USAID | DELIVER PROJECT

Nigeria: 2014-2015 SURE-P

Maternal and Child Health Commodity Requirements and Financing Needs

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USAID | DELIVER PROJECT, Task Order 4
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Abstract
In May 2014, Subsidy Reinvestment and Empowerment Program on Maternal and Child Health Project Implementing Unit SURE-P MCH PIU, with technical assistance from the USAID | DELIVER PROJECT, Task Order 4, conducted the 2014–2015 SURE-P Maternal and Child Health (MCH) Commodity Requirements and Financing Needs study in Nigeria. The commodity forecast was generated using demographic-based and hybrid morbidity and service statistics–based methodologies. From the forecast, the total commodity needs were generated for a period of 18 months and were estimated to cost $19,167,895 for medicines and $11,044,988 for supplies. This report includes the quantification methodology and results as well as recommendations to improve the continuous availability of MCH commodities for the SURE-P MCH program.

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Acronyms

3PL	third-party logistics provider
AL	arthemeter/lumenfantrine
ANC	antenatal clinic
ARI	acute respiratory infection
bd	twice daily
CCT	conditional cash transfer
CHEW	community health extension worker
C/S	caesarean section
DHS	Demographic and Health Survey
EOP	emergency order point
HMIS	health management information system
IV	intravenous
LGA	local government area
LMIS	logistics management information system
MCH	maternal and child health
NPC	National Population Commission
ORS	oral rehydration salt
PHC	primary healthcare center
PIU	Project Implementing Unit
PPH	postpartum hemorrhage
qds	four times daily
SDP	service delivery point
SPA	state program assistant
STG	standard treatment guidelines
SURE-P MCH	Subsidy Reinvestment and Empowerment Program, maternal and child health component
tds	three times daily
U5	under 5 years
UNFPA	United Nations Population Fund
USAID	United State Agency for International Development
UTI	urinary tract infection
VHW	village health worker
WHO	World Health Organization

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Executive Summary

Over the past few years, the Government of Nigeria has implemented a number of interventions to improve the maternal and child health (MCH) situation in Nigeria. One of these interventions is the MCH component of the Subsidy Reinvestment and Empowerment Program (SURE-P MCH). SURE-P was set up by the Federal Government of Nigeria to mitigate the impact of the reduction in the government petroleum products subsidy on the vulnerable populations in the country by initiating safety net projects. The goal of the SURE-P MCH program is to provide quality healthcare to women and children, reducing maternal and child mortality rates and thereby accelerating progress toward meeting Millennium Development Goals 4 and 5.

In order to achieve this goal, SURE-P MCH aims to increase the availability of skilled health workers at the primary healthcare level and provide infrastructure upgrades and essential commodities at these facilities while increasing the demand for these services using the conditional cash transfer mechanism. SURE-P MCH is implemented by the Project Implementing Unit (PIU) under the National Primary Health Care Development Agency. SURE-P MCH currently supports 1,000 primary healthcare centers across the nation. The USAID | DELIVER PROJECT has been providing technical assistance to the SURE-P MCH PIU to strengthen supply chains that deliver commodities to supported health facilities nationwide. In 2013, the project provided technical support to the PIU to estimate the annual requirements for commodities; conducted a baseline assessment of the logistics system; and designed a system to manage health commodities and information flows within the program based on the assessment findings. The project is currently providing assistance to operationalize this system to mitigate stockouts and wastages at the facility level and improve logistics data visibility for decision-making.

SURE-P MCH PIU, with technical support from the project, conducted a forecast and developed a supply plan for July 2014 to December 2015 for procurement of MCH commodities. Demographic-based and hybrid morbidity and service statistics–based forecasts were conducted. Logistics data were not available, as the system does not routinely capture and report these data. The demographic-based forecast was calculated using data from the national Demographic and Health Survey and other Internet sources. The hybrid service statistics and morbidity–based forecast was calculated using service statistics data aggregated from the health management information system (HMIS) of SURE-P MCH–supported health facilities nationwide and morbidity data from peer-reviewed journals available on the Internet where HMIS data were unavailable.

This report includes the findings of the forecast and supply plan that can be used for procurement of commodities. The project quantified MCH commodities provided by SURE-P MCH, which included drugs and supplies/consumables. In total, the quantification team estimated the funding requirements for 27 medicines and 32 health supplies/consumable using purchase prices from the International Drug Price Indicator Guide and other Internet sources. The SURE-P MCH PIU team decided to go with the forecast generated from the hybrid morbidity and service statistics data as they were more confident of the data compared with the demographic data because the data used were obtained from actual service/morbidity statistics from SURE-P MCH facilities and

incorporated the program targets. The 18-month funding requirement from July 2014 to December 2015 was estimated at $19,167,895 for medicines and $11,044,988 for supplies.

Going forward, the project recommends that the SURE-P MCH logistics system be operationalized; this will lead to ready access to logistics data. The quantification output should be reviewed every quarter with the visibility of actual logistics data from the health facilities to inform flexible procurement that should be responsive to client needs. The SURE-P MCH PIU should create a commodity tracking committee to ensure that commodities are kept at optimum levels throughout the system. Also, this committee will be in charge of creating and managing a distribution plan to facilities so that stock levels are properly maintained.

Background

The Subsidy Reinvestment and Empowerment Program (SURE-P) was established by the Federal Government of Nigeria to effectively manage financial resources accruable from the reduction in the subsidy on fuel in 2012. SURE-P is made up of programs designed to mitigate the impact of the reduction in the fuel subsidy on the most vulnerable populations in the country. These programs include maternal and child health (MCH), community services, employment schemes, mass transit, vocational training, road works, and rail transport programs.

The goal of the MCH component of SURE-P (SURE-P MCH) is to provide quality healthcare to women and children, reducing maternal and child mortality rates and thereby accelerating progress toward achieving Millennium Development Goals 4 and 5. Designed as a four-year program (2012–2015), SURE-P MCH initially supported 500 facilities at its inception in 2012 but has since increased its reach. The program currently supports 1,000 primary healthcare centers (PHCs) across the country with plans to scale up to 1,500 facilities during the lifetime of the project.

