Ministry of Health

Republic of Uganda

Supply Chain System for Community Health Programs in Uganda: A Situation Analysis

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FOREWORD

The Government of Uganda is committed to delivery of key health services to the population in need by improving access to both preventive and curative services particularly at community level. This is highlighted in the Health Sector Development Plan 2015/16 – 2019/2010, the Reproductive Maternal, Newborn and Child Health Sharpened Plan for Uganda as well as the National Pharmaceutical Sector Strategic Plan III 2015–2020. This assessment is therefore timely as we examine different strategic options to ensure that trained community level health workers continually have the medicines and supplies they need to reach those vulnerable people, particularly children under five years, in the communities they serve.

This report was developed by USAID/Uganda Health Supply Chain (UHSC) program together with the Ministry of Health's Pharmacy Division, Child Health Division and Reproductive Health Division. The report represents the outcome of an in-depth review of the supply chain systems for community health programs in Uganda undertaken as part of a situation analysis.

The situation analysis assessed the pharmaceutical supply chain from central to lower level public and PNFP health facilities and has provided insights that are extremely vital in informing strategy development for community level interventions. It identifies challenges, constraints, and alternatives to reducing waste and or inefficiencies in the sector with a view of improving supply chain functions and increasing access to essential medicines and health supplies at the community level through village health teams (VHTs).

This report is evidence of the government's commitment to work in partnership to deliver health services in Uganda and provides invaluable information that will inform our next actions with regard to supply chain interventions including at community level.

The Ministry of Health encourages all stakeholders to use the findings of the report and other available evidence to guide investment in the RMNCAH commodity supply chain as we jointly act to improve RMNCAH indices in Uganda. Together we shall win our struggle against ill health generally and RMNCAH challenges in particular.

Dr. Anthony K. Mbonye
Director Health Services (Clinical and Community)
Ministry of Health, Uganda.

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ABBREVIATIONS AND ACRONYMS

ACT	artemisinin-based combination therapy
CHW	community health workers
DHIS2	district health information software version 2
DHO	district health office
DHT	district health team
EMHS	essential medicines and health supplies
EMHSLU	Essential Medicines and Health Supplies List of Uganda
FHI360	Family Health International 360
Global Fund	Global Fund to Fight AIDS, Tuberculosis and Malaria
GoU	Government of Uganda
HC	health center
HMIS	health management information system
iCCM	integrated community case management
MoH	Ministry of Health
ORS	oral rehydration solution
PNFP	private not-for profit
QPPU	Quantification and Procurement Planning Unit
RDT	rapid diagnostic test
RMNCH	Reproductive, Maternal, Neonatal and Child Health
UHSC	Uganda Health Supply Chain Program
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VHT	village health team

EXECUTIVE SUMMARY

Community-based village health teams (VHTs) have long been an important component of the Uganda Ministry of Health's (MoH) strategies to improve access to medicines and health supplies in households facing geographic, logistic, financial, cultural, and other constraints to using and reaching formal health services. The cost-effective interventions that comprise integrated community case management (iCCM) of malaria, diarrhea, and pneumonia and family planning are the main service components of Uganda's community health programs.

Although Government of Uganda financing dedicated to VHTs and community level programs is relatively minimal, progress has been made with financial and technical support from donor and implementing partners. More than 100 implementing partners are currently supporting community-based iCCM, family planning and other prevention interventions related to HIV, tuberculosis, immunization, nutrition, and sanitation in 70% of districts across the country.

Many of the community-level activities are project-led and smaller scale; a few have been adopted as national programs that are being scaled-up. By 2017, the iCCM program will cover 78 districts and a community-based pilot of the new subcutaneous injectable contraceptive-—*Sayana Press*—will have been completed in 28 districts with the potential to roll out nationwide. The MoH is also committed to expanding sustainable community-based health services by establishing a new cadre of an estimated 15,000 community health extension workers that will be formally integrated into the MoH staff structure.

Much has also been achieved over the past 10 years to strengthen and streamline the national supply chain system at central, district, and facility level. Financing, quantification, procurement, and distribution are more efficient and transparent; information at all levels is more readily available and used in decision making and monitoring; functioning coordination mechanisms exist between the government and donor partners; and district and facility capacity in medicines management has improved greatly. With this stronger foundation it is time to extend efforts to the community.
MoH policies support VHT dispensing of 20 basic medicines and health supplies primarily for iCCM, reproductive health and family planning, and neglected tropical diseases. Recent assessments have shown that community health programs face frequent product stock-outs, and unreliable supplies are the most common cause of service disruption. In the absence of national guidelines, programs and partners use different approaches to training, supervising, delivering, managing, and reporting on VHT commodities. National planning and monitoring for community-level commodities is limited, which leads to more stock-outs and under-performance of community health programs.

The USAID/Uganda Health Supply Chain (UHSC) carried out a situation analysis of the supply chain for community-level health programs to support government of Uganda efforts to increase access to life-saving reproductive, maternal, neonatal, and child health commodities. The analysis examines national policies, financing and procurement, product selection, quantification, distribution, commodity management at facility and VHT level, and visibility of community-level data at national level. The findings and recommendations in this report will inform the development of a comprehensive strategy for strengthening the supply chain for all community-level health commodities.

BACKGROUND

The USAID-funded Uganda Health Supply Chain (UHSC) program supports the Government of Uganda (GoU) and Ministry of Health (MoH) to improve the health status of Ugandans by increasing the availability, affordability, accessibility, and appropriate use of good quality essential medicines and health supplies (EMHS). The objective will be achieved through three main intermediate results: 1) national policies and strategies that support cost-effective, equitable, and transparent use of available EMHS resources; 2) country capacity strengthened for effective management and utilization of EMHS; and 3) increased availability and access to EMHS for priority populations.

UHSC assessed the supply system for community-level health programs to support GoU efforts to improve access to life-saving reproductive, maternal, neonatal, and child health (RMNCH) commodities in order to prevent an additional 40% of deaths of children under five years and 26% maternal deaths by 2017.[1]

Since 2001, village health teams (VHTs) have played an important role in MoH strategies to improve maternal and child health through health promotion activities and increasingly through the provision of basic primary health care services. By bringing essential medicines and basic services closer to households that have less access to services in the formal health system, the MoH hopes to have greater impact on reducing morbidity and mortality.

Currently, approximately 60,000 of the existing 180,000 VHT[2] members have been trained to provide services that include dispensing of medicines and other health supplies for integrated community case management (iCCM), family planning, and neglected tropical diseases. Many VHTs are also involved in prevention interventions for HIV, TB, malaria and nutrition.[3] Some of the community-based activities are project-led or pilots, while others are being scaled up by the MoH as national programs.

VHTs who have received the requisite training are distributing more than 20 commodities.[4] The list includes nutritional supplements, oral and injectable contraceptives, antimalarials and malaria rapid diagnostic tests, antibiotics to treat pneumonia, and antidiarrheal medicines. For community-level programs to have the intended impact, VHTs must have the required health commodities on hand; however, results from recent studies show problems in the supply chain.

A 2014 assessment of the iCCM program found that 68% of the trained VHTs reported stock-outs of one or more of their medicines in the previous three months.[5] The 2015 UHSC baseline facility assessment had similar findings with 70% of facilities reporting stock-outs of commodities in the previous six months for their community RMNCH programs. The UHSC assessment also revealed

[1] Uganda Ministry of Health, RMNCH Strategic Plan.
[2] In the report, VHT can refer to an individual VHT member as well as the five-member team.
[3] Uganda Ministry of Health. (2015*). National Village Health Teams (VHT) Assessment in Uganda.* Government of Uganda.
[4] Child health: iCCM package (amoxicillin, ORS, zinc, ACTs, malaria RDTs, Respiratory timers, artesunate suppository), albendazole, vitamin A, Aquasafe, MUAC, RUTF (ready to use therapeutic feeds); Reproductive health commodities: male condoms, injectable contraceptives (Depo Provera, Sayana Press), oral contraceptive pills, alcohol with glycerine, sharp boxes, examination gloves, needles, and syringes; Maternal health: ferrous sulphate, ferrous sulphate/folic acid, multivitamins.
[5] Bagonza, J., Kibira, S. P., & Rutebemberwa, E. (2014). Performance of community health workers managing malaria, pneumonia and diarrhea under the community case management programme in central Uganda: a cross sectional study. *Malaria Journal, 13*(1), 1. doi:10.1186/1475-2875-13-367.

widely differing procedures across facilities for distributing VHT commodities, determining how much and when to resupply VHTs, and what information to record and report.

The MoH is committed to strengthening community-level health services. They are currently developing a strategy to establish a new cadre of community health extension workers, who will receive 12 months of pre-service training and be formally integrated in the MoH staff structure.

To support existing programs and new initiatives to increase community access to life-saving medicines, understanding and addressing the problems at each stage of the supply chain is critical. These results and recommendations to strengthen the supply chain system for community health programs apply to all programs as well as VHTs and community health extension workers.

