are then further aggregated at either the regional level or over LGU income levels.

**Table 4. General service readiness tracer indicators: SARA and from survey**

Domain	WHO SARA Tracer Indicators	Tracer Indicators from Survey
Basic Infrastructure	• Power	• Is the electricity always available or is it sometimes interrupted?
	• Improved water source inside OR within the ground of the RHU	• Does the laboratory have running water? Or does the delivery room have running water?
	• Room with auditory and visual privacy for patient consultations	• There is visual privacy AND auditory privacy in the doctor's consultation room.
	• Access to adequate sanitation in RHUs for clients	• Is there a toilet in the RHU that is available for general client use?
	• Communication equipment (phone or shortwave [SW] radio)	• <i>Indicator Dropped - Data not available.</i>
	• RHU has access to computer with email/Internet access	• Does this RHU have a functioning computer? AND is Internet connection available in the RHU?
	• Emergency transportation	• Does this RHU have a functional ambulance or other vehicle for emergency transportation for clients?
Basic Equipment	• Adult scale	• Weighing scale (Adult)
	• Child scale	• Weighing scale (infant)
	• Thermometer	• Non-mercurial thermometer
	• Stethoscope	• Stethoscope
	• BP apparatus	• Non-mercurial BP apparatus
	• Light source (spotlight source for consultations)	• <i>Indicator Dropped - Data not available</i>

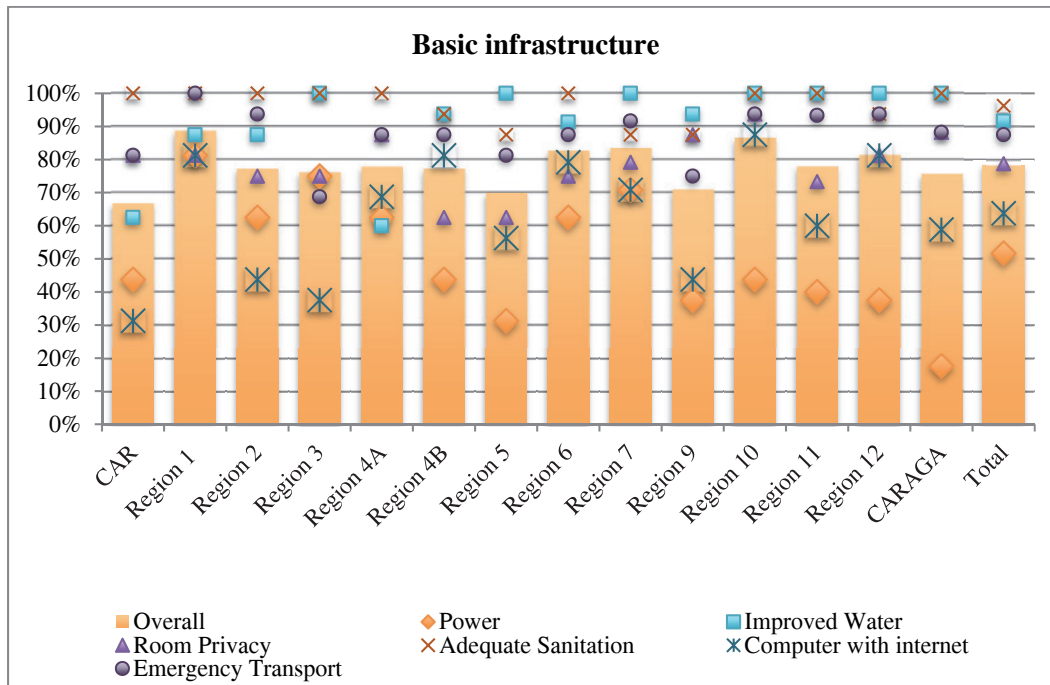
Domain	WHO SARA Tracer Indicators	Tracer Indicators from Survey
Infection Prevention	<ul style="list-style-type: none"> <li>• Safe final sharps disposal</li> </ul>	<ul style="list-style-type: none"> <li>• Safe disposal of sharps: Puncture-proof receptacles for disposal of pointed/sharp objects</li> </ul>
	<ul style="list-style-type: none"> <li>• Safe final disposal of infectious waste</li> </ul>	<ul style="list-style-type: none"> <li>• Safety vault for disposing contaminated waste</li> </ul>
	<ul style="list-style-type: none"> <li>• Sharps container/storage</li> </ul>	<ul style="list-style-type: none"> <li>• Safe disposal of sharps: Puncture-proof receptacles for disposal of pointed/sharp objects</li> </ul>
	<ul style="list-style-type: none"> <li>• Infectious waste storage</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Indicator Dropped - Data not available</i></li> </ul>
	<ul style="list-style-type: none"> <li>• Single-use syringes</li> </ul>	<ul style="list-style-type: none"> <li>• Disposable needles and syringes</li> </ul>
	<ul style="list-style-type: none"> <li>• Soap and running water, or alcohol rub</li> </ul>	<ul style="list-style-type: none"> <li>• 70% isopropyl alcohol</li> </ul>
	<ul style="list-style-type: none"> <li>• Latex gloves</li> </ul>	<ul style="list-style-type: none"> <li>• Latex gloves</li> </ul>
Diagnostic Capacity	<ul style="list-style-type: none"> <li>• Guidelines for standard precautions</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Indicator Dropped - Data not available</i></li> </ul>
	<ul style="list-style-type: none"> <li>• Hemoglobin (Hb)</li> </ul>	<ul style="list-style-type: none"> <li>• Hemoglobinometer kit/acid hematin (for RHUs with laboratory)</li> </ul>
	<ul style="list-style-type: none"> <li>• Blood glucose</li> </ul>	<ul style="list-style-type: none"> <li>• Offering fasting blood glucose</li> </ul>
	<ul style="list-style-type: none"> <li>• Malaria diagnostic</li> </ul>	<ul style="list-style-type: none"> <li>• Offering diagnosis or treatment of malaria</li> </ul>
	<ul style="list-style-type: none"> <li>• Urine dipstick-protein</li> </ul>	<ul style="list-style-type: none"> <li>• Indicators merged: Dipstick for qualitative urine analysis</li> </ul>
	<ul style="list-style-type: none"> <li>• Urine dipstick-glucose</li> </ul>	
	<ul style="list-style-type: none"> <li>• HIV diagnostic capacity</li> </ul>	<ul style="list-style-type: none"> <li>• Offering HIV counseling and testing services</li> </ul>
Essential Medicines	<ul style="list-style-type: none"> <li>• Syphilis rapid test</li> </ul>	<ul style="list-style-type: none"> <li>• Offering diagnosis or treatment of sexually transmitted infections (STIs) (excluding HIV)</li> </ul>
	<ul style="list-style-type: none"> <li>• Urine test for pregnancy</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Indicator Dropped – data not available</i></li> </ul>
	<ul style="list-style-type: none"> <li>• Amlodipine/calcium channel blocker</li> </ul>	<ul style="list-style-type: none"> <li>• Calcium channel blocker, for example, amlodipine, nifedipine</li> </ul>
	<ul style="list-style-type: none"> <li>• Amoxicillin syrup, suspension or dispersible tablet</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Indicator Dropped - Data not available</i></li> </ul>
	<ul style="list-style-type: none"> <li>• Amoxicillin tablet</li> </ul>	<ul style="list-style-type: none"> <li>• Amoxicillin (stock availability)</li> </ul>
	<ul style="list-style-type: none"> <li>• Ampicillin powder for injection</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Indicator Dropped - Data not available</i></li> </ul>
	<ul style="list-style-type: none"> <li>• Aspirin capsule/tablet</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Indicator Dropped - Data not available</i></li> </ul>
	<ul style="list-style-type: none"> <li>• Beclomethasone inhaler</li> </ul>	<ul style="list-style-type: none"> <li>• ICS, for example, beclomethasone or budesonide or fluticasone (stock availability [asthma])</li> </ul>
	<ul style="list-style-type: none"> <li>• Beta-blocker</li> </ul>	<ul style="list-style-type: none"> <li>• Beta-blocker (stock availability [hypertension])</li> </ul>
	<ul style="list-style-type: none"> <li>• Carbamazepine tablet</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Indicator Dropped - Data not available</i></li> </ul>
	<ul style="list-style-type: none"> <li>• Ceftriaxone injection</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Indicator Dropped - Data not available</i></li> </ul>
	<ul style="list-style-type: none"> <li>• Diazepam injection</li> </ul>	<ul style="list-style-type: none"> <li>• Injectable diazepam (stock availability [BEmONC])</li> </ul>
	<ul style="list-style-type: none"> <li>• Enalapril tablet/ angiotensin converting enzyme (ACE) inhibitor</li> </ul>	<ul style="list-style-type: none"> <li>• ACE inhibitor (stock availability [hypertension])</li> </ul>
	<ul style="list-style-type: none"> <li>• Fluoxetine tablet</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Indicator Dropped - Data not available</i></li> </ul>

Domain	WHO SARA Tracer Indicators	Tracer Indicators from Survey
	<ul style="list-style-type: none"> <li>Gentamicin injection</li> <li>Glibenclamide tablet</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> <li>Sulfonylureas, for example, glibenclamide, gliclazide (observed available preparation [hypertension])</li> </ul>
	<ul style="list-style-type: none"> <li>Haloperidol tablet</li> <li>Insulin regular injection</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> </ul>
	<ul style="list-style-type: none"> <li>Magnesium sulfate injectable</li> </ul>	<ul style="list-style-type: none"> <li>Magnesium sulfate (stock availability [BEmONC])</li> </ul>
	<ul style="list-style-type: none"> <li>Metformin tablet</li> </ul>	<ul style="list-style-type: none"> <li>Metformin (stock availability [diabetes])</li> </ul>
	<ul style="list-style-type: none"> <li>Ome/panto/rabeprazole tablet</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> </ul>
	<ul style="list-style-type: none"> <li>Oral rehydration salts (ORS)</li> <li>Oxytocin injection</li> <li>Salbutamol inhaler</li> </ul>	<ul style="list-style-type: none"> <li>ORS (stock availability [gastroenteritis])</li> <li>Oxytocin (stock availability [BEmONC])</li> <li>Beta2-agonist, for example, salbutamol (stock availability [asthma])</li> </ul>
	<ul style="list-style-type: none"> <li>Simvastatin tablet or other statin</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> </ul>
	<ul style="list-style-type: none"> <li>Thiazide</li> <li>Zinc sulfate tablets, dispersible tablets or syrup</li> </ul>	<ul style="list-style-type: none"> <li>Diuretic, for example, hydrochlorothiazide</li> <li>Zinc supplements (stock availability [gastroenteritis])</li> </ul>

*Note:* Column 1 indicates the SARA domain; Column 2 indicates SARA tracer indicators; and Column 3 indicates the precise wording of the I3QUiP survey question or, when applicable, that a given indicator has been dropped.

Basic infrastructure indicators include availability of electricity, water and sanitation facilities, privacy for consultations, computer with Internet access, and emergency transportation. Many of the basic amenities are in place across the Philippines. Access to water and sanitation is nearly universal, and room privacy is also generally available. However, the survey identified a number gaps in electricity, Internet access, and emergency transport. While nearly all RHUs had a functional computer, one in three did not have Internet access on the day of the survey. Internet access, which is an important factor for the planned introduction of EMRs, was particularly limited in the Cordillera Administrative Region (CAR) and Regions 2, 3, and 9. Gaps in emergency transportation were concentrated in specific regions. While nearly 90 percent of RHUs have access to a vehicle for emergency referral, RHUs in Region 3—where nearly one-third of facilities visited were without emergency transport—were least likely to have access to a vehicle. The same was true for one-quarter of RHUs in Region 9, and nearly one-fifth of RHUs in CAR and Region 5. In comparison, all RHUs in Region 1 reported having access to an emergency vehicle (see Figure 4).

**Figure 4. Basic infrastructure by region**

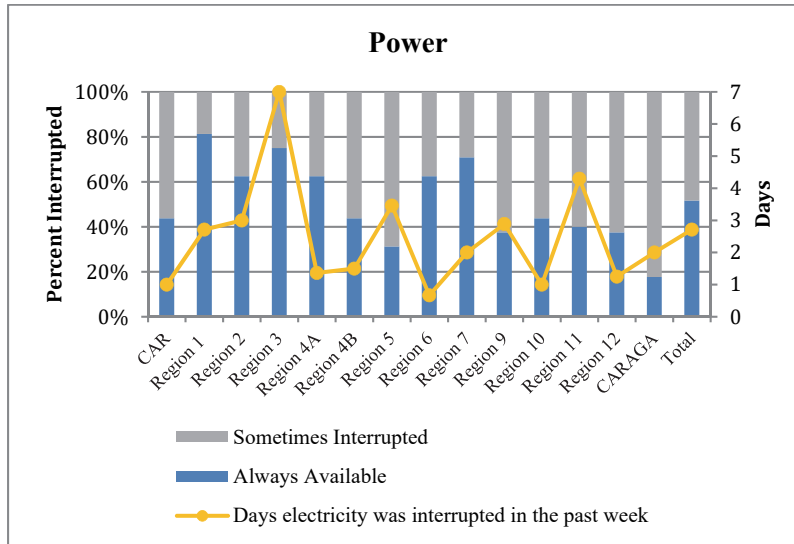


*Note:* This figure indicates the regional availability of the tracer indicators included in the Basic Infrastructure domain. Blue bars indicate aggregate performance by region.

The survey results highlight gaps in access to power. Only 51 percent of the RHUs had uninterrupted power in the seven days prior to the survey team’s visits, while the remaining 49 percent had power interruptions of at least two hours for an average of 2.7 days in the seven days prior to the visits. As shown in

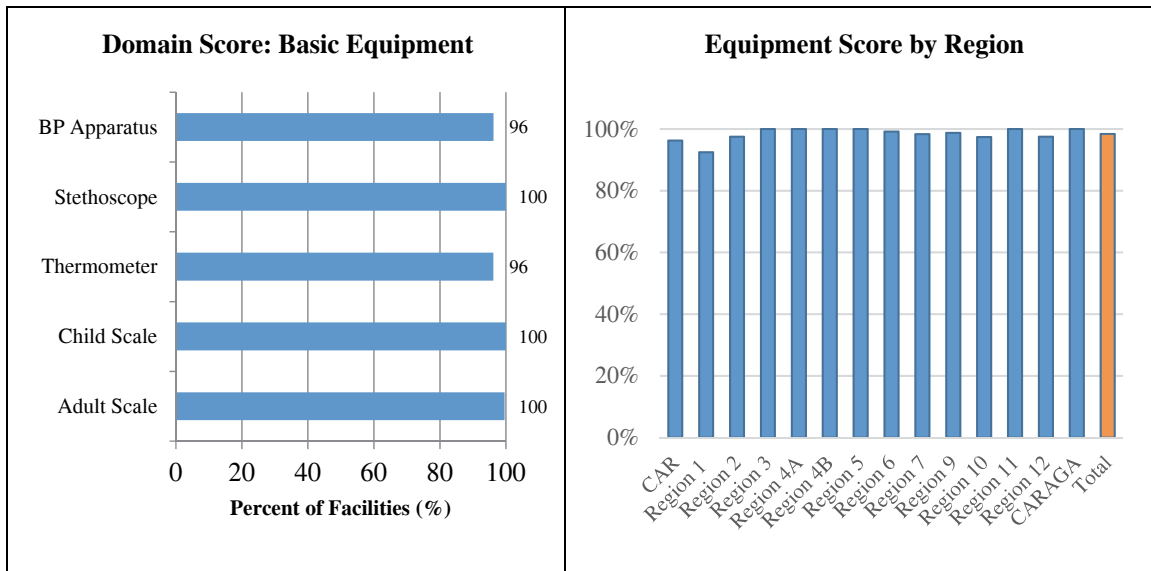
Figure 5, power access was particularly problematic in Region 3, where power interruptions (for at least two hours) in the RHUs occurred every day during the entire week preceding the survey. These power outages were found despite the fact that power access is a standard requirement for all RHUs eligible for PCB accreditation with PhilHealth and, thus, for participation in this survey.

**Figure 5. Power outages - Frequency and duration by region**



Basic equipment includes a BP apparatus, stethoscope, thermometer, a child scale, and an adult scale. All of these items were widely available. Stethoscopes and scales were available at all facilities visited, while BP apparatuses and thermometers were available at 96 percent of facilities. There was also little variance in aggregate regional scores. CAR (96.3 percent) and Region 1 (92.5 percent) had the lowest regional performance.

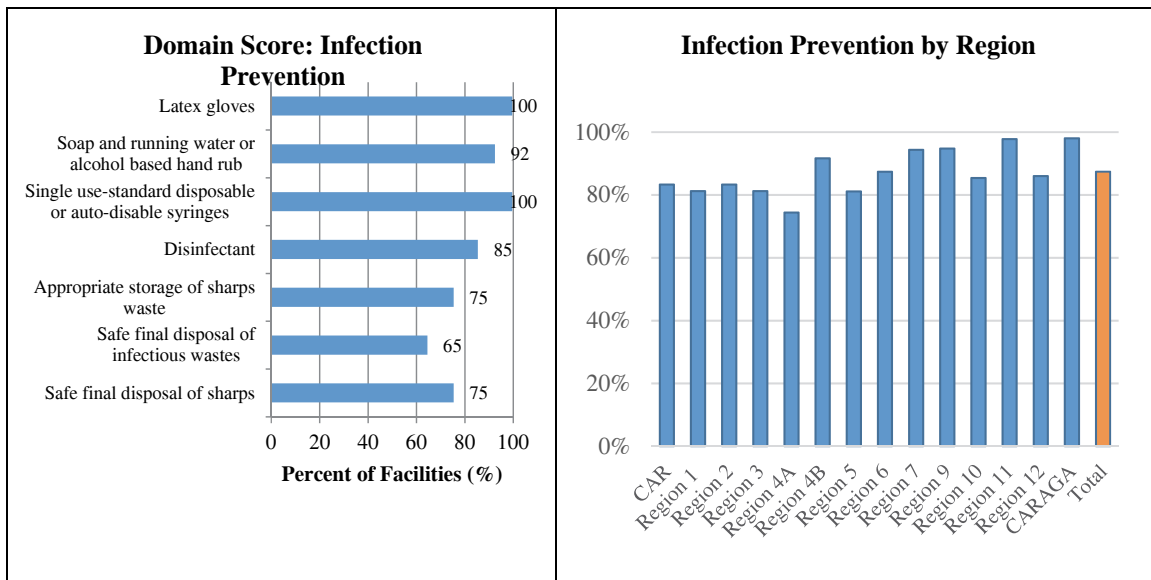
**Figure 6. General service readiness: Basic equipment**



Note: The left panel indicates the availability of tracer indicators at RHUs nationwide. The right panel indicates aggregate scores at the regional level.

Figure 7 provides an overview of infection prevention efforts in RHUs. While almost all RHUs have disposable gloves and syringes, disinfectant is missing from 15 percent of RHUs and nearly 8 percent of RHUs had neither running water nor alcohol solution for hand hygiene. There are also still serious gaps in waste management. A quarter of RHUs did not have the infrastructure in place for storage and safe disposal of sharps, and 35 percent of RHUs were unable to safely dispose of infectious materials.

**Figure 7. General service readiness: Infection prevention**

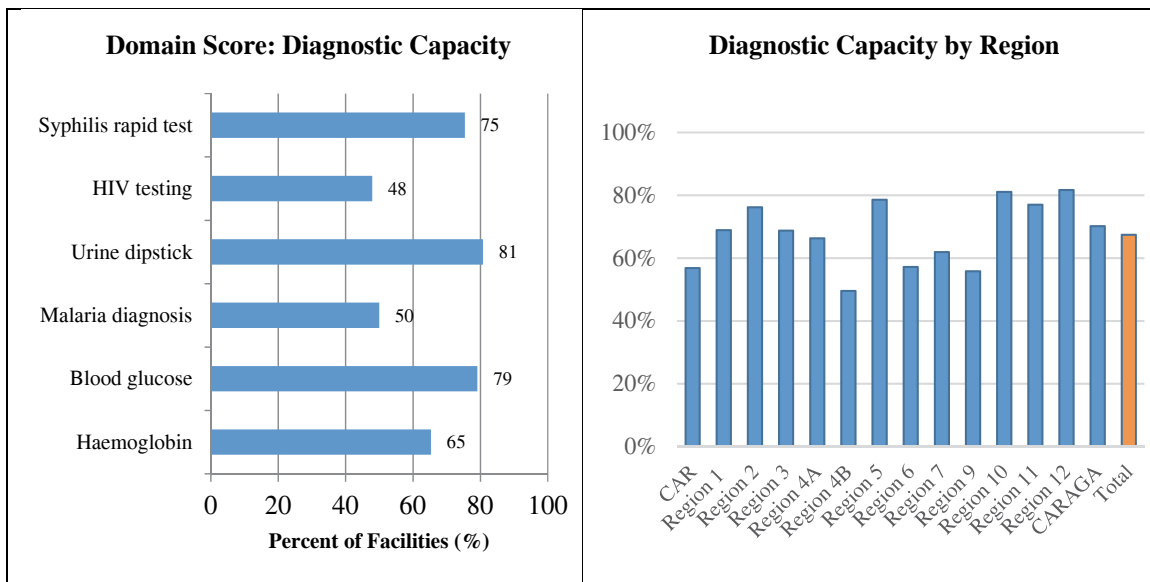


Note: The left panel indicates the availability of tracer indicators at RHUs nation-wide. The right panel indicates aggregate scores at the regional level.



The domain on diagnostic capacity checks whether some common diagnostics tests (syphilis rapid test, HIV testing, urine dipstick, malaria diagnosis, blood glucose, Hb) can be conducted on-site in the facility and functional equipment and reagents needed to conduct the tests are observed in the facility. Survey results show that there is substantial scope for an improvement in diagnostic capacity across the country. The average domain score within our sample was just 67 percent, and it ranged from a high of 82 percent in Region 12 to a low of just 50 percent in Region 4B (Figure 8). The specific components of the diagnostic capacity score are discussed in more detail in the sections of the report dealing with the domains to which they apply.

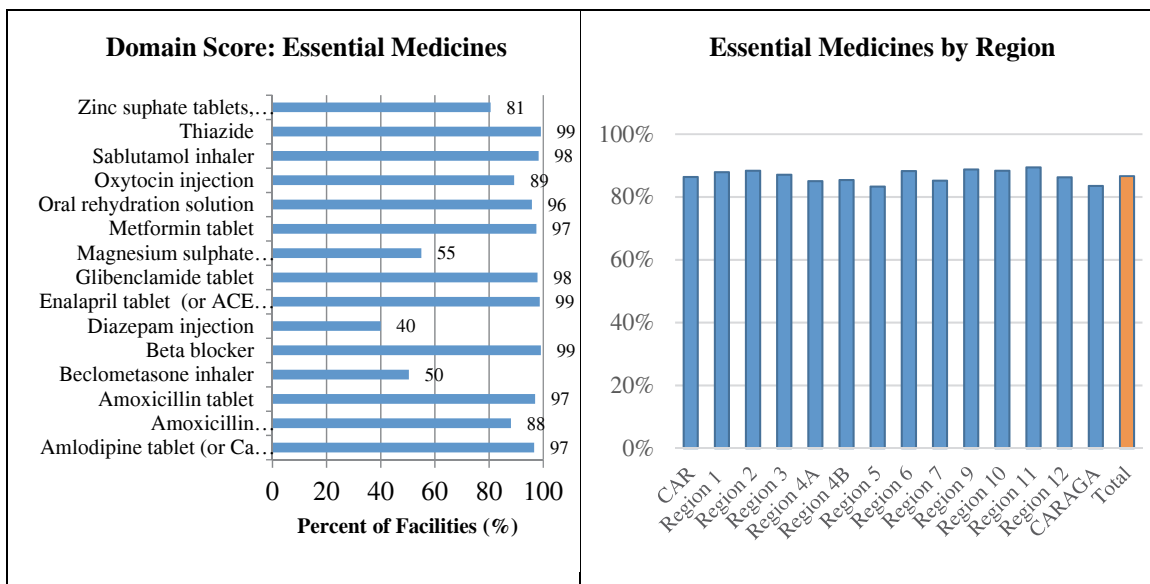
**Figure 8. General service readiness: Diagnostic capacity**



*Note:* The left panel indicates the availability of tracer indicators at RHUs nationwide. The right panel indicates aggregate scores at the regional level.

Availability of essential medicines is presented in Figure 9. I3QUiP data collection focused on supplies and commodities required for the PCB-covered conditions (for example, hypertension, TB, AGE, asthma) and the most basic commodity requirements in a primary care facility for other priority programs (for example, TB, maternal and newborn care, and FP). Generally, medicines are more widely available than are diagnostics. The national average score was 87 percent, indicating that most medicines were available at most RHUs visited. There was also less variability in the availability of medicines, with scores ranging from a low of 83 percent in Region 5 and CARAGA to a high of 89 percent in Region 11. While the survey did not ask for the source of these medicines, it can be noted that the most widely available are the medicines that are distributed by the DOH, either through medicines access programs such as ComPacks or through disease-specific programs. More details are provided on the specific components of the domain in service-specific sections of this report.

**Figure 9. General service readiness: Essential medicines**



Note: The left panel indicates the availability of tracer indicators at RHUs nationwide. The right panel indicates aggregate scores at the regional level.

Looking at details on aggregate general service readiness scores, LGUs in the upper income class levels performed better in several of the domains, including basic amenities, basic equipment, and diagnostic capacity. However, the sixth class LGUs performed slightly better than their wealthier counterparts on infection prevention and availability of essential medicines (Table 5).

**Table 5. General service readiness score by LGU income classification**

Income Class	Basic Infrastructure (%)	Basic Equipment (%)	Infection Prevention (%)	Diagnostic Capacity (%)	Essential Medicines (%)
1	79	85	89	77	88
2	80	83	88	65	85
3	82	88	88	71	87
4	79	81	86	63	87
5	70	68	87	56	85
6	74	79	90	67	90
Total	78	81	87	67	87

Note: Basic infrastructure includes power, water access, auditory and visual privacy for consultations, access to sanitation, access to a computer with Internet, and emergency transportation. Basic equipment includes child scale, adult scale, thermometer, stethoscope, and BP apparatus. Infection prevention includes infectious waste disposal, sharps containers, single-use syringes, alcohol rub, and latex gloves. Diagnostic capacity includes tests for Hb, blood glucose, urine, HIV, and syphilis. Essential medicines include calcium channel blockers, amoxicillin, ICS, beta-blockers, injectable diazepam, ACE inhibitors, sulfonylureas, magnesium sulfate, metformin, ORS, oxytocin, beta2-agonist, diuretic, and zinc supplements. Color-coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

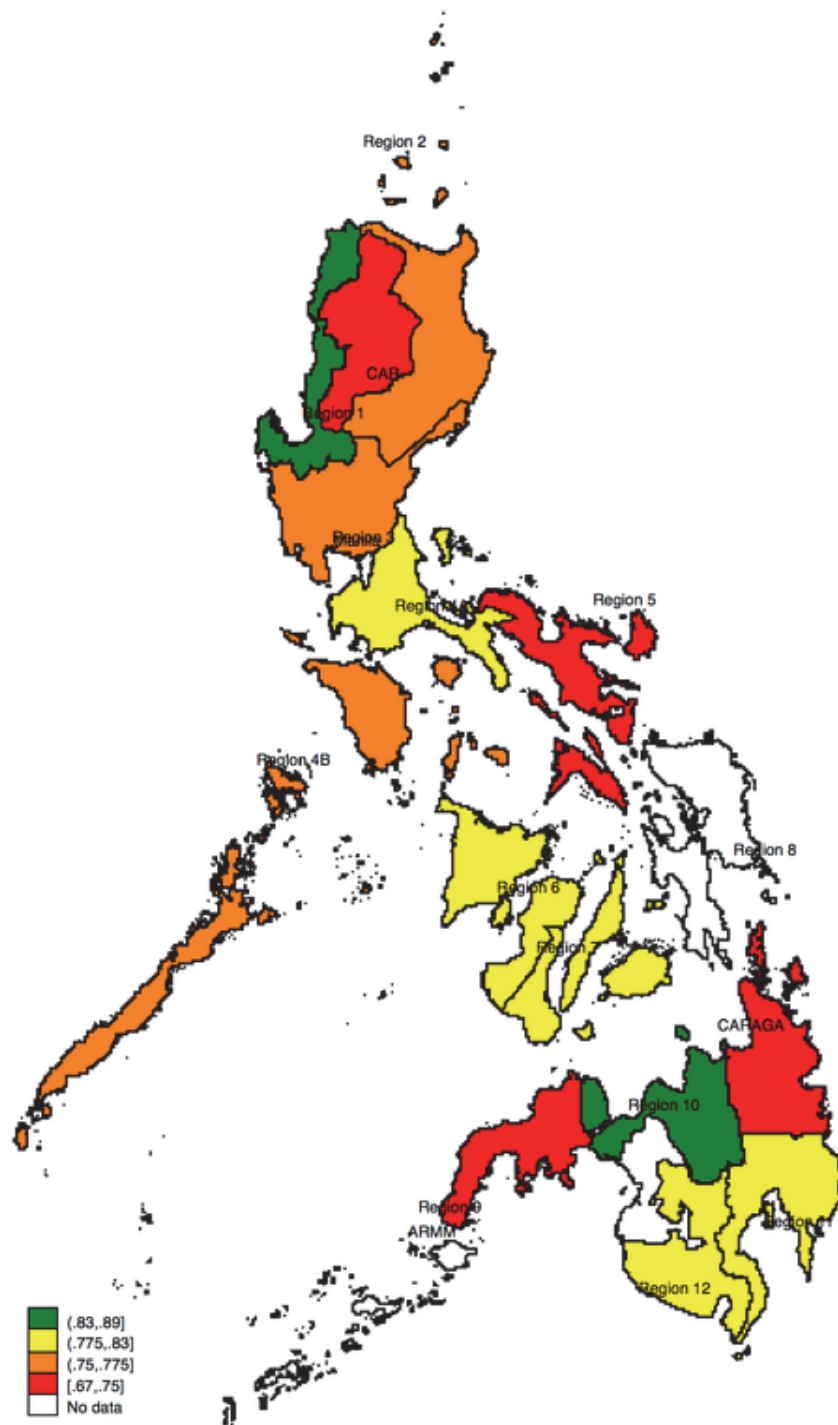
Regionally, there was little variation in the availability of essential medicines, but CAR was below average in all domains, with Region 4A below average in four out of five domains (Table 6).

**Table 6. General service readiness score by region**

Region (%)	Basic Infrastructure (%)	Basic Equipment (%)	Infection Prevention (%)	Diagnostic Capacity (%)	Essential Medicines (%)
CAR	67	96	83	57	86
Region 1	89	93	81	69	88
Region 2	77	98	83	76	88
Region 3	76	100	81	69	87
Region 4A	78	100	74	66	85
Region 4B	77	100	92	50	85
Region 5	70	100	81	79	83
Region 6	83	99	87	57	88
Region 7	83	98	94	62	85
Region 9	71	99	95	56	89
Region 10	86	97	85	81	88
Region 11	78	100	98	77	89
Region 12	81	98	86	82	86
CARAGA	75	100	98	70	84
Total	78	98	87	67	87

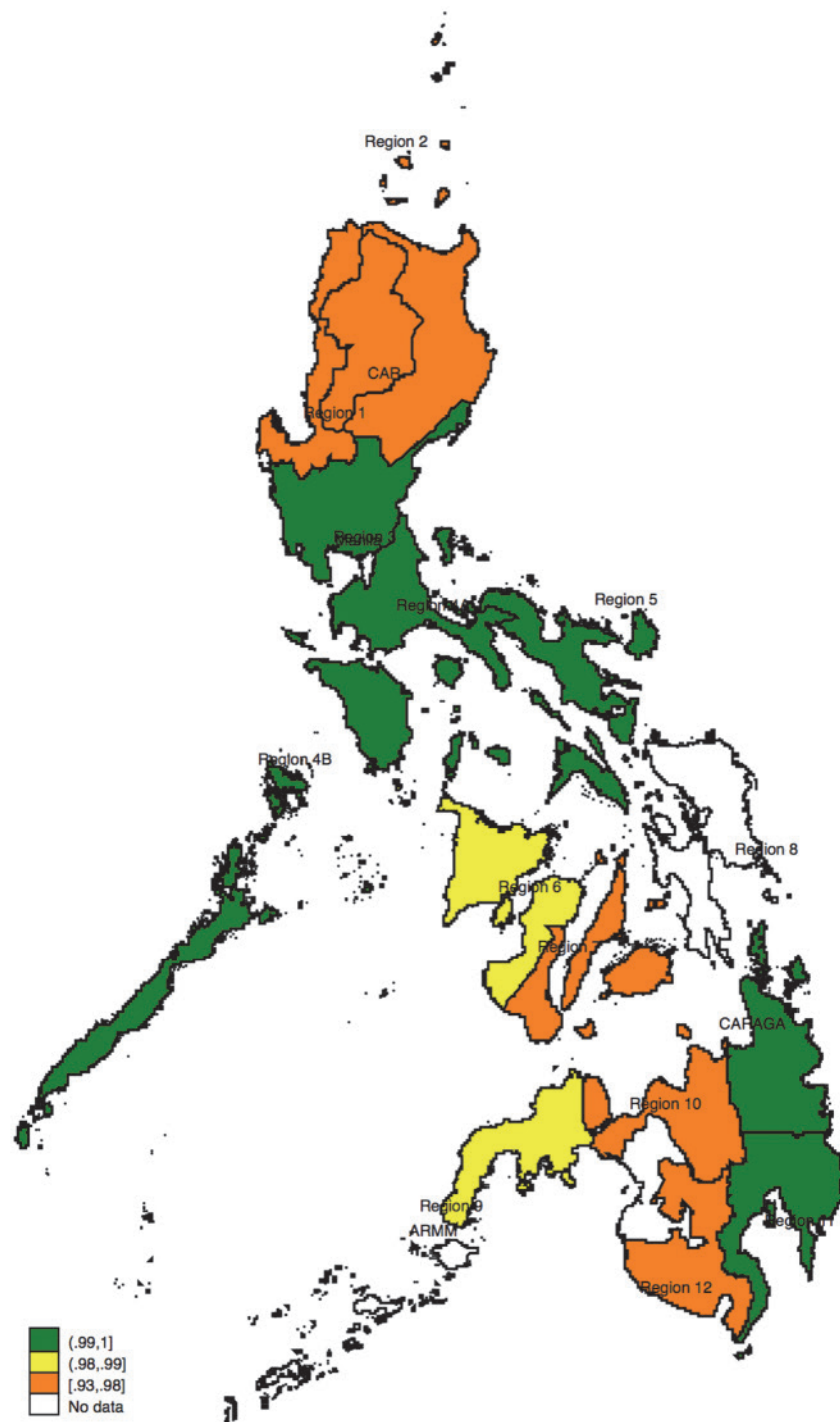
*Note:* Basic infrastructure includes power, water access, auditory and visual privacy for consultations, access to sanitation, access to a computer with Internet, and emergency transportation. Basic equipment includes child scale, adult scale, thermometer, stethoscope, and BP apparatus. Infection prevention includes infectious waste disposal, sharps containers, single-use syringes, alcohol rub, and latex gloves. Diagnostic capacity includes tests for Hb, blood glucose, urine, HIV, and syphilis. Essential medicines include calcium channel blockers, amoxicillin, ICS, beta-blockers, injectable diazepam, ACE inhibitors, sulfonylureas, magnesium sulfate, metformin, ORS, oxytocin, beta2-agonist, diuretic, and zinc supplements. Color-coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

**Figure 10. Regional variation in the availability of basic infrastructure**



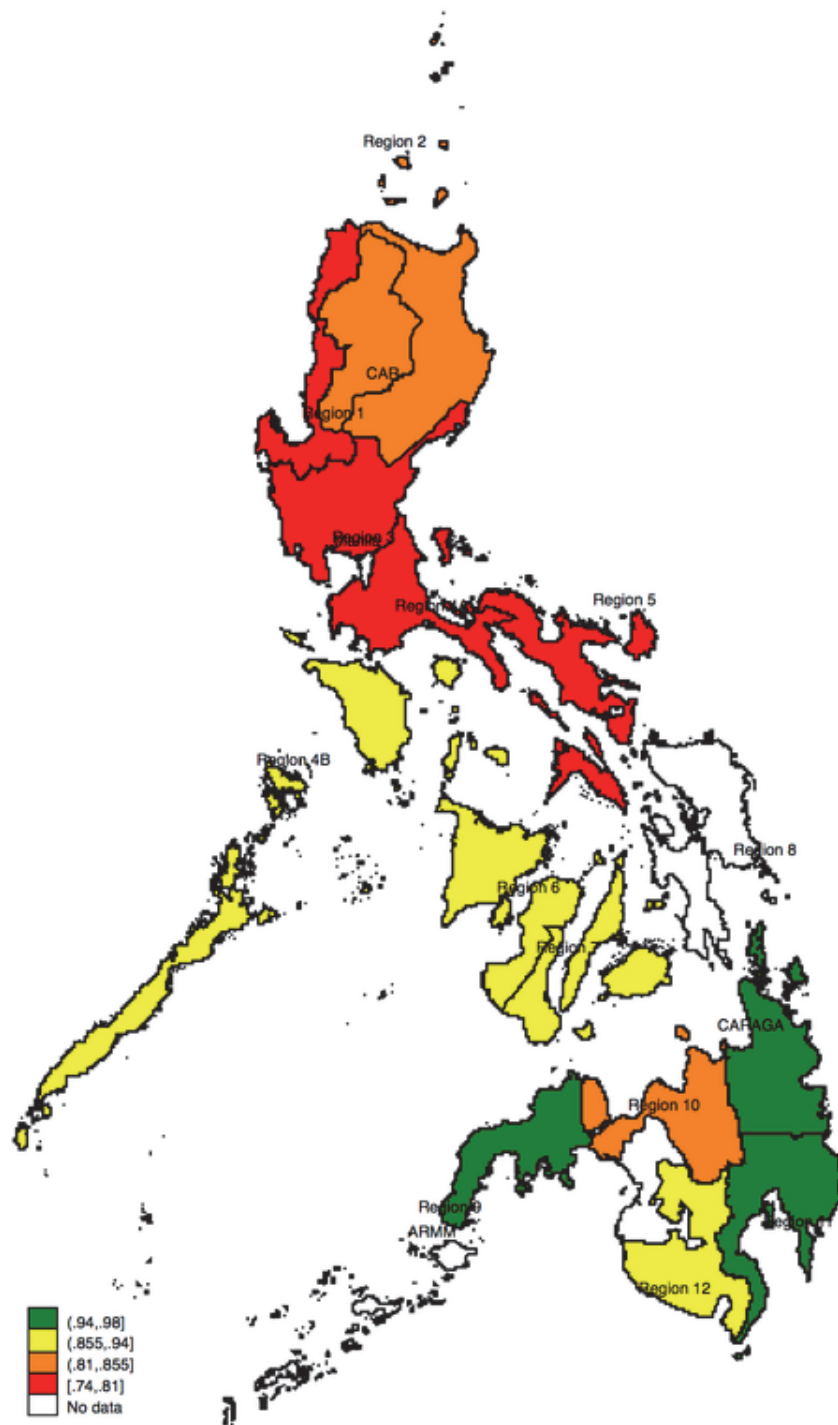
*Note:* Infrastructure includes power, water access, auditory and visual privacy for consultations, access to sanitation, access to a computer with Internet, and emergency transportation. Low score is 67 percent, high score is 89 percent.