SURE-P MCH utilizes a two-pronged approach to achieve its objective of reducing maternal and child mortality rates in the country: supply and demand. The supply component involves the provision of infrastructure upgrades and deployment of the necessary human resources to improve service delivery at the PHCs. This is done by providing the MCH drugs, supplies, and equipment to PHCs; engaging various cadres of trained health workers, such as community health extension workers (CHEWs), village health workers (VHWs), and midwives; and also by renovating health centers, including providing boreholes and an alternative power supply.

The demand component is geared toward increasing the utilization of MCH services in the health facilities through the use of incentives like the conditional cash transfer (CCT), which is given after a woman accesses the full range of recommended antenatal, postnatal, and early newborn care at SURE-P MCH–supported health facilities, including four antenatal care (ANC) visits, delivery by a skilled birth attendant, postnatal visit, first round of immunizations given to the newborn, and receiving counseling on family planning. CCT was piloted in nine states in 2013, with a planned scale-up to nine additional states in 2014.

The demand component fosters behavioral change by engaging the community through liaisons with the ward development committees and with traditional and religious leaders on the need to patronize these health facilities, which allows for deeper reach to target communities, thereby mitigating barriers to access to healthcare at the primary level.

SURE-P MCH also works with other stakeholders, including the local and state governments, donor agencies, and other nongovernmental organizations to foster collaboration to achieve program objectives.

SURE-P MCH Supply Chain

The SURE-P MCH health commodities supply chain was designed with support from the project in July 2013. This system is a forced-ordering, push, min-max inventory control system where commodities are supplied by vendors to six National Primary Health Care Development Agency vaccine dry stores located in the six geopolitical zones of the country. These stores serve as storage

hubs before final delivery to the health facilities on a quarterly basis, based on facility needs. Information flows from the health facilities through the state program assistant located in each state to the Project Implementing Unit (PIU), where resupply quantities are calculated based on data submitted by the facilities and instruction is sent to the zonal stores to pick and pack commodities for health facilities in respective zones. The SURE-P MCH kits (VHW kits and outreach kits) on the other hand, are managed using a two-bin continuous review min-max inventory control system.

Figure 1: SURE-P MCH Logistics System Pipeline (flow of commodities and information)

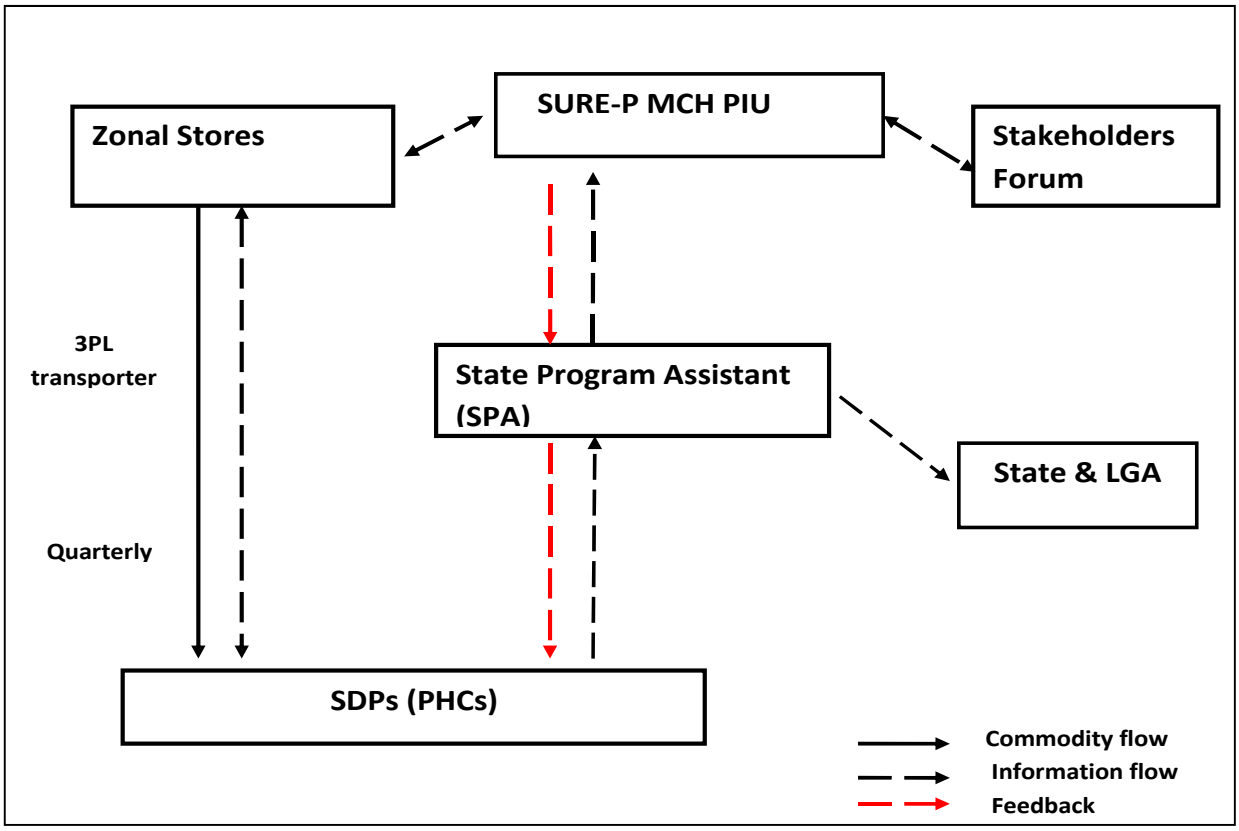


Table 1: SURE-P MCH Max-Min Inventory Control System

Levels	Maximum	Minimum	EOP
Zonal store	8 months	5 months	2 months
PHCs	5 months	3 months	1 month
CHEWs and VHWs	2 bins	1 bin	½ bin