OBJECTIVES

The objectives of the situation analysis were to:

- Document the policies, systems, processes, information, and resources that support the supply chain for community-level RMNCH programs
- Identify important gaps and bottlenecks in the supply system affecting reliability of community-level commodity supply
- Make recommendations to build a well-functioning national supply chain for community-based programs that optimizes the availability and accountability of health commodities.

SCOPE OF THE SITUATION ANALYSIS

Figure 1 illustrates the health commodity management cycle, which provides the framework for the situation analysis. The analysis examined the national coverage of community health programs and the supply chain elements of national policies, financing and procurement, product selection, quantification, distribution, commodity management at facility and VHT level, and information management including ordering and reporting and visibility of community-level data. The analysis focused on the supply chain and did not analyze appropriate diagnosis, treatment, medicines use and dispensing.

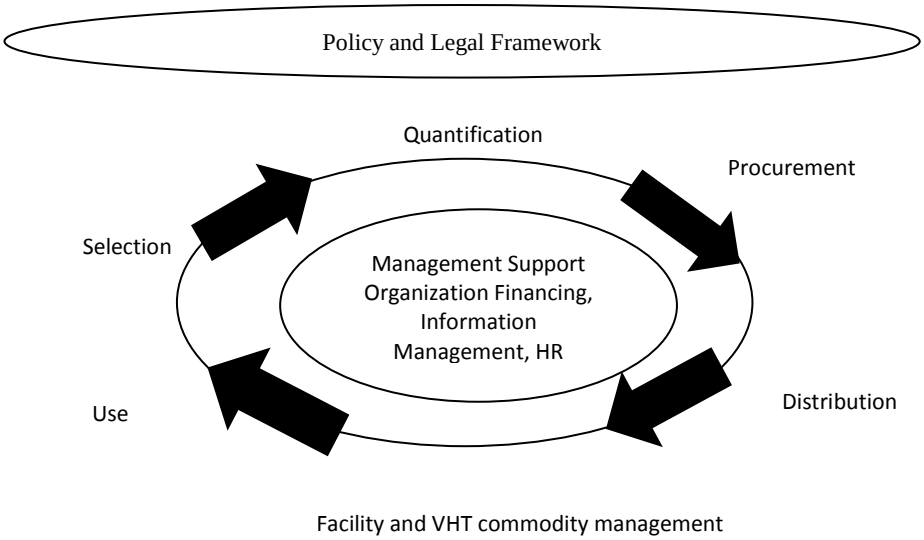


Figure 1: Health commodity management cycle (adapted from MSH, *Managing Drug Supply*, 1997).

The Ministry of Health considers community health programs as cost-effective interventions and would like to further strengthen them. The situation analysis focuses on the supply chain systems of two high impact community-level programs, the iCCM program and Sayana Press pilot program (Table 1).

The main service components of Uganda's community health program comprise the high impact and cost-effective iCCM and family planning interventions.

Table 1: Background information on the iCCM and Sayana Press pilot programs in Uganda

Program Operations	iCCM Program	Family Planning/Sayana Press pilot program
Implementing partners	Malaria Consortium, UNICEF, TASO, IRC, Save the Children, World Vision, PACE	Path, Pathfinder, FHI 360, WellShare International, Reproductive Health Uganda
Program type	Scaling-up (Adopted by MoH as policy)	Pilot
Districts covered	78 (Includes 18 planned for 2016)	28* (* partial district coverage)
Period	Start: 2010 End: N/A	Start: 2014 End: 2017
Commodities handled by VHTs	**Consumable:** Amoxicillin 250mg dispersible tablets, malaria rapid diagnostic tests (RDTs), artemisinin-based combination therapies (ACTs), rectal artesunate, oral rehydration solution (ORS)/zinc, gloves, safety box **Non-consumable:** acute respiratory infection timer	**Consumable**: male & female condom, Progestin-only and Combined oral pills, depot-medroxyprogesterone acetate (DPMA), emergency contraceptive pill, Sayana Press
Number of VHTs trained by September 2015	2 selected from the 5 VHT members per village Approx. 30,000 VHTs trained	Not standardized across partners Average of 5 VHT members per health facility Approx. 2,000 VHTs trained

Program Operations	iCCM Program	Family Planning/Sayana Press pilot program
Target number of VHTs	Approx. 60,000 VHTs	Approx. 6,000 VHTs

The iCCM strategy aims to deliver lifesaving curative interventions for common childhood illnesses (diarrhea, malaria, and pneumonia) in the community, particularly where there is poor access to facility-based services and high childhood morbidity and mortality. The iCCM program has grown out of Uganda's experience in home-based management of fever, which trained community medicine distributors to treat children under five with fever with Homapak, a pre-packed combination of chloroquine and sulphadoxine-pyrimethamine.

In 2010, the GoU approved the integration of injectable contraceptives (DPMA) in the existing services offered by VHTs, thereby improving access to family planning services at the community level. Pilot research on the safety and feasibility of the community-based distribution of DPMA conducted in 2004 by Family Health International, Save the Children, and the MoH helped pave the way for scale-up in Uganda.

Since, 2014, PATH and key partners including the MoH launched the community-based pilot introduction of a subcutaneous injectable contraceptive—Sayana Press—in Uganda. The results and lessons learned from this pilot will inform how to include this contraceptive option in the community-level family planning program.

METHODOLOGY

A team of UHSC staff, with support from two consultants, designed the study, developed the tools, collected and analyzed the information, and prepared this report. The situation analysis included a combination of methods including key informant interviews, field visits to health facilities, focus group discussions, and literature review. UHSC began work on the analysis in August 2015, and a two-person team conducted the key informant interviews and field visits between October and November 2015.

Using semi-structured interview guides, team members interviewed 35 key informants. They included MoH officials from the Resource Center, Child Health, Reproductive Health and Pharmacy Divisions, donor partners, and implementing partners supporting VHT programs as well as representatives from the two central warehouses supplying VHT commodities (National Medical Stores and [NMS] Uganda Health Marketing Group [UHMG]).

The team visited eight health center HCII and HCIII facilities in five districts. The facilities were purposively chosen in consultation with the district health offices and implementing partners to include facilities with VHTs trained in iCCM or family planning. Table 2 provides a summary of the facilities visited and the number and type of VHTs that are assigned to them.

Table 2. List of districts and health facilities visited

District	Health facility	Ownership	Number of villages served	No. and type of VHTs assigned to facility
Kamwenge	Rwizi HCIII	Government	14	iCCM: 28 family planning: 14
	Biguli HCIII	Government	40	iCCM: 80 family planning: 16
Kiryandongo	Karuma HCII	Government	10	iCCM: 20 family planning: NA
Kyenjojo	Myeri HCII	Government		iCCM: 48 family planning: NA
	Rwibaale HCIII	private not-for-profit (PNFP)	8	iCCM: 19 family planning: NA
Luwero	Bwaziba HCII	Government	8	iCCM: 16 family planning: 5
Mubende	Kaweri HCII	Government	13	iCCM: NA family planning: 10
	Mubende Town Council HCII	Government	5	iCCM: NA family planning: 5

NA = Not Applicable: There are no VHTs trained in the specific program's services

During the facility visits the team conducted separate interviews with the VHT focal person and two or three VHTs available that day. In two districts, focus group discussions were conducted with six to eight VHTs. The team also reviewed VHT-related registers, stock cards, and requisition forms to document logistics management practices.

At the district health office (DHO), the team interviewed, when available on the day of visit, the district health officer, district malaria focal person, the district health educator, and health management information system (HMIS) focal person. At least one DHO staff person accompanied the assessment team during the field visits.

The literature review covered existing health sector strategies, policies, plans, programmatic and technical reports related to VHTs and the supply chain management system in Uganda, including relevant assessments and evaluations. We also reviewed English language peer-reviewed and grey literature from other countries on community health supply systems, policies and strategies related to RMNCH, RMNCH commodity logistics management systems, VHTs/community health workers and medicine distribution at community level, and community access to medicines.

FINDINGS

The *Health Sector Strategic Plan III* has a target of covering 100% of districts with trained VHTs by 2015. Approximately 67% (75) of the 112 districts will have an iCCM and/or community family planning program by 2017. Seventeen of the districts will have both iCCM and family planning programs.

The iCCM intervention was adopted as a national program in 2010, and is being scaled up from 45 districts at the start of 2015 to 78 districts by the end of 2016 (Figure 2). The Sayana Press pilot program was introduced in selected sub-counties, with scale-up planned to cover the entire 28 districts by 2017.

Figure 2: 2015 Coverage of iCCM and Sayana Press Community-level Family Planning Programs

In addition to these programs, the 2015 VHT national assessment found more than 100 implementing partners are supporting a variety of VHT activities in their district-based HIV/AIDS, tuberculosis, reproductive health/family planning, immunization, nutrition, and sanitation programs. The assessment noted a lack of standardization and differing quality of VHT training and implementation across programs. The uncoordinated district selection resulted in "inequitable distribution of partners among and within districts."

According to the MoH's RMNCH strategic plan, the highest rates of unmet family planning needs are in West Nile and Northern regions; these regions, however, are not covered by the Sayana Press pilot program. The iCCM program district coverage is better aligned with where the highest child and maternal mortality rates are in Karamoja, Western, and West Nile regions.