**Figure 11. Regional variation in the availability of basic equipment**



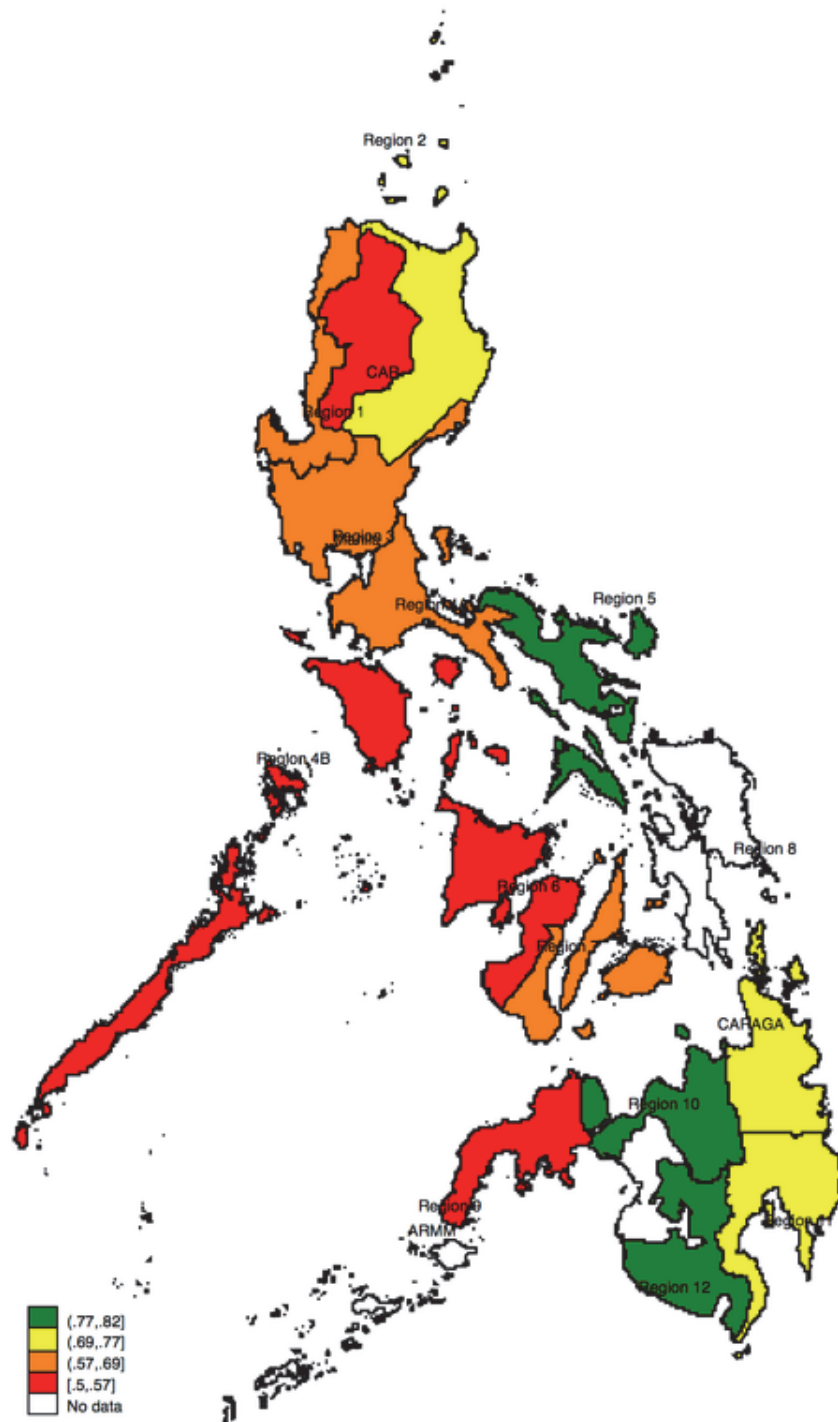
*Note:* Basic equipment includes child scale, adult scale, thermometer, stethoscope, and BP apparatus. Low score is 93 percent, high score is 100 percent.

**Figure 12. Regional variation in infection prevention**



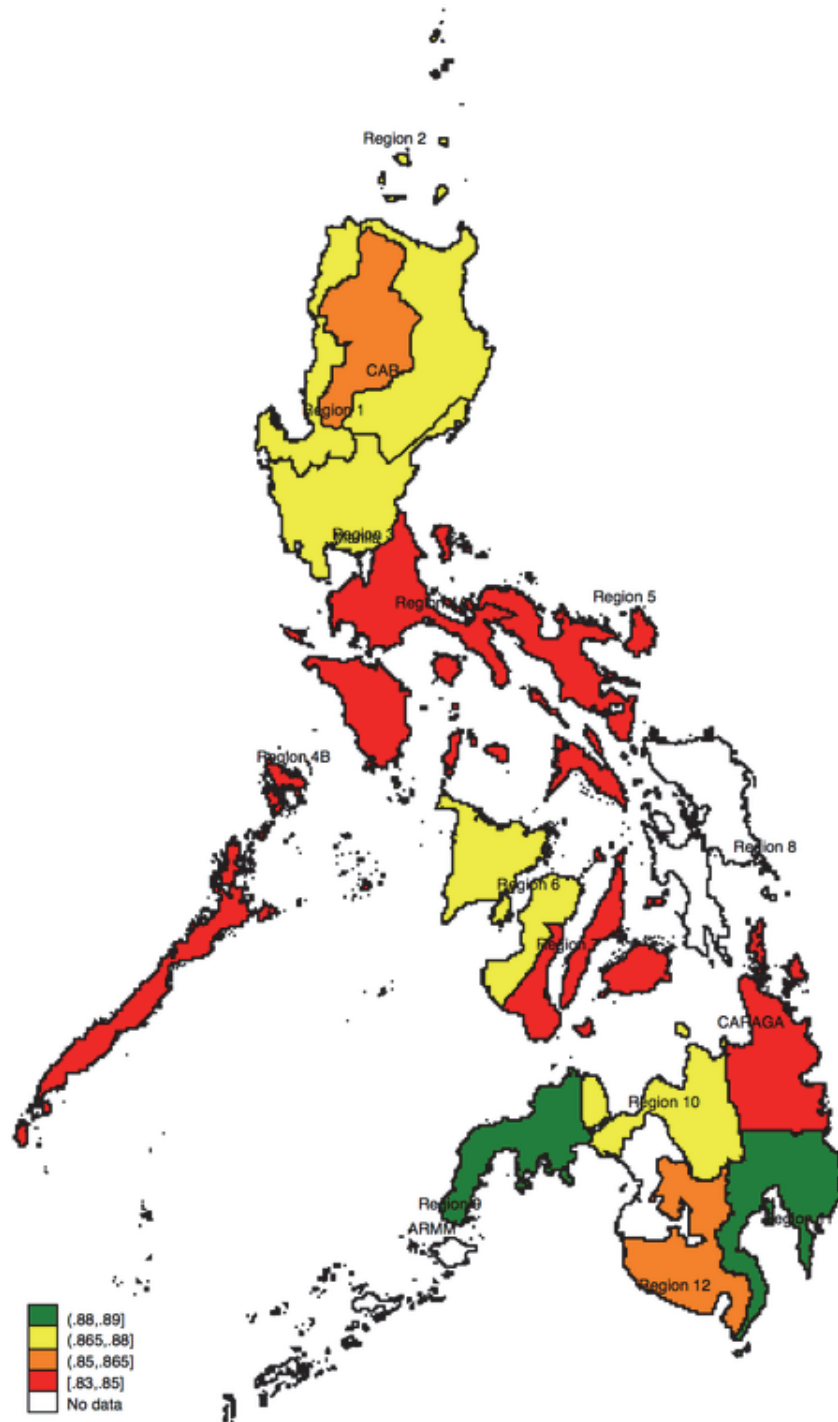
*Note:* Infection prevention includes infectious waste disposal, sharps containers, single-use syringes, alcohol rub, and latex gloves. Low score is 74 percent, high score in 98 percent.

**Figure 13. Regional variation in diagnostic capacity**



*Note:* Diagnostic capacity includes tests for Hb, blood glucose, urine, HIV, and syphilis. Low score is 50 percent, high score is 82 percent.

**Figure 14. Regional variation in essential medicine availability**



*Note:* Essential medicines include calcium channel blockers, amoxicillin, ICS, beta-blockers, injectable diazepam, ACE inhibitors, sulfonylureas, magnesium sulfate, metformin, ORS, oxytocin, beta2-agonist, diuretic, and zinc supplements. Low score is 83 percent, high score is 89 percent





## *RHU Personnel*

Within the SARA framework, human resources for health (HRH) fall under the scope of service availability and are considered at the macro level, as ratio of health worker to total population. Although an explicit analysis of health workforce level and distribution is not part of the supply-side readiness framework, HRH are critical for the delivery of clinical services. In this section, we provide an overview of staffing levels to help inform the discussion.

To become PCB-accredited, an RHU is required (a) to have on staff one each of a licensed doctor, licensed nurse, and licensed midwife; (b) to have a licensed medical technologist for those that provide laboratory services; and (c) to have a licensed radiologist for those that provide X-ray services.<sup>11</sup> Aside from these personnel, RHUs typically employ one or more dentist(s), dental aide(s), rural sanitary inspector(s), administrative personnel, and driver(s). The RHU personnel work closely with BHWs, volunteers who render primary health care services in the community after undergoing training and accreditation.

**Error! Reference source not found.** shows that RHUs meeting the above requirement varied between regions, especially on having at least one full-time physician—only 62 percent for Region 2 to 100 percent for Regions 4A and 4B. Only Region 4A had met full requirement with at least one full-time physician, nurse, and midwife.

The DOH standard requirement of health worker to catchment population ratio is 1:20,000 for physicians, 1:10,000 for nurses, and 1: 5,000 for midwives. Table 7 shows that the actual ratios for public health workers in the RHUs are much lower than these requirements. There may possibly be private sector facilities serving the same populations, so these ratios could be underestimated.

**Table 7. RHU personnel compared with PCB requirements and DOH requirements (right)**

Region	PCB Requirements			DOH Requirements		
	At least one full-time physician	At least one full-time nurse	At least one full-time midwife	Physician (1:10,000)	Nurse (1:20,000)	Midwife (1:5,000)
CAR	93.75	93.75	100.00	6.32	6.32	25.06
Region 1	87.50	87.50	100.00	38.78	21.68	21.68
Region 2	62.50	93.75	100.00	25.45	31.81	38.18
Region 3	93.75	100.00	100.00	78.68	50.25	63.96
Region 4A	100.00	100.00	100.00	70.78	64.93	70.78
Region 4B	100.00	93.75	100.00	49.23	49.23	55.86
Region 5	87.50	100.00	100.00	55.28	34.80	41.63
Region 6	95.83	87.50	95.83	55.55	49.78	11.53
Region 7	91.67	95.83	100.00	56.52	56.67	43.15
Region 9	81.25	87.50	81.25	44.89	25.00	37.5
Region 10	87.50	87.50	93.75	62.5	51.69	34.13
Region 11	93.33	93.33	93.33	73.64	63.56	73.64

<sup>11</sup> RHUs with no laboratory or X-ray services may still get accredited provided they have a Memorandum of Understanding with a licensed laboratory and X-ray provider/s.

Region	PCB Requirements			DOH Requirements		
	At least one full-time physician	At least one full-time nurse	At least one full-time midwife	Physician (1:10,000)	Nurse (1:20,000)	Midwife (1:5,000)
Region 12	93.75	93.75	93.75	84.82	70.09	32.59
CARAGA	94.12	100.00	100.00	45.13	38.63	6.50
Total	90.42	93.75	97.08	53.46	43.21	39.38

*Note:* PCB guidelines require that all facilities have at least one full-time physician, nurse, and midwife. National guidelines indicate a minimum of 1 physician for every 10,000 people, 1 nurse for every 20,000 people, and 1 midwife for every 5,000 people.

In addition to the core staff hired locally, the DOH has deployment programs to augment the existing health workforce in RHUs. Although intended as stopgap measures, these programs have been ongoing for a number of years. The Doctors to the Barrios (DTTB) program started in the early 1990s in response to shortage of doctors in remote areas. More recently in 2011, the Nurse Deployment Program (NDP, formerly known as Registered Nurses for Health Enhancement and Local Service Project or RNHEALS) was launched, while the Rural Health Midwives Placement Program (RHMPP) started deploying midwives to areas underperforming in the coverage of institutional delivery care, immunization, and contraceptive prevalence rates. The DOH-National Nutrition Council also sponsors barangay nutrition scholars (BNSs), who are volunteer community workers trained specifically to assist in implementing nutrition programs in the locality.

Table 8 shows that among full-time staff, RHUs had an average of 1.2 physicians, 1.9 nurses, and 7.3 midwives for every facility. However, RHUs were more likely to have part-time or volunteer nurses among their staff. The highest density of physicians was in CARAGA (2.3 physicians per RHU) and Region 12 (1.5 physicians per RHU), while CAR and Regions 2 and 5 all had less than one full-time physician per RHU. Region 2, which has the fewest doctors per RHU in the sample, also has the fewest full-time nurses at 1.1 nurses per RHU, and disproportionately relies on part-time and volunteer nurses. Full-time rural health midwives (RHMs) followed a similar pattern and were, again, most common in Region 12 (13.2) and CARAGA (8.5 per RHU), while CAR (3.4) and Region 2 (4.9) had low density, as did Region 4B (4.8). RHUs in Regions 3, 10, 11, 12 and CARAGA all had at least one medical technologist on staff, compared to one medical technologist for every three RHUs in CAR, Region 1, and Region 4B.

There were also variations in staffing by LGU income level. In general, RHUs in the first to third class LGUs had more physicians, nurses, midwives, and medical technologists than the RHUs in the poorer fourth to sixth class LGUs, whether full time or part time. All RHUs in the first group have at least one physician, nurse, or midwife, compared to 86 percent in the sixth income group. Table 9 shows that the RHUs in first to fifth class LGUs had on average one or more than one full-time physician, while RHUs in sixth class LGUs only had 0.4 physician.

Deployment by the DOH of health personnel does not appear to correspond to the regions with personnel gaps (Figure 15). In terms of LGU income class, however, it is notable that DTTB and RHMPPs mostly complemented the physician and midwife gaps in the poorest set of LGUs, but the same cannot be said of the nurse deployments (Figure 16).

Details on other RHU staff, including sanitary inspectors, dentists, dental aides, and administrative staff, and BHWs and nutrition scholars can be found in Annex 3.

**Table 8. RHU and DOH-deployed personnel, average by region**

Region	Health RHU Personnel and DOH-deployed Personnel															
	Physician				Nurse (excluding RNHEALS)				Rural Health Midwives (RHMIs)				Medical Technologists			
	Full Time	Part Time	Volunteer	DTTB	Full Time	Part Time	Volunteer	NDP/ RNHEA LS	Full Time	Part Time	Volunteer	RHMPP	Full Time	Part Time	Volunteer	RHMPP
CAR	0.9	0.0	0.1	0.2	1.5	0.1	0.3	4.3	3.4	0.1	0.1	1.6	0.3	0.0	0.0	0.0
Region 1	1.4	0.2	0.3	0.1	2	0.8	1.7	4.5	6.9	1.2	0.0	1.8	0.4	0.1	0.0	0.0
Region 2	0.6	0.2	0.0	0.3	1.1	2.6	3.6	4.5	4.9	2.3	1.0	1.6	0.4	0.1	0.1	0.1
Region 3	1.3	0.0	0.1	0.1	2.8	2.4	5.5	5.9	7.1	1.1	1.0	0.9	1.1	0.2	0.0	0.0
Region 4A	1.1	0.2	0.0	0.2	2.1	0.9	0.0	5.4	7.0	3.0	0.5	4.2	0.4	0.3	0.0	0.0
Region 4B	1.2	0.1	0.0	0.2	1.5	0.4	0.0	4.9	4.8	1.2	0.0	1.3	0.3	0.2	0.0	0.0
Region 5	0.9	0.1	0.0	0.1	1.6	0.3	0.3	6.2	5.5	1.3	0.1	2.3	1.0	0.1	0.0	0.0
Region 6	1.0	0.1	0.0	0.4	1.1	1.1	0.0	6.3	8.9	1.9	0.0	2.4	0.7	0.4	0.0	0.0
Region 7	1.0	0.0	0.0	0.1	1.3	1.0	0.1	6.1	6.5	2.2	0.3	2.5	0.9	0.0	0.0	0.0
Region 9	1.0	0.0	0.0	0.3	2.1	0.9	0.1	6.3	6.5	0.3	0.0	1.6	0.9	0.1	0.0	0.0
Region 10	1.1	0.1	0.0	0.3	2.3	2.5	0.0	8.6	10.7	2.5	0.1	2.8	1.1	0.1	0.0	0.0
Region 11	1.2	0.1	0.0	0.4	2.3	1.2	0.0	7.1	7.6	4.1	1.1	1.5	1.1	0.1	0.0	0.0
Region 12	1.5	0.2	0.0	0.1	3.1	1.3	0.5	7.1	13.2	7.1	0.0	2.2	1.3	0.1	0.1	0.1
CARAGA	2.3	0.0	0.0	0.1	1.8	0.8	0.1	6.1	8.5	1.5	0.0	1.9	1.1	0.0	0.0	0.0
<b>Total</b>	<b>1.2</b>	<b>0.1</b>	<b>0.0</b>	<b>0.2</b>	<b>1.9</b>	<b>1.2</b>	<b>0.8</b>	<b>6.0</b>	<b>7.3</b>	<b>2.1</b>	<b>0.3</b>	<b>2.1</b>	<b>0.8</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>

**Table 9. RHU and DOH-deployed personnel by LGU income class**

Region	Health RHU Personnel and DOH-deployed Personnel															
	Physician				Nurse (excluding RNHEALS)				Rural Health Midwives (RHMIs)				Medical Technicians			
	Full Time	Part Time	Volunteer	DTTB	Full Time	Part Time	Volunteer	NDP/ RNHEALS	Full Time	Part Time	Volunteer	RHMPP	Full Time	Part Time	Volunteer	RHMPP
1	1.2	0.2	0.0	0.4	2.2	2.2	1.0	7.3	9.8	3.7	0.3	1.6	1.0	0.1	0.0	0.0
2	1.7	0.0	0.0	0.1	1.4	1.1	1.3	6.3	7.3	2.1	0.6	2.3	0.8	0.1	0.0	0.0
3	1.3	0.1	0.1	0.2	2.3	1.0	1.2	6.6	9.6	2.4	0.5	2.1	1.0	0.1	0.0	0.0
4	1.0	0.0	0.0	0.1	1.7	0.9	0.4	5.6	5.6	1.3	0.1	2.2	0.7	0.2	0.0	0.0
5	1.0	0.0	0.0	0.1	1.4	0.2	0.3	4.1	4.1	0.5	0.0	1.6	0.4	0.1	0.0	0.0
6	0.4	0.4	0.0	0.6	1.6	1.1	0.0	3.4	2.6	3.6	0.0	6.0	0.3	0.1	0.0	0.0
Total	1.2	0.1	0.0	0.2	1.9	1.2	0.8	6.0	7.3	2.1	0.3	2.1	0.8	0.1	0.0	0.0

Figure 15. LGU health personnel and DOH deployment, by region

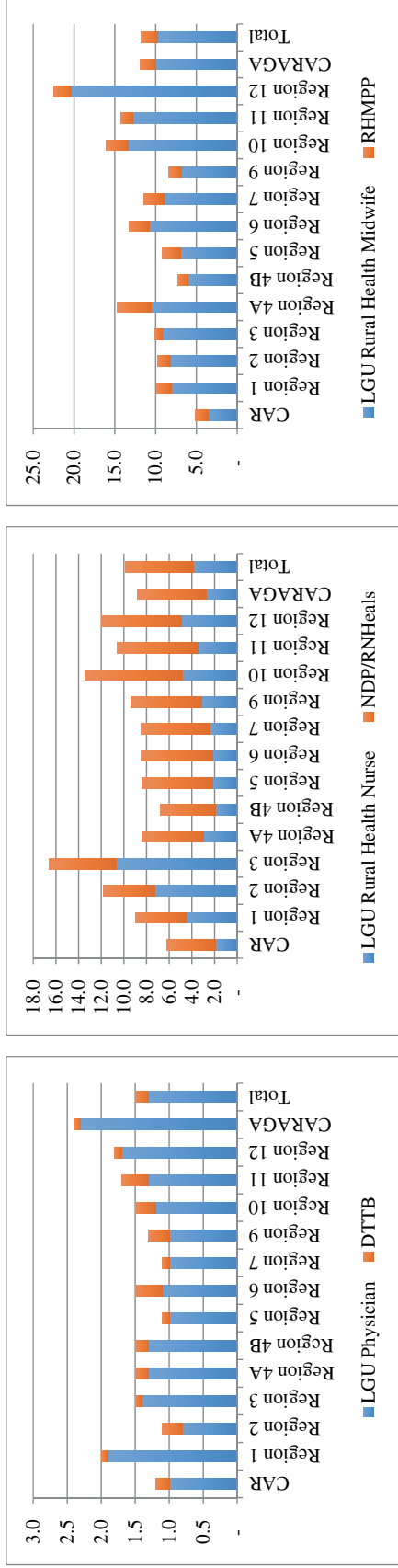
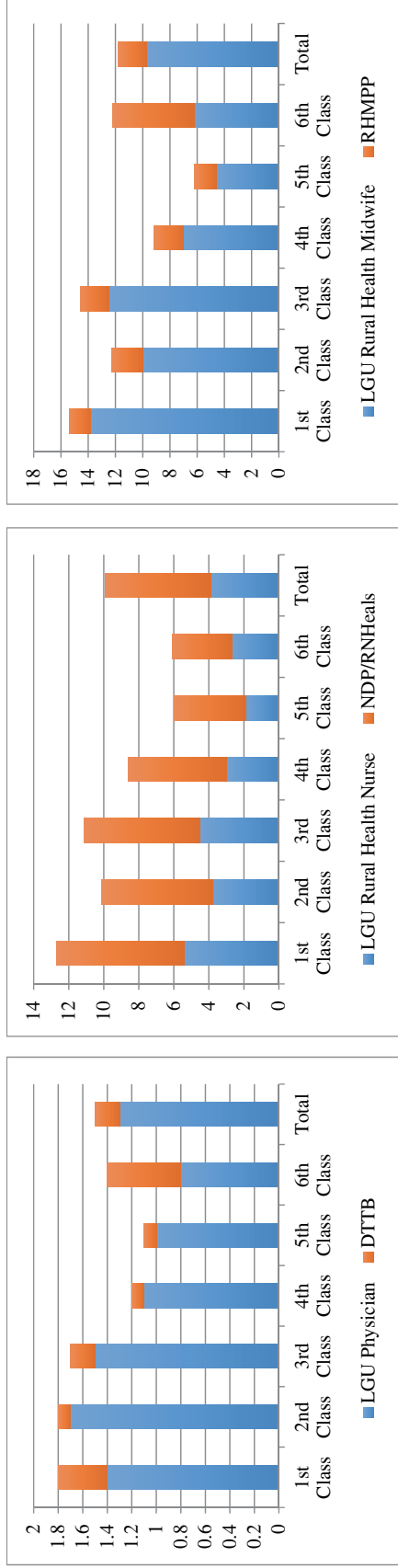


Figure 16. LGU health personnel and DOH deployment, by income class



## 2. *Maternal and Child Health*

This section focuses on priority MCH services in the Philippines, with a focus on those services that are delivered through the primary care system. For maternal health, we follow two of the four target actions outlined in the national Maternal, Newborn and Child Health and Nutrition (MNCHN) strategy to reduce deaths, namely: (1) avoiding mistimed, unplanned, unwanted, and unsupported pregnancies and (2) ensuring adequate care during the course of pregnancy (DOH 2011).<sup>12</sup> For child health services, we include an analysis of the availability of immunization services, which have been a national priority since the 1970s, and general child health services (such as consultations).

Use of ANC is now close to universal: according to the 2013 NDHS, 95.4 percent of pregnant women received at least one ANC visit with a skilled health provider and 84 percent had four or more ANC visits (Philippine Statistics Authority 2013). Despite high service utilization, the survey data suggest uneven distribution of the core components of quality ANC. According to the 2013 NDHS, among women who gave birth in the last five years, 92 percent took iron supplements, 46 percent had folic acid supplements, and 82 percent were protected against tetanus. Among those who had received ANC, 98 percent had their BP measured, but only 65 percent had a urine sample taken and just 59 percent had a blood sample taken (Philippine Statistics Authority 2013). The percentage of facility-based delivery has also increased in recent years, from 44 percent in 2008 to 61 percent in 2013. Yet, bypassing of formal care is common. Almost four out of every ten women deliver at home, and in rural areas this number increases to five out of ten women. Home births can result in delays in identifying, referring, and managing complications.<sup>13</sup>

Ensuring access to vaccination is among the highest priorities for child health. Although approximately 90 percent of children are fully immunized by age one,<sup>14</sup> the Philippines has among the highest burdens of unvaccinated children in the world. Despite concentrated efforts since the 1970s, the Philippines has struggled to maintain consistent results and national targets for immunization have not been met in nearly two decades. The Philippine NDHS shows that Fully Immunized Child (FIC) coverage is at its lowest point in 10 years. In 2013, FIC was only 61.8 percent, down from 79.5 percent coverage in 2008. The trend of decline from 2008 to 2013 shown by the NDHS is similar to the decrease observed when using DOH data for the last four years prior to 2013. The DOH reports, further, that target coverage of 95 percent for all vaccines has not been achieved since 2000. There are also large inequalities in vaccination coverage by region. According to the DOH's 2013 EPI report, only 5 of the 17 regions reached the service coverage target of 95 percent. This has

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<sup>12</sup> The strategy also targets (3) delivering with skilled medical assistance and (4) securing appropriate postpartum and newborn care for the mother and newborn, but these targets are not a focus of this paper because the relevant data were not collected in the survey.

<sup>13</sup> As noted earlier in the Introduction, this analysis is not able to include BEmONC services because the relevant indicators were not sufficiently captured in the survey. However, some indicators in the general service readiness analysis are relevant to BEmONC services. These include the availability of emergency transport and emergency medicines.

<sup>14</sup> FIC coverage measures the proportion of children ages 12 to 24 months who have received bacillus Calmette-Guérin (BCG), measles, and three doses each of DPT and polio and Hepatitis B vaccine (either Hepatitis B0, B1 and B2 or Hepatitis B1, B2 and B3) at any time before the survey.

resulted in an increase in the number of children susceptible to vaccine-preventable diseases and deaths.

Much like vaccination, child health care benefits from long-standing political support in the Philippines. Treatment for childhood health issues, including acute respiratory infection (ARI), fever, diarrhea, and malnutrition, was a central component of the country's successful efforts to achieve the child health MDGs, and remains an important element of the SDG target to end preventable child death. Nonetheless, there are important gaps in child health. Malnutrition, in particular, remains very high in the country and has not declined despite economic growth. The national prevalence of stunting has not declined at all for more than a decade and, with an estimated 4.2 million children under the age of 5 stunted, the Philippines is among the global top 10 in the burden of stunting (Food and Nutrition Research Institute 2013). The Philippines is also among the worst three countries in the East Asia and Pacific region in terms of wasting, low birth weight, and suboptimal infant and young child feeding practices. Recent data suggest that there is still much to do to appropriately respond to child illness. In the 2013 NDHS, 6 percent of children younger than five years had an ARI, 28 percent had fever, and 8 percent had diarrhea in the two weeks prior to the survey (Philippine Statistics Authority 2013). However, many of these children were not brought for medical care: of children with symptoms of ARI, with fever, and with diarrhea, only 64 percent, 50 percent, and 42 percent, respectively, were taken to a health facility or health provider to seek advice or treatment (Philippine Statistics Authority 2013).

### Antenatal Care

Efforts to increase access to and utilization of ANC have been successful in the Philippines, and the government is now working to ensure that the services are of consistently high quality. To this end, the national guidelines, detailed in the MNCHN Manual of Operations (MOP) and funded by PhilHealth under the MCP, are well aligned with global guidelines on ANC. Women are entitled to at least four prenatal visits during the course of the pregnancy, with the first visit to occur within the first trimester. During these visits, health workers are expected to detect and manage danger signs and potential complications of pregnancy; provide iron folate supplementation (daily for three months) and iodine supplementation; ensure complete TT immunization; and counsel on healthy lifestyle, breastfeeding, prevention and management of infection, and oral health services (Department of Health 2011).

**Table 10. Access to maternal health services, 2014<sup>a</sup>**

Region	4+ ANC Visits (%)	2 doses TT (%)	>2 doses TT (%)	Complete Iron + Folic Acid (%)
CAR	62.13	29.15	51.23	49.62
Region 1	61.89	30.62	61.04	58.90
Region 2	58.78	31.50	59.91	57.41
Region 3	60.61	30.37	51.03	54.47
Region 4A	42.46	23.84	39.20	40.19
Region 4B	60.51	36.06	59.79	53.64
Region 5	65.22	32.90	57.97	64.48
Region 6	54.38	26.67	56.60	50.92
Region 7	63.45	30.68	72.22	55.76



Region	4+ ANC Visits (%)	2 doses TT (%)	>2 doses TT (%)	Complete Iron + Folic Acid (%)
Region 9	51.62	27.80	44.32	50.02
Region 10	75.39	33.13	61.72	69.04
Region 11	37.39	26.19	71.87	35.40
Region 12	62.29	36.73	64.95	58.97
CARAGA	58.26	33.09	50.26	50.56
Philippines	58.99	30.84	58.29	52.04

Source: Field Health Service Information System (FHSIS) 2014.

Note: a Prevalence of pregnant women with access to: 4+ ANC visits, 2 doses of TT, >2 doses of TT, and a complete dose of iron and folic acid.

The WHO SARA tracer indicators for ANC call for (a) the availability of ANC guidelines and checklists, and staff trained in ANC; (b) BP apparatus; (c) Hb and urine dipstick-protein testing capacity; and (d) iron folate, TT, intermittent preventive treatment (IPT) drug (for malaria), and insecticide-treated nets (ITNs). As shown in Annex 5, most of these components listed in the WHO SARA guidelines are explicitly referenced in national strategies. As shown in Table 11, Column 3, data are available for all the equipment and diagnostics considered by SARA, as well as for a number of key medicines and commodities, including TT and iron folate.