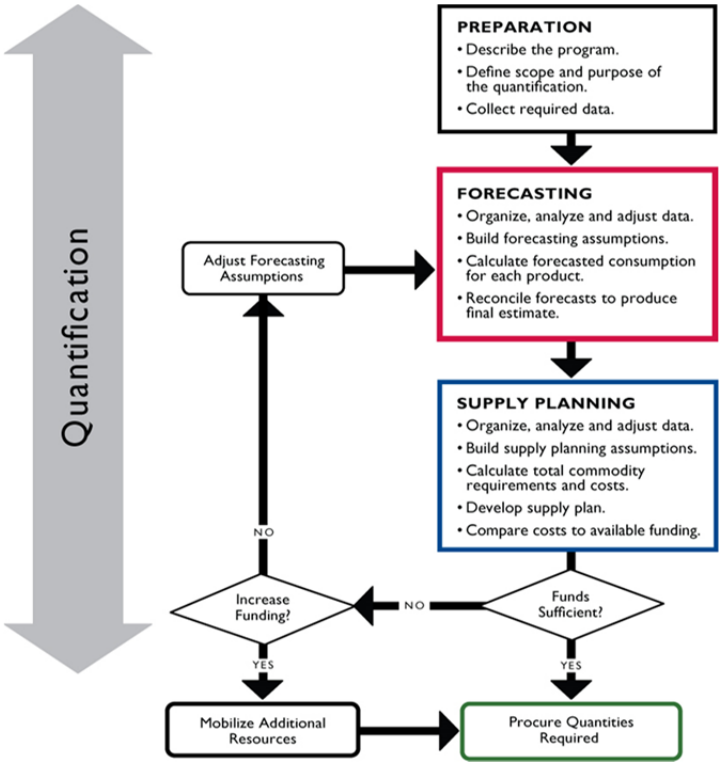
Scope/Purpose of Quantification

The project provided support to the SURE-P MCH PIU to estimate the requirement of commodities for the program for 18 months. The time frame of the quantification was therefore set from July 2014 to December 2015. The outcome of this activity is to be used for procurement purposes.

Methodology

Commodities quantification is a process that includes estimating the quantities and the cost of products required to meet demand and fill the pipeline with adequate stock levels. For MCH commodities, this involves forecasting the need for medicines and medical supplies. The process takes into account the service delivery capacity, supply pipeline requirements, and resources available for procurement. The quantification process as shown in Figure 2 involves the preparation, forecasting, and supply planning stages.

Figure 2: Steps in Quantification



Relevant data were collected and aggregated after the scope and purpose of the quantification had been identified. Health management information system (HMIS) data were collected from approximately 500 facilities, and catchment population data were collected from approximately 1,000 facilities, with a reporting rate of about 95 percent. Since HMIS data collected information for only certain indicators, phone calls were made to one facility per state to obtain data for additional indicators. The data collected from each state were aggregated and adjusted as necessary. Logistics data were not available, as the system does not routinely capture and report these data.

Based on the available data, the team agreed to use the hybrid morbidity/service statistics–based and demographic-based methodologies to generate the forecast. In using these methodologies, additional steps were required to move from number of patients/services rendered at the facility to quantity of products needed. Relevant conditions/categories were created based on the list of commodities to be quantified provided by SURE-P. From the data, the target numbers for each condition were determined based on assumptions agreed upon. Other sources of information for the forecast included the 2008 Demographic Health Survey (DHS), standard treatment guidelines (STGs), and relevant publications. Commodities, aggregated client load, regimens, dosages, and treatment duration were entered into Quantimed software to generate the forecast figures.

The supply planning process is a critical step in ensuring that products are continuously available in the program. The supply plan provides information on the quantities of drugs and supplies expected, including their costs and shipment schedules. This ensures that the stock is managed within the desired inventory control levels. In planning procurement, the program takes into consideration the forecasted consumption, the stock on hand, the lead time of the suppliers, and the buffer stock to protect the program in the event of an unusual increase in demand or delays in shipments.

In the SURE-P MCH program, the maximum and minimum stock levels for the national program was obtained from the last system design and set at 13 and 8 months of stock, respectively. The desired stock on hand was calculated to be 11 months of stock. Stock on hand was assumed to be zero, as no data could be obtained before or during the quantification. Unit commodity costs were obtained from the International Drug Price Indicator Guide and www.alibaba.com, an Internet source.

The forecasted quantities of drugs and supplies for the period of the forecast (2014–2015) were then entered into PipeLine to propose quantities and shipment dates to ensure that the stocks are managed properly within the desired stock levels to avoid overstocking or stockouts. In proposing the shipment quantities and dates, PipeLine takes into account the stock on hand, quantities of drugs on order, the buffer stock, the supplier lead time, and the desired maximum and minimum inventory levels of the program. One output from the PipeLine software is the supply plan that estimates product quantities and financial requirements for 2014 and 2015.

The estimated product quantities and financial requirements for both the demographic-based and morbidity/service statistics–based forecasts were presented to SURE-P MCH PIU, as well as the strengths and weakness of each forecast. The SURE-P MCH team decided to use the forecast generated from morbidity/service statistics data as they were more confident of the input data because it was collected by their staff from the facilities and had a high reporting rate of 95 percent.