Coverage is not sustainable because all VHT programs are heavily reliant on donor funding, and the GoU allocates little dedicated financial or other resources to community-level health services (see Section 2.3). Despite existence of the VHT strategy, there is no MoH guidance to local governments on how to transition VHT activities from donor-supported projects into locally sustained activities. District officials, facility staff, and VHTs interviewed by the team said that VHT activities largely come to a halt when partner support ends. Specifically, VHTs in most cases are no longer given access to health commodities from the facility even when the facility has stock available to them.

To achieve the greatest cost-effectiveness and impact on community-level services, the MoH must ensure that the district selection process is based on criteria related to disease burden as well as geographical, cultural, and financial constraints to accessing health services. The GoU must also increase their share of dedicated resources to maintain the community health programs.[6]

Policy Framework: VHT Provision of Community Health Services

Beginning in 1999, national health policies and sector strategies have supported the role of VHTs as providers of community-level health services. The underlying premise is that VHTs live in the communities where they work, which can play an important role reaching underserved populations.

The key policies and strategies include the following:

[6] Ministry of Health, Uganda. (2010). Health Sector Strategic & Investment Plan: Promoting People's Health to Enhance Socio-economic Development. Kampala: Government of Uganda.

- 2001: *Health Sector Strategic Plan I* establishes VHTs as HCI level in the health system
- 2010: MoH VHT strategy officially recognizes their role in community-based case management of common health conditions
- 2010: MoH policy guidelines for iCCM and community-based family planning state that VHTs can administer antimalarial medicines, antibiotics, and injectable contraceptives
- 2012: Uganda Clinical Guidelines and Essential Medicines and Health Supplies List of Uganda (EMHSLU) identify EMHS that can be used at community level
- 2007-2015 *Roadmap for Accelerating the Reduction of Maternal and Neonatal Mortality and Morbidity in Uganda*, and *RMNCH Sharpened Plan* (2013) prioritize use of VHTs to improve health indicators
- 2015: EMHSLU addendum incorporates World Health Organization-recommended life-saving commodities that should be universally available, including at community level.
- 2015: the new five-year *National Medicines Policy* and *National Pharmaceutical Sector Strategic Plan* support the scale-up and strengthening of community-based EMHS distribution
- 2015: iCCM commodities are integrated into the national supply system through NMS.

Figure 3 provides an overall picture and timeline of a selection of VHT-related policies.

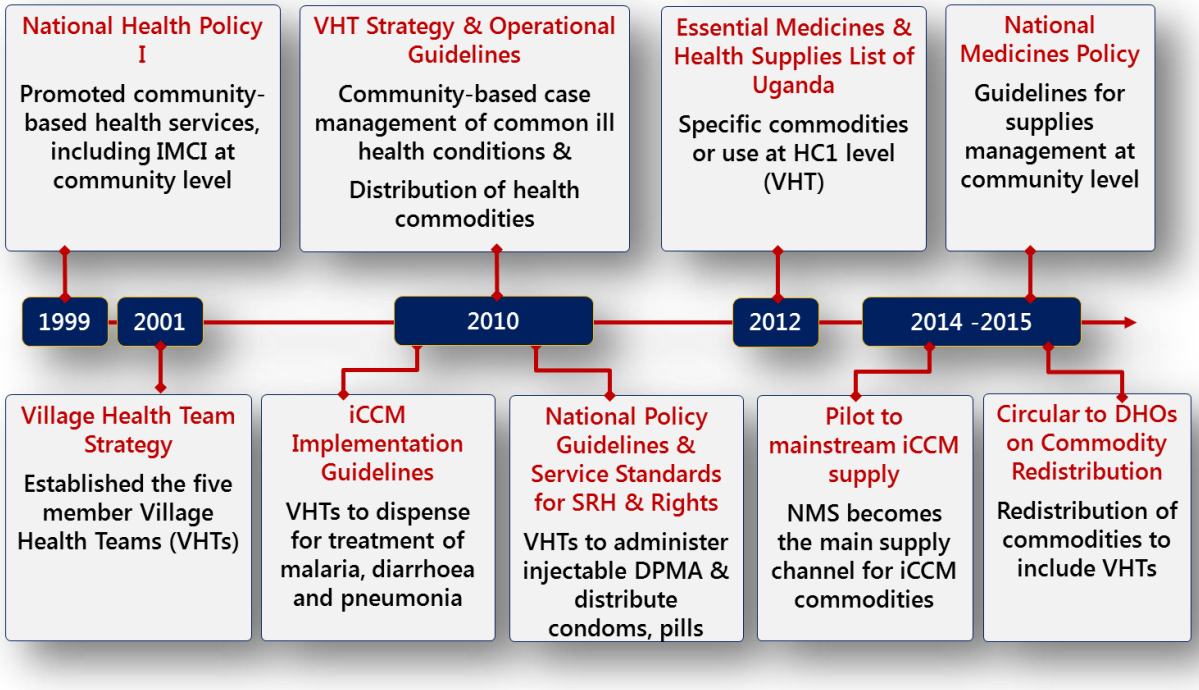


Figure 3: Timeline of Ministry of Health policies on community-level services

Although MoH policy solidly establishes the importance of community-level services, our review revealed some important policy gaps. For example, VHTs have no official legal standing within the health sector legal and regulatory framework (i.e., they are not legally covered or protected under laws regulating health providers).

The 2000 National Drug Policy and Authority Act prohibits the prescribing of antibiotics at community level; this contradicts MoH policies that allow VHTs to dispense antibiotics. The National Drug Authority had to grant an exemption for the iCCM program with a provision that

primary packages of amoxicillin 250mg dispersible tablets and ACTs be color coded and VHTs trained to correctly identify appropriate dosage by the color of the packaging. The National Drug Policy and Authority Act needs to be updated to reflect current MoH policies. More specifically, update of the schedule in the law that provides for the establishment of a list of medicines that can be dispensed at community level by a Community Health Worker (CHW) changed from time to time based on need by ministerial statutory instrument.

No standard operating procedures or tools are available to guide implementers in how to correctly and accountably manage medicines and health supplies for community-level health programs. The MoH reference manual on management of essential medicines and health supplies for facility level[7] does not specifically address VHT/community health supplies. The different programs and partners as well as health facilities are using different approaches, procedures, and tools. Not all of the commodities currently being distributed and dispensed by VHTs are indicated as appropriate for HCI use in the 2012 EMHSLU or the 2015 addendum for life-saving RMNCH commodities. The missing items for HCI level include DPMA injectables, malaria RDTs, and ACTs. The update of the EMHSLU planned for 2016 should correct any inconsistencies between policy and practice. The MoH and partners should also ensure that their community-level activities comply with the EMHSLU as well as other MoH policies, such as training requirements, to ensure appropriate medicines use.

Guidelines are also needed for district health authorities on how to allocate their facility EMHS supplies with respect to VHTs. This is important because the commodities used in the iCCM and family planning programs are routinely supplied facility commodities. In 2015, the MoH issued a circular instructing DHTs to support "redistribution of stock between health facilities and VHTs whenever need arises." This is a positive step, however, the circular does not provide sufficient detail on how to implement this. The DHTs interviewed did not know whether health facilities are required to order VHT commodities from their EMHS credit line with NMS, whether their EMHS budgets would increase in light of the new policy, or whether their priority should be supplying VHTs or supplying the health facility.

Financing and Procurement of VHT Commodities

iCCM Program

Multiple donor partners are currently funding the scale-up of the iCCM program in 30 new districts over two years (2015-2016). Global Fund, UNICEF and the RMNCH Trust Fund have provided 80% of the $10 million budget (see Table 3).

Table 3: Funding commitments for iCCM scale-up (2015-2016)

Source of Funding[8]	2015 (US$)	2016 (US$)	Total (US$)	% of Total	End Year
Global Fund malaria grant	2,675,303	1,889,240	4,564,543	45%	2016
Global Fund health systems strengthening grant	-	1,860,881	1,860,881	19%	2016
UNICEF	835,157	803,116	1,638,273	16%	2016
GoU	76,855	1,619,832	1,696,687	17%	N/A
Unfunded	*138,776*	*158,088*	*296,864*	*3%*	*N/A*

[7] SURE Program and the Pharmacy Division, Uganda Ministry of Health .*Medicines and Health Supplies Management Manual.* Arlington, VA: SURE, 2011

[8] Source: Implementation of ICCM in 33 additional districts 2015-2016: Implementation plan submitted to The Global Fund to Fight AIDS, Tuberculosis and Malaria - 27 February 2015