**Table 11. ANC tracer indicators: SARA guidelines and indicators used for assessment**

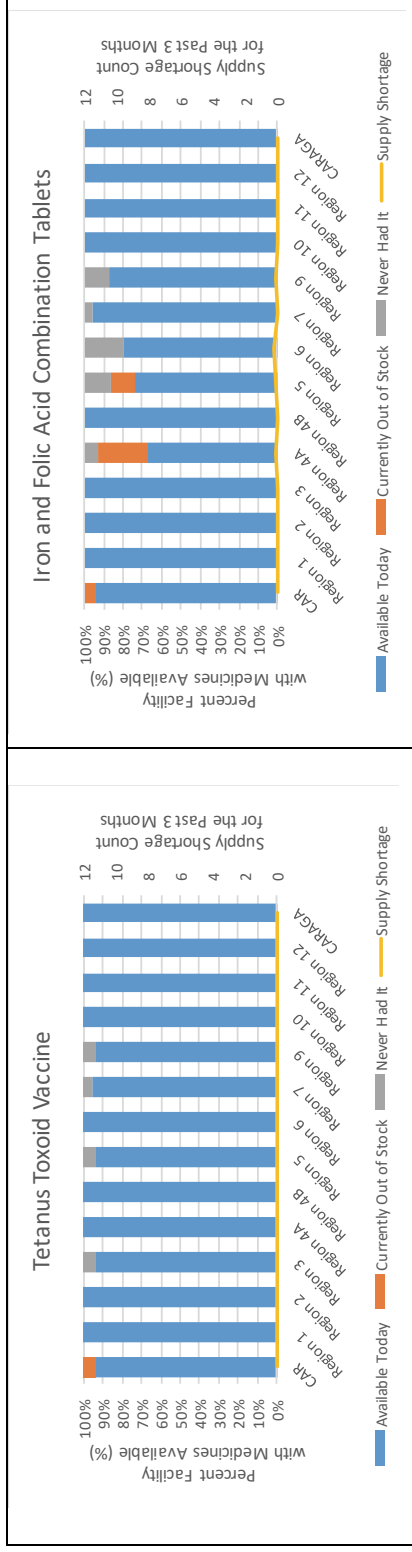
Tracer Indicator	WHO SARA Guidelines	Indicators Used for Assessment
Staffing and Training	<ul style="list-style-type: none"> <li>ANC guidelines</li> <li>ANC checklists and/or job aids</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> </ul>
	<ul style="list-style-type: none"> <li>Staff trained in ANC</li> </ul>	<ul style="list-style-type: none"> <li>Physician, nurse, midwife trained in BEmONC</li> </ul>
Equipment	<ul style="list-style-type: none"> <li>BP apparatus</li> </ul>	<ul style="list-style-type: none"> <li>Non-mercurial BP apparatus</li> </ul>
Diagnostics	<ul style="list-style-type: none"> <li>Hb</li> </ul>	<ul style="list-style-type: none"> <li>Hemoglobinometer kit/acid hematin (stock availability for today, for RHUs with laboratory)</li> </ul>
	<ul style="list-style-type: none"> <li>Urine dipstick-protein</li> </ul>	<ul style="list-style-type: none"> <li>Dipstick for qualitative urine analysis (stock availability for today, for RHUs with laboratory)</li> </ul>
Medicines and Commodities	<ul style="list-style-type: none"> <li>TT vaccine</li> </ul>	<ul style="list-style-type: none"> <li>TT vaccine (stock availability for today?)</li> </ul>
	<ul style="list-style-type: none"> <li>Iron tablets (or iron folate)</li> <li>Folic acid tablets (or iron folate)</li> </ul>	<ul style="list-style-type: none"> <li>Iron and folic acid combination tablets OR (iron tablets AND folic acid tablets) (stock availability for today)</li> </ul>
	<ul style="list-style-type: none"> <li>IPT drug</li> <li>ITNs</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> </ul>

Note: Column 1 indicates the SARA domain; Column 2 indicates SARA tracer indicators; and Column 3 indicates the precise wording of the I3QUP survey question or, when applicable, that a given indicator has been dropped.

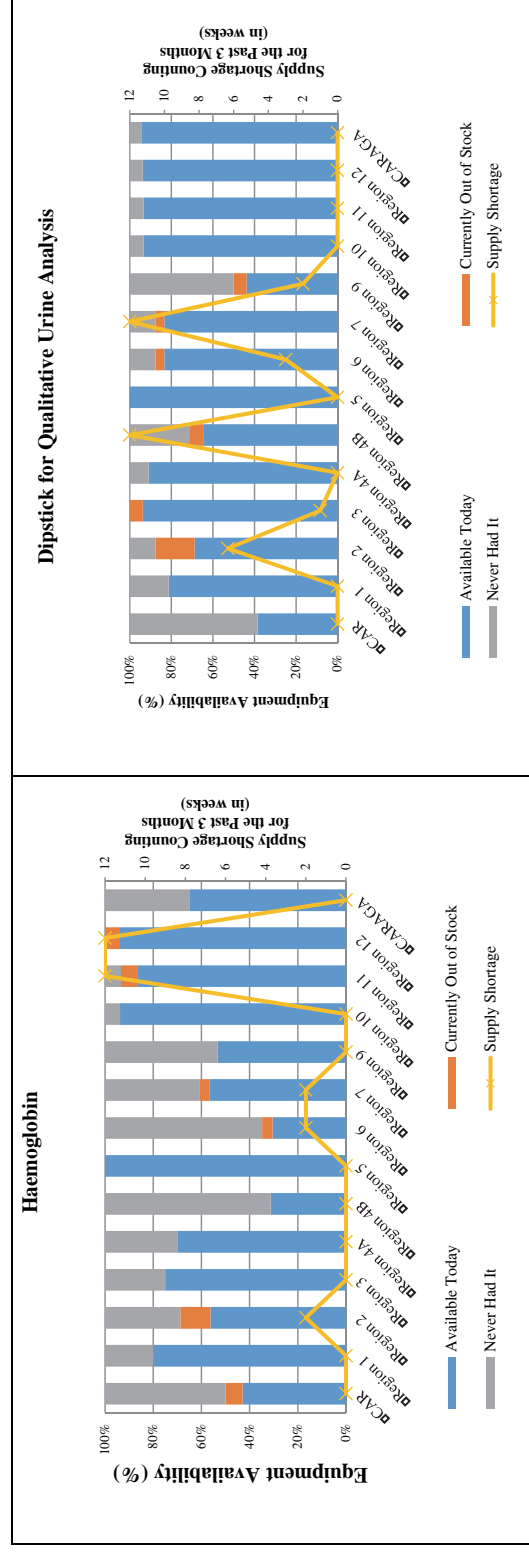
ANC services are available at all the RHUs visited and survey results show that basic commodities were well distributed. Almost all (95 percent) RHUs had TT in stock during the visit and, with the exceptions of Regions 4B and 5, nearly all RHUs also had iron and folate—either separately or in combination (Figure 17). However, we identify significant

gaps in diagnostic capacity: only 65 percent of RHUs had Hb testing available on the day of the survey; this varied from 100 percent of RHUs in Region 5 to just 31 percent of RHUs in Region 4B (Figure 18). Although urine dipsticks were more widely available, there were still gaps: 81 percent of RHUs overall had them in stock on the day of the survey, and this ranged from 100 percent (Region 5) to 44 percent (Region 9) (Figure 18). While most facilities had relevant tests in stock, we identified lengthy shortages of Hb tests in Regions 11 and 12 and lengthy urine dipstick shortages in Regions 4B and 7. In all cases, those facilities that reported being “currently out of stock” of the diagnostic test had been out of stock for the entirety of the three months preceding the survey.

**Figure 17. ANC service readiness: Medicines and commodities availability**

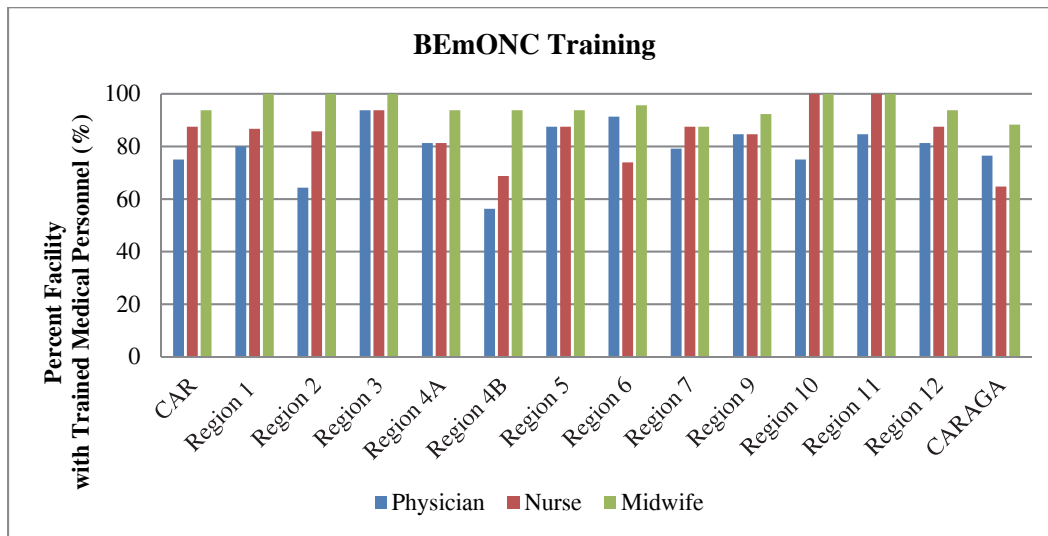


**Figure 18. ANC service readiness: Diagnostics availability**



ANC training is provided through the national training on BEmONC. BEmONC training was attended by at least one staff from most (97 percent) RHUs. CARAGA (88 percent) was most likely to report that no staff had attended a BEmONC training, while all RHUs in Regions 1, 2, 3, 5, 9, 10, and 11 had at least one member attend. In all regions, midwives were most likely to have attended the training and, with the exception of CARAGA, physicians<sup>15</sup> were least likely to have attended the training (Figure 19).

**Figure 19. RHU staff who have undergone BEmONC training**



*Note:* Data are available for any nurse and any midwife at facilities, but only one physician responded to the survey at each facility. Few facilities had more than one physician on staff.

Table 12 shows substantially higher overall ANC service readiness of facilities in wealthier LGUs, with sixth class LGUs performing worst in three of the four domains. Disparities were especially notable for scores on diagnostic capacity, with sixth class LGUs receiving an aggregate score of just 38 percent, compared to an aggregate score of 87 percent among first class LGUs.

<sup>15</sup> Training is asked differently for nurses/midwives and physicians. For nurses and midwives, the survey asks whether any nurse or midwife at the facility had received training. For physicians, information was collected only for the physician respondent, and not for any physician at the facility. Seventy-three percent of facilities have one physician on staff, 13 percent have two physicians on staff, and 3 percent have more than two physicians on staff.

**Table 12. ANC service readiness score by LGU income classification**

Income Class	Staff & Guidelines (%)	Basic Equipment (%)	Diagnostics (%)	Medicines & Commodities (%)	Overall (%)
1	100	94	87	97	94
2	90	93	70	98	88
3	98	98	76	95	91
4	96	98	70	94	88
5	97	97	49	98	84
6	86	86	38	100	78
Total	97	96	71	96	89

*Note:* Staff and Guidelines refers to facilities in which a physician, nurse, or midwife has been trained in BEmONC. Basic Equipment refers to the availability of a BP apparatus. Diagnostics refers to the availability of a hemoglobinometer. Medicines and Commodities refers to the availability of TT vaccine and iron and folic acid. -coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

We also find regional variations in the readiness to provide ANC. RHUs in CAR and Regions 4B and 9 scored well below the survey average. This was driven largely by poor performance in the availability of diagnostics testing (Table 13).

**Table 13. ANC service readiness score by region**

Region	Staff & Guidelines (%)	Basic Equipment (%)	Diagnostics (%)	Medicines & Commodities (%)	Overall (%)
CAR	100	100	41	94	80
Region 1	100	75	74	100	89
Region 2	100	94	59	100	88
Region 3	100	100	84	98	95
Region 4A	94	100	80	80	85
Region 4B	94	100	41	100	82
Region 5	100	100	100	84	93
Region 6	96	96	57	100	86
Region 7	92	96	68	96	87
Region 9	100	100	45	92	81
Region 10	100	94	94	100	97
Region 11	100	100	83	100	95
Region 12	94	94	94	100	96
CARAGA	88	100	76	100	92
Total	97	96	71	96	89

*Note:* Staff and Guidelines refers to facilities in which a physician, nurse, or midwife has been trained in BEmONC. Basic Equipment refers to the availability of a BP apparatus. Diagnostics refers to the availability of a hemoglobinometer. Medicines and Commodities refers to the availability of TT vaccine and iron and folic acid. Color-coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

## Family Planning

Avoiding mistimed, unplanned, unwanted, and unsupported pregnancies is a key component of the national strategy to reduce maternal mortality, and the Reproductive Health Law of 2012<sup>16</sup> guarantees universal access to contraception, sexual education, and maternal care. While injectable contraceptives (depot medroxyprogesterone acetate [DMPA]) and condoms are not included in any of the PhilHealth benefit packages, there are packages for intrauterine devices (IUDs) and implants and LGUs are responsible for procuring a range of FP commodities, including oral contraceptives, DMPA, and condoms.

High total fertility, insufficient birth spacing, and young age of mothers are all associated with increased maternal mortality, and are documented challenges in the Philippines. The total fertility rate, at 2.6, is among the highest in the East Asia and Pacific region and 10 percent of Filipino women have already begun childbearing by age 19 (Philippine Statistics Authority 2013). Despite widespread knowledge and increasing access to FP services, the 2013 NDHS found high unmet need for FP, with 18 percent of married women reporting unmet need at the time of the survey (Philippine Statistics Authority 2013).

The WHO SARA tracer indicators consist of (a) the availability of guidelines and checklists for FP and staff trained in FP; (b) a BP apparatus; (c) oral contraceptives, injectable contraceptives, and male and female condoms, implants, IUDs, and emergency contraceptives. The third column of Table 14 shows the list of tracer indicators from the survey used in this assessment. This assessment focuses on the availability of oral contraceptives, DMPA, and IUD. Implants are not currently recommended for use in the Philippines<sup>17</sup> and are therefore not included in this assessment.

**Table 14. Family planning tracer indicators: SARA guidelines and indicators used for assessment**

Domain	WHO SARA Tracer Indicators	Tracer Indicators from Survey
<b>Staff and Guidelines</b>	• Guidelines on FP	• <i>Indicator Dropped - Data not available</i>
	• FP checklists and/or job aids	• <i>Indicator Dropped - Data not available</i>
	• Staff trained in FP	• <i>Indicator Dropped - Data not available</i>
<b>Equipment</b>	• BP apparatus	• Non-mercurial BP apparatus (number of available instruments/equipment)
<b>Medicines and Commodities</b>	• Combined estrogen progesterone oral contraceptive pills	• Oral contraceptives (stock availability [FP])
	• Progestin-only contraceptive pills	• <i>Indicator Dropped - Data not available</i>
	• Injectable contraceptives: Either combined estrogen progesterone injectable contraceptives or progestin-only injectable contraceptives	• DMPA (stock availability [FP])

<sup>16</sup> The Supreme Court delayed the implementation of the Reproductive Health Law in 2013, and then ruled the law “not unconstitutional” after striking out some provisions in 2014.

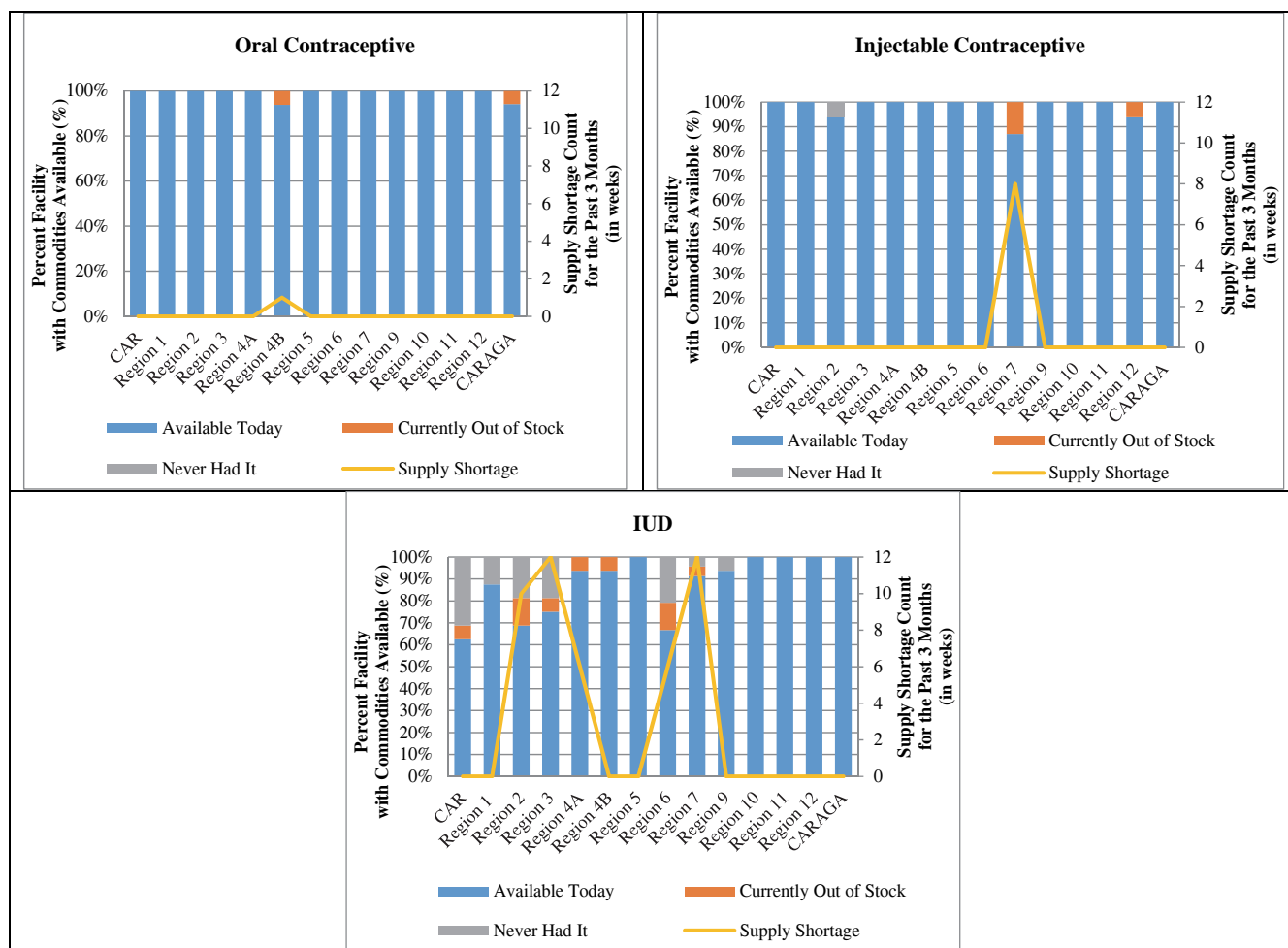
<sup>17</sup> There is currently a temporary court-issued restraining order preventing the Philippines government from promoting the use of implants. However, implants are included in the PhilHealth benefit package and are specifically detailed in PhilHealth Circular No. 038-2015, PhilHealth Subdermal Contraceptive Implant Package.

Domain	WHO SARA Tracer Indicators	Tracer Indicators from Survey
	• Condoms	• <i>Indicator Dropped - Data not available</i>
<b>Auxiliary Commodities</b>	• Combined estrogen progesterone injectable contraceptives	• DMPA (stock availability [FP])
	• Progestin-only injectable contraceptives	• <i>Indicator Dropped - Data not available</i>
	• Female condoms	• <i>Indicator Dropped - Data not available</i>
	• Implants: For example, levonorgestrel or etonogestrel implant	• <i>Indicator Dropped - Data not available</i>
	• Emergency contraceptive: For example, levonorgestrel tablet or ulipristal acetate tablet or mifepristone tablet 10–25 mg	• <i>Indicator Dropped - Data not available</i>
	• IUD	• IUD (stock availability [FP])

*Note:* Column 1 indicates the SARA domain; Column 2 indicates SARA tracer indicators; and Column 3 indicates the precise wording of the I3QUiP survey question or, when applicable, that a given indicator has been dropped.

FP services were generally available at the RHUs visited in the survey. As discussed in the section on general service readiness, BP apparatuses are widely available at RHUs. Of the commodities investigated, oral contraceptives and DMPA are close to universally available and IUD services were also common. Approximately 87 percent of RHUs had IUD device/commodity on the day of the survey, although this number falls to less than 70 percent in CAR, Region 2, and Region 6; 8 percent of facilities never had it in stock. Stock-outs of FP commodities are relatively uncommon in our sample, although the few that had stock-outs were long lasting. They were missing for 10 to 12 weeks prior to the survey for IUDs in Regions 2, 3, and 7, and for 8 weeks for injectable contraceptives in Region 7 (Figure 20).

**Figure 20. Family planning service readiness: Medicines and commodities availability**



In terms of overall readiness to provide FP services at the RHUs, there was a 5-percentage point difference between the sixth class LGUs (91 percent) and the first class LGUs (96 percent) (Table 15). CAR and Regions 1, 2, 6, and 7 underperformed compared to their neighbors, largely due to variability in the available drugs and commodities (Table 16).



**Table 15. Family planning service readiness score by LGU income group**

Income Level	Basic Equipment (%)	Medicines & Commodities (%)	Overall (%)
1	94	97	96
2	93	94	94
3	98	97	97
4	98	95	96
5	97	94	95
6	86	93	91
Total	96	96	96

*Note:* Relevant FP staffing indicators were not collected and are not shown. Basic Equipment refers to the availability of a BP apparatus. Medicines and Commodities refers to the availability of oral contraceptives, DMPA, and IUDs. Color-coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

**Table 16. Family planning service readiness score by region**

Region	Basic Equipment (%)	Medicines & Commodities (%)	Overall (%)
CAR	100	91	93
Region 1	75	97	93
Region 2	94	89	90
Region 3	100	94	95
Region 4A	100	98	99
Region 4B	100	97	98
Region 5	100	100	100
Region 6	96	92	93
Region 7	96	91	92
Region 9	100	98	99
Region 10	94	100	99
Region 11	100	100	100
Region 12	94	97	96
CARAGA	100	99	99
Total	96	96	96

*Note:* Relevant FP staffing indicators were not collected and are not shown. Basic Equipment refers to the availability of a BP apparatus. Medicines and Commodities refers to the availability of oral contraceptives, DMPA, and IUDs. Color-coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

## Immunization

Free universal distribution of vaccines in the Philippines has a long-standing legal mandate that began with the September 1976 Presidential Decree No. 996 providing for the compulsory basic immunization for infants and children below eight years. In 1994, this decree was amended by Republic Act No. 7846 to expand the package of mandatory vaccines and funds were appropriated for its implementation. The basic package of vaccines continues to be updated, most recently with the Mandatory Infants and Children Health Immunization Act of 2011, which mandates a comprehensive, mandatory, and sustainable immunization program. The 2016 National Immunization Program (NIP) includes the following antigens: (a) BCG vaccine, a single dose given at birth; (b) monovalent Hepatitis B vaccine, a single dose given at birth; (c) DPT-Hib-HepB<sup>18</sup> vaccines, three doses given at 6-10-14 weeks; (d) oral polio vaccine (OPV), three doses given at 6-10-14 weeks; (e) inactivated polio vaccine (IPV), a single dose given with the final OPV vaccine at 14 weeks; (f) pneumococcal conjugate vaccine (PCV), three doses given at 6-10-14 weeks; (g) measles containing vaccine, either monovalent or Measles-Mumps-Rubella, a single dose given at 9 months; (h) Measles-Mumps-Rubella vaccine given at 12 months; and (i) rotavirus vaccine series, to be given between 6 and 32 weeks. Mandatory basic immunization for children is provided for free at any government hospital or health center and national targets for each vaccine is determined and made public every six years in the DOH National Objectives for Health. Table 17 shows the status of the government's efforts to improve child nutritional status as of 2014. The national FHSIS indicates that nearly one-quarter of children are not fully immunized—coverage ranges from 88 percent in Region 10 to just 62 percent in Region 3 (DOH 2014).

**Table 17. Immunization coverage by region, 2014**

Total	FIC (%)
CAR	72.51
Region 1	76.77
Region 2	74.46
Region 3	62.40
Region 4A	64.38
Region 4B	82.39
Region 5	79.49
Region 6	73.39
Region 7	83.34
Region 9	82.18
Region 10	88.23
Region 11	79.25
Region 12	77.39
CARAGA	87.86
Overall	75.38

Source: DOH (2014).

Note: FIC: Child must have completed BCG 1, DPT 1, DPT 2, DPT 3, OPV 1, OPV 2, OPV 3, Hepatitis B1, Hepatitis B2, Hepatitis B3, and measles vaccines before the child is 12 months of age.

<sup>18</sup> DPT-Hib-HepB = Diphtheria, Pertussis, Tetanus, Haemophilus Influenza B and Hepatitis B.

The WHO SARA tracer indicators include (a) the availability of guidelines on child immunization and staff who have been trained on the EPI in the two years prior to the survey; (b) a cold box, a functioning refrigerator, a sharps container, auto-disposable syringes, a temperature log for the refrigerator, immunization cards, and immunization tally sheets; and (c) current and continuous (over three months) stocking of all relevant vaccines as indicated by the national guidelines. The tracer indicators used and analysis presented here focus on the availability of a cold storage for medicines and vaccines, availability of a receptacle for sharp objects, and the supply of measles, DPT-Hib-HepB (separately or together as pentavalent), OPV, BCG, pneumococcal, rotavirus, and TT vaccines (Table 18).

**Table 18. Immunization tracer indicators: WHO SARA guidelines and indicators used for assessment**

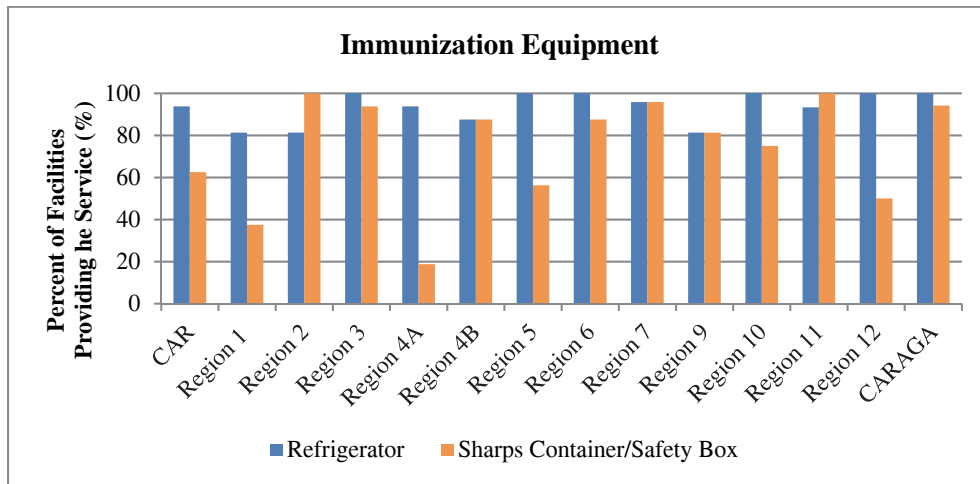
Domain	WHO SARA Tracer Indicators	Tracer Indicators from Survey
<b>Staff and Guidelines</b>	<ul style="list-style-type: none"> <li>Guidelines for child immunization</li> <li>Staff trained in child immunization</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>Cold box/vaccine carrier with ice packs</li> <li>Refrigerator: Functioning refrigerator with sufficient storage capacity</li> <li>Sharps container/safety box</li> <li>Auto-disposable syringes</li> <li>Temperature monitoring device in refrigerator: Thermometer or recorder/logger</li> <li>Adequate refrigerator temperature: Temperature not out of range (2°C to 8°C) in the last 30 days</li> <li>Immunization cards</li> <li>Immunization tally sheets</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> <li>Cold storage solely for medicines and vaccines</li> <li>Are there puncture proof receptacles for disposal or pointed/sharp objects? Safety vault</li> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> </ul>
<b>Medicines and Commodities</b>	<ul style="list-style-type: none"> <li>Rotavirus vaccine</li> <li>IPV: If part of the national schedule</li> <li>Human papillomavirus (HPV): If part of the national schedule</li> <li>Measles vaccine</li> </ul>	<ul style="list-style-type: none"> <li>Rotavirus (stock availability [Vaccine available today])</li> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> <li>Measles (supply shortage counts for the past 3 months [vaccine available today])</li> </ul>

Domain	WHO SARA Tracer Indicators	Tracer Indicators from Survey
	<ul style="list-style-type: none"> <li>DPT-Hib-HepB vaccine: Country-specific vaccine combination</li> <li>OPV</li> <li>BCG vaccine</li> <li>Pneumococcal vaccine: If part of the national schedule</li> <li>Rotavirus vaccine: If part of the national schedule</li> </ul>	<ul style="list-style-type: none"> <li>DPT-Hib-HepB (supply shortage counts for the past 3 months [vaccine available today])</li> <li>OPV (supply shortage counts for the past 3 months [vaccine available today])</li> <li>BCG (supply shortage counts for the past 3 months [vaccine available today])</li> <li>Pneumococcal vaccine (supply shortage counts for the past 3 months [vaccine available today])</li> <li>Rotavirus (supply shortage counts for the past 3 months [vaccine available today])</li> </ul>
	<ul style="list-style-type: none"> <li>IPV</li> <li>HPV</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> </ul>
	<ul style="list-style-type: none"> <li>DPT</li> <li>Hepatitis B</li> <li>TT</li> </ul>	<ul style="list-style-type: none"> <li>DPT (supply shortage counts for the past 3 months [vaccine available today])</li> <li>Hepatitis B (supply shortage counts for the past 3 months [vaccine available today])</li> <li>TT (supply shortage counts for the past 3 months [vaccine available today])</li> </ul>
<b>Cold Chain</b>	<ul style="list-style-type: none"> <li>Cold chain minimum requirements: Functional refrigerator, temperature monitoring device, and the temperature has been maintained between 2°C and 8°C for the last 30 days.</li> <li>Energy source and power supply for vaccine refrigerator</li> <li>Types of power used for cold chain refrigeration</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> </ul>

*Note:* Column 1 indicates the SARA domain; Column 2 indicates SARA tracer indicators; and Column 3 indicates the precise wording of the I3QUiP survey question or, when applicable, that a given indicator has been dropped.

Most RHUs had refrigerators for vaccines, although there were gaps in Regions 1, 2 and 9, where approximately 20 percent of RHUs did not have refrigerators. Sharps containers, on the other hand, were frequently missing at RHUs. They were missing in one-quarter of the RHUs visited overall, and only 20 percent of RHUs had sharps containers in Region 4A. Half or fewer had them in Regions 1 and 12. In contrast, all RHUs in Regions 2 and 11 had the containers on the day of the survey (Figure 21).

**Figure 21. Immunization service readiness: Equipment availability**



Most of the vaccines included in the survey were widely available. We did not identify any stock-outs of measles or TT<sup>19</sup> vaccines, and BCG and OPV vaccines were both available at 97–98 percent of RHUs. However, shortages were noted for DPT, which was unavailable in either its stand-alone formation or as pentavalent (DPT-Hib-HepB).

Pneumococcal and rotavirus vaccines have both been introduced to the NIP schedule relatively recently, and neither are yet universally available (Figure 22). Pneumococcal vaccine was available at just 45 percent of the facilities, although an additional 41 percent of facilities reported that they were currently out of stock—implying that they had carried the vaccine at one point. Rotavirus vaccine was available at only 24 percent of facilities and approximately 56 percent of facilities reported that they were out of stock on the day of the survey. In both cases, facilities that are out of stock report having been out of stock for up to the full three months prior to the survey.

<sup>19</sup> TT not shown.

**Figure 22. Immunization service readiness: Medicines and commodities availability**



Notably, there was little variation in the readiness to provide vaccination services by LGU income class, with all being quite low, although we did observe regional variations. Regions 1, 5, and 7 performed below the national average. This generally reflects differential stock-outs of commodities across regions, although there were also notable equipment gaps in Regions 1 and 4A (Table 19, Table 20).

**Table 19. Immunization service readiness score by LGU income group**

Income Level	Basic Equipment (%)	Medicines & Commodities (%)	Overall (%)
1	85	79	80
2	88	79	80
3	88	77	79
4	81	78	78
5	85	76	77
6	71	79	77
Total	85	78	79

*Note:* Relevant immunization staffing indicators were not collected and are not shown. Basic Equipment refers to the availability of cold storage and sharps containers. Medicines and Commodities refers to the availability of the following vaccines: measles, DPT-Hib-HepB, OPV, BCG, pneumococcal, rotavirus, DPT, Hepatitis B, and TT. Color-coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

**Table 20. Immunization service readiness score by region**

Region	Basic Equipment (%)	Medicines & Commodities (%)	Overall (%)
CAR	78	77	77
Region 1	59	72	70
Region 2	91	76	78
Region 3	97	80	83
Region 4A	56	86	81
Region 4B	88	80	81
Region 5	78	74	74
Region 6	94	80	83
Region 7	96	68	73
Region 9	81	76	77
Region 10	88	83	84
Region 11	97	76	80
Region 12	75	84	82
CARAGA	97	82	85
Total	85	78	79

*Note:* Relevant immunization staffing indicators were not collected and are not shown. Equipment refers to the availability of cold storage and sharps containers. Medicines and Commodities refers to the availability of the following vaccines: measles, DPT-Hib-HepB,

OPV, BCG, pneumococcal, rotavirus, DPT, Hepatitis B, and TT. Color-coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

## Child Health

Child health and survival has long been an important priority of the Philippines government. In addition to the NIP described in the last section, the government has worked to improve child nutrition status (including through improving infant and young child feeding practices, distributing important micronutrients, and assuring appropriate treatment of diarrhea). The government has also sought to encourage appropriate treatment for fevers and respiratory infections, particularly through the integrated management of childhood illness (IMCI), which was first introduced in the country in 1995, and helps to guide health staff in providing high-quality consultations. Table 21 shows the status of the government's efforts to improve child nutritional status as of 2014. The national FHSIS indicates that nearly all infants were given vitamin A, but that prevalence dropped off with age. Nationwide, approximately three-quarters of children with diarrhea were given ORS, and half were given zinc (DOH 2014).

**Table 21. Access to child health and nutrition services by region, 2014**

Region	Infants 6–11 months given Vitamin A	Children 12–59 months given Vitamin A	Children ages 12–59 months given Deworming Tablets/Syrup	Children 0–59 months with Diarrhea given ORS	Children 0–59 months with Diarrhea given ORS/ORT and Zinc
CAR	88.81	60.62	53.70	48.65	49.45
Region 1	76.27	34.04	15.77	88.33	55.53
Region 2	109.52	77.75	71.82	76.91	63.79
Region 3	77.53	13.60	5.25	76.56	53.11
Region 4A	111.73	30.98	20.40	85.56	36.97
Region 4B	72.47	29.79	5.63	81.28	36.48
Region 5	37.49	3.58	38.50	77.94	32.46
Region 6	88.64	36.59	23.26	87.61	59.50
Region 7	116.18	37.23	15.63	71.17	43.24
Region 9	98.57	12.72	—	80.31	46.90
Region 10	166.67	75.04	57.21	76.33	51.12
Region 11	92.78	94.48	—	48.26	38.92
Region 12	91.23	84.51	136.99	81.07	21.89
CARAGA	129.12	73.21	61.10	79.61	43.12
Overall	95.48	44.15	28.56	77.27	45.76

Source: DOH (2014).

The SARA tracer indicators consist of (a) the availability of staff trained in IMCI and growth monitoring, as well as guidelines for each; (b) a child and infant scale, length and height monitoring board, thermometer, stethoscope, and growth chart; (c) Hb testing capacity, parasite testing capacity, and malaria diagnostic capacity; and (d) ORS, child dosage of amoxicillin, child dosage of co-trimoxazole, child dosage of paracetamol, vitamin A capsules, mebendazole, and zinc supplements. As shown in Table 22, the tracer



indicators used from the survey include all these except staffing and guidelines, length and height monitoring board, and vitamin A capsules.