Commodity List Categorization

SURE-P MCH PIU presented a list of health products comprising medical supplies and medicines for maternal, neonatal, and child health at PHCs. The medicines and supplies were assumed to be targeted for the following categories/conditions:

Targeted Maternal Health Conditions

- Antenatal attendance
- Deliveries

- Caesarean section (C/S)
- Postpartum hemorrhage (PPH) prevention and management
- Pre-eclampsia/eclampsia
- Malaria in pregnancy
- Urinary tract infection (UTI) in pregnancy

Targeted Neonatal and Child Health Conditions

- Antenatal attendance
- Deliveries
- Caesarean section (C/S)
- Postpartum hemorrhage (PPH) prevention and management
- Pre-eclampsia/eclampsia
- Malaria in pregnancy
- Urinary tract infection (UTI) in pregnancy

Assumptions

In order to complete the forecast and arrive at an appropriate estimate of commodities needed by the program, a number of assumptions were made based on the data available. It was recommended that the assumptions made during this forecast should be revisited regularly to replace the assumptions with actual data that will be subsequently collected from the facilities to reflect the reality on the ground.

The assumptions made were based on the program targets, the period of the forecast, and the services provided.

Patient Target Determination

Catchment population data were collected for 2013 and adjusted appropriately. The population growth rate of 3.4 percent was applied to the total population to reflect annual growth. The subset data for the different conditions were then calculated applying percentages obtained from the 2008 DHS and community-based studies in relevant publications.

Table 2: PHC Patient Targets from Demography Data

Care/Condition	2014 Targets	2015 Target	Notes/Source
Deliveries (proportion of women that accessed delivery by a skilled staff)	228,343	236,107	General fertility rate 19.4% (NPC 2009) and proportion of still births (15% of live births –UNFPA) applied to women of reproductive age to obtain number of deliveries. 39% (NPC 2009) of these deliveries are attended by a skilled birth attendant.
Antenatal attendance	309,727	320,258	52.9% of total deliveries (NPC, 2009)
C/S	4,567	4,722	2% of births attended by skilled staff (NPC, 2009)
PPH prevention and management	228,343	236,107	Same as number of deliveries as all women delivering will receive misoprostol or ergotmetrine
Pre-eclampsia/eclampsia	32,788	33,903	5.6% of births attended by skilled staff (Onyiriuka et al., 2004)
Malaria in pregnancy	152,229	157,405	26% of number of deliveries (Wogu et al., 2013)
UTI in pregnancy	301,530	311,782	51.5% of number of deliveries (Okonko et al., 2009; Mbakwem-Aniebo et al., 2009; Ani et al., 2008)
Prevention of neonatal cord infections	228,343	236,107	Proportion of deliveries attended by skilled staff
Febrile convulsions	21,210	21,931	2.7% of under 5 years with fever (Eseigbe et al., 2012)
Malaria in children	385,712	398,256	49.1% of under 5 years with fever (WHO, 2011)
Diarrhea/dysentery	983,892	1,017,344	38.1% of under 5 years (WHO, 2011)
ARIs/pneumonia	356,646	368,772	45.4% of under 5 years with fever (WHO, 2011)
Admissions	387,359	400,529	15.5% of under 5 years (analysis of SURE-P service statistics data)
Severe dehydration	14,758	15,260	1.5% of all diarrhea cases (Ibadin et al., 2000)

See Annex 1, Spectrum for Demographic Data.

Service statistics data are routinely collected and aggregated nationally for some indicators, such as antenatal attendance and number of deliveries, among other indicators. These data were aggregated from January to November 2013 from the initial facilities of approximately 500, with a reporting rate of 95 percent. For those indicators that were not routinely collected and aggregated, phone calls were made to one facility per state. The data were adjusted to represent the 1,000 facilities. The service data obtained for malaria in pregnancy were not used for the quantification because pregnant women that receive sulfadoxine and pyrimethamine were also included in the data. Instead, the 26 percent prevalence rate (Wogu et al., 2013) was applied to the data representing number of ANC visits. For some other conditions, such as severe dehydration in children, pre-eclampsia, C/S, and febrile convulsions, for which service data could not be collected, the proportions used in the demographic data spectrum were applied. An annual growth rate of 10 percent was applied yearly to represent the target growth of the SURE-P MCH program, including a scale-up to an additional 200 facilities and the introduction of CCT to more states to increase the number of clients accessing the MCH services.

Table 3: PHC Patient Targets from Service Statistics Data

Care/Condition	2014 Targets	2015 Target
Deliveries (proportion of women that accessed delivery by a skilled staff)	187,940	206,734
Antenatal attendance	315,037	346,540
C/S	3,759	4,135
PPH prevention and management	187,940	206,734
Pre-eclampsia/eclampsia	10,525	11,577
Malaria in pregnancy	103,005	113,306
UTI in pregnancy	94,955	104,450
Prevention of neonatal cord infections	187,940	206,734
Febrile convulsions	60,144	66,159
Malaria in children	2,294,744	2,524,218
Diarrhea/dysentery	773,989	851,388
ARIs/pneumonia	111,027	122,129
Admissions	363,780	400,158
Severe dehydration	11,610	12,771

Forecast Tree

Table 4: Forecast Tree for Pediatrics Category

Conditions/ Care Provided	Regimen	Regimen %	Medicines/ Supplies	Product Mix	Dose
ARI/pneumonia	Amoxycillin	80%	Amoxycillin	100%	250 mg tds for 5 days
			Paracetamol		120 mg tds for 3 days
	Cotrimoxazole	20%	Cotrimoxazole	100%	240 mg bd for 5 days
			Paracetamol		120 mg tds for 3 days
	Supplies	100%	Spatula	100%	1 each
			Disposable gloves		1 each
Malaria	AL -6	64%	AL -6	100%	120/20 mg bd for 3 days
			Paracetamol		120 mg tds for 3 days
	AL-12	36%	AL-12	100%	240/40 mg bd a day for 3 days
			Paracetamol		120 mg tds for 3 days
Diarrhea	Nonbloody diarrhea	96.5%	ORS	100%	3 satchets per episode
			Zinc	100%	20 mg daily for 10 days
	Bloody diarrhea	3.5%	ORS	100%	3 satchets per episode
			Zinc	100%	20 mg daily for 10 days
			Metronidazole	80%	200 mg tds for 5 days
			Cotrimoxazole	20%	240 mg bd for 5 days
Admissions	Admissions	100%	IV fluids(4.3% dextrose saline)	100%	500 ml tds for 3 days