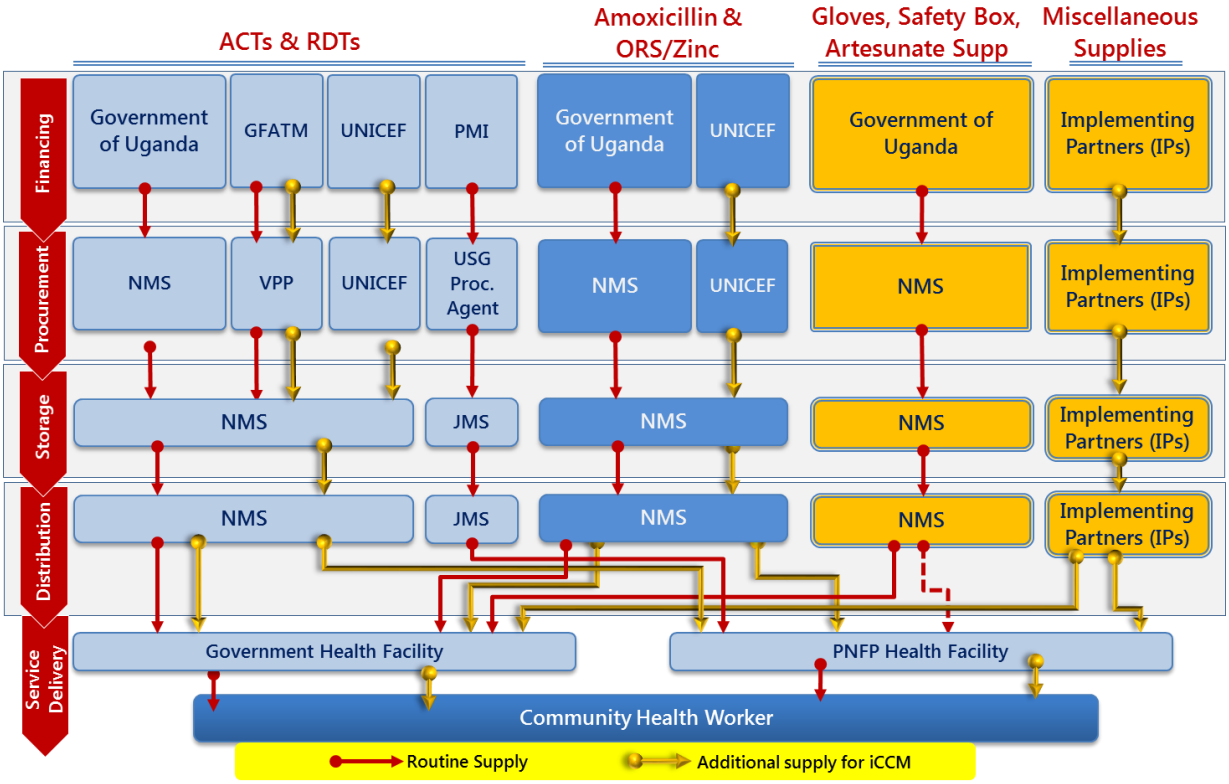
Total	**3,726,090**	**6,331,158**	**10,057,248**	**100%**	

Half of the donor iCCM scale-up budget is for procurement and distribution of the iCCM commodities: ACTs, RDTs, ORS/zinc, amoxicillin 250mg, and dispensing envelopes. The GoU support of US$1.7 million is to procure gloves and safety boxes. To sustain iCCM activities in the 34 old districts, The UK Department for International Development recently committed about US$6 million through UNICEF to procure iCCM commodities up to 2017.

A 2013 study of the iCCM program in Uganda by INSCALE/Malaria Consortium found that medicines and supplies accounted for about 75% of the cost of running the program; this is similar to costs of community-based programs in other countries.[9] For sustainability, future planning exercises, including the proposal currently being prepared for the Global Financing Facility, should ensure that 75% of funding is dedicated to the procurement and distribution of the commodities.

Figure 4 below charts the financing, procurement, and flow of iCCM commodities in Uganda. The situation is complex with many agencies and implementing partners involved. The red lines show the flow of regular supplies of iCCM commodities and the yellow lines the flow of additional supplies purchased specifically for the iCCM program.

Some partners both fund and procure the commodities, others provide the financing but use a third party agent to procure the commodities, which adds an additional coordination layer. Four entities procure ACTs and RDTs, two supply amoxicillin and ORS/zinc, and only the GoU buys gloves, safety boxes, and artesunate suppositories. NMS has been contracted to deliver the special iCCM products to both public and PNFP facilities, while Joint Medical Store (JMS) delivers the routine supplies to PNFP supplies.



[9] Frida Kasteng, LSHTM Sustaining ICCM: focus on costing; Sharing What Works: ICCM, Malaria Consortium, London, 30 May 2013. http://www.malariaconsortium.org/userfiles/9-sustaining-ICCM-focus-on-costing.pdf

Figure 4: Financing, procurement, and flow of iCCM commodities in Uganda

To have a regular and full supply of the various commodities available at central level will require close coordination and on-time procurement and delivery by the many partners. A central mechanism needs to be established to track the finances and commodities. At the time of the assessment team visits, the full package of iCCM products were not available and the rollout of iCCM commodity distribution by the VHTs had not started.

Having multiple partners procure the same products may be difficult to coordinate but having more than one source reduces the risk of shortages. The iCCM program should consider to have a second supplier of commodities for which NMS is the sole supplier.

All the commodities should flow through established supply channels to avoid disruption to routine logistics management processes and to ensure accountability. JMS should be the agency contracted to deliver the special iCCM commodities to their PNFP facilities; among other things, integrating them into JMS routine deliveries of EMHS is more cost-effective. Implementing partners should **not** bypass these established channels and deliver their own supplies to facilities on an ad hoc basis.

Family Planning/Sayana Press Pilot Program

The Uganda family planning costed implementation plan calls for the scale-up of VHT training on family planning methods to reach 50,000 villages by 2020. According to the plan, the funding commitments from the GoU and donor partners for 2015 to 2020 are sufficient to procure a full supply of contraceptive commodities, an estimated US$115 million, for the country's needs including government and PNFP facilities and community-level distribution (except for male condoms).[10]

Table 4 shows the funding available in 2015 for contraceptive procurement for routine use in health facilities throughout the country. These commodities are also given to VHTs for community distribution. This is the main funding source for community level family planning commodities; the proportion that is dispensed by VHTs is not known as this information is not routinely collected or analyzed.

Table 4: Funding Commitments for Family Planning Commodities, 2015

Source of Funding	2015 (US$)	% of Total	End Year
Global Fund	7,548,368	39%	2016
USAID	2,867,255	15%	N/A
International Planned Parenthood Federation	8,506	0.04%	N/A
United Nations Population Fund (UNFPA)	2,175,099	11%	N/A
GoU	6,900,000	35%	N/A
Total	**19,499,228**	**100%**	

Source: family planning costed implementation plan 2015-2020

The community-level Sayana Press pilot program is funded through a partnership that includes the Bill & Melinda Gates Foundation, the Children's Investment Fund Foundation, USAID, UK Department for International Development, UNFPA, and PATH. UNFPA procured the initial

[10] Zlatunich and Taryn (2015). 2015 Gap Analysis for Uganda Family Planning Costed Implementation Plant, 2015–2020. Health Policy Project.

quantity of Sayana Press. There is commitment to continue funding if the introduction is successful. Discussions are ongoing to cover the entire 28 districts of the pilot.
Figure 5 shows the current procurement, financing and flow of family planning contraceptives and Sayana Press. Sayana Press is managed differently from regular commodities because it is being field-tested.