**Table 22. Child health: SARA guidelines and indicators used for assessment**

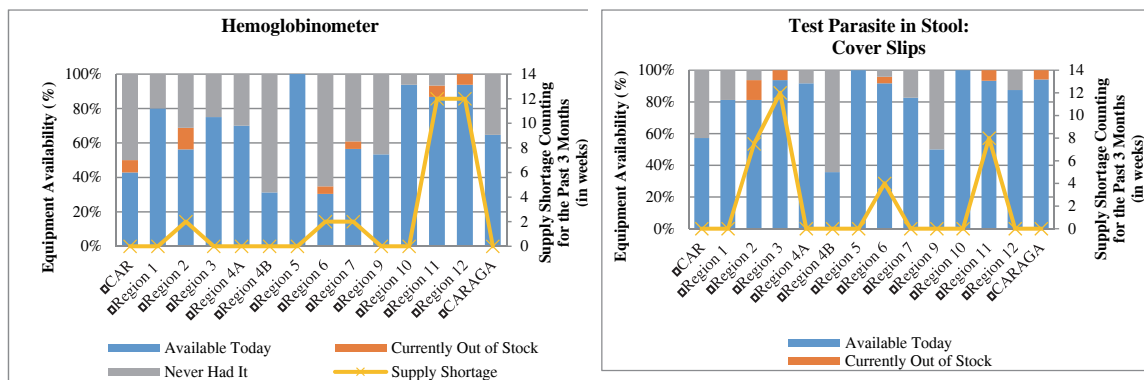
Domain	WHO SARA Tracer Indicators	Tracer Indicators from Survey
Staff and Guidelines	<ul style="list-style-type: none"> <li>Guidelines for IMCI: Country adapts to which guidelines are required/accepted</li> <li>Guidelines for growth monitoring: Country adapts to which guidelines are required/accepted</li> <li>Staff trained in IMCI: Country adapts to which guidelines are required/accepted</li> <li>Staff trained in growth monitoring: At least one staff providing the service trained in some aspect of growth monitoring in the last two years</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> </ul>
Equipment	<ul style="list-style-type: none"> <li>Child and infant scale: Weight gradations at minimum 250 gm and 100 gm</li> </ul>	<ul style="list-style-type: none"> <li>Weighing scale (infant)</li> </ul>
	<ul style="list-style-type: none"> <li>Length/height measuring equipment: Wooden boards or metal beams with a mounted rule that permits measurement of crown-to-heel length (infants under 2 years, lying down) or height (older children, standing up) in centimeters Gradations at 1 mm or 5 mm</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> </ul>
	<ul style="list-style-type: none"> <li>Thermometer</li> <li>Stethoscope</li> </ul>	<ul style="list-style-type: none"> <li>Non-mercurial thermometer</li> <li>Stethoscope (number of available instruments/equipment)</li> </ul>
Diagnostics	<ul style="list-style-type: none"> <li>Growth chart</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> </ul>
	<ul style="list-style-type: none"> <li>Hb: This may include colorimeter, hemoglobinometer, hemocue, or any other country-specific method</li> <li>Test parasite in stool (general microscopy): Microscope, slides, covers</li> <li>Malaria diagnostic capacity: Malaria rapid test or smear (microscope, slides, and stain)</li> </ul>	<ul style="list-style-type: none"> <li>Hemoglobinometer kit/acid hematin (stock availability for today [lab supplies: Manual CBC])</li> <li>Microscope (number of functional equipment)</li> <li>Glass slides (stock availability for today [lab supplies: automated CBC])</li> <li>Cover slips (stock availability for today [lab supplies: automated CBC])</li> <li>Fecalysis</li> <li>Diagnosis or treatment of malaria (offered services)</li> </ul>
Medicines and Commodities	<ul style="list-style-type: none"> <li>Oral rehydration solution packet: Any child dosage or formulation</li> <li>Amoxicillin (dispersible tablet 250 mg or 500 mg OR syrup/suspension): Any child dosage or formulation</li> </ul>	<ul style="list-style-type: none"> <li>ORS (stock availability [gastroenteritis])</li> <li>Amoxicillin (stock availability [antibacterial])</li> </ul>

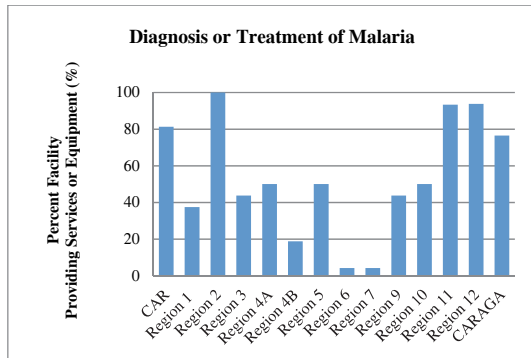
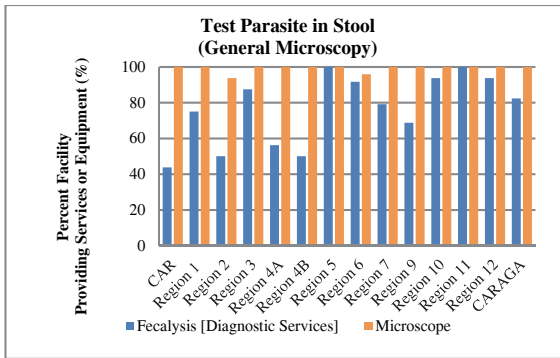
Domain	WHO SARA Tracer Indicators	Tracer Indicators from Survey
	<ul style="list-style-type: none"> <li>• Co-trimoxazole syrup/suspension: Any child dosage or formulation.</li> <li>• Paracetamol syrup/suspension: Any child dosage or formulation</li> <li>• Vitamin A capsules: Any child dosage or formulation</li> <li>• Me-/albendazole capsule/tablet: Any child dosage or formulation</li> <li>• Zinc sulfate tablets, dispersible tablets, or syrup: Any child dosage or formulation</li> </ul>	<ul style="list-style-type: none"> <li>• Co-trimoxazole (stock availability [antibacterial])</li> <li>• Paracetamol (stock availability [others])</li> <li>• <i>Indicator Dropped - Data not available</i></li> <li>• Deworming drugs (albendazole of mebendazole) (stock availability [others])</li> <li>• Zinc supplements (stock availability [gastroenteritis])</li> </ul>

Note: Column 1 indicates the SARA domain; Column 2 indicates SARA tracer indicators; and Column 3 indicates the precise wording of the I3QUiP survey question or, when applicable, that a given indicator has been dropped.

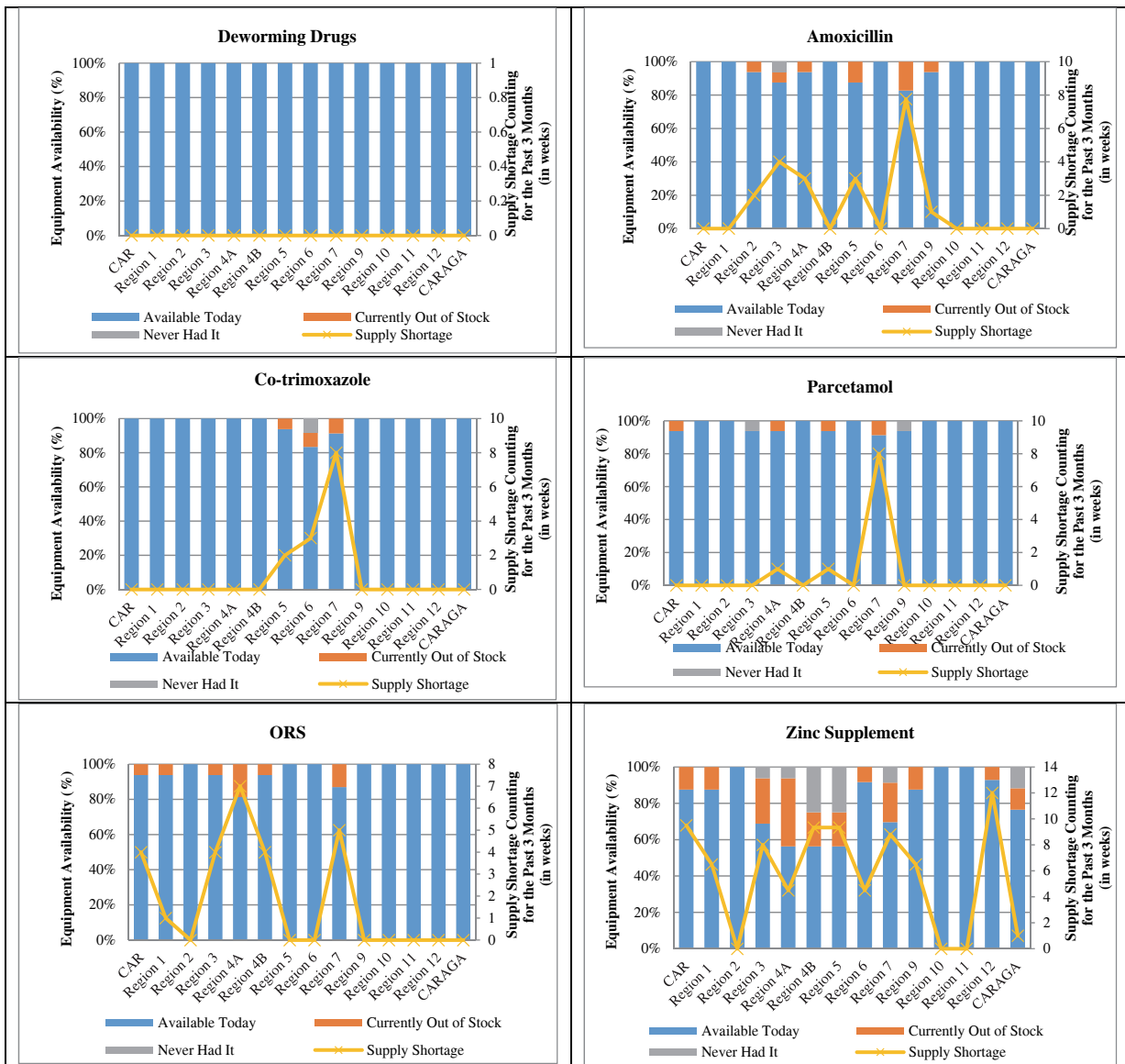
Nearly all RHUs offered preventive and curative care services for children, and thermometers, stethoscopes, and child scales were widely available. However, there were gaps in diagnostic services. Hb testing was available at only 62 percent of RHUs and there, again, was very wide variability between regions. Only Region 5 had Hb testing available at all RHUs. Nearby Regions 4B and 6, on the other hand, had Hb testing available at less than a third of the RHUs. Tools for parasite testing were generally available. Microscopes were available at 99 percent of RHUs; glass slides were generally available. Slide cover slips were also generally available, although there were some gaps—only 35 percent of RHUs in Region 4B had slide covers on hand and 50 percent in Region 9 did so. Nonetheless, fecalysis was available at only 77 percent of RHUs overall, and fewer than 60 percent of RHUs in CAR and Regions 2, 4A, and 4B offered fecalysis (Figure 23). Medicines were also generally available. All RHUs had mebendazole in stock, and more than 95 percent had ORS, amoxicillin, co-trimoxazole, and paracetamol. Although zinc is centrally procured, it was unavailable at one out of every five RHUs visited. These stock-outs were concentrated in particular regions. While all RHUs in Regions 2, 10, and 11 had zinc on hand, less than 60 percent of RHUs in Regions 4A, 4B, and 5 had the supplement (Figure 24).

Figure 23. Child health service readiness: Diagnostics availability





**Figure 24. Child health service availability: Medicines and commodities availability**



Although performance in child health service readiness does not consistently increase with LGU income class, we again find higher aggregate performance in first class LGUs and relatively lower performance in sixth class LGUs (Table 23).

**Table 23. Child health service readiness score by LGU income classification**

Income Class	Basic Equipment (%)	Diagnostics (%)	Medicines & Commodities (%)	Overall (%)
1	97	85	96	93
2	100	66	94	89
3	99	71	96	90
4	100	61	92	86
5	98	50	94	84
6	95	54	98	86
Total	99	67	94	89

*Note:* Relevant child health staffing indicators were not collected and are not shown. Basic Equipment refers to the availability of a scale, a thermometer, and a stethoscope. Diagnostics refers to the availability of a hemoglobinometer kit, microscope, glass slides cover slips, fecalysis, and malaria diagnosis. Medicines and Commodities refers to the availability ORS, amoxicillin, co-trimoxazole, paracetamol, deworming drugs, and zinc supplements. Color-coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

Regionally, the weakest scores were for Regions 4B and 7, due to their very low diagnostic capacity. Regions 6 and 9 also performed poorly on diagnostic capacity, but received higher overall scores due to stronger availability of equipment and medicines (Table 24).

**Table 24. Child health service readiness score by region**

Region	Basic Equipment (%)	Diagnostics (%)	Medicines & Commodities (%)	Overall (%)
CAR	96	62	96	87
Region 1	96	64	97	88
Region 2	98	75	99	93
Region 3	100	73	91	89
Region 4A	100	68	88	86
Region 4B	100	34	92	79
Region 5	100	83	89	90
Region 6	100	42	96	83
Region 7	99	49	87	80
Region 9	98	59	96	87
Region 10	98	81	100	95
Region 11	100	91	100	98
Region 12	98	96	99	98
CARAGA	100	78	96	93
Total	99	67	94	89

*Note:* Relevant child health staffing indicators were not collected and are not shown. Basic Equipment refers to the availability of a scale, a thermometer, and a stethoscope. Diagnostics refers to the availability of a hemoglobinometer kit, microscope, glass slides cover slips, fecalysis, and malaria diagnosis. Medicines and Commodities refers to the availability ORS, amoxicillin, co-trimoxazole, paracetamol, deworming drugs, and zinc supplements. Color-coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

### 3. *Noncommunicable Diseases (NCD) Prevention and Treatment*

The rise of NCD is among the most important challenges facing the Philippines in 2016. CVD, cancers, and CRDs account for more than half of all deaths annually, and hypertension is the number one cause of death in the country [20]. The burden is not only large in absolute terms, but is also growing at an alarming pace. In 1990, NCDs accounted for just under half of the total DALYs lost. By 2010, they accounted for two-thirds of DALYs lost.

Because more years of life are lost when a condition affects a child, DALYs give greater weight to health conditions that predominately affect children. These tend to be CDs. It is also informative to assess the top causes of death. As shown in Table 25, NCDs are already the top three causes of death in the Philippines. The toll of NCDs is expected to continue to grow—in middle-income countries, including the Philippines, NCDs could account for up to 80 percent of deaths by 2030 (WHO, 2010).

**Table 25. Top ten causes of mortality in the Philippines, 2009**

Diseases	Number of Deaths	Percent Share
Heart disease	100,908	21.0
Cerebrovascular diseases	56,670	11.8
Malignant neoplasm	47,732	9.9
Pneumonia	42,642	8.9
TB	25,470	5.3
<b>Chronic obstructive pulmonary disease (COPD)</b>	22,755	4.7
Diabetes	22,345	4.6
Nephritis, nephrotic syndrome	13,799	2.9
Assault	12,227	2.5
Certain conditions arising from perinatal period	11,514	2.4

*Source:* Adapted from WHO 2010.

The chronic nature of NCDs necessitates a highly organized and well-integrated health system that is capable of management and follow-up, often involving multiple service types and providers. Cost-effectively managing NCDs requires that primary care services play an effective role in screening services and provision of promotive services for early-disease-stage management. Perhaps even more importantly, many of these issues can be prevented and, through advocacy and patient education, primary health care workers play an important role in preventive health care. Indeed, a strengthened primary health care system has been emphasized as a crucial step in the pathway to universal health care.

Strengthening the country’s response to NCDs was a core priority of the 2010–2016 Aquino Health Agenda; the third of its three pillars focused on ‘MDGs and NCDs’ which specifies that treatment packs for hypertension and diabetes should be obtained and distributed to all RHUs as part of improved access to quality health care at hospitals and

RHUs.<sup>20</sup> Details related to NCD readiness and management were further detailed in the implementing guidelines on the institutionalization of the Philippine package of essential NCD interventions (PhilPEN), with a focus on hypertension and diabetes care.<sup>21</sup> These guidelines prioritized a shift away from tertiary care, reemphasizing the importance of primary care in the management of chronic NCD conditions. With the national priority of reducing the impact of NCDs well established, PhilHealth integrated PhilPEN guidelines into the PCB Package, and both the DOH and PhilHealth have worked to increase PhilPEN training nationwide.<sup>22</sup> Jointly, these efforts are expected to have greatly increased access to essential care for NCDs.

PCB-accredited RHUs are required to establish or update an annual health profile of the covered population. During profiling, RHUs are required to follow the PhilPEN protocol to diagnose and manage NCDs. Survey results showed that NCD care is widely available: 98 percent of RHUs offered diabetes diagnosis or management, 96 percent offered these services for CVD and CRD. However, gaps remain. Although CCS is a component of the PCB Package, it was available at only 30 percent of the RHUs visited.

### **Diabetes Mellitus**

The Philippines is ranked 15th worldwide for Diabetes Mellitus (DM or diabetes) prevalence, and diabetes is the seventh leading cause of death in the country. Diabetes prevalence in the Philippines is higher than both regional and global averages for all age groups and, while it is currently concentrated in the higher socioeconomic strata, prevalence is growing rapidly among the poor.

Identification and management of diabetes in the population is an important part of the government's health programming. While referral services for diabetes have long been an important component of PhilHealth's benefits, there have been efforts to push the locus of diabetes identification and treatment to primary care. The government's ComPacks aim to ensure the availability of key medicines for the poor and provide a number of diabetes medicines to facilities. Meanwhile, the current PCB Package calls for a comprehensive health profiling upon enlistment, which includes a risk assessment and lifestyle modification counseling for diabetes. While these services currently target the indigent, there are plans to expand this benefit package to all PhilHealth beneficiaries.

The WHO SARA tracer indicators cover (a) the availability of guidelines for diabetes diagnosis and treatment and staff trained on the same; (b) BP apparatus, an adult scale, and a measuring tape; (c) blood glucose and urine dipstick (protein and ketones) testing; and (d) metformin, glibenclamide, injectable insulin, injectable glucose, and gliclazide. The national PhilPEN guidelines were developed to harmonize with international norms,

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<sup>20</sup> DOH, Administrative Order (AO) 2010-0036 (2010), The Aquino Health Agenda: Achieving Universal Health Care for all Filipinos. Development 63: 1–9.

<sup>21</sup> DOH, Administrative Order (AO) 2012-002 (2012), Implementing Guidelines on the Institutionalization of the Philippine Package of Essential NCD Interventions (PhilPEN) on the Integrated Management of Hypertension and Diabetes for Primary Health Care Facilities.

<sup>22</sup> PhilHealth, Circular No. 0020.s.2013 (2013) Adoption of the Philippine Package of Essential Non-Communicable Disease (NCD) Interventions (PhilPEN) In the Implementation of PhilHealth's Primary Care Benefit Package. Available at: [https://www.philhealth.gov.ph/circulars/2013/circ20\\_2013.pdf](https://www.philhealth.gov.ph/circulars/2013/circ20_2013.pdf).

particularly the WHO’s Package of Essential NCD Interventions (WHO PEN), and most of the indicators listed by SARA are explicitly mentioned in the national guidelines. The main exception to this is the availability of insulin. While insulin availability was not indicated for RHUs under earlier iterations of service guidelines, the DOH is currently in the process of making available insulin at all RHUs (Table 26).

**Table 26. DM tracer indicators: SARA guidelines and indicators used for assessment**

Domain	WHO SARA Tracer Indicators	Tracer Indicators from Survey
<b>Staff and Guidelines</b>	<ul style="list-style-type: none"> <li>Guidelines for diabetes diagnosis and treatment</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> </ul>
	<ul style="list-style-type: none"> <li>Staff trained in diabetes diagnosis and treatment: At least one staff providing the service trained in diabetes diagnosis and treatment in the last two years</li> </ul>	<ul style="list-style-type: none"> <li>Have you received any training on PhilPEN guidelines?</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>BP apparatus</li> </ul>	<ul style="list-style-type: none"> <li>Non-mercurial BP apparatus (number of available instruments/equipment)</li> </ul>
	<ul style="list-style-type: none"> <li>Adult scale</li> </ul>	<ul style="list-style-type: none"> <li>Weighing scale (Adult)</li> </ul>
	<ul style="list-style-type: none"> <li>Measuring tape (height board/stadiometer)</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> </ul>
<b>Diagnostics</b>	<ul style="list-style-type: none"> <li>Blood glucose</li> </ul>	<ul style="list-style-type: none"> <li>Diagnostic services: Fasting blood glucose (offered services)</li> </ul>
	<ul style="list-style-type: none"> <li>Urine dipstick-protein</li> </ul>	<ul style="list-style-type: none"> <li>Dipstick for qualitative urine analysis (stock availability for today [lab supplies: automated CBC])</li> </ul>
	<ul style="list-style-type: none"> <li>Urine dipstick-ketones</li> </ul>	<ul style="list-style-type: none"> <li>Dipstick for qualitative urine analysis (stock availability for today [lab supplies: automated CBC])</li> </ul>
<b>Medicines and Commodities</b>	<ul style="list-style-type: none"> <li>Metformin capsule/tablet</li> </ul>	<ul style="list-style-type: none"> <li>Metformin (stock availability [diabetes])</li> </ul>
	<ul style="list-style-type: none"> <li>Glibenclamide capsule/tablet</li> </ul>	<ul style="list-style-type: none"> <li>Sulfonylureas, for example, glibenclamide, gliclazide (stock availability [diabetes])</li> </ul>
	<ul style="list-style-type: none"> <li>Insulin regular injectable</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> </ul>
	<ul style="list-style-type: none"> <li>Glucose 50% injectable</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> </ul>
	<ul style="list-style-type: none"> <li>Gliclazide tablet or glipizide tablet</li> </ul>	<ul style="list-style-type: none"> <li>Sulfonylureas, for example, glibenclamide, gliclazide (stock availability [diabetes])</li> </ul>

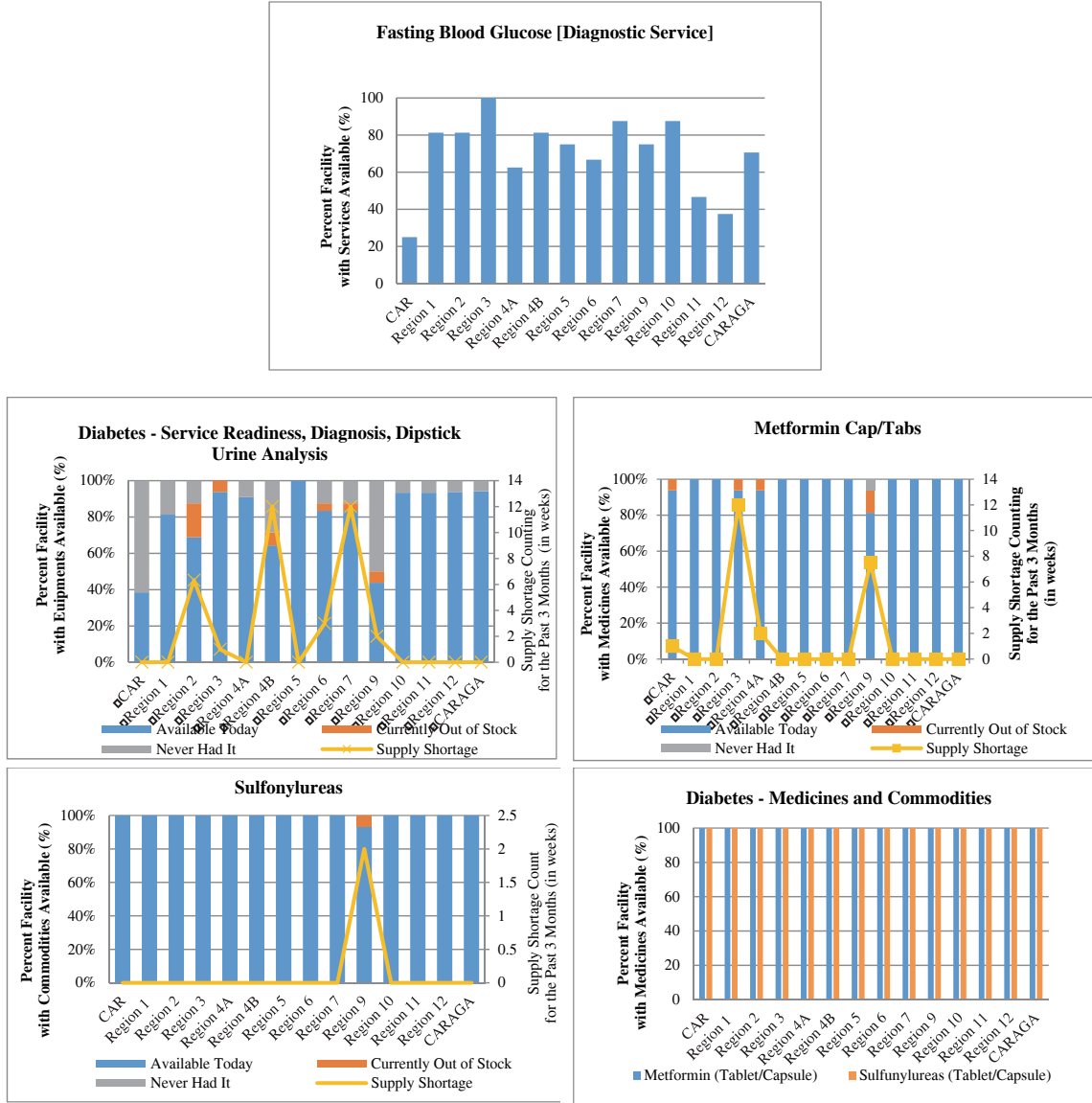
*Note:* Column 1 indicates the SARA domain; Column 2 indicates SARA tracer indicators; and Column 3 indicates the precise wording of the I3QUIP survey question or, when applicable, that a given indicator has been dropped.

DM services are available at nearly all (98 percent) RHUs, as is training on diabetes care. In all regions except for Region 12 (93.8 percent), all doctors have undergone PhilPEN training. Diabetes drugs, including metformin and sulfonylureas, are also common (each available at 97 percent of RHUs). These drugs are part of the ComPacks that the DOH has been distributing to RHUs since 2011, which may help explain the widespread availability. However, RHUs continue to struggle with gaps in diagnostic service capacity. Fasting blood glucose testing was available at just 70 percent of RHUs visited overall, and at only 25 percent of RHUs in CAR and 38 percent of RHUs in Region 10. Similar gaps were



found in the ability to conduct urine analysis: 81 percent overall, and only 39 percent in CAR and 100 percent in Region 5 (Figure 25).

**Figure 25. DM service readiness: Diagnostics availability and medicines and commodities availability**



Despite the importance of PhilPEN, there was a substantial, 9 percentage point difference in overall readiness to provide diabetes care between RHUs in first class LGUs and RHUs in sixth class LGUs. This difference is almost entirely driven by differences in the availability of diagnostics (Table 27). Regionally, we saw that CAR and Regions 2, 4B, 9, and 11 significantly underperformed compared to their neighbors in the availability of diabetes-specific diagnostics (Table 28).

**Table 27. DM service readiness score by LGU income group**

Income Level	Staff & Guidelines (%)	Basic Equipment (%)	Diagnostics (%)	Medicines & Commodities (%)	Overall (%)
1	100	98	83	99	93
2	100	98	80	94	91
3	98	99	80	98	92
4	100	99	76	97	91
5	100	99	56	99	85
6	100	95	57	100	84
Total	100	98	75	98	91

*Note:* Staff and Guidelines indicates that staff have received training on PhilPEN guidelines. Equipment includes access to a BP apparatus and a weighing scale. Diagnostics includes access to fasting blood glucose tests and qualitative urine analysis. Medicines and Commodities includes metformin and sulfonylureas. Color-coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

**Table 28. DM service readiness score by region**

Region	Staff & Guidelines (%)	Basic Equipment (%)	Diagnostics (%)	Medicines & Commodities (%)	Overall (%)
CAR	100	98	34	98	77
Region 1	100	92	77	96	88
Region 2	100	98	73	100	90
Region 3	100	100	96	98	98
Region 4A	100	100	81	98	93
Region 4B	100	100	60	100	87
Region 5	100	100	92	100	97
Region 6	100	99	78	92	89
Region 7	100	99	82	100	94
Region 9	100	100	50	89	80
Region 10	100	98	91	100	96
Region 11	100	100	73	100	91
Region 12	94	96	75	100	90
CARAGA	100	100	82	100	94
Total	100	98	75	98	91

*Note:* Staff and Guidelines indicates that staff have received training on PhilPEN guidelines. Equipment includes access to a BP apparatus and a weighing scale. Diagnostics includes access to fasting blood glucose tests and qualitative urine analysis. Medicines and commodities includes metformin and sulfonylureas. Color-coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

### Cardiovascular Disease

CVD was the top cause of death in the Philippines in 2013, the most recent year for which there is data (IHME 2013). CVD is a broad group of diseases which includes hypertension (the single most important cause of YLL in the country in 2013), coronary heart disease,

cerebrovascular diseases, and peripheral arterial disease. Like many other NCDs, CVD is associated with the combination of biologic, social, and environmental factors. Risk factors include genetics, diets high in salt and fat and low in fruits and vegetables, physical inactivity, stress, and smoking. As effects of these accrue over time, individuals often exhibit intermediate risk factors, including high body mass index and high total cholesterol. Prevention and treatment of hypertension, high total cholesterol, and diabetes (which is often comorbid with CVD) is key to managing CVD and preventing premature mortality. With aging populations and rapidly changing diets, many countries in the region—including the Philippines, Indonesia, Vietnam, and Malaysia, among others—have struggled with the rapid emergence of CVD as a dominant cause of morbidity and mortality. According to the 2008 National Nutrition Survey (NNS), 1 percent of the adult population was, at that time, diagnosed with myocardial infarction, and 1 percent was diagnosed with coronary heart disease, with prevalence increasing among those age 60 and older (Food and Nutrition Research Institute 2008). Prevalence is expected to have increased over the intervening years.

The Aquino Health Agenda specifies that treatment packs for hypertension should be obtained and distributed to all RHUs as part of improved access to quality hospitals and health care RHUs, and treatment for a number of issues related to the diagnosis and treatment of CVD were detailed in the PhilPEN guidelines. Generally, these guidelines prioritized a shift away from tertiary care, reemphasizing the importance of primary care in the management of chronic NCD conditions.

WHO SARA recommends that indicators for CVD service readiness include (a) at least one staff in the RHU who has received training for diagnosis and treatment of chronic cardiovascular conditions in the previous two years, and national guidelines for the diagnosis and treatment of chronic cardiovascular conditions be available at the RHU; (b) health RHUs should have, at a minimum, stethoscopes, functional BP machines (either a digital BP machine or a manual sphygmomanometer with a stethoscope), and adult scale; and (c) ACE inhibitors, thiazides, beta-blockers, calcium channel blockers, aspirin, and metformin. The angiotensin receptor blockers, which are hypertensive medicines that are among those distributed in the DOH’s ComPacks, was asked in the survey and added as an indicator in this analysis. This set is well aligned with national guidelines, which specified similar lists of equipment and commodities, although training and guideline requirements were unspecified. The tracer indicators from the survey and this analysis include an overview of all equipment and data, with the exception of aspirin for which data are unavailable (Table 29).

**Table 29. CVD tracer indicators: SARA guidelines and indicators used for assessment**

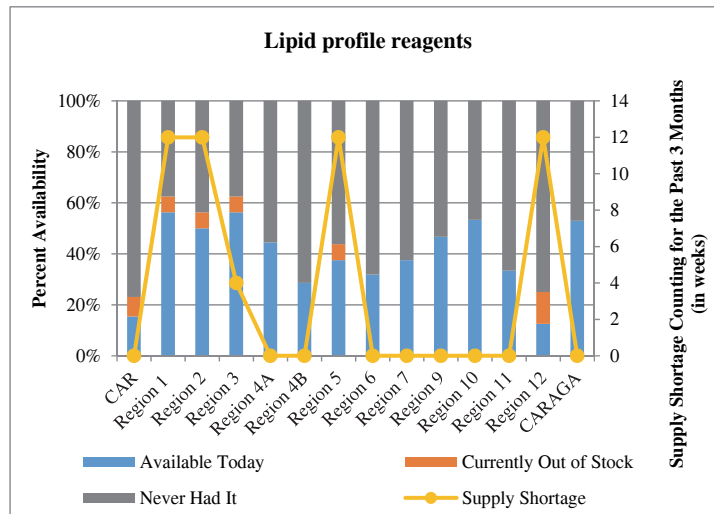
Domain	WHO SARA Tracer Indicators	Tracer Indicators from Survey
<b>Staff and Guidelines</b>	<ul style="list-style-type: none"> <li>Guidelines for diagnosis and treatment of chronic cardiovascular conditions</li> <li>Staff trained in diagnosis and management of chronic cardiovascular conditions: At least one staff providing the service trained in diagnosis and management of chronic</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> <li>Have you received any training on PhilPEN guidelines?</li> </ul>

Domain	WHO SARA Tracer Indicators	Tracer Indicators from Survey
	cardiovascular conditions in the last two years	
<b>Equipment</b>	<ul style="list-style-type: none"> <li>• Stethoscope</li> <li>• BP apparatus: Digital BP machine or manual sphygmomanometer with stethoscope</li> <li>• Adult scale</li> </ul>	<ul style="list-style-type: none"> <li>• Stethoscope (number of available instruments/equipment)</li> <li>• Non-mercurial BP apparatus (number of available instruments/equipment)</li> <li>• Weighing scale (adult)</li> </ul>
<b>Diagnostics</b>	<ul style="list-style-type: none"> <li>• n.a.</li> </ul>	<ul style="list-style-type: none"> <li>• Availability of lipid profile reagents</li> </ul>
<b>Medicines and Commodities</b>	<ul style="list-style-type: none"> <li>• ACE inhibitor (for example, enalapril, lisinopril, ramipril, perindopril)</li> <li>• Hydrochlorothiazide tablet or other thiazide diuretic tablet</li> <li>• Beta-blocker (for example, bisoprolol, metoprolol, carvedilol, atenolol)</li> <li>• Calcium channel blockers (for example, amlodipine)</li> <li>• Aspirin capsule/tablets</li> <li>• Metformin capsule/tablets</li> </ul>	<ul style="list-style-type: none"> <li>• ACE inhibitor (stock availability [hypertension])</li> <li>• Diuretic, for example, hydrochlorothiazide (stock availability [hypertension])</li> <li>• Beta-blocker (stock availability [hypertension])</li> <li>• Calcium channel blocker (stock availability [hypertension])</li> <li>• <i>Indicator Dropped - Data not available</i></li> <li>• Metformin (stock availability [diabetes])</li> <li>• Angiotensin receptor blocker (stock availability [hypertension])</li> </ul>

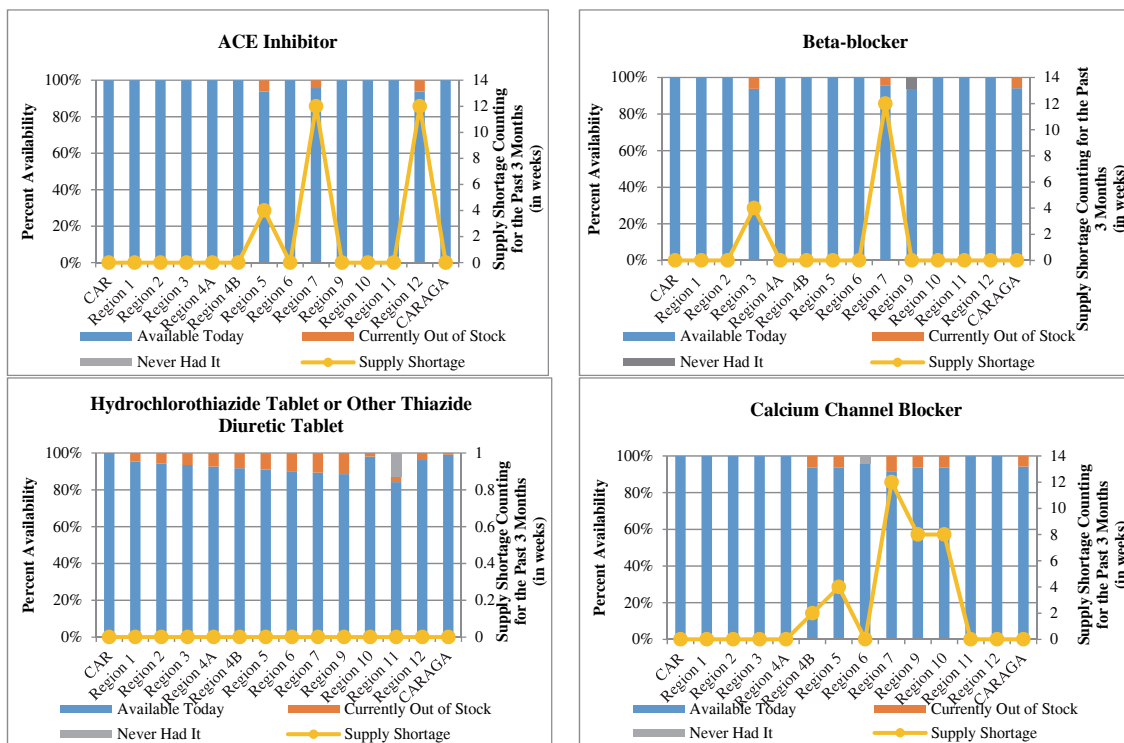
*Note:* Column 1 indicates the SARA domain; Column 2 indicates SARA tracer indicators; and Column 3 indicates the precise wording of the I3QUP survey question or, when applicable, that a given indicator has been dropped.