			2 ml syringe; 23 G pediatric needles		2 each per admission
			Sterile gloves		1 per admission
			IV fiving set; scalp vein set		1 per admission
Severe dehydration	Severe dehydration	100%	Half-strength Darrows	100%	500 ml tds for 1 day
			2 ml syringe; 23 G pediatric needles		2 each
			IV giving set; scalp vein set		1 each
			Sterile gloves		1 pair
Febrile convulsion	Febrile convulsion	100%	Diazepam 5 mg/ml	100%	5mg stat
			2 ml Syringe; 23 G needles		2 each
Prevention of neonatal infections	Live births	100%	Chlorhexidene	100%	2 applications per treatment course

Table 5: Forecast Tree for Maternal Category

Conditions/ Care Provided	Regimen	Regimen %	Medicines/ Supplies	Product Mix	Dose
ANC	Routine drugs	100%	Folic acid	100%	5 mg daily for 140 days
			Blood tonic capsules	20%	1 tab daily for 140 days
			Ferrous sulphate	80%	200 mg tds for 140 days
			Calcium lactate	100%	300 mg tds for 140 days
			Ascorbic acid		100 mg tds for 140 days

			Multivitamin		1 tab tds for 140 days
			Sulfadoxine/pyrimethamine		525 mg twice during pregnancy
			Pregnancy test strips		1 per pregnancy
			Urine test strip		1 per pregnancy
			Disposable gloves		2 per pregnancy
			Disposable containers		1 per pregnancy
Malaria in pregnancy	AL-24	100%	AL-24	100%	4800/80 mg 2 bd for 3 days
			Paracetamol	100%	
UTI in pregnancy	UTI in pregnancy	100%	Amoxycillin	80%	500 mg tds for 5 days
			Ampiclox	20%	500 mg qds for 5 days
Pre-eclampsia		100%	Magnesium sulphate	100%	Loading dose 10 g stat
			10 ml syringe; 21 G needle	100%	2 each
PPH prevention and management	All deliveries	100%	Ergometrine tabs	10%	0.5 mg bd for 2 days
			Misoprostol	90%	0.6 mg stat dose
	PPH management	3.40%	Ergometrine injection	50%	0.5 mg stat
			Misoprostol	50%	1 mg stat dose

C/S	C/S	100%	Foley's catheter 16F	50%	1 each
			Foley's catheter 18F	50%	1 each
			Sterile gloves	100%	1 each
Deliveries	All deliveries	100%	Paracetamol tabs	100%	1000 mg tds for 3 days
			Normal saline	100%	1.5 L per day for 1 day
			Dextrose saline	100%	1.5 L per day for 1 day
			IV giving set	100%	1 per admission
			Mama kits	100%	1 per delivery
			IV giving set; scalp vein set	100%	1 per delivery
			Chromic 2/0; chromic 0; suture needle	100%	1 per delivery
			5 ml syringes; 21 G needle	100%	1 per delivery
			Umbilical cord clamp; Mucous extractor	100%	1 per delivery
			Sterile gloves	100%	2 pairs per delivery
			Disposable gloves	100%	4 per delivery
			Insulin syringe	100%	1 per delivery

Table 6: Assumptions for Kits and Other Consumables

S/N	Name of Product	Assumption	Target Client
1.	Outreach kits	To be used by CHEW. There are two CHEWs per facility and based on system design, one CHEW will use six kits per year.	Number of PHCs
2.	VHW kits	To be used by VHWs. There are six VHWs per facility and based on system design, one VHW will use two kits per year.	Number of PHCs
3.	Cotton wool	10 rolls per year per PHC	Number of PHCs
4.	Hand sanitizer	4 bottles per year per PHC	Number of PHCs
5.	Disinfectant (chlorhexidene)	5 gallons per year per PHC	Number of PHCs
6.	Methylated spirit	4 gallons per year per PHC	Number of PHCs
7.	Detergent	2 bags per year per PHC	Number of PHCs
8.	Bleaching agent (sodium hypochloride)	36 bottles per year per PHC	Number of PHCs
9.	Injection safety boxes	10 boxes per year per PHC	Number of PHCs

Quantification Result

The following tables provide the results of the forecast exercise for quantities and cost of medicines and medical supplies for SURE-P MCH for the 18-month period from July 2014 to December 2015. As seen in figure 3, the total funding requirements for the period was estimated at $19,167,895 for medicines and $11,044,988 for supplies.

Table 7: 2014–2015 Forecasts for Medicines

Product	Unit Pack	Service Statistics –Based Forecast 2014	Service Statistics – Based Forecast 2015	Demography-Based Forecast 2014	Demography-Based Forecast 2015
4.3 % Dextrose saline 500 ml infusion	20 x 500 ml	54,567	60,024	58,104	60,079
5% Dextrose saline 500 ml infusion	20 x 500 ml	28,192	31,010	34,252	35,417
Amoxicillin 500 mg capsule	10 x 10 caps	11,395	12,534	36,184	37,414
Amoxicillin 250 mg/5 ml suspension	1 x 100 ml	66,615	73,275	213,984	221,263
Ampicillin+cloxacillin 500 mg capsules	10 x 10 caps	3,798	4,178	12,061	12,471
AL 20+120 mg tablet	1 x 24 tabs	883,223	971,541	283,376	293,007
Ascorbic acid 100 mg tablet	1 x 1000 tabs	166,396	183,033	130,087	134,508
Blood tonic capsule	10 x 10 tabs	110,932	122,052	86,725	89,672
Calcium lactate 300 mg tablet	1 x 1000 tabs	166,396	183,033	130,087	134,508
Chlorhexidine 4% ointment	100 x 3 grams	3,759	4,135	4,567	4,722
Cotrimoxazole 240 mg/5ml suspension	1 x 50 ml	27,623	30,385	78,215	80,876
Diazepam 5 mg ampoule	1 x 10 amps	6,014	6,616	2,122	2,194
Ergometrine 0.5 mg/ml ampoule	1 x 100 amps	1,879	2,067	2,283	2,361
Ergometrine maleate 0.5 mg tab	1 x 1000 tabs	75	83	91	94