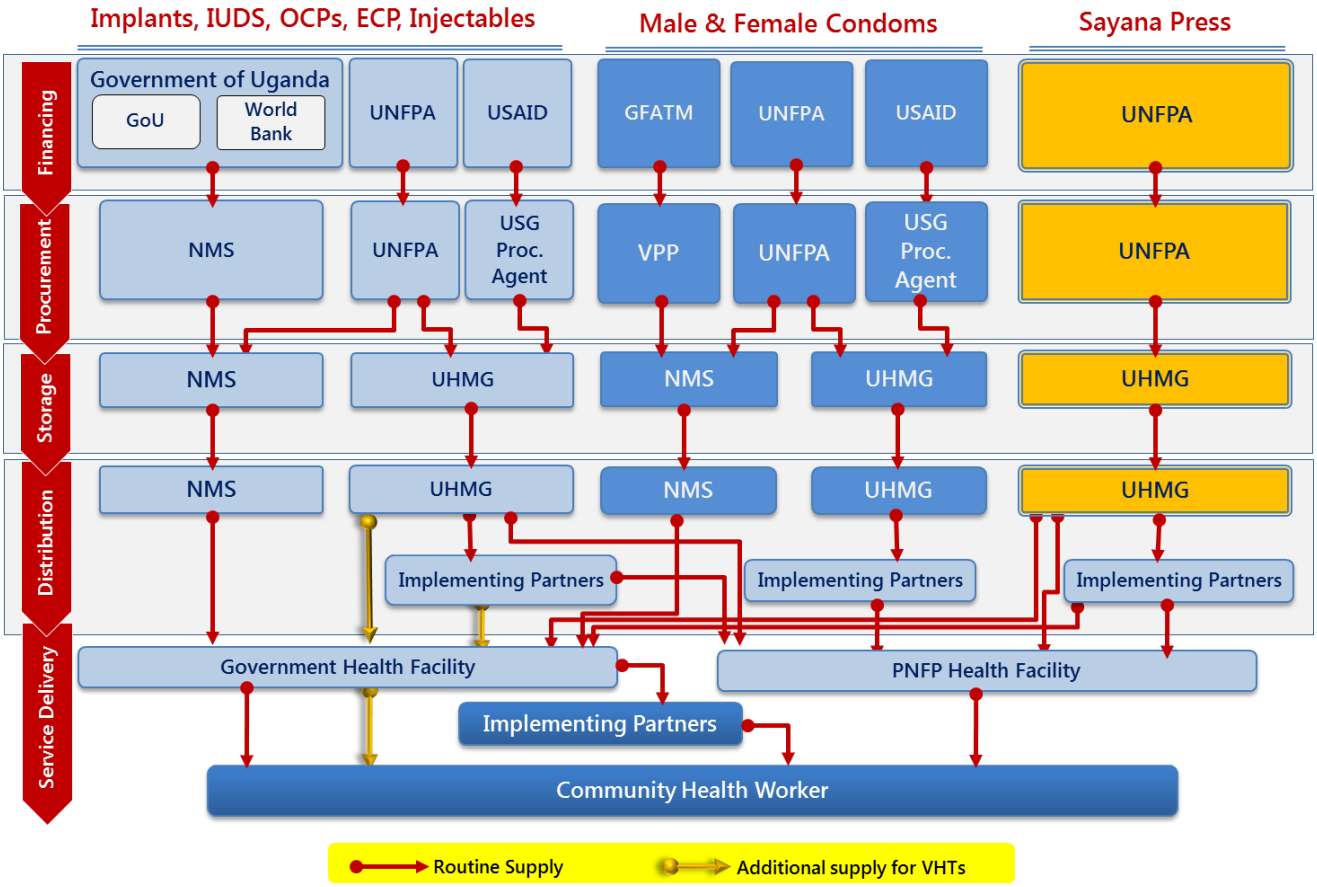


Figure 5: Financing, procurement, and flow of Reproductive and Family planning commodities in Uganda

If and when Sayana Press is approved for community use, the product must be integrated into the mainstream storage and distribution channels. Adequate preparations need to be made for its introduction as for any other new product, including national training, adding it to order forms, information systems, etc. Partners and UHMG need to carefully review the data they are collecting on stock levels and consumption to advise future procurements and avoid unnecessary wastage. It appears as if the initial quantities of Sayana Press procured for start-up were too high; units due to expire in April 2016 may have to be recalled and destroyed.

Reaching 50,000 villages (out of an estimated 57,000 villages) is a huge task that will require substantial start-up funding, but also secured follow-on funding to sustain the activities. The family planning costed implementation plan estimates that approximately US$43 million will be needed over five years to expand family planning outreach and community-based services, including VHT training, demand creation, supervision, tools for logistics management information, etc.

Product Selection for Community Programs

The MoH iCCM implementation guidelines (2010) guide product selection for VHTs under the program. The program allows the use of RDTs and ACTs for diagnosis and treatment of malaria,

timers and amoxicillin 250mg dispersible tablets for upper respiratory infection, ORS and zinc co-packs for diarrhea treatment, and gloves and safety boxes for infection prevention. VHTs can also dispense rectal artesunate for pre-referral treatment of severe malaria.

Under MoH family planning guidelines for community-level family planning services, VHTs can be provided DPMA, oral contraceptives (combined and progestin-only oral pill, emergency contraceptive pill) and male and female condoms. In addition, they are also provided syringes for DPMA administration, gloves, and safety boxes.

There are no clear guidelines from the Quality Assurance Department or Pharmacy Division on how products are added to or removed from the list of products dispensed by VHTs. There are a number of programs, including HIV/AIDS, tuberculosis, and nutrition, which would also like to use community health workers to increase access to services and health products. The Uganda Medicines and Therapeutics Advisory Committee (UMTAC) was established in 2010 to "promote, monitor, and evaluate appropriate medicines and health supplies use at all levels of health care". The committee was instrumental in updating the Uganda Clinical Guidelines and EMHSLU in 2012, but has since been largely inactive. According to Pharmacy Division, the newly established technical working group for medicines will lead the review of the revision of Uganda Clinical Guidelines.

National Level Quantification

Commodity forecasting and quantification needs to be as accurate and realistic as possible to avoid stock-outs and expiries at central level. Forecasting and quantification exercises can use a combination of data and assumptions to estimate program requirements including demographic and health service statistics, morbidity rates and patterns, logistics data (e.g., consumption data) as well as information on supply chain performance and program plans.

The MoH Pharmacy Division, through the Quantification and Procurement Planning Unit (QPPU), is responsible for national quantification and supply planning for all medicines and health supplies. Although community program requirements have recently been recognized as important in some of the national commodity quantifications, the results are limited due to the lack of a systematic approach and poor availability and quality of community-level service statistics and logistics data.

QPPU conducted a national quantification for reproductive health/family planning commodities for the 2013 to 2016 period.[11] The quantification was based on contraceptive prevalence rate targets set in the Health Sector Strategic and Investment Plan (2010/11- 2014/15). The quantification recognized that VHTs would be an important access point for family planning commodities, however, it did not consider the planned scale-up of VHT programs or the proportion of facility contraceptives reported in the HMIS 105 as dispensed by VHTs. The latter data are poor but still useful for validation purposes. Consequently, the report could not specify the product quantities or funding required for the community level. In addition, using program targets as the basis for a quantification is risky, particularly when estimates are well above actual levels of current consumption, as is the case for contraceptives in Uganda.

In October 2013, the MoH Pharmacy Division completed a national quantification of iCCM commodities for the 2014 to 2016 period, which used a combination of HMIS service statistics and 2012 data compiled from VHT reports from nine mid-West districts. This quantification produced estimates that were later used to design the standardized VHT kit (see Section 2.7). Also in 2013,

[11] Ministry of Health, Pharmacy Division, 2014. National Quantification of Family Planning and Selected Reproductive Health Commodities; QPPU Ref:RH-01-2014, Kampala, Uganda

ACT and RDT requirements for 15 districts were quantified for the iCCM program as part of the Global Fund malaria grant application. The basis of the quantification was malaria morbidity data (fever episodes per age group). A standard factor of a 7% was used to calculate the quantities of the ACTs and RDTs needed for community-level distribution. The basis for the 7% was not clearly described, so it is hard to judge if this factor is appropriate for one or both products and how it relates to the national iCCM quantification.

The 2013 iCCM national quantification used best practice methodology and current HMIS service statistics and iCCM program data, which now covers many more districts. The assumptions and data used for the contraceptive quantification should also be reviewed and updated as needed. It is critical that the all national quantifications be led by the MoH QPPU, using trained, experienced logistics professionals. QPPU is able to ensure all stakeholder participation and buy-in.

It is also important for the GoU and donor partners to plan their procurements in accordance with the national supply plans developed by the QPPU. The supply plans indicate the recommended quantities and delivery dates to ensure central level supplies for family planning and iCCM commodities are maintained between the recommended minimum and maximum stock levels. Implementation of the supply plan is coordinated and through the regular Commodity Security Group and the Reproductive Health Commodity Security meetings that bring together the different stakeholders.

Section 2.8 describes the logistics data that are collected and reported by facilities involved in the iCCM and family planning/Sayana Press pilot program. There are gaps and limitations to the logistics data, such as poor reporting rates and lack of a routine mechanism to assess data quality. It is critical for the accuracy of national quantifications that the MoH and partners support the strengthening of HMIS reporting and revision of HMIS forms to ensure that basic logistics data are collected and adequate for national-level supply chain planning and monitoring. Finally, where logistics and other service data are lacking or poor quality, the QPPU and partners should use information from alternative sources such as special surveys, program assessments, and small-scale projects. These data, if good quality, are valuable for validating or added depth to the quantification process.

Distribution of VHT Commodities

VHTs obtain their supplies from health facilities, which in turn get their supplies from central warehouses. NMS delivers both family planning and iCCM commodities to public facilities, and through the recent contract, iCCM commodities to PNFP facilities. UHMG supplies Sayana Press and other family planning commodities to both public and PNFP facilities. Joint Medical Store delivers commodities to PNFPs, but has not been used to deliver any commodities reaching VHTs. NMS and UHMG use different models for delivery to the health facility.

Supply through NMS

NMS manages the delivery of EMHS to all government facilities on a bimonthly distribution schedule and NMS uses their own trucks to deliver to district stores and hospitals. Third party logistics companies have been contracted by NMS to take supplies from district stores to lower facilities, thereby completing the delivery. In general, this system has functioned well; most health facilities receive commodities every two months according to schedule and the average number of days between deliveries is down to 39 days in the fiscal year 2013/14, from 59 days in the fiscal year 2010/11.[12]

[12] Annual Pharmaceutical Sector Performance Report 2013-2014).