Overall, RHUs included in this assessment were well prepared to handle primary care level CVD screening and treatment activities. Almost all RHUs had at least one staff who had received PhilPEN training and CVD diagnosis and treatment were widely available at the RHUs visited. Tracer equipment included stethoscopes, BP apparatus, and an adult scale, and all were widespread. The same was true for the medicines considered. ACE inhibitors, diuretics, beta-blockers, calcium channel blockers, and metformin (all components of the ComPacks distributed by the DOH) were available at a majority of the RHUs. However, a number of stock-outs were identified. RHUs in Region 9, in particular, reported stock-outs for each of the medicines in the assessment: ACE inhibitors, thiazide diuretics, beta-blockers, calcium channel blockers, metformin tablets, and angiotensin receptor blockers (Figure 27). While not indicated in the SARA guidelines, we also provide information on the availability of lipid profile reagents, which are available in only approximately half of the facilities visited (Figure 26).

**Figure 26. CVD service readiness: Diagnostics availability**



**Figure 27. CVD service readiness: Medicines and commodities availability**



The availability of equipment and medicines for CVD was very strong and we identified very little variability along either regional or income lines (Table 29, Table 30). However, diagnostic capabilities remain very low. CAR scored just 9 percent for CVD-specific diagnostics, and Regions 5 and 12 both scored below 20 percent. Region 3 had the highest diagnostic score with an aggregate score of just 65 percent.

**Table 30. CVD service readiness score by LGU income classification**

Income Class	Staff & Guidelines (%)	Diagnostics (%)	Basic Equipment (%)	Medicines & Commodities (%)	Overall (%)
1	100	52	98	99	87
2	100	56	98	97	87
3	98	47	99	98	86
4	100	47	99	97	85
5	100	34	99	98	82
6	100	48	95	100	86
Total	100	48	99	98	86

*Note:* Staff and Guidelines indicates that staff have received training on PhilPEN guidelines. Diagnostics includes access to lipid profile reagents. Basic Equipment includes access to a stethoscope, BP apparatus, and a weighing scale. Medicines and Commodities includes availability of ACE inhibitors, diuretics, beta-blockers, calcium channel blockers, metformin, and angiotensin. Color-coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

**Table 31. CVD service readiness score by region**

Region	Staff & Guidelines (%)	Diagnostics (%)	Basic Equipment (%)	Medicines & Commodities (%)	Overall (%)
CAR	100	9	98	99	76
Region 1	100	62	92	100	88
Region 2	100	51	98	100	87
Region 3	100	65	100	98	90
Region 4A	100	52	100	99	88
Region 4B	100	51	100	99	87
Region 5	100	19	100	98	79
Region 6	100	48	99	99	86
Region 7	100	49	99	97	85
Region 9	100	55	100	94	86
Region 10	100	60	98	99	89
Region 11	100	49	100	97	86
Region 12	94	13	98	99	82
CARAGA	100	57	100	98	88
Total	100	48	99	98	86

*Note:* Staff and Guidelines indicates that staff have received training on PhilPEN guidelines. Diagnostics includes access to lipid profile reagents. Basic Equipment includes access to a stethoscope, BP apparatus, and a weighing scale. Medicines and Commodities includes availability of ACE inhibitors, diuretics, beta-blockers, calcium channel blockers, metformin, and angiotensin. Color-coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

## Chronic Respiratory Disease

CRDs, including asthma, COPD, and other diseases of the airways and lungs, are another NCD challenge. In 2008, asthma and COPD together accounted for more than 6 percent of all reported deaths (approximately 10,200) in the country. COPD is the most important CRD-related cause of morbidity and mortality, accounting for 57 percent of reported CRD-linked deaths. Asthma is linked to 41 percent of the CRD deaths, with the remaining uncategorized; between one in three and one in four Filipinos has definite or possible asthma.

Asthma was introduced into the PhilHealth benefit package in 2011 as a part of PCB, and the policy around asthma treatment has most recently been updated in 2016.<sup>23</sup> The current guidelines provide guidance on diagnosis and management of asthma at the primary care level and at higher-level facilities.

The SARA tracer indicators for CRD consist of (a) the availability of guidelines and staff trained in the diagnosis and management of CRD in the previous two years; (b) a stethoscope, a peak flowmeter, spacer for inhalers, and oxygen; and (c) salbutamol inhalers, beclomethasone inhalers, beta-blockers, prednisolone tablets, hydrocortisone injection, and epinephrine injectables. We compare the WHO SARA guidelines to the PhilHealth policy statement for asthma care in Annex 5. The tracer indicators from the survey (Column 3 of Table 32) include only the availability of key equipment (stethoscope and peak expiratory flowmeter) and drugs (beta2-agonist, beclomethasone, and beta-blockers).

**Table 32. CRD tracer indicators: SARA guidelines and indicators used for assessment**

Domain	WHO SARA Tracer Indicators	Tracer Indicators from Survey
<b>Staff and Guidelines</b>	<ul style="list-style-type: none"> <li>Guidelines for diagnosis and management of CRD: Country adapts to which guidelines are required/accepted (can be NCD guidelines which contain information on CRD)</li> <li>Staff trained in diagnosis and management of CRD: At least one staff providing the service trained in diagnosis and management of CRD in the last two years (can be an NCD training including a section on CRD)</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>Stethoscope</li> <li>Peak flowmeter</li> <li>Spacers for inhalers</li> </ul>	<ul style="list-style-type: none"> <li>Stethoscope (number of available instruments/equipment)</li> <li>Diagnostic service: Peak expiratory flowmeter (offered services)</li> <li><i>Indicator Dropped - Data not available</i></li> </ul>

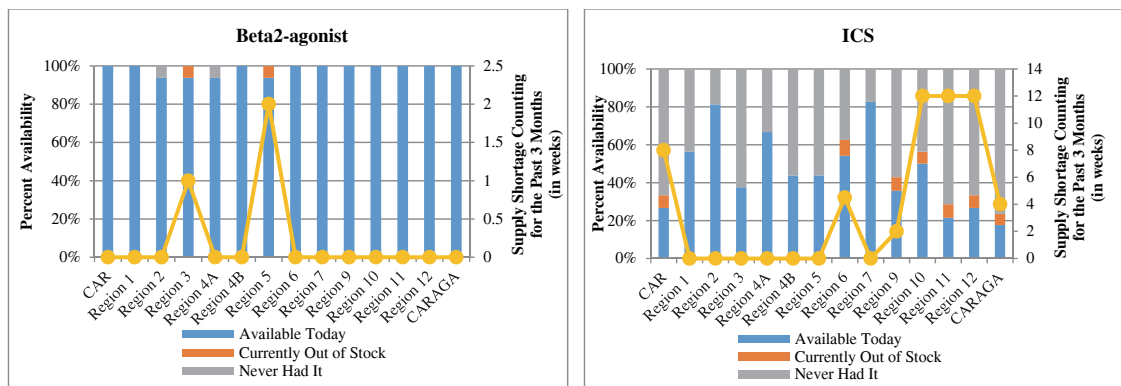
<sup>23</sup> PhilHealth Circular No.2016-0004 (2016) Policy Statement on the Diagnosis and Management of Asthma in Adults as Reference by the Corporation in Ensuring Quality of Care. Available at: <https://www.philhealth.gov.ph/circulars/2016/circ2016-004.pdf>.

Domain	WHO SARA Tracer Indicators	Tracer Indicators from Survey
	<ul style="list-style-type: none"> <li>Oxygen: Oxygen cylinders OR concentrators OR central oxygen supply with functioning flowmeter for oxygen therapy (with humidification) AND oxygen delivery apparatus</li> </ul>	<ul style="list-style-type: none"> <li>Indicator Dropped - Data not available</li> </ul>
<b>Medicines and Commodities</b>	<ul style="list-style-type: none"> <li>Salbutamol inhaler</li> <li>Beclomethasone inhaler</li> <li>Beta-blocker (for example, bisoprolol, metoprolol, carvedilol, atenolol)</li> <li>Prednisolone capsules/tablets</li> <li>Hydrocortisone injection</li> <li>Epinephrine injectable</li> </ul>	<ul style="list-style-type: none"> <li>Beta2-agonist for example, salbutamol (stock availability [asthma])</li> <li>ICS, for example, beclomethasone or budesonide or fluticasone (stock availability [asthma])</li> <li>Beta-blocker (stock availability [hypertension])</li> <li>Indicator Dropped - Data not available</li> <li>Indicator Dropped - Data not available</li> <li>Indicator Dropped - Data not available</li> </ul>

Note: Column 1 indicates the SARA domain; Column 2 indicates SARA tracer indicators; and Column 3 indicates the precise wording of the I3QUiP survey question or, when applicable, that a given indicator has been dropped.

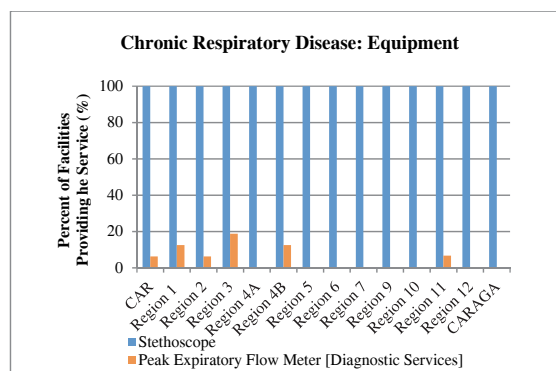
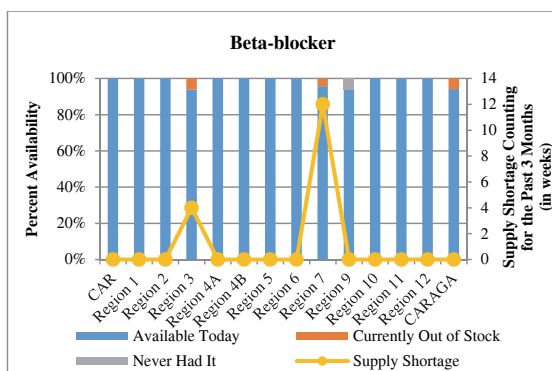
While almost all RHUs offer some sort of asthma care, this is largely limited to treatment, generally via beta2-agonists and beta-blockers, which are nearly universal. Inhaled corticosteroids (ICS), in contrast, are available at fewer than half of the RHUs, and necessary diagnostics equipment is generally missing from the RHUs visited. Only 4 percent of RHUs had a peak expiratory flowmeter in place on the day of the survey, despite the fact that the PhilHealth policy statement on asthma has required the use of peak expiratory flowmeter since May 2013 (Figure 28).<sup>24</sup>

**Figure 28. CRD service readiness: Medicines and commodities availability and equipment availability**



<sup>24</sup> PhilHealth, Quality Assurance Committee Resolution No. 05 s.2013; (2013) Resolution recommending the adoption of the CPG-based policy statement on bronchial asthma in adults in the outpatient setting.





There was no clear association between readiness to provide CRD services and LGU income class (Table 33). We do, however, identify regional variation in the availability of CRD services, particularly linked to differences in the stocking of drugs and commodities, as the extremely low availability of peak expiratory flowmeters resulting in universally low equipment scores. CAR and CARAGA were among the lowest-performing regions (Table 34).

**Table 33. CRD service readiness score by LGU income group**

Income Level	Basic Equipment (%)	Medicines & Commodities (%)	Overall (%)
1	53	84	71
2	50	78	67
3	51	80	69
4	54	81	70
5	50	83	70
6	57	81	71
Total	52	81	70

*Note:* Relevant CRD staffing indicators were not collected and are not shown. Basic Equipment indicates availability of stethoscope and a peak expiratory flowmeter. Medicines and Commodities indicates availability of beta2-agonists; beclomethasone, budesonide, or fluticasone; and beta-blockers. Color-coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

**Table 34. CRD service readiness score by region**

Region	Basic Equipment (%)	Medicines & Commodities (%)	Overall (%)
CAR	53	76	67
Region 1	56	85	74
Region 2	53	92	76
Region 3	59	75	69
Region 4A	50	87	72

Region	Basic Equipment (%)	Medicines & Commodities (%)	Overall (%)
Region 4B	56	81	71
Region 5	50	79	68
Region 6	50	85	71
Region 7	50	93	76
Region 9	50	76	66
Region 10	50	83	70
Region 11	53	74	66
Region 12	50	76	65
CARAGA	50	71	62
Total	52	81	70

*Note:* Relevant CRD staffing indicators were not collected and are not shown. Basic Equipment indicates availability of stethoscope and a peak expiratory flowmeter. Medicines and Commodities indicates availability of beta2-agonists; beclomethasone, budesonide, or fluticasone; and beta-blockers. Color-coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

### Cervical Cancer Screening

In contrast to most other types of cancers, cervical cancer is largely preventable. Onset is associated with prior infection with the vaccine-preventable HPV and early diagnosis and treatment can prevent disease progression and avoid much of the morbidity and mortality associated with the disease. Nonetheless, cervical cancer is the fifth most common cancer among women and is responsible for 7 percent of all deaths due to malignancy in the Philippines.

CCS is an emerging priority in the Philippines and, in 2016, the government ramped up its response. Regional centers to train providers to conduct CCS have recently opened, and the government is in the process of rolling out widespread trainings. As data presented here were collected in 2014, they provide a baseline snapshot of the policies and infrastructure in place prior to the government's current efforts. While provision of CCS is included in the 2012 PCB Package, relatively few staff were trained in the screening protocol at the time of the survey. Later rounds of data collection are likely to reflect these more recent investments and efforts to expand access to screening.

The SARA tracer indicators for CCS consist of (a) staff trained in cervical cancer prevention and control and the availability of guidelines; (b) a speculum; and (c) the availability of acetic acid. The MNCHN MOP guidelines specify the ability to conduct CCS using either VIA or a pap smear. Both a speculum and acetic acid are specified in the MNCHN MOP (Table 35).

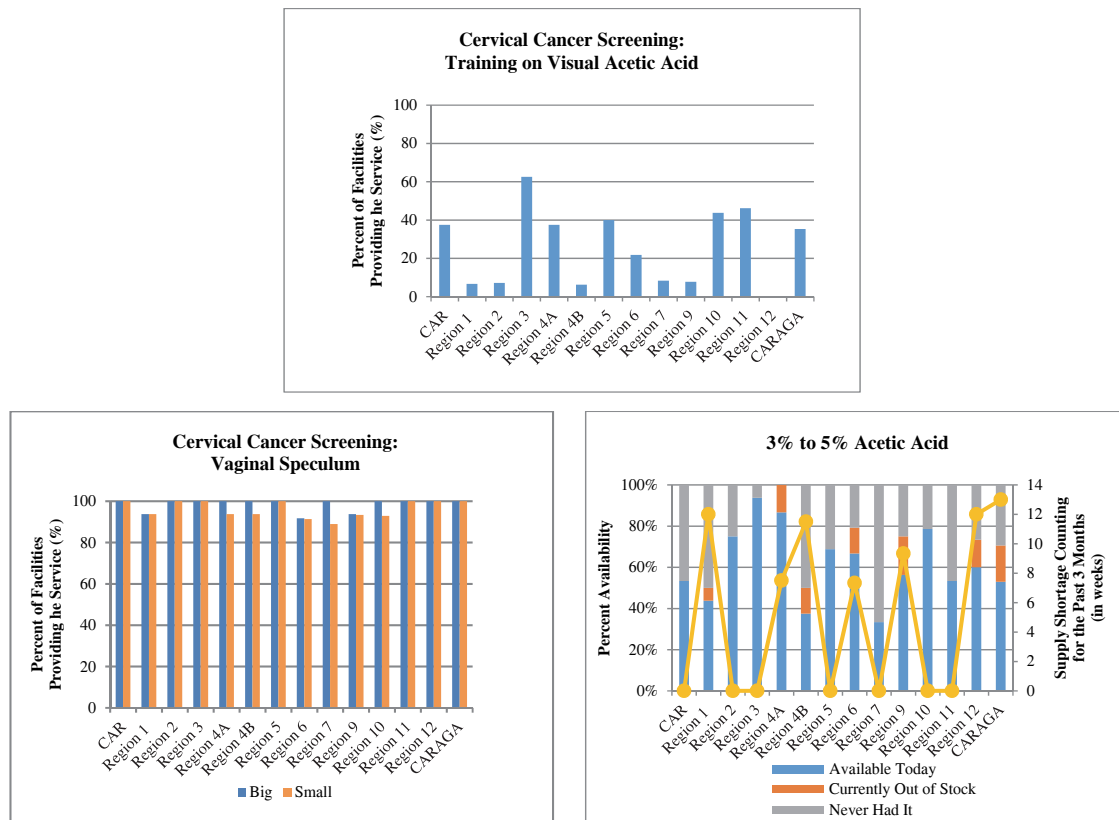
**Table 35. CCS tracer indicators: SARA guidelines and indicators used for assessment**

Domain	WHO SARA Tracer Indicators	Tracer Indicators from Survey
Staff and Guidelines	<ul style="list-style-type: none"> <li>Guidelines for cervical cancer prevention and control</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> </ul>
	<ul style="list-style-type: none"> <li>Staff trained in cervical cancer prevention and control</li> </ul>	<ul style="list-style-type: none"> <li>Have you attended a training on visual acetic acid?</li> </ul>
Equipment	<ul style="list-style-type: none"> <li>Speculum</li> </ul>	<ul style="list-style-type: none"> <li>Vaginal speculum (big) (number of available instruments/equipment)</li> </ul>
Diagnostics	<ul style="list-style-type: none"> <li>Acetic acid</li> </ul>	<ul style="list-style-type: none"> <li>3% to 5% acetic acid (availability of supply today)</li> </ul>

Note: Column 1 indicates the SARA domain; Column 2 indicates SARA tracer indicators; and Column 3 indicates the precise wording of the I3QUIP survey question or, when applicable, that a given indicator has been dropped.

Many RHUs did not yet offer screening services at the time of the survey. While necessary equipment (speculum) was widespread, fewer than half of the RHUs visited offered screening. Acetic acid, which is needed for screening, was not available at many RHUs (Figure 29).

**Figure 29. CCS service readiness: Equipment availability and diagnostics availability**



The nature of the inputs for cervical screening merit some discussion. Acetic acid is sold as table vinegar, and is readily available at low cost from many stores. Thus, the current low availability of acetic acid is likely an indication that these facilities do not offer this service rather than gaps in the supply chain. Once the provider undergoes training on visual

screening for cervical cancer, the availability of acetic acid is not expected to be an issue. Speculums, by contrast, are needed for other services routinely offered at RHUs. Thus, its general availability likely points to the strength of other maternal and women’s health programs, rather than cervical screening readiness.

CCS services are, generally, least available among RHUs in sixth class LGUs and most available among RHUs in first class LGUs. While the equipment is widely available, access to inputs such as acetic acid and staff training vary by income class. The same is true regionally. At the time of the survey, no staff at the RHUs visited in Region 12 reported having attended training on CCS, while nearly two-thirds of staff in Region 3 had received training. Access to medicines and commodities was also higher in Region 3, and the region received an aggregate commodities score of 94 percent, compared to the sample average of 60 percent (Table 37).

**Table 36. CCS service readiness score by LGU income classification**

Income Class	Staff & Guidelines (%)	Basic Equipment (%)	Medicines & Commodities (%)	Overall (%)
1	29	100	76	68
2	21	97	43	53
3	20	98	63	60
4	30	98	70	66
5	23	97	38	53
6	29	100	43	57
Total	25	98	60	61

*Note:* Staff & Guidelines refers to facilities having at least one staff who attended training on visual acetic acid. Basic Equipment refers to availability of a speculum. Medicines and Commodities refers to the availability of 3 percent to 5 percent acetic acid. Color-coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

**Table 37. CCS service readiness score by region**

Region	Staff & Guidelines (%)	Basic Equipment (%)	Medicines & Commodities (%)	Overall (5)
CAR	38	100	53	64
Region 1	7	94	44	48
Region 2	7	100	75	61
Region 3	63	100	94	85
Region 4A	38	100	87	75
Region 4B	6	100	38	48
Region 5	40	100	69	70
Region 6	22	92	67	60
Region 7	8	100	33	47
Region 9	8	94	56	53
Region 10	44	100	79	74

Region	Staff & Guidelines (%)	Basic Equipment (%)	Medicines & Commodities (%)	Overall (5)
Region 11	46	100	53	66
Region 12	0	100	60	53
CARAGA	35	100	53	63
Total	25	98	60	61

*Note:* Staff & Guidelines refers to facilities having at least one staff who attended training on visual acetic acid. Basic Equipment refers to availability of a speculum. Medicines and Commodities refers to the availability of 3 percent to 5 percent acetic acid. Color-coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

#### 4. Tuberculosis

Although the epidemiologic transition toward a preponderance of NCDs is well under way in the Philippines, the country continues to face a substantial CD burden, and addressing this burden is an explicit priority of the national government. TB is among the top causes of morbidity and the fourth leading cause of mortality in the country. Despite a robust DOTS program and generalized reduction in prevalence of TB, much remains to be done and the MDG target was not met. National data indicate a TB case detection rate of 83 percent (exceeding the national target of 70 percent) and treatment success rate of 90 percent (Philippines Statistical Authority, MDG Watch, September 2015).<sup>25</sup> Meanwhile, the increase in multi-drug resistant (MDR) TB, both globally and domestically, necessitates the availability of a robust screening, diagnosis, and treatment system. The 2014 FHSIS indicates a national case detection rate of 41.62.

PhilHealth first introduced coverage for TB care in 2002 with the passage of Resolution Nos. 485 and 490, which detailed reimbursements to RHUs for consultation, diagnostics, and medicines associated with TB care. In 2003, Circular Nos. 17 and 19 expanded these services to include coverage for DOTS and coverage for pediatric and extra-pulmonary TB. The current 2010–2016 Philippine Plan against Tuberculosis outlines a plan to achieve an 85 percent case detection rate and at least 90 percent treatment success rate.

The SARA tracer indicators for TB consist of (a) guidelines and staff trained on diagnosis and treatment of TB, management of HIV and TB coinfection, MDR-TB treatment (or referral), and TB infection control; (b) TB microscopy, HIV diagnostic capacity, a system for diagnosis of HIV among TB clients, and sputum microscopy; and (c) first-line TB medications (Table 38). Sputum microscopy is the only diagnostic required in the TB-DOTS protocol in the Philippines, hence only sputum microscopy and first-line drugs are the only tracer indicators used in this analysis. The survey was not able to capture any indicators on staff and guidelines.

<sup>25</sup> <http://nap.psa.gov.ph/mdg/MDGWatchasofSeptember2015.pdf>.

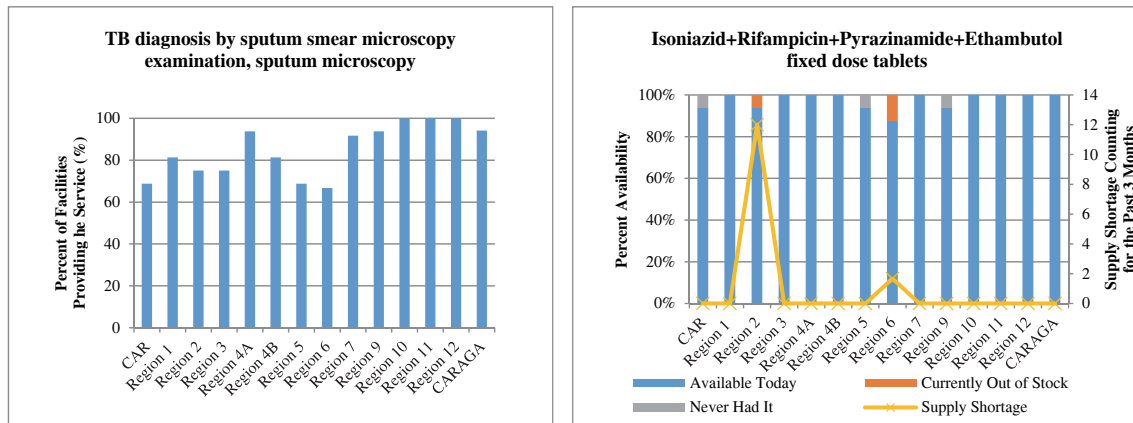
**Table 38. TB tracer indicators: SARA guidelines and indicators used for assessment**

Domain	WHO SARA Tracer Indicators	Tracer Indicators from Survey
Staff and Guidelines	<ul style="list-style-type: none"> <li>Guidelines for diagnosis and treatment of TB</li> <li>Guidelines for management of HIV and TB coinfection</li> <li>Guidelines related to MDR-TB treatment (or identification of need for referral)</li> <li>Guidelines for TB infection control</li> <li>Staff trained in TB diagnosis and management</li> <li>Staff trained in management of HIV and TB coinfection</li> <li>Staff trained in client MDR-TB treatment or identification of need for referral</li> <li>Staff trained in TB infection control</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> </ul>
Diagnostics	<ul style="list-style-type: none"> <li>TB microscopy</li> <li>HIV diagnostic capacity</li> <li>System for diagnosis of HIV among TB clients</li> <li>Sputum microscopy</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> <li><i>Indicator Dropped - Data not available</i></li> <li>Diagnostic service: Sputum testing for TB (offered services)</li> </ul>
Medicines and Commodities	<ul style="list-style-type: none"> <li>First-line TB medications</li> </ul>	<ul style="list-style-type: none"> <li>Isoniazid+Rifampicin+Pyrazinamide+Ethambutol fixed-dose tablets, tablet/capsule (observed available preparation [TB drugs])</li> </ul>

*Note:* Column 1 indicates the SARA domain; Column 2 indicates SARA tracer indicators; and Column 3 indicates the precise wording of the I3QUP survey question or, when applicable, that a given indicator has been dropped.

Sputum microscopy was available at 85 percent of the 240 RHUs. Some form of first-line treatment was similarly widespread. Nearly all (97 percent) of the 240 facilities visited during the survey offered isoniazid-rifampicin-pyrazinamide-ethambutol combination tablets.

**Figure30. Equipment availability and medicines and commodities availability**



Although there was high overall readiness to provide TB services, we see a difference in overall readiness depending on the LGU income class. Facilities in sixth class LGUs scored an average of 86 percent on access to the diagnostic tools, compared to 100 percent among first, second, and third class LGUs. Regionally, CAR and Region 6 underperformed compared to other regions, although there was no one input that appeared to drive gaps in service readiness for TB (Table , Table 40).

**Table 39. TB service readiness score by LGU income group**

Income Level	Diagnostics (%)	Medicines & Commodities (%)	Overall (%)
1	100	98	99
2	100	97	98
3	100	100	100
4	92	95	93
5	92	97	95
6	86	86	86
Total	96	97	97

*Note:* Relevant TB staffing indicators were not collected and are not shown. Diagnostics refers to the availability of sputum smear microscopy. Medicines and Commodities refers to the availability of Isoniazid-Rifampicin-Pyrazinamide-Ethambutol tablets. Color-coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

**Table 40. TB service readiness score by region**

Region	Diagnostics (%)	Medicines & Commodities (%)	Overall (%)
CAR	88	94	91
Region 1	100	100	100
Region 2	100	94	97
Region 3	100	100	100
Region 4A	94	100	97
Region 4B	88	100	94
Region 5	100	94	97
Region 6	92	88	90
Region 7	96	100	98
Region 9	100	94	97
Region 10	94	100	97
Region 11	100	100	100
Region 12	100	100	100
CARAGA	100	100	100
Total	96	97	97

*Note:* Relevant TB staffing indicators were not collected and are not shown. Diagnostics refers to the availability of sputum smear microscopy. Medicines and Commodities refers to the availability of Isoniazid-Rifampicin-Pyrazinamide-Ethambutol tablets. Color-coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

### 5. Variation in Service Readiness

In this section, we present evidence of macro trends in service readiness and availability. As shown in Table , regions that perform poorly in one health service category often struggle across multiple categories. CAR and Region 9 both underperformed across nearly all of the health service categories, while Region 10 and CARAGA both performed at or above the mean in nearly all the categories.

**Table 41. Variation in service readiness score by region**

Region	ANC (%)	FP (%)	Immunization (%)	Child Health (%)	DM (%)	CVD (%)	CRD (%)	CCS (%)	TB (%)
CAR	80	93	77	87	77	76	67	64	91
Region 1	89	93	70	88	88	88	74	48	100
Region 2	88	90	78	93	90	87	76	61	97
Region 3	95	95	83	89	98	90	69	85	100
Region 4 A	85	99	81	86	93	88	72	75	97
Region 4 B	82	98	81	79	87	87	71	48	94



Region 5	93	100	74	90	97	79	68	70	97
Region 6	86	93	83	83	89	86	71	60	90
Region 7	87	92	73	80	94	85	76	47	98
Region 9	81	99	77	87	80	86	66	53	97
Region 10	97	99	84	95	96	89	70	74	97
Region 11	95	100	80	98	91	86	66	66	100
Region 12	96	96	82	98	90	82	65	53	100
CARAGA	92	99	85	93	94	88	62	63	100
Total	89	96	79	89	91	86	70	61	97

Note: Color-coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

Table shows that there is a clear relationship between service readiness and the resource base of the LGUs where the surveyed facility is located. In general, the table suggests improving performance with increasing LGU resources. Facilities in first income class municipalities perform at or above the sample means for all health service categories and have the top performance for several categories, while RHUs from the poorest LGUs, in fifth and sixth income classes, each had the lowest score for five domains. Between them, RHUs in fifth and sixth class municipalities perform at or above the sample mean for only one health service category: CRD. Although we cannot clearly link this outcome with any particular policy, it is notable that CRD benefits from ComPacks' central procurement.

**Table 2. Variation in service readiness score by LGU income group**

Income Level	ANC (%)	FP (%)	Immuni zation (%)	Child Health (%)	DM (%)	CVD (%)	CRD (%)	CCS (%)	TB (%)
1	94	96	80	93	93	87	71	68	99
2	88	94	80	89	91	87	67	53	98
3	91	97	79	90	92	86	69	60	100
4	88	96	78	86	91	85	70	66	93
5	84	95	77	84	85	82	70	53	95
6	78	91	77	86	84	86	71	57	86
Total	89	96	79	89	91	86	70	61	97

Note: Color-coding indicates relative performance, with those performing above the mean shaded in green and those below the mean shaded in beige.

Finally, these tables also highlight the high variability in average performance across the different health service categories. The average category scores for FP and TB were nearly 100 percent. Reflecting their relatively new status in the PhilHealth benefit package, readiness to provide both CRD and CCS scores were far lower, at 70 percent and 61 percent, respectively. With an average score of 79 percent, readiness to provide immunization services is also relatively low. As with CRD and CCS scores, this low average is a reflection of the difficulty of rapidly attaining high coverage at the scale of more newly introduced vaccines such as rotavirus and pneumococcal vaccines.