Ferrous salt 200 mg tablet	1 x 1000 tabs	133,116	146,426	104,070	107,606
Folic acid 5 mg tablet	1 x 1000 tabs	55,465	61,011	43,362	44,836
Half-strength Darrows 500 ml infusion	20 x 500 ml	1,741	1,915	2,214	2,290
Magnesium sulfate 5 gram vial	1 x 10 vials	2,105	2,316	6,557	6,780
Metronidazole 200 mg/5 ml suspension	1 x 60 ml	16,254	17,879	20,662	35,607
Misoprostol 0.2 mg tablet	1 x 20 tabs	29,789	32,768	36,193	37,424
Multivitamin tablet	1 x 1000 tabs	166,396	183,033	130,087	134,508
0.9 % Normal saline 500 ml infusion	20 x 500 ml	28,192	31,010	34,252	35,417
ORS	3 x 100 satchets	7,740	8,514	9,839	10,173
Paracetamol 120 mg/5 ml syrup	1 x 60 ml	1,804,329	1,984,761	556,767	575,703
Paracetamol 500 mg tablet	1 x 1000 tabs	5,237	5,761	6,850	7,083
Sulfadoxine/pyrimethamine 525 mg tablet	1 x 1000 tabs	2,377	2,615	1,858	1,922
Zinc sulfate 20 mg tablet	1 x 1000 tabs	7,740	8,514	9,839	10,173

Table 8: 2014–2015 Forecasts for Supplies

Product	**Unit Pack**	**Service Statistics –Based Forecast 2014**	**Service Statistics – Based Forecast 2015**	**Demography -Based Forecast 2014**	**Demography- Based Forecast 2015**
21 G needles (adult)	1 x 100	3,969	4,366	5,223	5,400
23 G needles (pediatric)	1 x 100	8,109	8,920	8,255	8,535
Bleaching agent (sodium hypochloride)	12 x 2 L	3,600	3,600	3,600	3,600
Chromic 0	1 x 12's	15,662	17,228	19,029	19,676
Chromic 2/0	1 x 12's	15,662	17,228	19,029	19,676
Cotton wool	1 x 10 rolls	1,200	1,200	1,200	1,200
Detergent 25 kg bags	1's	2,400	2,400	2,400	2,400
Disinfectant (chlorhexidene)	1 x 4L	6,000	6,000	6,000	6,000

Disposable containers	1 x 100	3,970	4,366	3,097	3,203
Foley catheter 16 F sterile	1 x 10's	188	208	229	473
Foley catheter 18 F sterile	1 x 10's	188	208	229	236
Gloves, latex size 7 (disposable)	1 x 100's	20,977	23,074	25,602	26,472
Hand sanitizer 500 mls	10 x 500 ml	480	480	480	480
Injection safety boxes	1's	12,000	12,000	12,000	12,000
Insulin syringes	1 x 100	1,878	2,067	2,283	2,361
IV infusion set	1 x 100	5,633	6,197	6,305	6,519
Latex gloves (surgical) size 7	1 x 50	7,550	8,305	8,634	8,928
Mama kits	1's	187,944	206,736	228,348	236,112
Methylated spirit	4L	4,800	4,800	4,800	4,800
Mucus extractor	1 x 100	1,879	2,067	2,283	2,361
Outreach kits	1's	14,400	14,400	14,400	14,400
Pregnancy test strips	1 x 100	3,962	4,358	3,097	3,203
Scalp vein needle 21 G	1 x 100	1,879	2,067	2,283	2,361
Scalp vein needle 23 G	1 x 100	3,754	4,129	4,021	4,158
Scalpel blade	1 x 100	1,879	2,067	2,283	2,361
Spatula	1 x 100	888	977	2,853	2,950
Suture needle	1 x 100	1,879	2,067	2,283	2,361
Syringes and needles 10 ml (retractable)	1 x 100	210	232	656	678
Syringes and needles 2 ml (retractable)	1 x 100	8,109	8,920	8,255	8,535
Syringes and needles 5 ml (retractable)	1 x 100	3,759	4,135	4,567	4,722
Umbilical cord clamp	1 x 100	1,879	2,067	2,283	2,361
Urine test strip	1 x 100	3,962	4,358	3,097	3,203
VHW kit	1's	14,400	14,400	14,400	14,400

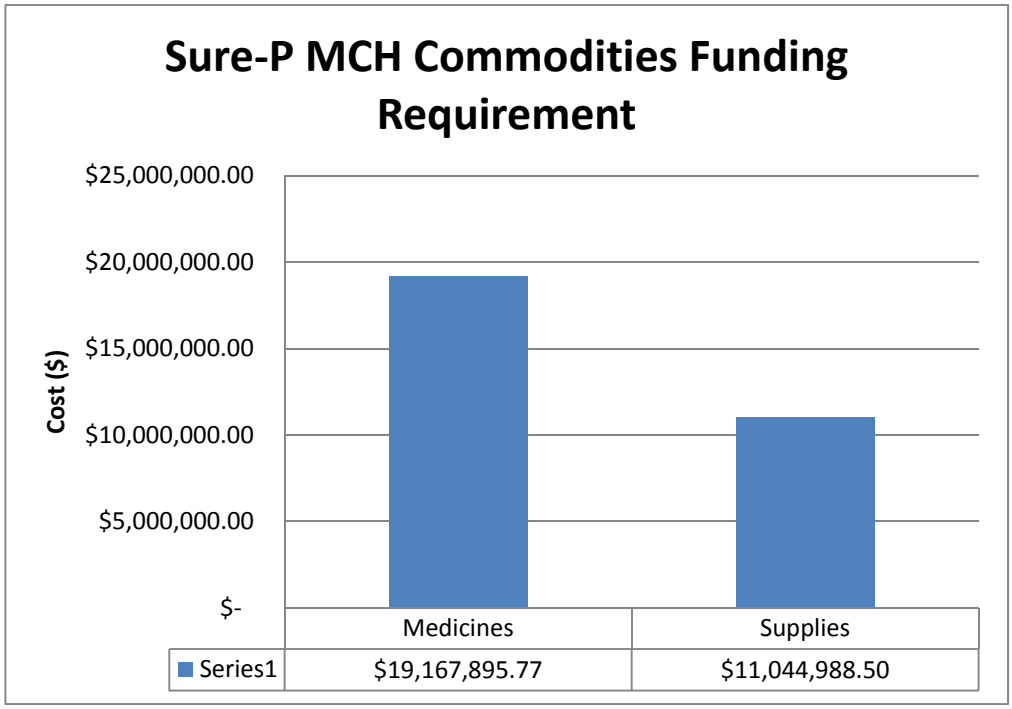
Table 9: SURE-P MCH Medicines Requirements for July 2014–December 2015