Government HCIIs and HCIIIs, which predominantly work with VHTs, are sent pre-packed kits of EMHS. This is a push system: facilities do not order or determine what they receive; the decision is made by district officials and NMS. Government hospitals and HCIVs are under a pull system as they decide what to order for their facilities within their allocated annual budget. (Figure 6)

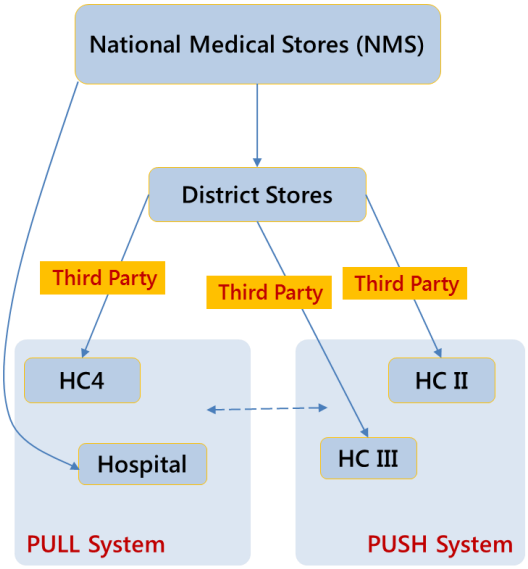


Figure 6: Distribution system from National Medical stores to health facility level for RMNCH commodities

The initial kits have now been replaced by district-specific kits. On an annual basis, DHOs are supposed to work with NMS to decide on the products and quantities that they want in their HCII and HCIII kits. Although the district kits contain or can contain all of the commodities used in the iCCM and family planning programs (with the exception of Sayana Press), our review found that none of the DHTs interviewed for the situation analysis reported that they had included VHT requirements into their district-specific EMHS kits.

In 2015, UNICEF and Global Fund contracted NMS to deliver VHT commodities to both government and PNFPs in the districts implementing the iCCM program. These iCCM commodities are additional to the routine EMHS supplies delivered to facilities; they are packaged at NMS into kits that contain the same products and quantities (Table 5). The use of a standardized VHT kit was recommended by the MoH Pharmacy Division "as the best fit for nationally integrating the supply of ICCM commodities with NMS". (Note: The kit contents shown below are somewhat higher than the 2013 estimated kit requirements, particularly for RDTs and ORS/ZINC).[13]

[13] Integrated Case Management of Malaria, Pneumonia, Diarrhea Report, December, 2013.

Table 5: VHT Kit Content in the iCCM Program

Description (Unit Pack Size)	Projected Monthly Requirement*	Kit Content (2 months)
Co-packaged ORS (2 sachets) & zinc tablets (10 tabs)	5	10
Amoxicillin 250mg (10 tabs)	4	8
Amoxicillin 250mg (20 tabs)	5	10
Artemether 20mg + lumefantrine 120mg (strip of 6s)	5	10
Artemether 20mg + lumefantrine 120mg (strip of 12s)	5	10
Malaria rapid test kits (25 Tests)	1	2

** Based on data from UNICEF and Malaria Consortium*

Each iCCM health facility receives pre-packed VHT kits based on the number of iCCM-trained VHTs attached to the facility. At the facility, VHTs can pull the quantity they need from the combined total of available iCCM kit commodities. This can be described as an "adjusted push" system because there is some adjustment for patient load (Figure 7)

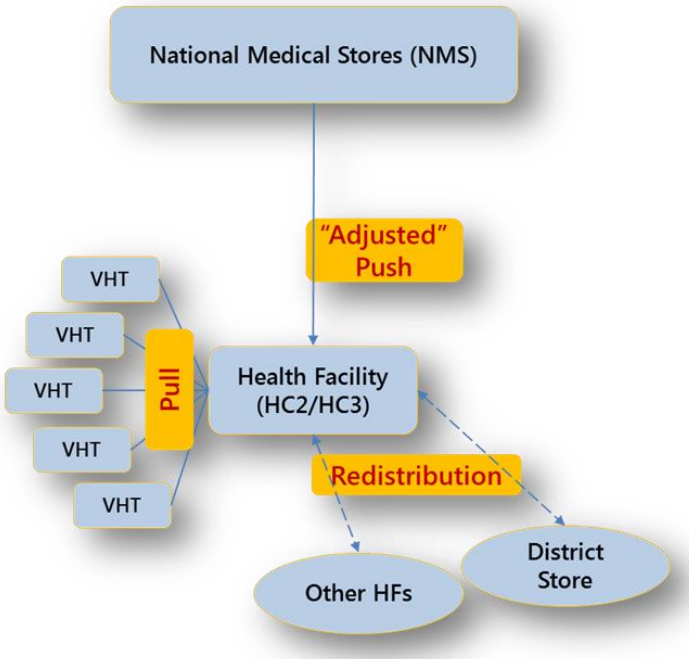


Figure 7: iCCM VHT kit 'push" and "pull" supply method

In September 2015, NMS delivered the first VHT kits of iCCM supplies to 553 public and PNFP facilities in the 15 districts supported through Global Fund financing. In October and November, the assessment team found that none of the kits had been given out to VHTs in the facilities visited, because the other accompanying items needed for the iCCM program, such as registers, job aids, and medicine storage boxes, had not been delivered. The delay apparently was caused by protracted Global Fund procurement procedures. This situation illustrates the challenge that will be faced to achieve timely and coordinated procurement and delivery of the many iCCM items.

There are concerns about having a pre-packed VHT kit and the effect of adding the VHT kit on top of the regular district-specific EMHS kits for government health facilities. Studies of the national and regional kits from 2011 to 2013 show that the one-fit-for-all kits resulted in significant stock

imbalances because of widely varying rates of consumption across facilities. Only 20% of the regional kit items were supplied in optimum quantities (defined as between two to three months of stock); the rest of the kit contents were either undersupplied (40%) or oversupplied (40%), leading to a risk of stock outs or excess accumulation. Another problem was the inconsistency in the product quantities actually delivered compared to what should have been delivered according to the standard kit list. For medicines classified as vital, only 45% and 39% of the items were supplied in the correct quantities at HCIIs and HCIIIs, respectively; some were not delivered at all.[14]

Review of logistics data collected on tracer iCCM and family planning commodities by medicine management supervisors in 75 districts from April to September 2015 showed that the new district EMHS kits are still no better at appropriately supplying facilities.

Table 4 shows the percent of facilities by months of stock that the kit quantity provided to the facility. The highlighted column is the percent of facilities that are appropriately stocked (i.e., provided between 2.0-2.9 months of stock). Very few facilities are appropriately stocked (< 10%). For example:

- 50% of facilities were stocked out of microgynon
- More than 70% had excess stocks of Depo-Provera
- 43% had excess stocks of RDTs
- 35-40% had excess stocks of ORS sachets

Table 6: Analysis of stock levels of HCII & HCIIIs following introduction of district EMHS kits

Product	April - June 2015** (Months of Stock)				July – September 2015** (Months of Stock)			
	0	<2	2 -2.9	>3	0	<2	2 -2.9	>3
	Percent of Facilities				Percent of Facilities			
Artemether/lumefantrine 20/120mg (adult dose)	8%	34%	10%	49%	13%	55%	5%	27%
Depo-Provera vials	19%	8%	2%	72%	17%	8%	1%	74%
Malaria rapid diagnostic test	9%	44%	2%	45%	15%	39%	3%	43%
Microgynon	60%	17%	0%	23%	48%	21%	6%	26%
ORS sachet	19%	30%	16%	35%	20%	37%	4%	39%

* Based on analysis of data from 61 facilities (19 HC3s and 42 HC2s) in 34 districts.
** Months of stock analysis: Understock <2; Adequate 2-2.9; Overstock >3

These results suggest that the additional quantities of RDTs and ORS supplied in the iCCM VHT kits could exacerbate the oversupply and wastage problem in facilities receiving the EMHS kits. On the other hand, facilities that receive too few of the iCCM commodities in their regular EMHS kits will undoubtedly borrow from VHT supplies, which could disrupt community services. Table 7 below shows an analysis of the additional supply of ORS/Zinc, malaria RDTs and ACTs by NMS to health facilities in the 15 GF scale-up districts as a result of rolling out iCCM. HCIIs and HCIIIs will experience up to a 5-fold increase in their supply of ORS. They will also receive approximately 70% and 100% increase in the quantities of ACTs (6s) and malaria RDTs respectively.

[14] Assessment of Essential Medicines Kit Based supply system in Uganda, The Division of Pharmacy Services, Ministry of Health, Government of Uganda. December 2011

own stores. They both reported that they delivery directly to facilities on an as-needed basis, usually quarterly. The quantities delivered depend on consumption levels of the health facility.

UHMG reports they use the dispensed data from the Sayana Press reports to estimate the months of stock of Sayana Press in their central warehouse. It is vital that the partners and UHMG systematically assess the quality of these data so that stock levels can be reliably estimated and appropriate supply plans developed for new procurements. Some of the Sayana Press delivered to the health facilities at the start of the program is due to expire in April 2016, and if not used, will need to be retrieved from the health facilities and VHTs or redistributed to other Sayana Press facilities to prevent wastage.