Figure 31. Regional variation in ANC service readiness

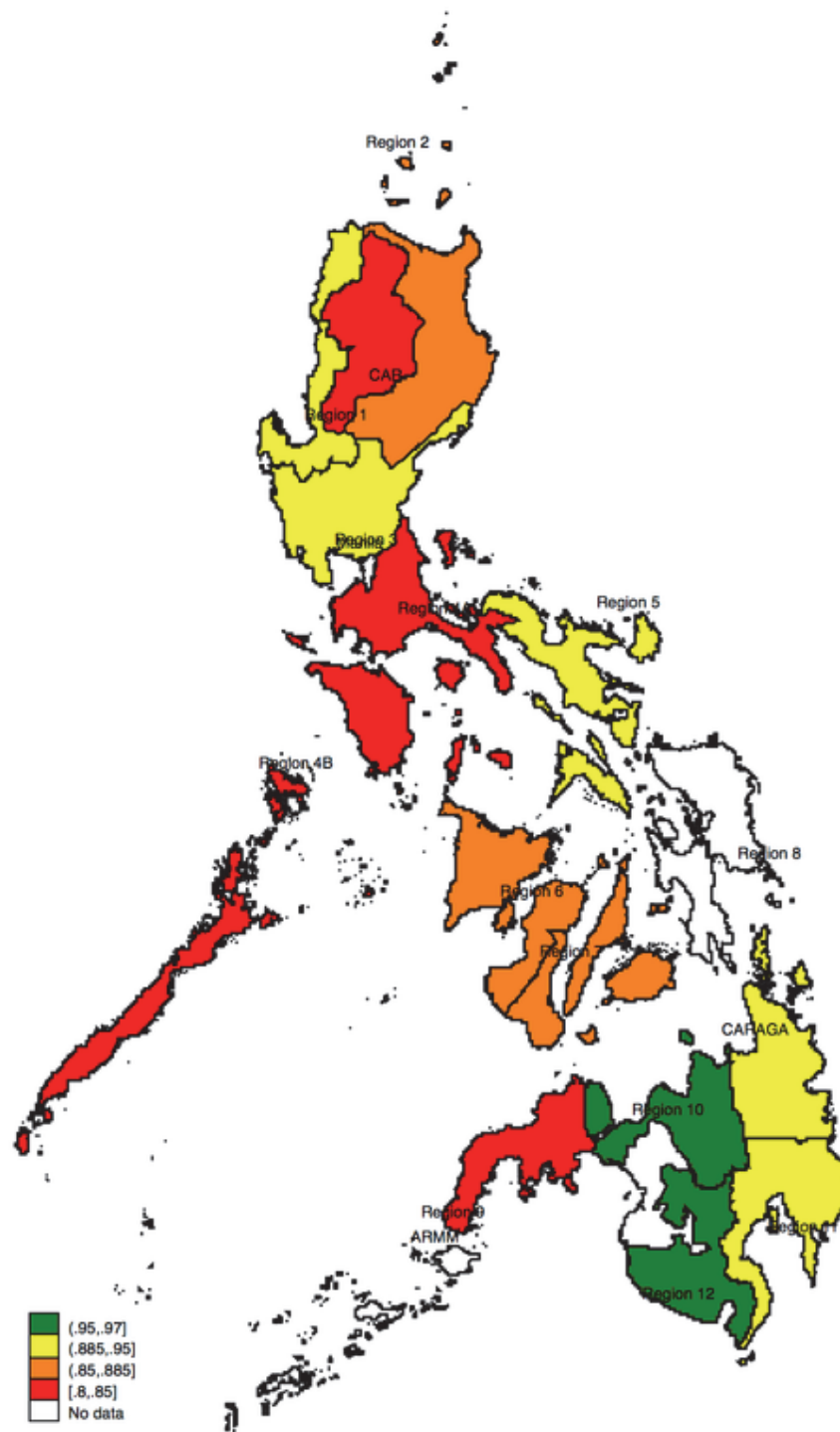


Figure 32. Regional variation in FP service readiness

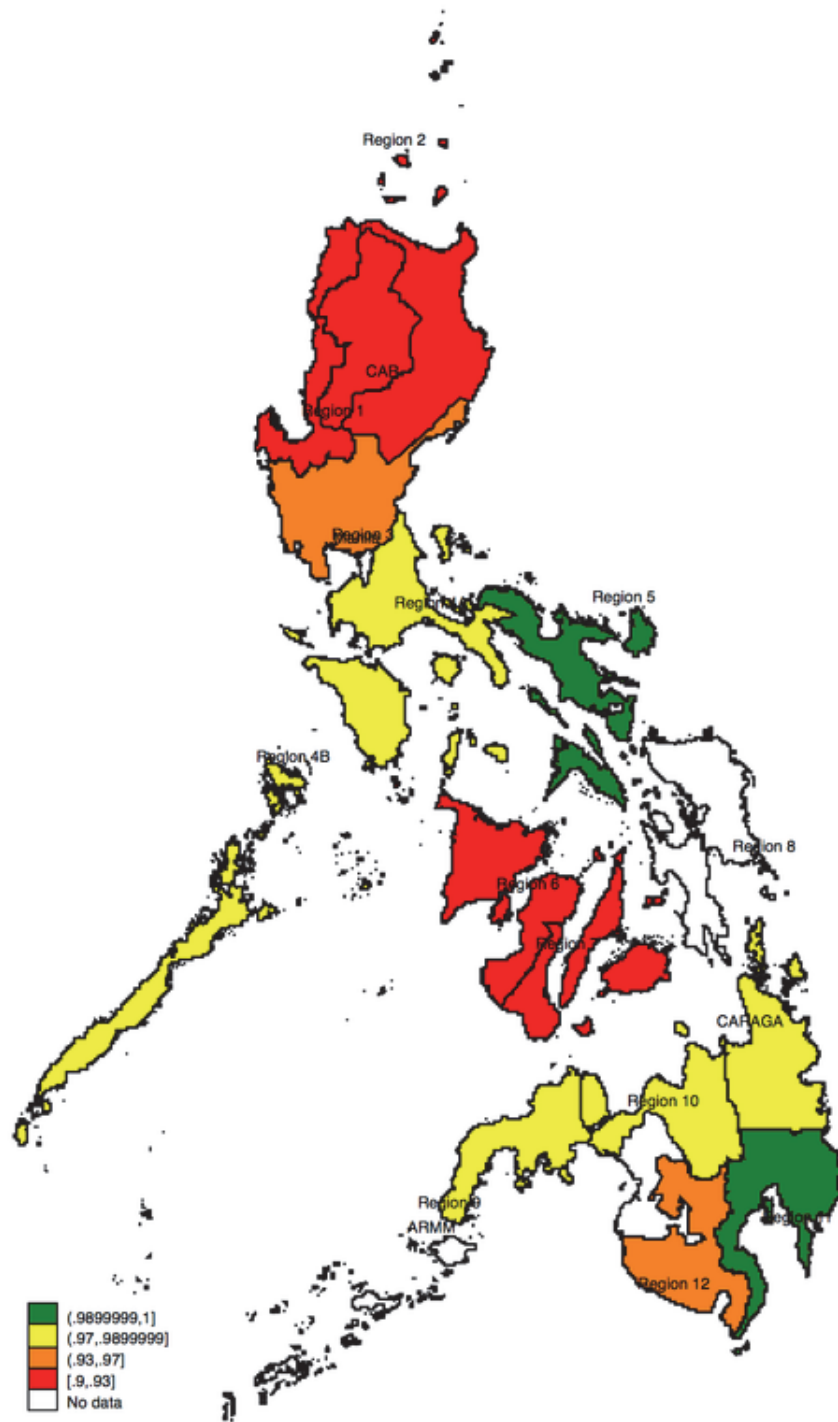


Figure 33. Regional variation in immunization service readiness

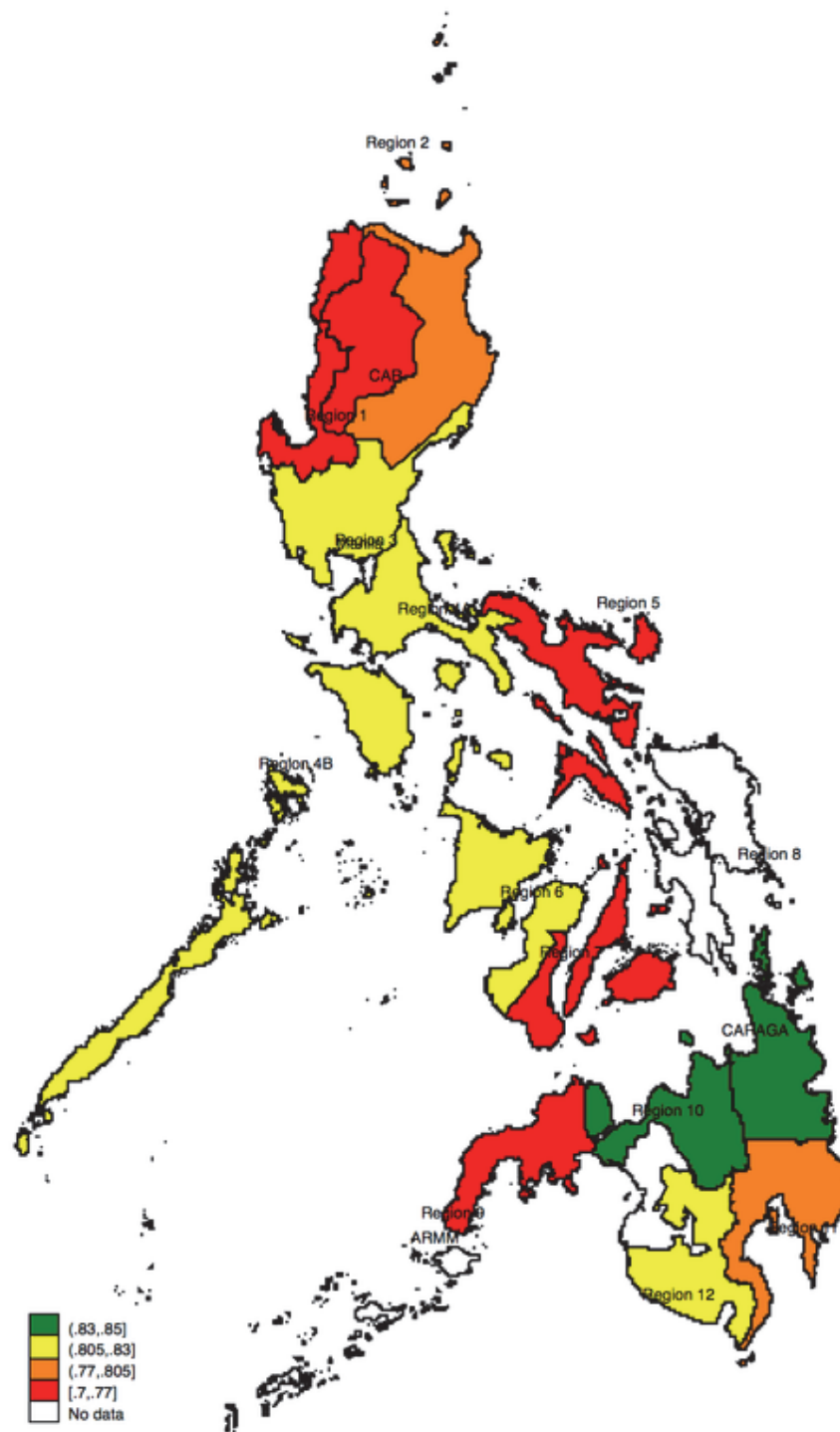


Figure 34. Regional variation in child health service readiness

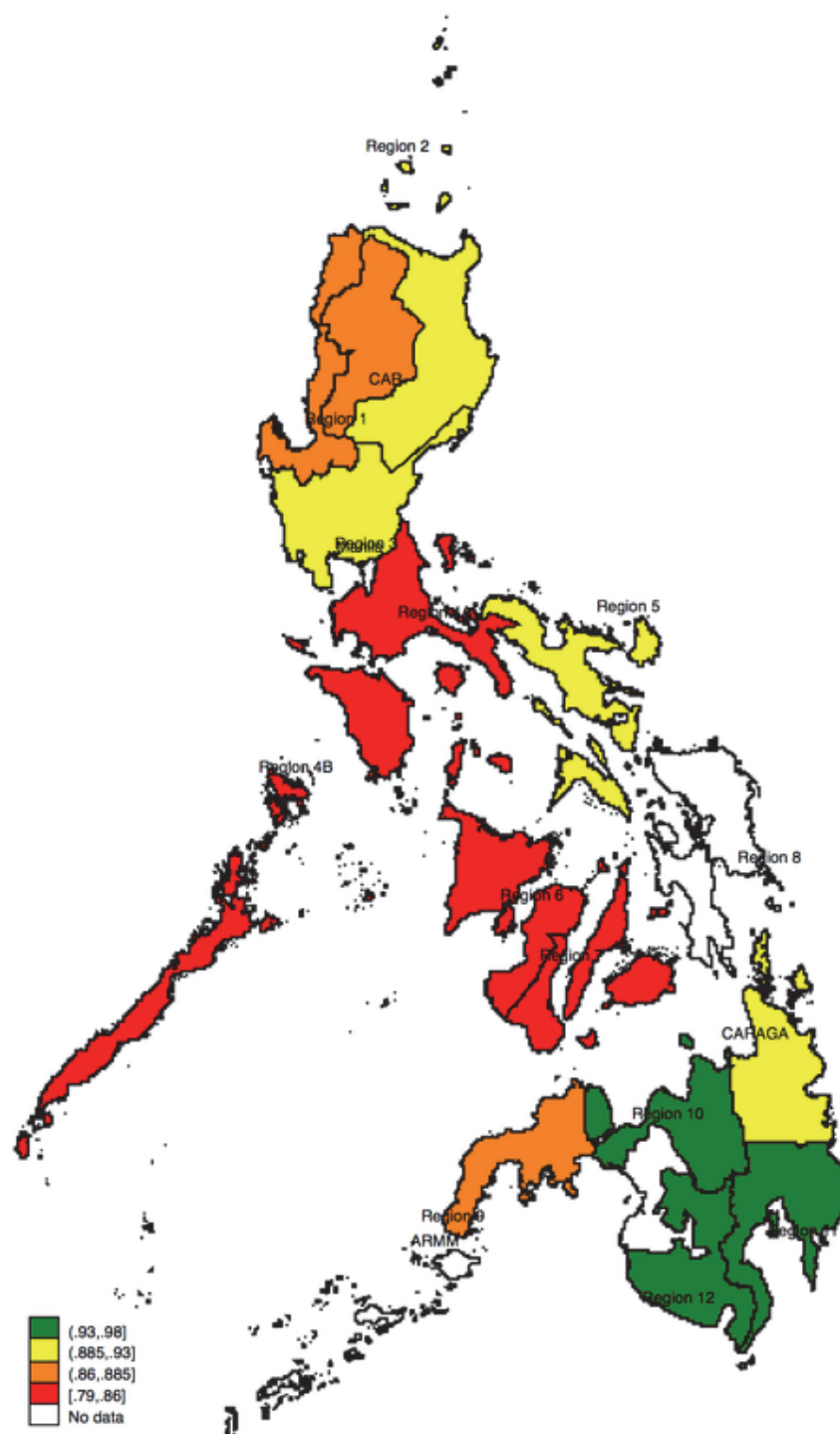


Figure 35. Regional variation DM service readiness

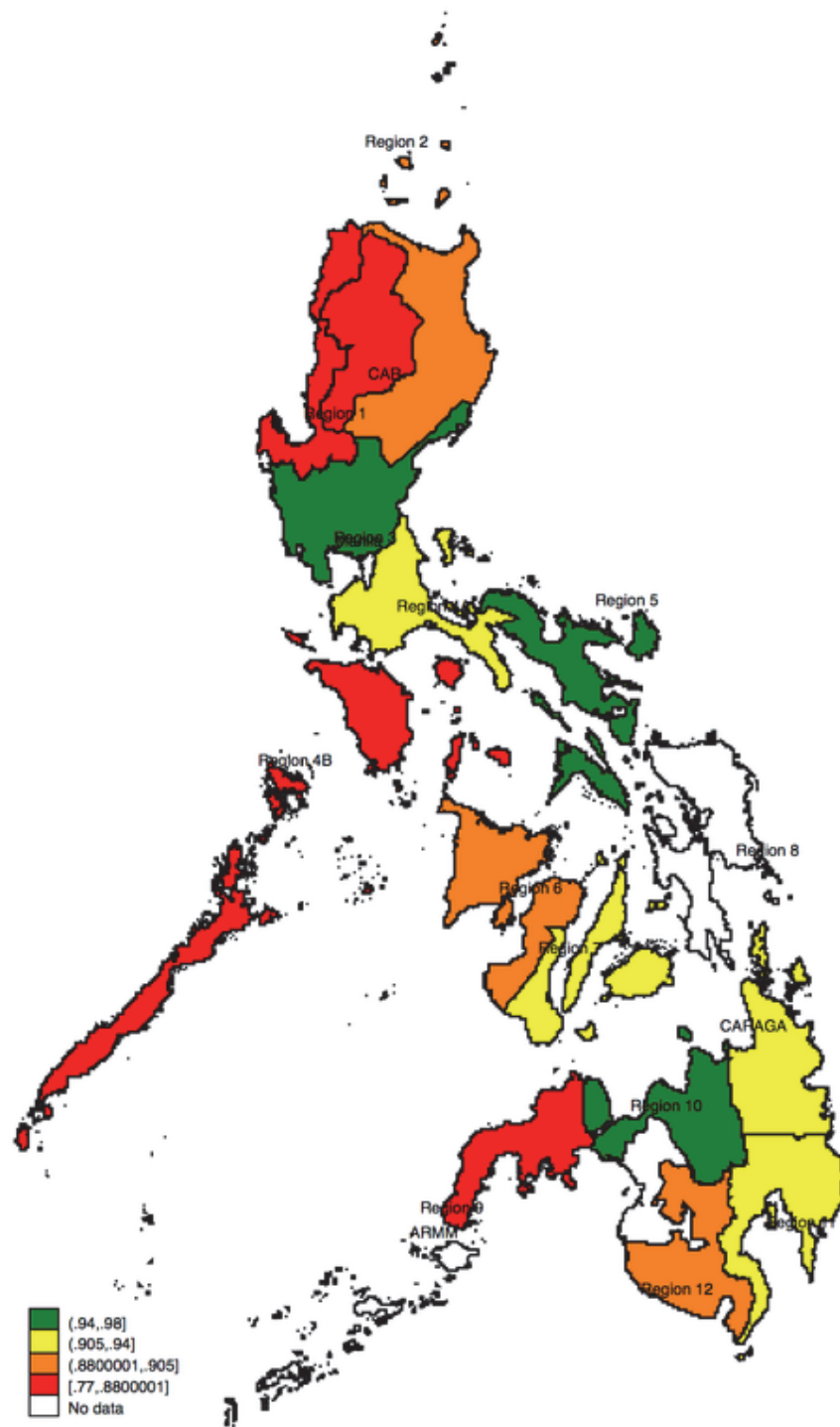


Figure 36. Regional variation in CVD service readiness

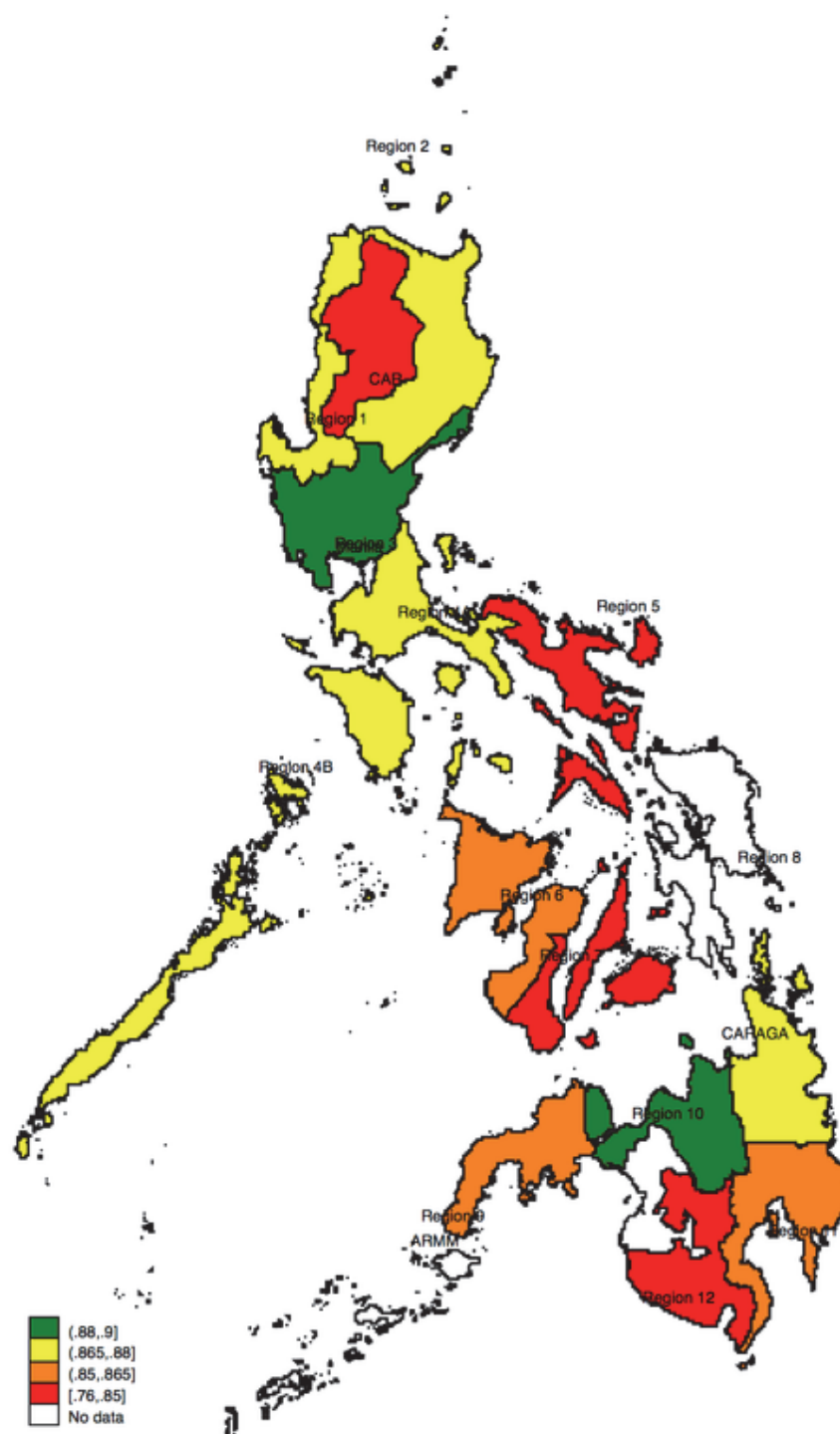


Figure 37. Regional variation in CRD service readiness

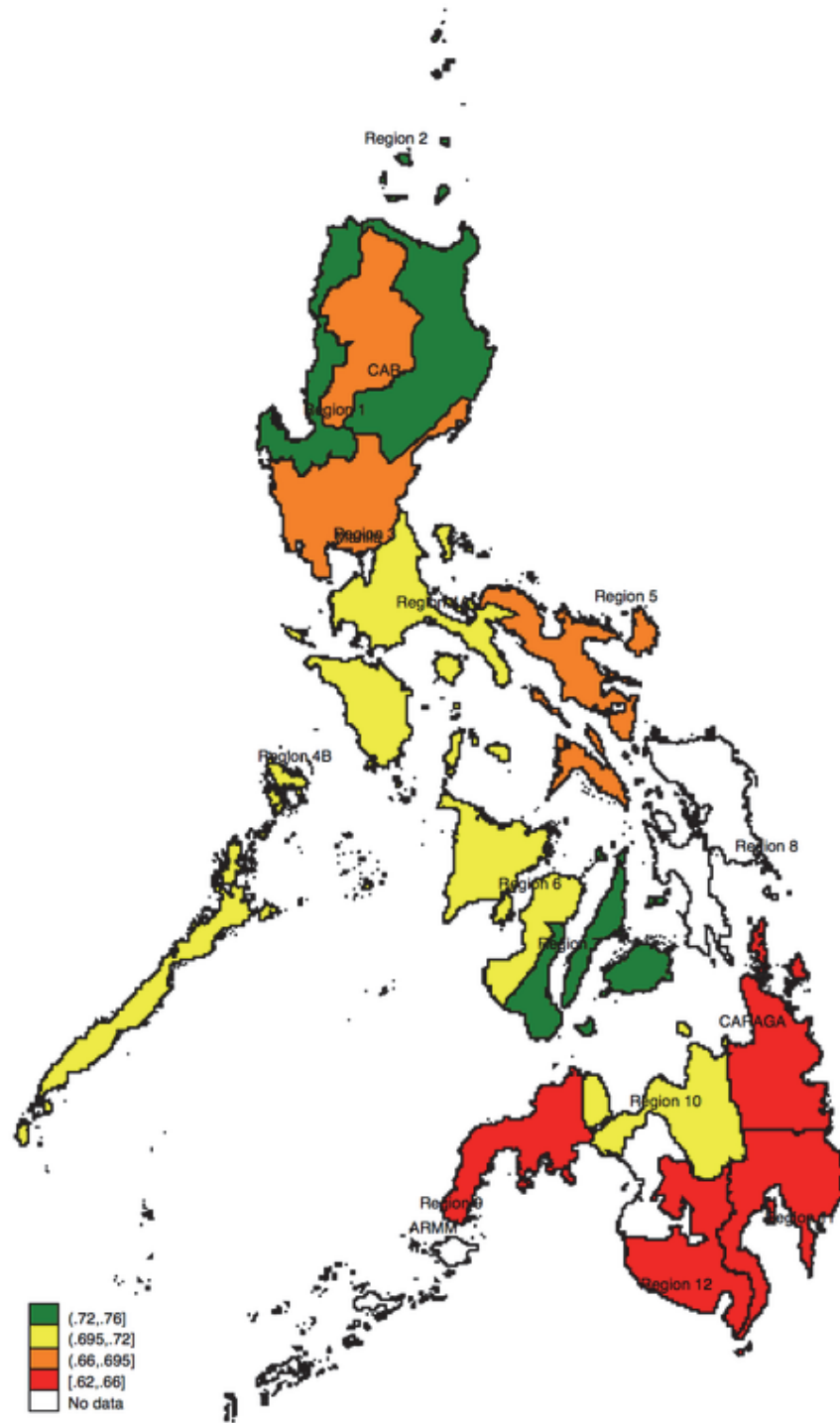




Figure 38. Regional variation in CSS service readiness

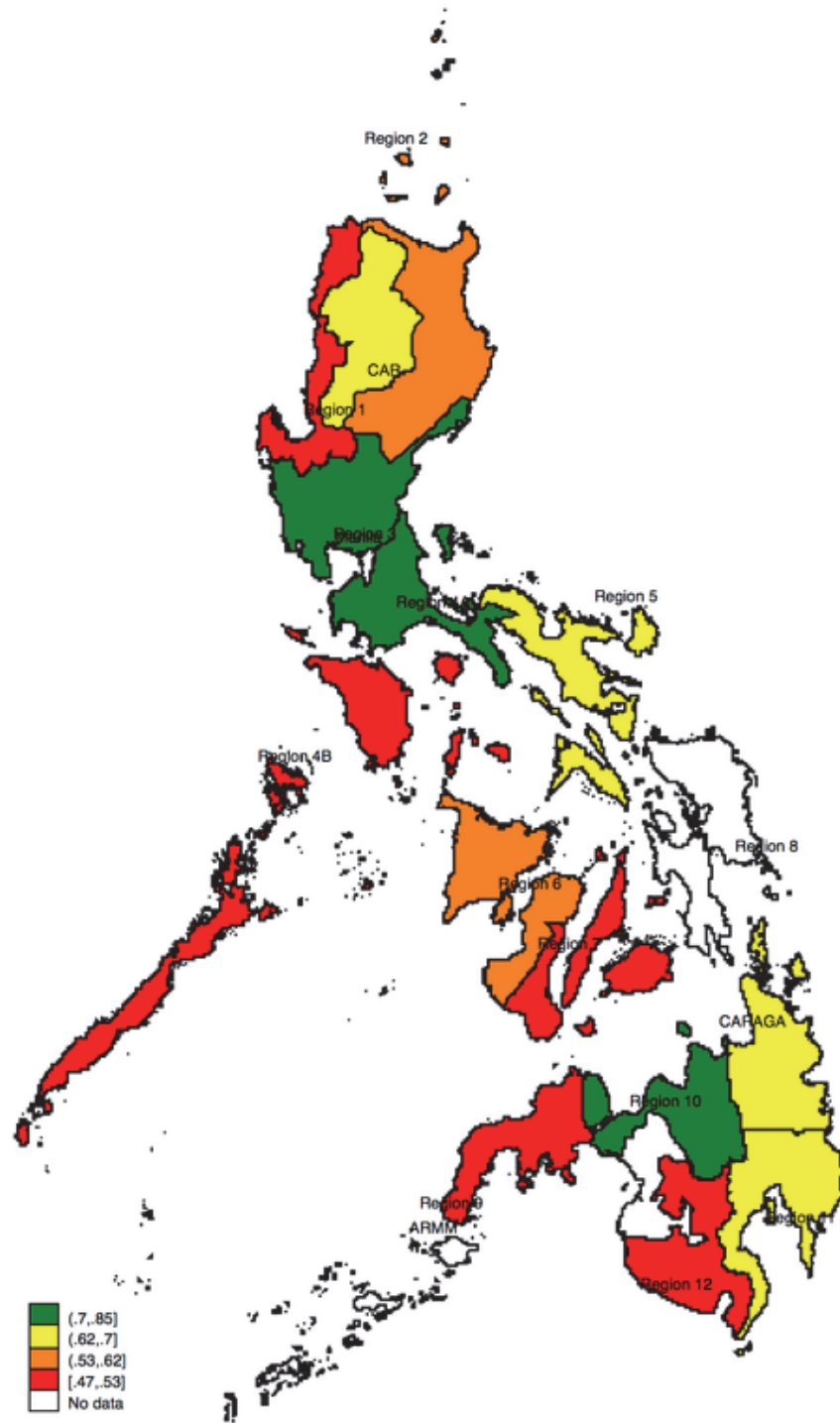
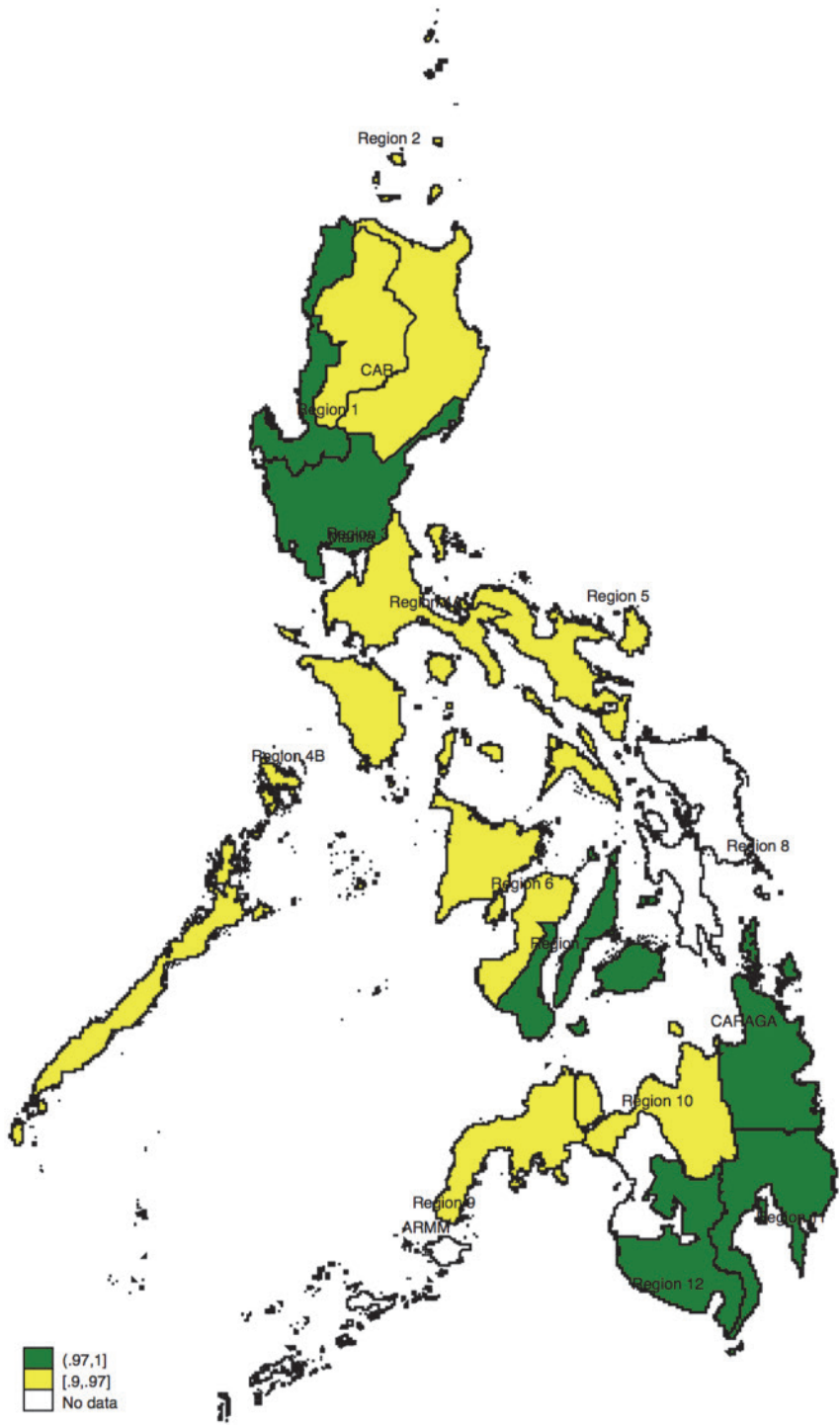


Figure 39. Regional variation in TB service readiness



#### **IV. Discussion, Limitations, and Areas for Further Work**

**Results from a nationally representative survey have identified a number of strengths in the delivery of primary care in the Philippines.** Basic equipment, including adult and child scales, BP apparatuses, sterile gloves, thermometers, and stethoscopes, were all commonly available. Many medicines and commodities are also widely available. Very few stock-outs were identified for several high-priority items, including TT, BCG, and OPV vaccines, oral and injectable contraceptives, mebendazole, ORS, amoxicillin, co-trimoxazole, and paracetamol. Therapies are also generally available for the NCDs, including the diabetes drugs metformin and sulfonylureas; ACE inhibitors, diuretic, beta-blockers, calcium channel blockers, metformin, and angiotensin receptor blockers for CVD; and beta2-agonists and beta-blockers for asthma. The average overall scores for both FP and TB were nearly 100 percent.

**There were, however, a number of important gaps.** The survey identified issues with the basic infrastructure and equipment at the facilities: 49 percent of RHUs had experienced some power outage in the week leading up to the survey, and 20 percent of facilities did not have refrigerators for vaccines. While there were some shortages in the availability of drugs and commodities (for example, the relatively newly introduced pneumococcal and rotavirus vaccines were each available at fewer than half of the facilities, as was ICS for asthma), the main gaps were in diagnostic capacity. Hb testing was available at only 62 percent of RHUs and fecalysis was available at 77 percent. Fasting blood glucose testing was available at just 70 percent of RHUs visited overall, and at only 25 percent of RHUs in CAR and 38 percent of RHUs in Region 10. Similar gaps were found in the ability to conduct urine analysis: 77 percent of RHUs overall could provide this test; only 31 percent of RHUs in CAR and 56 percent in Region 5 could do so. Only 4 percent of RHUs had a peak expiratory flowmeter in place for asthma diagnosis on the day of the survey and only one-fourth of RHUs have staff trained on CCS at the time of the survey.

**Overall domain scores for CRD, CCS, and immunization are low,** at 70 percent, 61 percent, and 79 percent respectively. To some degree, these low averages reflect the difficulty of rapidly attaining high coverage at the scale of more newly introduced services. This includes, in the case of vaccination, the new and contentious introduction of rotavirus and pneumococcal vaccines. In other cases, it reflects disconnect between the determination of a benefit package and the health sector's capacity to deliver on the resulting entitlements. CCS has been a component of the PCB since its launch in 2012. However, capacity to delivery screening was very low at baseline and, until recently, efforts to support PBC implementation have focused on strengthening access to other elements, including diabetes and hypertension care.

**There was substantial regional variation in readiness to provide some services.** This has important implications for equity in the distribution of and access to national resources. Although immunization and diabetes services are intended to be universally available, regional immunization scores varied from 70 percent to 85 percent, and diabetes scores ranged from a low of just 67 percent in CAR to a high of 98 percent in Region 3.

**Some regions consistently under- or over-performed when compared to their neighbors.** For example, CAR performed at or below the sample mean in all but three domains, as did Region 2. Meanwhile, Region 10 and CARAGA performed better than others in almost all the domains. A better understanding of why these regions fall short is needed to ensure that the LGUs in those regions are better able to deliver services over the medium term. However, it would also be important to go beyond the regional average to see what is going on within particular regions, as there is likely to be substantial subregional variation across RHUs.