Product	Unit Pack	Quantity	Product Costs
4.3 % Dextrose saline 500 ml infusion	20 x 500 ml	142,330	$1,423,300.00
5% Dextrose saline 500 ml infusion	20 x 500 ml	73,552	$735,520.00
Amoxicillin 500 mg capsule	10 x 10 caps	29,660	$92,835.80
Amoxicillin 250 mg/5ml suspension	1 x 100 ml	173,781	$85,152.69
Ampicillin+cloxacillin 500 mg capsules	10 x 10 caps	9,927	$37,027.71
AL 20+120 mg tablet	1 x 24 tabs	2,303,713	$668,076.77
Ascorbic acid 100 mg tablet	1 x 1000 tabs	433,981	$2,647,284.10
Blood tonic capsule	10 x10 caps	289,399	$434,098.50
Calcium lactate 300 mg tablet	1 x 1000 tabs	433,981	$3,645,440.40
Chlorhexidine 4% ointment	100 x 3grams	9,754	$780,320.00
Cotrimoxazole 240 mg/5 ml suspension	1 x 50 ml	72,059	$15,852.98
Diazepam 5 mg ampoule	1 x 10 amps	15,728	$80,212.80
Ergometrine 0.5 mg/ml ampoule	1 x 100 amps	4,942	$74,130.00
Ergometrine maleate 0.5 mg tab	1 x 1000 tabs	187	$2,431.00
Ferrous salt 200 mg tablet	1 x 1000 tabs	347,228	$1,006,961.20
Folic acid 5mg tablet	1 x 1000 tabs	144,701	$376,222.60
Half-strength Darrows 500 ml infusion	20 x 500 ml	4,490	$89,800.00
Magnesium sulfate 5 gram vial	1 x 10 vials	5,491	$73,030.30
Metronidazole 200 mg/5 ml suspension	1 x 60 ml	42,363	$9,319.86
Misoprostol 0.2 mg tablet	1 x 20 tabs	77,638	$439,431.08
Multivitamin tablet	1 x 1000 tabs	433,981	$2,386,895.50
0.9 % Normal saline 500 ml infusion	20 x 500 ml	73,552	$735,520.00
ORS	3 x 100 satchets	20,128	$621,955.20
Paracetamol 120 mg/5 ml syrup	1 x 60 ml	4,706,271	$1,788,382.98
Paracetamol 500 mg tablet	1 x 1000 tabs	13,649	$66,880.10
Sulfadoxine/pyrimethamine 525 mg tablet	1 x 1000 tabs	6,191	$179,539.00
Zinc sulfate 20 mg tablet	1 x 1000 tabs	20,128	$672,275.20
TOTAL			$19,167,895.77

Table 10: SURE-P MCH Medical Supplies Requirements for July 2014 – December 2015

Product	Unit Pack	Quantity	Product Costs
21 G Needles (adult)	1 x 100	10,344	$517.20
23 G Needles (pediatric)	1 x 100	21,192	$1,059.60
Bleaching agent (sodium hypochloride)	12 x 2L	8,700	$130,500.00
Chromic 0	1 x 12's	40,811	$122,433.00
Chromic 2/0	1 x 12's	40,811	$146,919.60
Cotton wool	1 x 10rolls	2,900	$7,250.00
Detergent 25kg bags	1's	5,800	$174,000.00
Disposable containers	1 x 100	10,343	$10,343.00
Foley catheter 16 F sterile	1 x 10's	533	$1,066.00
Foley catheter 18 F sterile	1 x 10's	533	$1,066.00
Gloves, latex size 7 (disposable)	1 x 100's	54,693	$109,386.00
Hand sanitizer 500 mls	10 x 500 ml	1,160	$116,000.00
Injection safety boxes	1's	29,000	$72,500.00
Insulin syringe and needle 1 ml	1 x 100	4,942	$15,320.20
IV giving set	1 x 100	15,331	$76,655.00
Latex gloves (surgical) size 7	1 x 50	20,717	$10,358.50
Mama kits	1's	490,020	$7,350,300.00
Methylated spirit	4L	11,600	$116,000.00
Mucus extractor	1 x 100	4,932	$98,640.00
Outreach kits	1's	34,800	$1,426,800.00
Pregnancy test strips	1 x 100	10,354	$28,991.20
Scalp vein needle 21 G	1 x 100	4,932	$11,343.60
Scalp vein needle 23 G	1 x 100	9,801	$22,542.30
Scalpel blade	1 x 100	4,943	$17,300.50
Spatula	1 x 100	2,367	$473.40
Suture needle	1 x 100	4,932	$147,960.00
Syringes and needles 10 ml (retractable)	1 x 100	590	$1,770.00
Syringes and needles 2 ml (retractable)	1 x 100	21,192	$21,192.00
Syringes and needles 5 ml (retractable)	1 x 100	9,754	$20,483.40
Umblical cord clamp	1 x 100	4,932	$9,864.00
Urine test strip	1 x 100	10,354	$10,354.00
VHW kit	1's	34,800	$765,600.00
TOTAL			$11,044,988.50

Figure 3: SURE-P MCH Commodities Funding Requirements (July 2014–December 2015)



Recommendations

To ensure this quantification translates into continuous MCH commodities availability in the country, a number of recommendations are provided. These recommendations are actions that will create the right platform for improved implementation of logistics management tasks and activities in SURE-P MCH.