In addition, the team found that the majority of the government facilities engaged in the Sayana Press pilot program reported receiving other types of contraceptives from UHMG, particularly oral contraceptives, which have been stocked out at NMS in recent months. In some instances, the contraceptives were delivered by an implementing partner. While this ad hoc type of parallel supply channels to facilities may not have a seriously disruptive affect (as quantities appear to be small), it is strongly discouraged. Central warehouse procurement plans are based in part on facility consumption history which will not be accurate because of these unknown extra supplies coming into facilities.

VHT Commodity Inventory Management, Reporting and Resupply

We examined the processes and procedures for handling VHT stocks at the health facility to understand a) how facilities store, record, and report on iCCM and Sayana Press stock, and b) what data and procedures are used to resupply VHTs.

Facility management, record keeping and reporting on VHT commodities

The iCCM program policy is to maintain separate stock cards and physical separation of iCCM kit stocks from the facilities' regular stocks. VHT kits delivered by NMS are supposed to be clearly labeled to indicate which stocks are for VHTs and which are for the health facility's routine use.

The 2014/15 iCCM pilot study showed that in practice this separation is not strictly maintained; health facilities commonly used VHT stock and vice versa in the event of stock-outs. If these stock transactions were accurately recorded in the stock cards or other facility records this would not pose a problem in keeping track of which supplies are being consumed by which party. The PNFP facility visited reported that they strictly kept iCCM stocks for VHTs separately from the rest of the health facility products, because they are provided free of charge to their clients, unlike their other products.

Sayana Press is currently only for VHT use, while supplies of Depo-Provera and the other family planning commodities which are distributed by the VHTs are taken from routine health facility stocks. In the facilities visited, it was observed that stock cards were being kept for Sayana Press, but they were not all properly updated. Physical counts did not appear to be made regularly or at all (the units were kept in the original large carton, which does not have inner boxes making it more difficult to count). Some reported that they had received some training in logistics management either on-the-job or in other fora, while others had never been trained.

The standard MoH procedure for obtaining stock from the facility store is for a health worker to fill out an issue/requisition voucher and the storekeeper records any stock issued to requesters on the product stock cards. These transactions are recorded for the purpose of knowing what stock was given to whom.

In our visits we observed different models being used by health facility staff to issue iCCM and family planning supplies to VHTs (Figure 8).

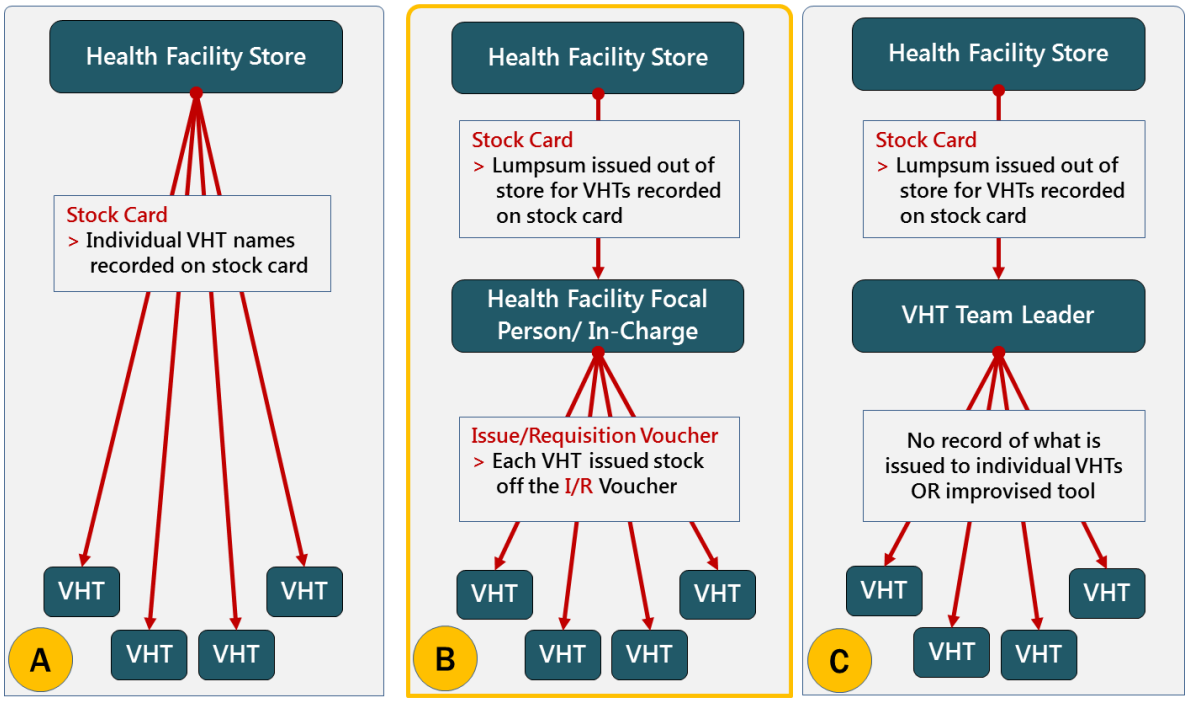


Figure 8: Different models of issuing stock from the health facility to the VHTs

Three models were observed for the iCCM program:

- In Model A, VHTs are supplied commodities directly from the store and individual VHT names are recorded on the stock card. This is not the best approach because with so many VHTs assigned to a facility, the number of transactions that need to be recorded (accurately) can become unmanageable, and stock cards are used up within a short time (a single stock card can sometimes last a year or more for slow-moving products).

- In Model B, a lump sum of commodities is issued to the facility in-charge or VHT focal person who then issues the stock to individual VHTs, recording the quantities and person receiving on the issue/requisition voucher.

- In Model C, a lump sum of commodities is issued to a VHT team leader who in turn issues the stock to the individual VHTs. In this model, improvised tools would be used to record issues to the VHT, if at all.

The Sayana Press Pilot Program uses a variation of Model B, where stock issued to VHTs are recorded on a record called the Health Centre VHT Stock Card, a tool designed and only used in PATH and Pathfinder supported districts.

In our view, Model B is most efficient because the VHT keeps a record of the issue/requisition voucher making it possible to trace the commodities issued from the health facility to the VHT. It also provides the most efficient use of stock cards and ensures health facility oversight of the resupply process.

For the 2014-15 iCCM pilot, a number of logistics tools were developed for recording VHT stocks delivered to health facility, stock issued to VHTs by health facilities, and stock reported by VHTs to the health facility staff after every three months. However, it is not clear whether these tools will be used in the programs where iCCM is being scaled up as they were not available in the pilot facilities.

Logistics data and resupply of VHTs at health facility

Staff and VHTs in the iCCM and Sayana Press programs reported that they resupply the VHTs based on their need. We looked at each program to see if the required logistics data for resupply are available and what process was followed in the facilities visited.

In a demand-based system, the quantities a VHT should be resupplied is based on three logistics elements: how much of each product the VHT dispensed to clients during the period (consumption), the quantity of product stock they have remaining (stock on hand), and the maximum months of stock the program wants VHTs to be supplied. The latter is usually the reporting period plus a buffer supply (e.g., one month plus another month).

Personnel, usually health facility staff, should review the VHT consumption collected in the register and stock on hand data and calculate how much of each product the VHT should receive so that they have enough to last them until the next resupply visit. The personnel need training on how to do the resupply calculations; therefore, we recommend written guidelines or job aids or even simple calculation tools.

Table 8 summarizes the information gathered from review of program documents and facility visits on the resupply process for iCCM and Sayana Press.

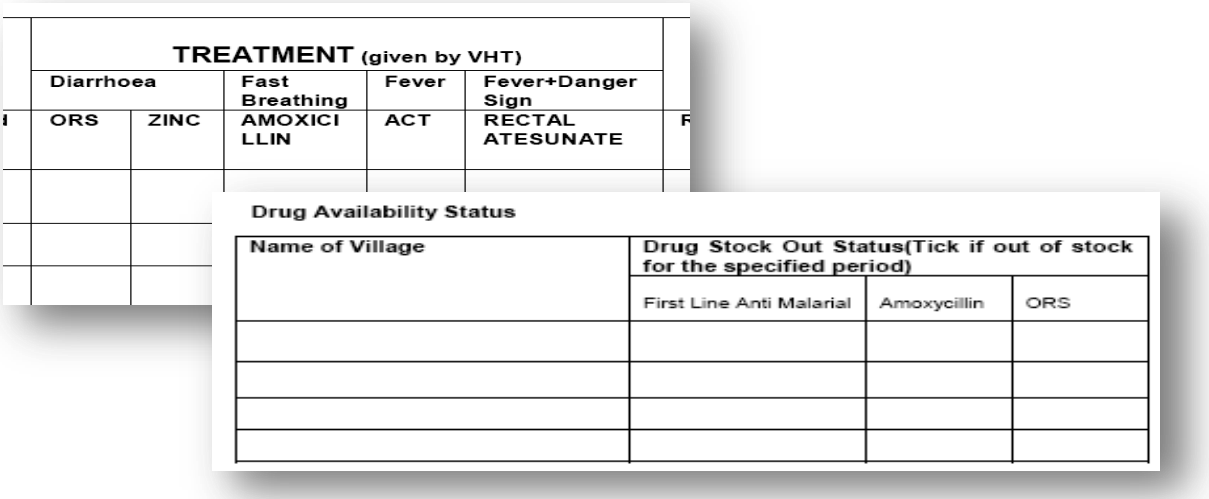
Table 8: Resupply process and data used by iCCM and Sayana Press pilot programs

Program	iCCM	Sayana Press Pilot
Resupply frequency	UNICEF—Monthly Global Fund—Quarterly	Monthly
Product consumption (dispensed) data collected	Yes	Yes
VHT stock on hand data collected	No	18 out of 28 districts
Standard guidelines available for resupply calculation	No	No
Logistics data used for resupply	Not clear/or routinely	Not clear/or routinely

iCCM program

The timing of resupplying VHTs generally coincides with the health facility supervisory meetings. This is monthly in the UNICEF-supported districts and quarterly in the Global Fund-supported districts. The iCCM program guidelines do not contain standard procedures on how to resupply VHTs.