**We also find inequalities in supply-side readiness across relatively more prosperous and relatively less prosperous LGUs.** RHUs located in first or second income class municipalities tend to have better basic infrastructure, more basic equipment, and higher diagnostic capacity than RHUs in fifth and sixth income class municipalities. Looking at the health service-specific category scores, RHUs located in first class LGUs perform well above the sample means for all categories except FP (which has a very high overall average score of 97 percent) and have the top performance for several categories. While RHUs located in poorer LGUs performed slightly better than their wealthier counterparts on infection prevention and for availability of general essential medicines, RHUs located in the sixth class LGUs have the lowest performance in five of the nine health service categories (ANC, FP, immunization, diabetes, and TB), and are above the sample mean for only one category—CRD. The explanation for this poor performance is outside the scope of this study, but it is reasonable to hypothesize that wealthier LGUs may have larger health budgets, find it easier to attract qualified staff, and—given the concentration of poorer LGUs in remote areas—face fewer logistics and supply chain issues.

**Better targeting of special national programs that deploy staff in underserved areas is urgently required to overcome supply-side gaps in human resources.** While programs such as DTTB and the NDP have compensated for human resource shortages in some areas, our data suggest that deployment of these staff does not correspond to the regions with personnel gaps. As the differences across regions and income class groups indicate, further effort is needed to efficiently reduce disparities in staffing across LGUs, especially in remote and hard-to-access areas.

**In some cases, national programs to centrally procure and distribute commodities and equipment appear to have been effective in getting many supplies even to far-flung areas.** Even in regions where average LGU performance was poor in most health service categories, LGUs tended to score well on the availability of medicines that are made available through the ComPacks program. Given the significant decentralization of the Philippines' health system, central programs will not be a long-term solution but, at least in the case considered here, they do appear to provide an important stopgap. Future data may permit us to assess more recent efforts to improve infrastructure via central procurement. For example, the government has recently committed to procuring and distributing Hb tests. Ability to conduct Hb testing was particularly weak among RHUs visited in this survey, with only 30 percent of facilities having the test in stock. The next round of data collection may be useful to assess whether initiatives such as this are successful.

**However, decentralization poses a particular challenge to delivering on national entitlements.** The various decrees and circulars documented in this report represent entitlements granted at the central level; however, local-level commitment and investments are generally required to deliver upon these promises. Central-level procurement can only serve to achieve targeted goals and, even with those, it is unclear whether they succeed in reaching more remote RHUs. The majority of investments come from municipalities and provinces that are subject to varying resource availability and to competing non-health priorities. And, while municipalities on average spend about 9 percent of their General Fund to health, the bulk of these resources (78 percent) are allocated for personal services, leaving a meager 22 percent of the 9 percent for operating expenses and capital outlays (Department of Finance: Bureau of Local Government Finance, n.d.)—including the supplies and infrastructure requirements that are assessed in this report.

**Local inter-sectoral competition for resources is exacerbated by weak accountability relationships.** No institution can hold LGUs accountable for delivering on their mandate, and accreditation does not appear to be sufficient to ensure availability of inputs. All facilities included in this survey were accredited with PhilHealth, yet we documented a number of gaps in infrastructure and supply availability that would seem to contraindicate accreditation.

**Performance-based payment mechanisms may hold LGUs accountable for basic service delivery.** PhilHealth has already introduced an incentive structure wherein capitation payments are paid based on obtaining the health profile of the population. This can be modified to further strengthen the incentive structure by linking the payments to the delivery of specific services.<sup>26</sup> Such performance-based mechanism may force LGUs to ensure that the facilities are properly maintained long after they receive accreditation, thereby also ensuring a minimum standard of care in LGUs across the country.

**Supply-side readiness is essential if the planned increase in the generosity of the primary care benefit package is not to be an empty promise.** The Philippines has made remarkable strides in ensuring PhilHealth coverage, and needs to also ensure that it is matched by the readiness of the supply side to deliver on it. The country currently subsidizes coverage for 45 million poor people, and has repeatedly enacted plans to expand the benefit package over the past decade. The country's current plan to expand the PhilHealth package such as in the Tsekap package as contained in PhilHealth Circular No. 02-2015 is both welcome and needed, and implementation of certain elements of Tsekap This is likely to be quite achievable. Coverage of hypertension and diabetes care, for example, are already high. However, as this analysis clearly shows, there are some gaps, such as on equipment for asthma management and training of RHU staff on CCS, that need to be addressed to ensure that all RHUs in all regions are able to deliver the package. There were also gaps documented in electricity and Internet access which are critical in implementing the electronic medical reporting component of the package. The electronic recording aims to aid in service delivery, monitoring, and to take into effect a performance-

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<sup>26</sup> For example, an ongoing study is evaluating the impact of paying based on (a) quantity of specific services delivered and (b) quality of care based on assessment of availability of supplies and management of tracer conditions, in boosting the utilization and quality of PCB services. It is for this impact evaluation that data presented for this report, which was co-funded by the World Bank and the Korean government, were initially collected.

based payment mechanism. It is important to note that such payment mechanism proposed in the Tsekap package incentivizes the LGUs and RHUs to ensure that all these necessities for the package are made available, again underscoring that implementation of such a benefit package is achievable.

### ***Limitations and Areas for Further Work***

This paper highlights gaps in benefit entitlements and service readiness. A key objective of this report is to stimulate policy dialogue on ways to enhance health service delivery in public primary care facilities in the country. However, as indicated in preceding sections of this report, there are a number of important limitations. One such limitation stems from the sampling frame, which is limited to PhilHealth-accredited RHUs, and the sampling methodology, in which only the largest (main) RHU in each municipality was eligible for selection. Thus, the RHUs surveyed are likely to represent the best RHU in each municipality and our findings on service readiness will be biased upwards, representing a more optimistic picture of supply-side readiness than that which prevails across RHUs in general.

Even within the sample, this report does not provide an exhaustive or even ideal list of the services and indicators that would have been examined had we set out with the main purpose of investigating supply-side readiness. This study was limited to the data collected during the baseline survey for a study on the PhilHealth PCB Package and has focused on tracer indicators across the nine health service categories examined. Nonetheless, the data that are available are broad, providing a number of insights into service readiness across the country, and we are able to draw relevant and important conclusions.

Future studies can provide a fuller examination of the key determinants—including demand-side determinants—of the maternal health, CD, and NCD tracer conditions considered here. A supply-side examination of quality of care that combines information on the availability of supply-side inputs (such as those discussed here) with information on the availability and performance of health care providers would be particularly useful. A separate and equally useful study would examine the cause of existing gaps in availability. Stock-outs might reflect issues with funding, unusually high utilization, poor forecasting, issues with logistics and supply chain, issues with procurement processes, or a combination of these challenges. Adequate stocks, on the other hand, might reflect a well-functioning supply chain or, alternatively, slow turnover of commodities due to lower-than-average utilization. While anecdotal evidence suggests that poor forecasting has led to oversupply of a number of commodities in some areas, this report is unable to make any causal assessments and additional information will help strengthen policy suggestions. Some of these questions might be explored during the I3QUiP end line data collection, which is planned to take place in late 2018 and will cover the same LGUs as were visited during the baseline. The end line survey will provide an opportunity to conduct a second round of analysis on supply-side readiness at the primary care level—potentially with an expansion of scope to include tracer indicators that could not be captured here. The follow-up analysis may, thus, allow us to offer some measure of the impact of policy changes or interventions that are implemented between the two points in time.

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## Annexes

### Annex 1: Standards for Accreditation of PhilHealth's PCB Package Providers; Diagnostic and Service Availability

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#### Service Capability

- Consultation
  - Medicine
  - General surgery
  - Obstetrics and gynecology
  - Pediatrics
- CCS: VIA
- Regular BP measurements
- Breastfeeding program education
- Periodic clinical breast examination
- Counseling for lifestyle modification
- Counseling for smoking cessation
- Body measurements
- Digital rectal examination (for males)

#### Diagnostic Services

- CBC
- Urinalysis
- Fecalysis
- Sputum microscopy
- FBS
- Lipid profile
- Chest X-ray

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Source: PhilHealth Circular No. 010, s. 2012: Implementing Guidelines for Universal Health Care Primary Care Benefit I (PCB1) Package for Transition Period CY 2012-2013.

## **Annex 2: Standards for Accreditation of PhilHealth’s PCB Package Providers; Infrastructure and Supplies Requirements**

### **General Infrastructure**

- Sign bearing name of RHU
- Sign indicating RHU is PhilHealth provider
- Sign enumeration health services provided, including components of PCB Package
- Smoke-free, generally clean environment
- Adequate lighting/electric supply
- Sufficient seating for patients in well-ventilated area
- Examination area
- Consultation area separate from examination area
- Safe area for record storage
- Toilet
- Adequate signages (entrance and exit)
- Emergency preparedness plans (exit/evacuation plans)
- Fire safety provision
- Puncture-proof receptacles for disposal of pointed/sharp objects
- Properly segregated and labeled waste bins for different kinds of waste
- Non-slippery floors
- Provision for hand hygiene/washing
- Area for cleaning instruments
- Safe storage for drugs and medicines
- Safe storage of laboratory reagents (if applicable)
- Well-ventilated sputum collection area (if applicable)

### **Equipment and Supplies**

- Non-mercurial BP apparatus
- Non-mercurial thermometer
- Stethoscope
- Weighing scale (adult)
- Weighing scale (infant)
- Tape measure
- Nebulizer
- Lubricating jelly
- Disposable needles and syringes
- Sterile cotton balls
- Sterile cotton swabs
- Applicator stick
- Disposable gloves
- Specimen cups/bottles
- Sterilizer or its equivalent
- Vaginal speculum (big)
- Vaginal speculum (small)
- Decontamination solution
- 70% isopropyl alcohol
- 3% to 5% acetic acid
- Glass slides
- Storage cabinet for sterile instruments and supplies

#### Drugs and Medicines

- For asthma
  - Inhaled corticosteroids
  - Short acting beta2-agonists
  - Oral or systemic corticosteroids
- For acute gastroenteritis
  - ORS
- For upper respiratory tract infection/pneumonia
  - Amoxicillin
  - Macrolide
  - Beta lactams with beta lactamase inhibitors and/pr
  - Second generation cephalosporins
- For urinary tract infection
  - Oral fluroquinolones
  - Co-trimoxazole

#### Human Resources

- Licensed doctor
- Licensed nurse
- Licensed midwife
- Licensed medical technologist (if with laboratory services)
- Licensed radiology technician (if with X-ray services)

#### Training

- Training on VIA
- Training on sputum microscopy

Source: PhilHealth Circular No. 010, s. 2012: Implementing Guidelines for Universal Health Care Primary Care Benefit I (PCB1) Package for Transition Period CY 2012-2013.

### Annex 3: RHU Personnel

Region	Full-time Health RHU Personnel						
	Medical Technician	Sanitary Inspector	Admin Staff	Driver	Dental Aide	Dentist	Nutrition Officer
CAR	0.31	0.94	1.56	0.81	0.31	0.19	0.50
Region 1	0.38	1.88	0.19	0.50	0.20	0.19	0.50
Region 2	0.44	1.06	0.00	0.56	0.06	0.31	0.38
Region 3	1.06	0.88	0.31	0.44	0.56	0.69	0.31
Region 4A	0.44	1.06	0.56	0.38	0.44	0.81	0.44
Region 4B	0.31	1.31	0.31	0.81	0.19	0.69	0.19
Region 5	1.00	1.19	0.19	0.56	0.25	0.31	0.31
Region 6	0.71	1.42	1.17	0.96	0.63	0.58	0.29
Region 7	0.88	1.00	0.38	0.83	0.75	0.79	0.25
Region 9	0.87	1.50	0.62	0.47	0.33	0.50	0.31
Region 10	1.13	1.88	2.00	0.94	0.81	0.94	0.25
Region 11	1.13	1.20	0.64	1.10	0.62	0.77	0.73
Region 12	1.25	1.31	1.25	0.81	0.75	1.00	0.14
CARAGA	1.12	1.65	0.65	0.71	1.00	1.06	0.35
Total	0.79	1.30	0.71	0.71	0.51	0.64	0.34

#### Annex 4: Provinces and Municipalities Included In This Survey

Region	Province	LGU (Municipality/City)	
<b>CAR</b>			
	<b>1 Abra</b>		
		1	Bucay
		2	Dolores
		3	Lagangilang
		4	Manabo
		5	Penarrubia
		6	Sallapadan
		7	San Juan
		8	San Quintin
		9	Tayum
		10	Tubo
	<b>2 Ifugao</b>		
		1	Aguinaldo
		2	Alfonso Lista
		3	Hingyon
		4	Lagawe
		5	Mayoyao
		6	Tinoc
<b>Region 1</b>			
	<b>1 Ilocos Sur</b>		
		1	Alilem
		2	Bantay
		3	Caoayan
		4	Lidlidda
		5	Magsingal
		6	Salcedo
		7	San Ildefonso
		8	Vigan, City Of
	<b>2 La Union</b>		
		1	Agoo
		2	Aringay
		3	Balaoan
		4	Burgos
		5	Naguilian
		6	San Fernando
		7	San Gabriel
		8	Tubao
<b>Region 2</b>			
	<b>1 Batanes</b>		
		1	Itbayat
		2	Ivana
		3	Mahatao
		4	Sabtang
		5	Uyugan
	<b>2 Nueva Vizcaya</b>		
		1	Alfonso Castaneda
		2	Ambaguio

Region	Province	LGU (Municipality/City)	
		3	Bagabag
		4	Bambang
		5	Diadi
		6	Dupax Del Norte
		7	Dupax Del Sur
		8	Kayapa
		9	Quezon
		10	Santa Fe
		11	Solano
<b>Region 3</b>			
	<b>1 Aurora</b>		
		1	Baler
		2	Dipaculao
		3	Maria Aurora
		4	San Luis
	<b>2 Nueva Ecija</b>		
		1	Aliaga
		2	Cabiao
		3	Cuyapo
		4	Laur
		5	Llanera
		6	Palayan City
		7	San Antonio
		8	San Isidro
		9	San Leonardo
		10	Sto. Domingo
		11	Talavera
		12	Talugtug
<b>Region 4A</b>			
	<b>1 Quezon</b>		
		1	Agdangan
		2	Atimonan
		3	Candelaria
		4	Dolores
		5	Infanta
		6	Macalelon
		7	Mulanay
		8	Padre Burgos
		9	Perez
		10	Real
		11	San Andres
		12	San Antonio
		13	Tayabas City
		14	Unisan
	<b>2 Rizal</b>		
		1	Jala-Jala
		2	Taytay
<b>Region 4B</b>			
	<b>1 Oriental Mindoro</b>		
		1	Baco

Region	Province	LGU (Municipality/City)	
		2	Bansud
		3	Calapan, City Of
		4	Gloria
		5	Naujan
		6	Pola
		7	San Teodoro
		8	Victoria
	<b>2 Romblon</b>		
		1	Alcantara
		2	Banton
		3	Cajidiocan
		4	Calatrava
		5	Ferrol
		6	Odiongan
		7	San Agustin
		8	Santa Fe
<b>Region 5</b>			
	<b>1 Camarines Norte</b>		
		1	Capalonga
		2	Daet
		3	Jose Panganiban
		4	Labo
		5	Paracale
		6	San Vicente
		7	Santa Elena
		8	Talisay
		9	Vinzons
	<b>2 Catanduanes</b>		
		1	Bagamanoc
		2	Baras
		3	Gigmoto
		4	Pandan
		5	Caramoran
		6	San Miguel
		7	Virac
<b>Region 6</b>			
	<b>1 Antique</b>		
		1	Hamtic
		2	Libertad
		3	Pandan
		4	Patnongon
		5	San Jose
		6	Sebaste
		7	Sibalom
		8	Tibiao
	<b>2 Capiz</b>		
		1	Cuartero
		2	Dumalag
		3	Dumarao
		4	Jamindan
		5	Ma-Ayon

Region	Province	LGU (Municipality/City)	
		6	Mambusao
		7	Ivisan
		8	Panay
		9	Pilar
		10	Pontevedra
		11	President Roxas
		12	Sigma
	<b>3 Guimaras</b>		
		1	Buenavista
		2	Jordan
		3	Nueva Valencia
		4	San Lorenzo
<b>Region 7</b>			
	<b>1 Cebu</b>		
		1	Alegria
		2	Boljoon
		3	Carmen
		4	Minglanilla
		5	Oslob
		6	Pinamungahan
		7	San Fernando
		8	Santa Fe
		9	Toledo City
		10	Ronda
	<b>2 Negros Oriental</b>		
		1	Basay
		2	Bindoy (Payabon)
		3	Canlaon City
		4	Dauin
		5	La Libertad
		6	Mabinay
		7	Tayasan
		8	Valencia
		9	Vallehermoso
		10	Zamboanguita
	<b>3 Siquijor</b>		
		1	Enrique Villanueva
		2	Larena
		3	Lazi
		4	Siquijor
<b>Region 9</b>			
	<b>1 Zamboanga Del Norte</b>		
		1	Dipolog City
		2	Godod
		3	La Libertad
		4	Pinan (New Pinan)
		5	Polanco
		6	Salug
		7	Sibutad
		8	Sindangan



Region	Province	LGU (Municipality/City)	
	<b>2 Zamboanga Del Sur</b>		
		1	Aurora
		2	Dimataling
		3	Bayog
		4	Lapuyan
		5	Mahayag
		6	Pitogo
		7	Ramon Magsaysay (Liargo)
		8	Tabina
<b>Region 10</b>			
	<b>1 Bukidnon</b>		
		1	Damulog
		2	Impasug-Ong
		3	Kibawe
		4	Kitaotao
		5	Pangantucan
		6	Malaybalay, City Of
		7	Maramag
		8	San Fernando
	<b>2 Misamis Occidental</b>		
		1	Aloran
		2	Clarin
		3	Ozamis City
		4	Panaon
		5	Plaridel
		6	Sapang Dalaga
		7	Tangub City
		8	Tudela
<b>Region 11</b>			
	<b>1 Davao Del Norte</b>		
		1	Asuncion (Saug)
		2	Carmen
		3	Kapalong
		4	New Corella
		5	Panabo, City Of
		6	Tagum, City Of
		7	Santo Tomas
	<b>2 Compostela Valley</b>		
		1	Compostela
		2	Mabini
		3	Maco
		4	Maragusan (San Mariano)
		5	Mawab
		6	Montevista
		7	Nabunturan
		8	New Bataan
<b>Region 12</b>			

Region	Province	LGU (Municipality/City)	
	<b>1 Cotabato (North Cotabato)</b>		
		1	Antipas
		2	Banisilan
		3	Kabacan
		4	Kidapawan, City Of
		5	Makilala
		6	Magpet
		7	Pikit
		8	President Roxas
	<b>2 South Cotabato</b>		
		1	Banga
		2	Koronadal, City Of
		3	Surallah
		4	Norala
		5	Tampakan
		6	Tantangan
		7	T'boli
		8	Tupi
<b>CARAGA</b>			
	<b>1 Surigao Del Norte</b>		
		1	Bacuag
		2	Claver
	<b>2 Surigao Del Sur</b>		
		1	Barobo
		2	Bislig, City Of
		3	Cagwait
		4	Cantilan
		5	Carrascal
		6	Cortes
		7	Hinatuan
		8	Lanuza
		9	Liangá
		10	Madrid
		11	Marihatag
		12	San Agustin
		13	San Miguel
		14	Tagbina
		15	Tandag

## Annex 5: Indicators in WHO SARA Guidelines and National Guidelines, and Data Availability

### Annex 5.1. General service readiness tracer indicators

Tracer Indicator	WHO SARA Guidelines	National Guidelines (PhilPEN, MNCHN, Annex C of DOH AO No. 2012-0012, PCB1, or Tsekap)	Indicators Used for Assessment
Basic Infrastructure	<ul style="list-style-type: none"> <li>Power</li> <li>Improved water source inside OR within the ground of the facility</li> <li>Room with auditory and visual privacy for patient consultations</li> <li>Access to adequate sanitation facilities for clients</li> <li>Communication equipment (phone or SW radio)</li> <li>Facility has access to computer with email/Internet access</li> <li>Emergency transportation</li> </ul>	<ul style="list-style-type: none"> <li>Adequate lighting and electric supply; standby generator or (battery-operated rechargeable emergency light)</li> <li>Adequate clean water supply</li> <li>Private consultation/examination room/cubicle</li> <li>Toilet (minimum of 1 for 1 to 6 beds and additional 1 toilet for every 6 additional beds)</li> <li>—</li> <li>Typewriter/computer</li> <li>Available transport vehicle for emergency cases (facility-</li> </ul>	<ul style="list-style-type: none"> <li>Is the electricity always available or is it sometimes interrupted?</li> <li>Does the laboratory have running water?</li> <li>There is visual privacy AND auditory privacy in the doctor's consultation room</li> <li>Is there a toilet in the RHU that is available for general client use?</li> <li>Does this facility have a functioning landline telephone?</li> <li>Does this facility have a functioning computer? Is Internet connection available in the facility?</li> <li>Does this facility have a functional ambulance or other vehicle for</li> </ul>

Tracer Indicator	WHO SARA Guidelines	National Guidelines (PhilPEN, MNCHN, Annex C of DOH AO No. 2012-0012, PCB1, or Tsekap)	Indicators Used for Assessment
		owned or contracted out)	emergency transportation for clients?
Basic Equipment	<ul style="list-style-type: none"> <li>• Adult scale</li> <li>• Child scale</li> <li>• Thermometer</li> <li>• Stethoscope</li> <li>• BP apparatus</li> <li>• Light source</li> </ul>	<ul style="list-style-type: none"> <li>• Adult weight Scare</li> <li>• Infant weighing scale; clinical weighing scale (for newborn)</li> <li>• Non-mercurial thermometer</li> <li>• Stethoscope (adult and pediatric)</li> <li>• Non-mercurial BP apparatus; Sphygmomanometer (non-mercurial) with adult cuff and neonatal cuff</li> <li>• Gooseneck lamp (2)</li> </ul>	<ul style="list-style-type: none"> <li>• Weighing scale (adult)</li> <li>• Weighing scale (infant)</li> <li>• Non-mercurial thermometer</li> <li>• Stethoscope</li> <li>• Non-mercurial BP apparatus</li> <li>• Indicator dropped as the SARA definition is a 'spotlight source that can be used for patient examinations' whereas baseline survey only tracked "enough light"</li> </ul>
Infection Prevention	<ul style="list-style-type: none"> <li>• Safe final disposal of sharps</li> <li>• Safe final disposal of infectious wastes</li> <li>• Appropriate storage of sharps waste</li> </ul>	<ul style="list-style-type: none"> <li>• —</li> <li>• —</li> <li>• Puncture-proof receptacles for disposal of</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• How does this facility dispose of contaminated waste (for example, used syringes)?</li> <li>• Safety vault</li> <li>• Are there puncture-proof receptacles for</li> </ul>

Tracer Indicator	WHO SARA Guidelines	National Guidelines (PhilPEN, MNCHN, Annex C of DOH AO No. 2012-0012, PCB1, or Tsekap)	Indicators Used for Assessment
	<ul style="list-style-type: none"> <li>• Appropriate storage of infectious waste</li> <li>• Disinfectant</li> <li>• Single-use standard disposable or auto-disposable syringes</li> <li>• Soap and running water or alcohol-based hand rub</li> <li>• Latex gloves</li> </ul>	<p>pointed/sharp objects</p> <ul style="list-style-type: none"> <li>• —</li> <li>• —</li> <li>• —</li> <li>• 70% isopropyl alcohol</li> <li>• Disposable gloves</li> </ul>	<p>disposal of pointed/sharp objects?</p> <ul style="list-style-type: none"> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• Skin disinfectant (stock availability [BEmONC])</li> <li>• Skin disinfectant (supply shortage counts for the past 3 months [BEmONC])</li> <li>• Disposable needles and syringes (availability of supply today)</li> <li>• Disposable needles and syringes (supply shortage counts for the past 3 months)</li> <li>• Does the laboratory have running water?</li> <li>• Does the delivery room have running water?</li> <li>• 70% isopropyl alcohol (availability of supply today)</li> <li>• 70% isopropyl alcohol (supply shortage counts for the past 3 months)</li> <li>• Disposable gloves (availability of supply today)</li> <li>• Disposable gloves (supply</li> </ul>

Tracer Indicator	WHO SARA Guidelines	National Guidelines (PhilPEN, MNCHN, Annex C of DOH AO No. 2012-0012, PCB1, or Tsekap)	Indicators Used for Assessment
	<ul style="list-style-type: none"> <li>Guidelines for standard precautions</li> </ul>	<ul style="list-style-type: none"> <li>—</li> </ul>	<ul style="list-style-type: none"> <li>shortage counts for the past 3 months)</li> <li>Indicator Dropped - No relevant variable</li> </ul>
Diagnostics	<ul style="list-style-type: none"> <li>Hb</li> <li>—</li> <li>Blood glucose</li> <li>—</li> <li>Malaria diagnostic capacity</li> </ul>	<ul style="list-style-type: none"> <li>CBC</li> <li>—</li> <li>Glucometer with test strips; blood glucose monitoring through blood glucose meters</li> <li>—</li> <li>—</li> </ul>	<ul style="list-style-type: none"> <li>Hemoglobinometer kit/acid hematin (stock availability for today [lab supplies: Manual CBC])</li> <li>Hemoglobinometer kit/acid hematin (supply shortage counts for the past 3 months [lab supplies: Manual CBC])</li> <li>Diagnostic services: Fasting blood glucose (offered services)</li> <li>FBS testing? (do you provide the following services?)</li> <li>Diagnosis or treatment of malaria (offered services)</li> </ul>
	<ul style="list-style-type: none"> <li>Urine dipstick-protein</li> <li>Urine dipstick-glucose</li> </ul>	<ul style="list-style-type: none"> <li>Urinalysis</li> <li>—</li> </ul>	<ul style="list-style-type: none"> <li>Indicators Merged: Dipstick for qualitative urine analysis (stock availability for today [lab supplies: Automated CBC])</li> </ul>

Tracer Indicator	WHO SARA Guidelines	National Guidelines (PhilPEN, MNCHN, Annex C of DOH AO No. 2012-0012, PCB1, or Tsekap)	Indicators Used for Assessment
	<ul style="list-style-type: none"> <li>• HIV diagnostic capacity</li> <li>• Syphilis rapid test</li> <li>• Urine test for pregnancy</li> </ul>	<ul style="list-style-type: none"> <li>• —</li> <li>• —</li> <li>• —</li> </ul>	<ul style="list-style-type: none"> <li>• HIV counseling and testing services (offered services)</li> <li>• Diagnosis or treatment of STIs, excluding HIV</li> <li>• <i>Indicator Dropped</i> - No relevant variable</li> </ul>
Essential Medicines	<ul style="list-style-type: none"> <li>• Amlodipine tablet or alternative calcium channel blocker</li> <li>• Amoxicillin syrup/suspension or dispersible tablet</li> <li>• Amoxicillin tablet</li> </ul>	<ul style="list-style-type: none"> <li>• Calcium channel blockers (sustained release formulation)</li> <li>• Amoxicillin</li> <li>• Amoxicillin</li> </ul>	<ul style="list-style-type: none"> <li>• Calcium channel blocker, for example, amlodipine, nifedipine</li> <li>• Amoxicillin (stock availability [antibacterial])</li> <li>• Amoxicillin, liquid/bottle/drops (observed available preparation [antibacterial])</li> <li>• Amoxicillin, tablet/capsule (supply shortage counts for the past 3 months [antibacterial])</li> <li>• Amoxicillin (stock availability [antibacterial])</li> <li>• Amoxicillin, tablet/capsule (observed available preparation [antibacterial])</li> <li>• Amoxicillin, tablet/capsule (supply shortage counts for the</li> </ul>

Tracer Indicator	WHO SARA Guidelines	National Guidelines (PhilPEN, MNCHN, Annex C of DOH AO No. 2012-0012, PCB1, or Tsekap)	Indicators Used for Assessment
	<ul style="list-style-type: none"> <li>• Ampicillin powder for injection</li> <li>• Aspirin capsule/tablet</li> <li>• Beclomethasone inhaler</li> </ul>	<ul style="list-style-type: none"> <li>• Intravenous antibiotics (ampicillin, gentamicin); syringe with needle</li> <li>• Aspirin</li> <li>• Fluticasone inhaler</li> </ul>	<p>past 3 months [antibacterial])</p> <ul style="list-style-type: none"> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• ICS, for example, beclomethasone or budesonide or fluticasone (stock availability [asthma])</li> <li>• Beclomethasone or budesonide or fluticasone, nebulizer (observed available preparation [asthma])</li> <li>• Beclomethasone or budesonide or fluticasone, sachet/powder (observed available preparation [asthma])</li> <li>• Beclomethasone or budesonide or fluticasone, others specify (observed available preparation [asthma])</li> <li>• Beclomethasone or budesonide or fluticasone, nebulizer (supply shortage counts for the past 3 months [asthma])</li> </ul>



Tracer Indicator	WHO SARA Guidelines	National Guidelines (PhilPEN, MNCHN, Annex C of DOH AO No. 2012-0012, PCB1, or Tsekap)	Indicators Used for Assessment
	<ul style="list-style-type: none"> <li>• Beta-blocker (for example, bisoprolol, metoprolol, carvedilol, atenolol)</li> <li>• Carbamazepine tablet</li> <li>• Ceftriaxone injection</li> <li>• Diazepam injection</li> <li>• Enalapril tablet or alternative ACE inhibitor, for example, lisinopril, ramipril, perindopril</li> <li>• Fluoxetine tablet</li> <li>• Gentamicin injection</li> </ul>	<ul style="list-style-type: none"> <li>• Beta-blockers</li> <li>• —</li> <li>• —</li> <li>• —</li> <li>• ACE inhibitors</li> <li>• —</li> <li>• Intravenous antibiotics (ampicillin,</li> </ul>	<ul style="list-style-type: none"> <li>• Beta-blocker (stock availability [hypertension])</li> <li>• Beta-blocker, tablet/capsule (observed available preparation [hypertension])</li> <li>• Beta-blocker (supply shortage counts for the past 3 months [hypertension])</li> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• Injectable diazepam (supply shortage counts for the past 3 months [BEmONC])</li> <li>• ACE inhibitor (stock availability [hypertension])</li> <li>• ACE inhibitor, tablet/capsule</li> <li>• ACE inhibitor (supply shortage counts for the past 3 months [hypertension])</li> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• <i>Indicator Dropped</i> - No relevant variable</li> </ul>

Tracer Indicator	WHO SARA Guidelines	National Guidelines (PhilPEN, MNCHN, Annex C of DOH AO No. 2012-0012, PCB1, or Tsekap)	Indicators Used for Assessment
	<ul style="list-style-type: none"> <li>• Glibenclamide tablet</li> <li>• Haloperidol tablet</li> <li>• Insulin regular injection</li> <li>• Magnesium sulfate injectable</li> </ul>	<ul style="list-style-type: none"> <li>gentamicin); syringe with needle</li> <li>• Glibenclamide</li> <li>• —</li> <li>• Insulin now being distributed – check most recent administrative orders (AOs)</li> <li>• Magnesium sulfate vials; syringe with needle; Magnesium sulfate ampoule</li> </ul>	<ul style="list-style-type: none"> <li>• Sulfonylureas, for example, glibenclamide, gliclazide (observed available preparation [hypertension])</li> <li>• Sulfonylureas, for example, glibenclamide, gliclazide (supply shortage counts for the past 3 months [diabetes])</li> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• Magnesium sulfate (stock availability [BEmONC])</li> <li>• Magnesium sulfate, ampoule/vial (observed available preparation [BEmONC])</li> <li>• Magnesium sulfate, injectable/syringe (observed available)</li> </ul>

Tracer Indicator	WHO SARA Guidelines	National Guidelines (PhilPEN, MNCHN, Annex C of DOH AO No. 2012-0012, PCB1, or Tsekap)	Indicators Used for Assessment
	<ul style="list-style-type: none"> <li>• Metformin tablet</li>   <li>• Omeprazole tablet or alternative such as pantoprazole, rabeprazole</li> <li>• ORS</li>   <li>• Oxytocin injection</li> </ul>	<ul style="list-style-type: none"> <li>• Metformin</li>   <li>• —</li>   <li>• ORS</li>   <li>• Uterotonics: oxytocin, ergotamine, oxytocin-ergotamine, methylergotamine, prostaglandin</li> </ul>	<ul style="list-style-type: none"> <li>preparation [BEmONC])</li> <li>• Magnesium sulfate (supply shortage counts for the past 3 months [BEmONC])</li> <li>• Metformin (stock availability [diabetes])</li> <li>• Metformin, tablet/capsule (observed available preparation [diabetes])</li> <li>• Metformin (supply shortage counts for the past 3 months [diabetes])</li> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• ORS (stock availability [gastroenteritis])</li> <li>• ORS, sachet/powder (observed available preparation [gastroenteritis])</li> <li>• ORS (supply shortage counts for the past 3 months [gastroenteritis])</li> <li>• Oxytocin (stock availability [BEmONC])</li> </ul>

Tracer Indicator	WHO SARA Guidelines	National Guidelines (PhilPEN, MNCHN, Annex C of DOH AO No. 2012-0012, PCB1, or Tsekap)	Indicators Used for Assessment
	<ul style="list-style-type: none"> <li>• Salbutamol inhaler</li>   <li>• Simvastatin tablet or other statin, for example, atorvastatin, pravastatin, fluvastatin</li> <li>• Thiazide (for example, hydrochlorothiazide )</li> </ul>	<p>tabs (misoprostol); oxytocin 10 units per ampoule or oxytocin in pre-filled, single-dose, non-reusable injection</p> <ul style="list-style-type: none"> <li>• Short acting beta2-agonists (inhalation solution or metered dose inhaler)</li>   <li>• Simvastatin</li>   <li>• Thiazide diuretics</li> </ul>	<ul style="list-style-type: none"> <li>• Oxytocin, injectable/syringe (observed available preparation [BEmONC])</li> <li>• Oxytocin (supply shortage counts for the past 3 months [BEmONC])</li> <li>• Beta2-agonist, for example, salbutamol (stock availability [asthma])</li> <li>• Beta2-agonist, for example, salbutamol (supply shortage counts for the past 3 months [asthma])</li> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• Diuretic, for example, hydrochlorothiazide</li> <li>• Diuretic, for example, hydrochlorothiazide (supply shortage counts)</li> </ul>

Tracer Indicator	WHO SARA Guidelines	National Guidelines (PhilPEN, MNCHN, Annex C of DOH AO No. 2012-0012, PCB1, or Tsekap)	Indicators Used for Assessment
	<ul style="list-style-type: none"> <li>Zinc sulfate tablets, dispersible tablets or syrup</li> </ul>	<ul style="list-style-type: none"> <li>Zinc supplements</li> </ul>	<p>for the past 3 months [hypertension])</p> <ul style="list-style-type: none"> <li>Zinc supplements (stock availability [gastroenteritis])</li> <li>Zinc supplements, tablet/capsule (observed available preparation [gastroenteritis])</li> <li>Zinc supplements, liquid/bottle/drops (observed available preparation [gastroenteritis])</li> <li>Zinc supplements (supply shortage counts for the past 3 months (gastroenteritis])</li> </ul>