- **Roll Out of the Maternal-Neonatal-Child Health Logistics Management Information System (LMIS) at the Facility Level:** Cyclical reporting of MCH commodities essential logistics data (consumption, stock on hand, and losses/adjustments data) to inform resupply is the bedrock of commodity availability. With the roll-out of the LMIS, actual consumption information can be obtained on a routine basis, which can be used to inform the quantification process.
- **Commodity Tracking Committee:** Constitute a committee to track shipments and monitor stock levels to ensure that adequate stock levels are maintained at each level of the system. The committee will also be tasked with creating and managing a distribution plan for facilities. Currently, each facility is supplied with the same quantities irrespective of their size. The distribution plan developed using logistics data will help to ensure adequate stock levels at each facility.
- **Capacity Building:** Build the capacity of the PIU to properly track and monitor the pipeline.

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Annex 1: Spectrum for Demographic Data

SURE-P MCH Demographic Targets

	Variable factor	2013 (Startup data)	2014	2015
Total Population		13,144,623	13,591,540	14,053,652
Projected annual population growth	3.40%			
Female population				
Women of childbearing age		2,538,071	2,624,365	2,713,594
Proportion of live births	19.40%	492,386	509,127	526,437
Proportion of women likely to have stillbirths	15.00%	73,858	76,369	78,966
Number of deliveries (live and stillbirths)		566,244	585,496	605,403
Proportion of women likely to attend antenatal clinic in public health facilities - 1st visit	52.9%	299,543	309,727	320,258
Proportion of women likely to attend antenatal clinic in public health facilities - 4 visits	44.8%	253,677	262,302	271,220
Proportion of women that may require delivery by skilled staff	39%	220,835	228,343	236,107
Proportion of women that may need C/S	2%	4,417	4,567	4,722
Proportion of women with UTI in pregnancy	51.50%	291,615	301,530	311,782
Proportion of women with malaria in pregnancy	26.00%	147,223	152,229	157,405
Proportion of women with PPH	3.40%	19,252	19,907	20,584
Proportion of women with pre-eclampsia/ eclampsia	5.60%	31,710	32,788	33,903
Children Population under 5 years	19.0%	2,497,47	2,582,39	2,670,19

		8	3	4
Proportion of U5 fever cases	30.42%	759,733	785,564	812,273
Proportion that may present with malaria fever under 5 yrs	49.10%	373,029	385,712	398,826
Proportion of U5 that may develop febrile convulsions	2.7%	20,513	21,210	21,931
Proportion of U5 cases that may develop ARI	45.4%	344,919	356,646	368,772
Proportion of diarrhea cases	38.1%	951,539	983,892	1,017,344
Proportion of diarrhea cases with severe dehydration	1.5%		14,758	15,260
Proportion of U5 that were admitted	15.0%	374,622	387,359	400,529

Annex 2: Mama Kit

S/N	Item	Specification
1	Sterile latex gloves	Pair size 7
2	Scapel blade	
3	Sanitary pad	Comfit/ Dele/ Nightingale
4	Hand sanitizer	Purell (60 ml)
5	Antiseptic	Purit/ Septol 200 ml
6	Cussons baby soap	1 tablet
7	Laundry soap (tablet)	Canoe/Zip
8	White cotton sheet (baby blanket)	1 yard
9	Cotton wool	My Lady/ Dele (100 gm)
10	Little bulb syringe	AMSINO AMsure/Finedge
11	Cord clamp	AMSINO AMsure/ Agary
12	Disposable theatre gown	
13	Urethral catheter	Size 14F
14	Underpads (90 x 60 cm)	Nightingale (5pcs)
15	Baby wipe	
16	Name tag	

Annex 3: Outreach Kit

S/N	Item	Specification
	INSTRUMENTS	
1	Straight scissors (blunt head)	Stainless steel
	DRUGS	
2	Ferrous sulphate 200 mg tablets)	
3	Folic acid 5 mg tablets	
4	Paracetamol 500 mg tablets	
5	Paracetamol 120 mg/5 ml syrup	
6	Deep heat ointment	
7	Antiseptic (povodine iodine)	
	GENERAL ITEMS	
8	Torchlight/batteries	
9	Pinard stethoscope (fetoscope)	Plastic
10	Mackintosh apron	
11	Latex examination gloves (packet)	
12	Little bulb syringe	AMSINO AMsure
13	Sanitary pad	Dele/Comfit/Nightingale
14	Male condoms (packet)	Gold circle
15	Hand sanitizer	Purell (100 ml)/Dettol
16	Liquid soap	Dettol (100 ml)
17	Plaster	First Plaster

19	Cotton	My Lady/Dele (100gm)
20	Cotton gauze	500gm
21	Guaze bandage	Packet
22	Methylated spirit	Mopson 250 ml

Annex 4: Village Health Workers Kit

S/N	Item	Specification
1	Baby soap	Cussons
2	Antiseptic (povidine iodine)	100 ml
3	Hand sanitizer	Purell (100 ml)
4	Plaster	First aid
5	Sterile latex gloves	50 per packet
6	Gauze	100 gm
7	Apron	
8	Torchlight/batteries	
9	100% cotton wool	MY LADY/ DELE (100gm)
10	Baby wipe	Packet
11	Sanitary pad	Dele/Comfit/Nightingale

Annex 5: Assumption Building Workshop Attendance

	Name	State	Designation	Email Address	Phone Number
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