### Annex 5.2. ANC tracer indicators

Tracer Indicator	WHO SARA Guidelines	National Guidelines: MNCHN Strategy Manual or Operations (2011) or BHFS Annex C	Indicators Used for Assessment
Staffing and Training	<ul style="list-style-type: none"> <li>• ANC guidelines</li> <li>• ANC checklists and/or job aids</li> <li>• Staff trained in ANC</li> </ul>	<ul style="list-style-type: none"> <li>• MNCHN MOP</li> <li>• IEC materials for Unang Yakap/END and breastfeeding</li> <li>• Training</li> </ul>	—
Equipment	<ul style="list-style-type: none"> <li>• BP apparatus</li> <li>• Stethoscope</li> </ul>	<ul style="list-style-type: none"> <li>• Non-mercurial BP apparatus; Sphygmomanometer (non-mercurial) with adult cuff and neonatal cuff</li> <li>• Stethoscope</li> </ul>	<ul style="list-style-type: none"> <li>• Non-mercurial BP apparatus</li> <li>• Stethoscope</li> </ul>
Diagnostics	<ul style="list-style-type: none"> <li>• Hemoglobin</li> <li>• Urine dipstick-protein</li> </ul>	<ul style="list-style-type: none"> <li>• ‘CBC testing’ with ‘well-equipped lab that can run these tests’</li> <li>• ‘Urinalysis’ with ‘well-equipped lab that can run these tests’</li> </ul>	<ul style="list-style-type: none"> <li>• Hemoglobinometer kit/acid hematin (stock availability for today)</li> <li>• Dipstick for qualitative urine analysis (stock availability for today)</li> </ul>
Medicines and Commodities	<ul style="list-style-type: none"> <li>• Iron folate acid tablets</li> <li>• TT vaccination</li> </ul>	<ul style="list-style-type: none"> <li>• TT ampoules</li> <li>• Iron/folate 60 mg elemental iron/400 ug folic acid tablet</li> </ul>	<ul style="list-style-type: none"> <li>• TT vaccine (stock availability)</li> <li>• Iron and folic acid combination tablets OR (iron tablets AND folic acid tablets); (stock availability for today)</li> </ul>

### Annex 5.3. BEmONC tracer indicators

Tracer Indicator	WHO SARA Guidelines	National Guidelines: Maternity & Newborn Care Package (Annex) or BHFS (Annex)	Indicators Used for Assessment
Staff and Training	<ul style="list-style-type: none"> <li>Guidelines for essential childbirth care</li> <li>Checklists and/or job aids for essential childbirth care</li> <li>Guidelines for essential newborn care</li> <li>Staff trained in essential childbirth care</li> <li>Staff trained in ANC</li> </ul>	<ul style="list-style-type: none"> <li>—</li> <li>—</li> <li>—</li> <li>Required: Skilled staff (MW or MD) on call</li> <li>Required: Skilled staff on call</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li>Attended BEmONC training?</li> <li>Attended BEmONC training? (nurse)</li> <li>Attended BEmONC training? (midwife)</li> </ul>
Equipment	<ul style="list-style-type: none"> <li>Emergency transport</li> <li>Sterilization equipment</li> <li>Examination light</li> <li>Delivery pack</li> <li>Suction apparatus (mucus extractor)</li> <li>Manual vacuum extractor</li> <li>Vacuum aspirator or D&amp;C kit (with speculum)</li> <li>Neonatal bag and mask</li> </ul>	<ul style="list-style-type: none"> <li>Emergency transport system</li> <li>Autoclave/sterilizer</li> <li>Gooseneck lamp (2)</li> <li>NSD set (minimum of 2 sets) consisting of: 2 hemostatic forceps, 1 needle holder, 1 pick-up forcep, 1 tissue forcep, 1 surgical scissor; delivery set</li> <li>Suction apparatus/rubber bulb suction (minimum of 2)</li> <li>—</li> <li>—</li> <li>Neonatal ambu bag and mask, laryngoscope</li> </ul>	<ul style="list-style-type: none"> <li>A vehicle stationed in the RHU</li> <li>Availability of fuel for an emergency</li> <li>Sterilizer or its equivalent (number of available instruments/equipment)</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> </ul>

Tracer Indicator	WHO SARA Guidelines	National Guidelines: Maternity & Newborn Care Package (Annex) or BHFS (Annex)	Indicators Used for Assessment
	<ul style="list-style-type: none"> <li>• Delivery bed</li> <li>• Partograph</li> <li>• Gloves</li> <li>• Infant weighting scale</li> <li>• BP apparatus</li> <li>• Soap and running water OR alcohol-based hand rub</li> </ul>	<ul style="list-style-type: none"> <li>• Delivery table with stirrups and provision for semi-upright position of the mother</li> <li>• Partograph</li> <li>• Sterile gloves</li> <li>• 2 weighing scales (adult and infant); Clinical weighing scale (for newborn)</li> <li>• Sphygmomanometer (non-mercurial) with adult cuff and neonatal cuff</li> <li>• Adequate clean water supply</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• Disposable gloves (availability of supply today)</li> <li>• Weighing scale (infant)</li> <li>• Non-mercurial BP apparatus (number of available instruments/equipment)</li> <li>• Does the delivery room have running water?</li> <li>• 70% isopropyl alcohol (availability of supply today)</li> </ul>
Drugs and Commodities	<ul style="list-style-type: none"> <li>• Antibiotic eye ointment for newborn</li> <li>• Injectable uterotonic</li> <li>• Injectable antibiotic</li> <li>• Magnesium sulfate (injectable)</li> <li>• Skin disinfectant</li> </ul>	<ul style="list-style-type: none"> <li>• Erythromycin or oxytetracycline ophthalmic ointment</li> <li>• Uterotonics: oxytocin, ergotamine, oxytocin-ergotamine, methyletergotamine, prostaglandin tablets (misoprostol); oxytocin 10 units per ampoule or oxytocin in pre-filled, single-dose, non-reusable injection</li> <li>• Intravenous antibiotics (ampicillin, gentamicin); syringe with needle</li> <li>• Magnesium sulfate vials; syringe with needle; magnesium sulfate ampoule</li> <li>• 70% isopropyl alcohol; povidone iodine solution</li> </ul>	<ul style="list-style-type: none"> <li>• Antibiotic eye ointment for newborn (stock availability [BEmONC])</li> <li>• Oxytocin (stock availability [BEmONC])</li> <li>• Injectable antibiotics (stock availability [BEmONC])</li> <li>• Magnesium sulfate (stock availability [BEmONC])</li> <li>• Skin disinfectant (stock availability [BEmONC])</li> </ul>



Tracer Indicator	WHO SARA Guidelines	National Guidelines: Maternity & Newborn Care Package (Annex) or BHFS (Annex)	Indicators Used for Assessment
	<ul style="list-style-type: none"> <li>Intravenous solution with infusion set</li> </ul>	<ul style="list-style-type: none"> <li>IV tubing; IV fluids: D5 LR or Plain LR 1 L bottle/Plain NSS 1 L per bottle</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped</i> - No relevant variable; IV not allowed at RHUs</li> </ul>

#### Annex 5.4. FP tracer indicators

Tracer Indicator	WHO SARA Guidelines	National Guidelines: Maternity & Newborn Care Package (Annex) or BHFS (Annex)	Indicators Used for Assessment
<b>Staff and Guidelines</b>	<ul style="list-style-type: none"> <li>Guidelines on FP</li> <li>FP checklists and/or job aids</li> <li>Staff trained in FP</li> </ul>	<ul style="list-style-type: none"> <li>—</li> <li>IEC materials on FP</li> <li>—</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>BP apparatus</li> </ul>	<ul style="list-style-type: none"> <li>Non-mercurial BP apparatus; sphygmomanometer (non-mercurial) with adult cuff and neonatal cuff</li> </ul>	<ul style="list-style-type: none"> <li>Non-mercurial BP apparatus (number of available instruments/equipment)</li> </ul>
<b>Medicines and Commodities</b>	<ul style="list-style-type: none"> <li>Combined estrogen progesterone oral contraceptive pills</li> <li>Progestin-only contraceptive pills</li> <li>Injectable contraceptives: Either combined estrogen progesterone injectable contraceptives or progestin-only injectable contraceptives</li> <li>Condoms</li> </ul>	<ul style="list-style-type: none"> <li>Adequate supply of pills</li> <li>—</li> <li>Adequate supply of DMPA</li> <li>Adequate supply of condoms</li> </ul>	<ul style="list-style-type: none"> <li>Oral contraceptives (stock availability [FP])</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li>DMPA (stock availability [FP])</li> <li><i>Indicator Dropped</i> - No relevant variable</li> </ul>
<b>Auxiliary Commodities</b>	<ul style="list-style-type: none"> <li>Combined estrogen progesterone injectable contraceptives</li> </ul>	<ul style="list-style-type: none"> <li>—</li> </ul>	<ul style="list-style-type: none"> <li>DMPA (stock availability [FP])</li> </ul>

Tracer Indicator	WHO SARA Guidelines	National Guidelines: Maternity & Newborn Care Package (Annex) or BHFS (Annex)	Indicators Used for Assessment
	<ul style="list-style-type: none"> <li>• Progestin-only injectable contraceptives</li> <li>• Female condoms</li> </ul>	<ul style="list-style-type: none"> <li>• —</li> <li>• —</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• <i>Indicator Dropped</i> - No relevant variable</li> </ul>
	<ul style="list-style-type: none"> <li>• Implants: For example, levonorgestrel or etonogestrel implant</li> <li>• Emergency contraceptive: For example, levonorgestrel tablet or ulipristal acetate tablet or mifepristone tablet 10–25 mg</li> </ul>	<ul style="list-style-type: none"> <li>• Dropped from national guidelines</li> <li>• —</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• <i>Indicator Dropped</i> - No relevant variable</li> </ul>
	<ul style="list-style-type: none"> <li>• IUD</li> </ul>	<ul style="list-style-type: none"> <li>• Adequate supply of NFP IUD</li> </ul>	<ul style="list-style-type: none"> <li>• IUD (stock availability [FP])</li> </ul>

#### Annex 5.5. Immunization tracer indicators

Tracer Indicator	WHO SARA Guidelines	National Guidelines: MCHN Annex H/I	Indicators Used for Assessment
<b>Staff and Guidelines</b>	<ul style="list-style-type: none"> <li>• Guidelines for child immunization</li> <li>• Staff trained in child immunization</li> </ul>	<ul style="list-style-type: none"> <li>• Immunization schedule</li> <li>• —</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• <i>Indicator Dropped</i> - No relevant variable</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>• Cold box/vaccine carrier with ice packs</li> <li>• Refrigerator: Functioning refrigerator with sufficient storage capacity to accommodate all needed vaccines</li> <li>• Sharps container/safety box: A puncture-resistant, rigid, leak-resistant container designed to hold used sharps safely during collection, disposal, and</li> </ul>	<ul style="list-style-type: none"> <li>• —</li> <li>• Vaccine refrigerator</li> <li>• —</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• Cold storage solely for medicines and vaccines</li> <li>• Are there puncture-proof receptacles for disposal of pointed/sharp objects? Safety vault (disposal of non-contaminated waste)</li> </ul>

Tracer Indicator	WHO SARA Guidelines	National Guidelines: MCHN Annex H/I	Indicators Used for Assessment
	<p>destruction; sharps containers should be made of plastic, metal, or cardboard and have a lid that can be closed; sharps containers should be fitted with a sharps aperture, capable of receiving syringes and needle assemblies of all standard sizes, together with other sharps; boxes must be clearly marked with the international biohazard warning not less than 50 mm diameter, printed in black or red on each of the front and back faces of the box</p> <ul style="list-style-type: none"> <li>• Auto-disable syringes</li> <li>• Temperature monitoring device in refrigerator: Thermometer or recorder/logger</li> <li>• Adequate refrigerator temperature: Temperature is monitored twice daily and has not been out of the range 2°C to 8°C, including in the last 30 days/record verification</li> <li>• Immunization cards</li> <li>• Immunization tally sheets</li> </ul>	<ul style="list-style-type: none"> <li>• 3 cc and tuberculin syringes</li> <li>• —</li> <li>• —</li> <li>• Immunization cards</li> <li>• Patient registry?</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• <i>Indicator Dropped</i> - No relevant variable</li> </ul>
<b>Medicines and Commodities</b>	<ul style="list-style-type: none"> <li>• Measles vaccine</li> </ul>	<ul style="list-style-type: none"> <li>• ‘Vaccines’</li> </ul>	<ul style="list-style-type: none"> <li>• Measles (stock availability [vaccine available today])</li> </ul>

Tracer Indicator	WHO SARA Guidelines	National Guidelines: MCHN Annex H/I	Indicators Used for Assessment
	<ul style="list-style-type: none"> <li>DPT-Hib-HepB vaccine (country-specific vaccine combination)</li> <li>OPV</li> </ul>	<ul style="list-style-type: none"> <li>'Vaccines'</li> <li>'Vaccines'</li> </ul>	<ul style="list-style-type: none"> <li>DPT-Hib-HepB (stock availability [vaccine available today])</li> <li>OPV (stock availability [vaccine available today])</li> </ul>
	<ul style="list-style-type: none"> <li>BCG vaccine</li> </ul>	<ul style="list-style-type: none"> <li>'Vaccines'</li> </ul>	<ul style="list-style-type: none"> <li>BCG (stock availability [vaccine available today])</li> </ul>
	<ul style="list-style-type: none"> <li>Pneumococcal vaccine</li> </ul>	<ul style="list-style-type: none"> <li>'Vaccines'</li> </ul>	<ul style="list-style-type: none"> <li>Pneumococcal vaccine (stock availability [vaccine available today])</li> </ul>
	<ul style="list-style-type: none"> <li>Rotavirus vaccine</li> </ul>	<ul style="list-style-type: none"> <li>—</li> </ul>	<ul style="list-style-type: none"> <li>Rotavirus (stock availability [vaccine available today])</li> </ul>
	<ul style="list-style-type: none"> <li>IPV: If part of the national schedule</li> </ul>	<ul style="list-style-type: none"> <li>'Vaccines'</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped</i> - No relevant variable</li> </ul>
	<ul style="list-style-type: none"> <li>HPV: If part of the national schedule</li> </ul>	<ul style="list-style-type: none"> <li>—</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped</i> - No relevant variable</li> </ul>
	<ul style="list-style-type: none"> <li>DPT</li> </ul>	<ul style="list-style-type: none"> <li>'Vaccines'</li> </ul>	<ul style="list-style-type: none"> <li>DPT (stock availability [vaccine available today])</li> </ul>
	<ul style="list-style-type: none"> <li>Hepatitis B</li> </ul>	<ul style="list-style-type: none"> <li>'Vaccines'</li> </ul>	<ul style="list-style-type: none"> <li>Hepatitis B (stock availability [vaccine available today])</li> </ul>
	<ul style="list-style-type: none"> <li>TT</li> </ul>	<ul style="list-style-type: none"> <li>"Vaccines"</li> </ul>	<ul style="list-style-type: none"> <li>TT (stock availability [vaccine available today])</li> </ul>
	<ul style="list-style-type: none"> <li>Measles vaccine</li> </ul>	<ul style="list-style-type: none"> <li>—</li> </ul>	<ul style="list-style-type: none"> <li>Measles (supply shortage counts for the past 3 months [vaccine available today])</li> </ul>
	<ul style="list-style-type: none"> <li>DPT-Hib-HepB vaccine: Country-specific vaccine combination</li> </ul>	<ul style="list-style-type: none"> <li>—</li> </ul>	<ul style="list-style-type: none"> <li>DPT-Hib-HepB (supply shortage counts for the past 3 months [vaccine available today])</li> </ul>
	<ul style="list-style-type: none"> <li>OPV</li> </ul>	<ul style="list-style-type: none"> <li>—</li> </ul>	<ul style="list-style-type: none"> <li>OPV (supply shortage counts for the past 3 months [vaccine available today])</li> </ul>

Tracer Indicator	WHO SARA Guidelines	National Guidelines: MCHN Annex H/I	Indicators Used for Assessment
	<ul style="list-style-type: none"> <li>• BCG vaccine</li> <li>• Pneumococcal vaccine: If part of the national schedule</li> <li>• Rotavirus vaccine: If part of the national schedule</li> <li>• IPV</li> <li>• HPV</li> <li>• DPT</li> <li>• Hepatitis B</li> <li>• TT</li> </ul>	<ul style="list-style-type: none"> <li>• —</li> <li>• —</li> <li>• —</li> <li>• —</li> <li>• —</li> <li>• —</li> <li>• —</li> </ul>	<ul style="list-style-type: none"> <li>• BCG (supply shortage counts for the past 3 months [vaccine available today])</li> <li>• Pneumococcal vaccine (supply shortage counts for the past 3 months [vaccine available today])</li> <li>• Rotavirus (supply shortage counts for the past 3 months [vaccine available today])</li> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• <i>Indicator Dropped</i> - No relevant variable</li> <li>• DPT (supply shortage counts for the past 3 months [vaccine available today])</li> <li>• Hepatitis B (supply shortage counts for the past 3 months [vaccine available today])</li> <li>• TT (supply shortage counts for the past 3 months [vaccine available today])</li> </ul>
<b>Cold Chain</b>	<ul style="list-style-type: none"> <li>• Cold chain minimum requirements: The minimum adequate cold chain requirements are available (there is a functional refrigerator, there is a temperature monitoring device, and the temperature has been maintained between 2°C and 8°C checked for the last 30 days)</li> </ul>	<ul style="list-style-type: none"> <li>• —</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Indicator Dropped</i> - No relevant variable</li> </ul>

Tracer Indicator	WHO SARA Guidelines	National Guidelines: MCHN Annex H/I	Indicators Used for Assessment
	<ul style="list-style-type: none"> <li>Energy source and power supply for vaccine refrigerator: Energy provided to the vaccine refrigerator through any source that supplies power to the refrigerator 24 hours a day and for 7 days in the week</li> <li>Types of power used for cold chain refrigeration: Grid or generator solar gas kerosene mixed other</li> </ul>	<ul style="list-style-type: none"> <li>—</li> <li>—</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> </ul>

#### Annex 5.6. Child health tracer indicators

Tracer Indicator	WHO SARA Guidelines	National Guidelines: MNCH MOP or Tsekap	Indicators Used for Assessment
Staff and Guidelines	<ul style="list-style-type: none"> <li>Guidelines for IMCI: Country adapts to which guidelines are required/accepted</li> <li>Guidelines for growth monitoring: Country adapts to which guidelines are required/accepted</li> <li>Staff trained in IMCI: Country adapts to which guidelines are required/accepted</li> <li>Staff trained in growth monitoring: At least one staff member providing the service trained in some aspect of growth monitoring in the last two years</li> </ul>	<ul style="list-style-type: none"> <li>IMCI manual</li> <li>—</li> <li>—</li> <li>—</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> </ul>
Equipment	<ul style="list-style-type: none"> <li>Child and infant scale: Weight gradations at minimum of 250 gm and 100 gm</li> <li>Length/height measuring equipment: Wooden boards or metal beams with a mounted rule that permits measurement of crown-to-heel length (infants under 2</li> </ul>	<ul style="list-style-type: none"> <li>—</li> <li>—</li> </ul>	<ul style="list-style-type: none"> <li>Weighing scale (infant)</li> <li><i>Indicator Dropped</i> - No relevant variable</li> </ul>

Tracer Indicator	WHO SARA Guidelines	National Guidelines: MNCH MOP or Tsekap	Indicators Used for Assessment
	<p>years, lying down) or height (older children, standing up) in centimeters; gradations at 1 mm or 5 mm</p> <ul style="list-style-type: none"> <li>• Thermometer</li> <li>• Stethoscope</li> <li>• Growth chart</li> </ul>	<ul style="list-style-type: none"> <li>• —</li> <li>• —</li> <li>• —</li> </ul>	<ul style="list-style-type: none"> <li>• Non-mercurial thermometer</li> <li>• Stethoscope (number of available instruments/equipment)</li> <li>• <i>Indicator Dropped</i> - No relevant variable</li> </ul>
Diagnostics	<ul style="list-style-type: none"> <li>• Hb: This may include colorimeter, hemoglobinometer, hemocue, or any other country-specific method.</li> <li>• Test parasite in stool (general microscopy): Microscope, slides, covers</li> <li>• —</li> <li>• —</li> <li>• Malaria diagnostic capacity: Malaria rapid test or smear (microscope, slides, and stain)</li> </ul>	<ul style="list-style-type: none"> <li>• CBC</li> <li>• Stool Exam?</li> <li>• —</li> <li>• —</li> <li>• —</li> </ul>	<ul style="list-style-type: none"> <li>• Hemoglobinometer kit/acid hematin (stock availability for today [lab supplies: Manual CBC])</li> <li>• Microscope (number of functional equipment)</li> <li>• Glass slides (stock availability for today [lab supplies: Automated CBC])</li> <li>• Fecalalysis</li> <li>• Diagnosis or treatment of malaria (offered services)</li> </ul>
Medicines and Commodities	<ul style="list-style-type: none"> <li>• ORS packet: Any child dosage or formulation</li> </ul>	<ul style="list-style-type: none"> <li>• ORS</li> </ul>	<ul style="list-style-type: none"> <li>• ORS (stock availability [gastroenteritis])</li> </ul>
	<ul style="list-style-type: none"> <li>• Amoxicillin (dispersible tablet 250 mg or 500 mg OR syrup/suspension): Any child dosage or formulation</li> <li>• Co-trimoxazole syrup/suspension: Any child dosage or formulation</li> <li>• Paracetamol syrup/suspension: Any child dosage or formulation</li> </ul>	<ul style="list-style-type: none"> <li>• Oral antibiotics for child; amoxicillin (not specified for child)</li> <li>• Oral antibiotics for child; co-trimoxazole, not specified for child</li> <li>• Oral antibiotics for child; paracetamol not specified for child</li> </ul>	<ul style="list-style-type: none"> <li>• Amoxicillin (stock availability [antibacterial])</li> <li>• Co-trimoxazole (stock availability [antibacterial])</li> <li>• Paracetamol (stock availability [others])</li> </ul>

Tracer Indicator	WHO SARA Guidelines	National Guidelines: MNCH MOP or Tsekap	Indicators Used for Assessment
	<ul style="list-style-type: none"> <li>Vitamin A capsules: Any child dosage or formulation</li> <li>Me-/albendazole capsule/tablet: Any child dosage or formulation</li> <li>Zinc sulfate tablets, dispersible tablets or syrup: Any child dosage or formulation</li> </ul>	<ul style="list-style-type: none"> <li>Vitamin A capsules</li> <li>Mebendazole</li> <li>Zinc supplements</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped</i> - No relevant variable</li> <li>Deworming drugs (albendazole of mebendazole) (stock availability [others])</li> <li>Zinc supplements (stock availability [gastroenteritis])</li> </ul>

#### Annex 5.7. DM tracer indicators

Tracer Indicator	WHO SARA Guidelines	National Guidelines: PhilPEN, PCB1, or Tsekap	Variable Description
<b>Service Availability</b>	<ul style="list-style-type: none"> <li>Diabetes diagnosis and/or management</li> </ul>	<ul style="list-style-type: none"> <li>—</li> </ul>	<ul style="list-style-type: none"> <li>Diagnosis or management of diabetes (offered services)</li> </ul>
<b>Staff and Guidelines</b>	<ul style="list-style-type: none"> <li>Guidelines for diabetes diagnosis and treatment</li> <li>Staff trained in diabetes diagnosis and treatment: At least one staff providing the service trained in diabetes diagnosis and treatment in the last two years (can be an NCD training including a section on diabetes)</li> </ul>	<ul style="list-style-type: none"> <li>NCD Risk Assessment and Screening Form</li> <li>—</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped</i> - No relevant variable</li> <li>Have you received any training on PhilPEN guidelines?</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>BP apparatus</li> <li>Adult scale</li> <li>Measuring tape (height board/stadiometer)</li> </ul>	<ul style="list-style-type: none"> <li>BP measurement device, non-mercurial</li> <li>Weighing scale (adult)</li> <li>Measuring tape, non-extensible</li> </ul>	<ul style="list-style-type: none"> <li>Non-mercurial BP apparatus (number of available instruments/equipment)</li> <li>Weighing scale (adult)</li> <li><i>Indicator Dropped</i> - No relevant variable</li> </ul>
<b>Diagnostics</b>	<ul style="list-style-type: none"> <li>Blood glucose</li> </ul>	<ul style="list-style-type: none"> <li>Glucometer with test strips; blood glucose monitoring through blood glucose meters</li> </ul>	<ul style="list-style-type: none"> <li>Diagnostic services: Fasting blood glucose (offered services)</li> </ul>



Tracer Indicator	WHO SARA Guidelines	National Guidelines: PhilPEN, PCB1, or Tsekap	Variable Description
	<ul style="list-style-type: none"> <li>Urine dipstick-protein</li> <li>Urine dipstick-ketones</li> </ul>	<ul style="list-style-type: none"> <li>Cholesterol meter with test strips; Urinalysis</li> <li>Test strips for checking urine ketones and proteins/test tube or glass container for the urine; urinalysis</li> </ul>	<ul style="list-style-type: none"> <li>Dipstick for qualitative urine analysis (stock availability for today [lab supplies: Automated CBC])</li> <li>Dipstick for qualitative urine analysis (stock availability for today [lab supplies: Automated CBC])</li> </ul>
<b>Medicines and Commodities</b>	<ul style="list-style-type: none"> <li>Metformin capsule/tablet</li> <li>Glibenclamide capsule/tablet</li> <li>Insulin regular injectable</li> <li>Glucose 50% injectable</li> <li>Gliclazide tablet or glipizide tablet</li> </ul>	<ul style="list-style-type: none"> <li>Metformin</li> <li>Glibenclamide</li> <li>Insulin now being distributed - check most recent AOs</li> <li>—</li> <li>Gliclazide</li> </ul>	<ul style="list-style-type: none"> <li>Metformin (stock availability [diabetes])</li> <li>Sulfonylureas, for example, glibenclamide, gliclazide (stock availability [diabetes])</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li>Sulfonylureas, for example, glibenclamide, gliclazide (stock availability [diabetes])</li> </ul>

#### Annex 5.8. CVD tracer indicators

Tracer Indicator	WHO SARA Guidelines	National Guidelines: PhilPEN, PCB1, or Tsekap	Variable Description
<b>Staff and Guidelines</b>	<ul style="list-style-type: none"> <li>Guidelines for diagnosis and treatment of chronic cardiovascular conditions: Country adapts to which guidelines are required/accepted (can be NCD guidelines which contain information on CVD)</li> </ul>	<ul style="list-style-type: none"> <li>Country adapts to which guidelines are required/accepted (can be NCD guidelines which contain information on CVD)</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped</i> - No relevant variable</li> </ul>

Tracer Indicator	WHO SARA Guidelines	National Guidelines: PhilPEN, PCB1, or Tsekap	Variable Description
	<ul style="list-style-type: none"> <li>Staff trained in diagnosis and management of chronic cardiovascular conditions: At least one staff providing the service trained in diagnosis and management of chronic cardiovascular conditions in the last two years (can be an NCD training including a section on CVD)</li> </ul>	<ul style="list-style-type: none"> <li>At least one staff providing the service trained in diagnosis and management of chronic cardiovascular conditions in the last two years (can be an NCD training including a section on CVD)</li> </ul>	<ul style="list-style-type: none"> <li>Have you received any training on PhilPEN guidelines?</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>Stethoscope</li> <li>BP apparatus: Digital BP machine or manual sphygmomanometer with stethoscope</li> <li>Adult scale</li> </ul>	<ul style="list-style-type: none"> <li>Stethoscope</li> <li>BP measurement device, non-mercurial</li> <li>Weighing scale (adult)</li> </ul>	<ul style="list-style-type: none"> <li>Stethoscope (number of available instruments/equipment)</li> <li>Non-mercurial BP apparatus (number of available instruments/equipment)</li> <li>Weighing scale (adult)</li> </ul>
<b>Medicines and Commodities</b>	<ul style="list-style-type: none"> <li>ACE inhibitor (for example, enalapril, lisinopril, ramipril, perindopril)</li> <li>Hydrochlorothiazide tablet or other thiazide diuretic tablet</li> <li>Beta-blocker (for example, bisoprolol, metoprolol, carvedilol, atenolol)</li> <li>Calcium channel blockers (for example, amlodipine)</li> <li>Aspirin capsule/tablets</li> <li>Metformin capsule/tablets</li> </ul>	<ul style="list-style-type: none"> <li>ACE inhibitors; enalapril</li> <li>Thiazide diuretics; hydrochlorothiazide</li> <li>Beta-blockers; Metoprolol</li> <li>Calcium channel blockers (sustained release formulations); amlodipine</li> <li>Aspirin</li> <li>Metformin</li> </ul>	<ul style="list-style-type: none"> <li>ACE inhibitor (stock availability [hypertension])</li> <li>Diuretic, for example, hydrochlorothiazide (stock availability [hypertension])</li> <li>Beta-blocker (stock availability [hypertension])</li> <li>Calcium channel blocker (stock availability [hypertension])</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li>Metformin (stock availability [diabetes])</li> </ul>

### Annex 5.9. CRD tracer indicators

Tracer Indicator	WHO SARA Guidelines	National Guidelines: Tsekap or Annex C BHFS	Indicators Used for Assessment
<b>Service Availability</b>	<ul style="list-style-type: none"> <li>CRD diagnosis and/or management</li> </ul>	<ul style="list-style-type: none"> <li>—</li> </ul>	<ul style="list-style-type: none"> <li>Diagnosis of CRD (offered services)</li> </ul>
<b>Staff and Guidelines</b>	<ul style="list-style-type: none"> <li>Guidelines for diagnosis and management of CRD: Country adapts to which guidelines are required/accepted (can be NCD guidelines which contain information on CRD)</li> <li>Staff trained in diagnosis and management of CRD: At least one staff providing the service trained in diagnosis and management of CRD in the last two years (can be an NCD training including a section on CRD)</li> </ul>	<ul style="list-style-type: none"> <li>—</li> <li>—</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>Stethoscope</li> <li>Peak flowmeter</li> <li>Spacers for inhalers</li> <li>Oxygen: Oxygen cylinders OR concentrators OR central oxygen supply with functioning flowmeter for oxygen therapy (with humidification) AND oxygen delivery apparatus (key connecting tubes and mask/nasal prongs), available at any time during the past 3 months</li> </ul>	<ul style="list-style-type: none"> <li>Stethoscope</li> <li>Peak expiratory flowmeter testing (Diagnostic Service 11, PhilHealth Circular 002-2015)</li> <li>—</li> <li>—</li> </ul>	<ul style="list-style-type: none"> <li>Stethoscope (number of available instruments/equipment)</li> <li>Diagnostic service: Peak expiratory flowmeter (offered services)</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> </ul>
<b>Drugs</b>	<ul style="list-style-type: none"> <li>Salbutamol inhaler</li> </ul>	<ul style="list-style-type: none"> <li>Salbutamol inhaler</li> </ul>	<ul style="list-style-type: none"> <li>Beta2-agonist, for example, salbutamol (stock availability [asthma])</li> </ul>

Tracer Indicator	WHO SARA Guidelines	National Guidelines: Tsekap or Annex C BHFS	Indicators Used for Assessment
	<ul style="list-style-type: none"> <li>Beclomethasone inhaler</li> <li>Beta-blocker (for example, bisoprolol, metoprolol, carvedilol, atenolol)</li> <li>Prednisolone capsule/tablets</li> <li>Hydrocortisone injection</li> <li>Epinephrine injectable</li> </ul>	<ul style="list-style-type: none"> <li>Fluticasone inhaler</li> <li>Short acting beta2-agonists</li> <li>—</li> <li>—</li> <li>—</li> </ul>	<ul style="list-style-type: none"> <li>Beclomethasone or budesonide or fluticasone (stock availability [asthma])</li> <li>Beta-blocker (stock availability [hypertension])</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> </ul>

#### Annex 5.10. CCS tracer indicators

Tracer Indicator	WHO SARA Guidelines	National Guidelines: MCHN Annex H/I	Indicators Used for Assessment
Service Availability	<ul style="list-style-type: none"> <li>Cervical cancer diagnosis</li> </ul>	<ul style="list-style-type: none"> <li>Cervical cancer screening using VIA or pap smear</li> </ul>	<ul style="list-style-type: none"> <li>VIA (offered services)</li> <li>Diagnostic test: CCS (additional interventions: postpartum)</li> </ul>
Staff and Guidelines	<ul style="list-style-type: none"> <li>Guidelines for cervical cancer prevention and control</li> <li>Staff trained in cervical cancer prevention and control</li> </ul>	<ul style="list-style-type: none"> <li>—</li> <li>Staff competencies: Pap smear and VIA wash technique</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped</i> - No relevant variable</li> <li>Have you attended a training on VIA?</li> </ul>
Equipment	<ul style="list-style-type: none"> <li>Speculum</li> </ul>	<ul style="list-style-type: none"> <li>Speculum</li> </ul>	<ul style="list-style-type: none"> <li>Vaginal speculum (big) (number of available instruments/equipment)</li> </ul>
Diagnostics	<ul style="list-style-type: none"> <li>Acetic acid</li> </ul>	<ul style="list-style-type: none"> <li>Acetic acid: 3% to 5%</li> </ul>	<ul style="list-style-type: none"> <li>3% to 5% acetic acid (availability of supply today)</li> </ul>

### Annex 5.11. TB tracer indicators

Tracer Indicator	WHO SARA Guidelines	National Guidelines: MCHN Annex H/I	Indicators Used for Assessment
Staff and Guidelines	<ul style="list-style-type: none"> <li>Guidelines for diagnosis and treatment of TB</li> <li>Guidelines for management of HIV and TB co-infection</li> <li>Guidelines related to MDR-TB treatment (or identification of need for referral)</li> <li>Guidelines for TB infection control</li> <li>Staff trained in TB diagnosis and treatment</li> <li>Staff trained in management of HIV and TB co-infection</li> <li>Staff trained in client MDR-TB treatment or identification of need for referral</li> <li>Staff trained in TB infection control</li> </ul>	<ul style="list-style-type: none"> <li>Circ 14 s. 2014: Revised Guidelines for the PhilHealth Outpatient Anti-Tuberculosis DOTS Benefit Package</li> <li>—</li> <li>—</li> <li>—</li> <li>Duly licensed by PRC certified by PhilCAT or trained by NTP in DOTS</li> <li>—</li> <li>—</li> <li>—</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> </ul>
Diagnostics	<ul style="list-style-type: none"> <li>TB microscopy</li> <li>HIV diagnostic capacity</li> <li>System for diagnosis of HIV among TB clients</li> <li>Sputum microscopy</li> </ul>	<ul style="list-style-type: none"> <li>Referral to a microscopy center that has acquired quality assurance certification from the NTP</li> <li>—</li> <li>—</li> <li>Sputum smear</li> </ul>	<ul style="list-style-type: none"> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li><i>Indicator Dropped</i> - No relevant variable</li> <li>Diagnostic service: Sputum testing for TB (offered services)</li> </ul>
Medicines and Commodities	<ul style="list-style-type: none"> <li>First-line TB medications</li> </ul>	<ul style="list-style-type: none"> <li>Isoniazid+Rifampicin+Pyrazinamide+Ethambutol</li> </ul>	<ul style="list-style-type: none"> <li>Isoniazid+Rifampicin+Pyrazinamide+Ethambutol fixed dose tablets (stock availability [TB drugs])</li> </ul>





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