The quarterly VHT/iCCM register (HMIS 097) that all VHTs fill out captures stock on hand data, but does not strictly capture quantities dispensed, instead it captures the number of treatments administered for diarrhea, pneumonia, and malaria. A tick is recorded next to the treatment given: for logistics purposes it would be accurate to have the quantity of the commodity given to the client. (The data collected on medicine stock outs is of limited logistic management value because it is by village rather than VHT and does not record stock out days). (Figure 9).



	TREATMENT (given by VHT)					
	Diarrhoea		Fast Breathing	Fever	Fever+Danger Sign	
	ORS	ZINC	AMOXICILLIN	ACT	RECTAL ATESUNATE	

Drug Availability Status

Name of Village	Drug Stock Out Status(Tick if out of stock for the specified period)		
	First Line Anti Malarial	Amoxycillin	ORS

Figure 9: VHT/iCCM register, treatment dispensed, and stock out sections

The health workers and VHTs we interviewed reported that consolidating data from several pages of the iCCM register over three months was difficult and thus they seldom used the data to inform the resupply decision. The work is made more difficult by the relatively large number of VHTs that have to be seen in a short time by few health staff members.

One of the primary recommendations from the 2013 iCCM pilot study was to standardize resupply based on the quantity they dispensed in the last cycle and their remaining stock on hand. MoH officials highlighted this recommendation and emphasized the importance of training health personnel how to do it properly. The study also recommended that the same resupply period be used across all iCCM districts to avoid confusion. Resupply monthly has advantages: VHTs have less stock to manage and facilities have more frequent oversight over VHT performance. In addition, the quarterly meeting and resupply schedule is at odds with the NMS bimonthly delivery schedule. This timing issue could result in times when health facilities do not have sufficient stock for VHTs.

The HMIS 097 form is reportedly being updated; this is an opportune time for stakeholders to agree on what essential new fields need to be added for logistics management purposes.

Sayana Press pilot program

VHTs are resupplied on a monthly basis. We found no written guidelines or standard operating procedures establishing how health workers or VHTs should calculate appropriate quantities for resupply. In the Sayana Press pilot program, the health worker is expected to review the VHT's completed registers or HMIS stock card to determine based on the quantities dispensed in the previous period how much a VHT should receive.

The Sayana Press partners use different VHT records and reporting tools. The only official MoH form is the HMIS 017 stock card, and the rest of the tools were developed by the partners specifically for the pilot program. (Table 9).

Table 9: Logistics data captured in tools used by Sayana Press Program Partners

Name of Form	PATH	Pathfinder	FHI 360	WellShare
Health Center VHT Stock Card Total quantities of each method issued to VHTs and method stock out days	X	X		
VHT Family Planning Visit Log Quantity dispensed by VHT of each method; stock out of method	X	X		
Community-Based Family Planning Register Type of method dispensed			X	X
Stock Card (HMIS 017) VHT records quantities received, dispensed, losses and adjustments and stock on hand of each method			X	X

It was not clear to us in our visits how health workers actually make their resupply decisions. The VHTs reported that they generally propose the quantity they need, but it is the health worker that ultimately determines the resupply quantity. How health workers make this decision varied from person to person—some staff said they considered facility stock levels. Most VHTs said they were resupplied based on quantity used, some said "same as last month". No one said it was based on a formula.

The facilities supported by the PATH/Pathfinder have consumption data but not stock on hand data. They record the total issues (quantities given) to VHTs, which is important for accountability but we do not know how these data are used and at what level.

In the FHI/WellShare districts, if the HMIS 017 stock card is completed by the VHTs, the calculation is possible because consumption and stock on hand data are captured. However, health workers we interviewed did not provide evidence that logistics data from the HMIS stock cards were used to make the resupply decision. According to the MoH/family planning 2012 training curriculum, VHTs are trained on how to use the HMIS stock card. It is, however a fairly complex tool even with training on how to complete it properly. Many health facility personnel have difficulty filling out the stock cards; for example, the *Annual Pharmaceutical Sector Report 2013/14* shows that only 50% of health facility stock cards are properly updated. In our visits, we did not see a stock card completed by a VHT and thus could not determine how this is working.

All Sayana Press/family planning partners should use the same set of VHT and facility records and reporting forms, and the forms should include at a minimum the two logistics data elements required for resupply calculations: quantities dispensed and stock on hand.

Health facility staff also reported that to manage the workload on the VHT meeting days, one health worker would have to be dedicated to only this function. An important purpose of these meetings is quality improvement through supervision; however, because of staff shortages, we saw that resupply is prioritized over supervision.

It is essential that standardized resupply procedures are developed for use in all community health programs. The procedures should be simple and easy to complete in a short amount of time. Health facility and district personnel such as the VHT focal persons and medicine management supervisors must be trained adequately on how to accurately calculate resupply quantities. VHT programs cannot run smoothly without this critical process.

Visibility of Community-level Data at National Level

Poor visibility of community-level logistics data at higher levels of the supply chain is a common problem across many community health programs. Increasing the visibility of community-level data enables effective monitoring, planning, and quantification of the commodities for the last mile in the supply chain. Good visible data that can be used to determine the actual community level need is essential to national level procurement and to providing community health workers with the correct quantity of supplies.

We reviewed the existing information systems to understand what community-level logistics data on iCCM and family planning are reported into the national health information systems and through partners.

HMIS 097b VHT/iCCM quarterly report. The VHT/iCCM quarterly report captures all of the activities carried out by VHTs, including the number of children under five years seen and treated by the VHT for diarrhea, malaria, and pneumonia. Unfortunately, the quarterly report does not contain the number of treatments dispensed, which is captured in the VHT/iCCM register (HMIS 097) filled by the VHTs; this is a lost opportunity to capture something about commodity consumption. However, the number of children seen and treated is useful data to have for quantifications.

The problem is the coverage and quality of data. In 2015, less than 10% of facilities submitted a HMIS 097b report. Facility staff and VHTs attributed the low reporting rates to the irregular commodity supply to VHTs. In one health facility, the staff reported that the numbers of their VHTs submitting reports varies widely each quarter (5–40%) but that they have no way of reflecting this when compiling their reports entered into DHIS2. There were differences in the processes followed to generate these quarterly reports across districts. In one district, VHTs were requested to generate and submit their quarterly report; in others, they felt that VHTs may not properly consolidate data over three months, so they were instead required to report monthly either directly or through a parish coordinator to the health facility, from which reports the health facility staff could generate the quarterly report.

The Resource Center and UNICEF are currently piloting an Android-based and mobile phone-based reporting solutions that could be sources of VHT-level consumption data for a number of commodities. However, it was still too early to determine if this is a viable and sustainable solution.

HMIS 105 Health Unit Outpatient Monthly Report. The HMIS 105 captures data on quantities dispensed through community-based distribution of oral contraceptive pills, emergency contraceptive pills, male and female condoms, intrauterine devices, and injectable contraceptives. The facility reporting rate is high, but the data on contraceptives dispensed in the community have been considered too poor to use in national quantifications.

The recently updated HMIS 105 (July 2015) also captures data on quantity dispensed, days out of stock, and stock on hand for four commodities used in the iCCM program (ORS/zinc, amoxicillin 250mg, ACTs, malaria RDTs) and Depo-Provera, one of the main community-level family planning

methods.[15] These data should be used to monitor availability at facility (and thus community) level, and they can be used in quantifications to make adjustments on consumption by factoring in facility level stock-outs. Facility reporting on this new section is still too low because facility staff are not yet accustomed to the tool.

Health Center Summary of VHT family planning visit report. Facilities involved in the Sayana Press pilot program are supposed to submit a monthly health center summary of VHT family planning visit report to their partners. The report summarizes the quantity of Sayana Press and the other contraceptive methods dispensed by the VHTs assigned to the facility. According to the first annual report, "In Uganda, PATH and the Ministry of Health extended the monitoring system to the community level and trained community health workers (CHWs) in data collection. Previously, it was not feasible to measure CHWs' contributions to the family planning program because CHW data were rolled into health facility data. The CHWs involved in Sayana Press introduction submit their data to a nearby health facility, while PATH and partners in Uganda gather monitoring data directly from providers based at those facilities".[16]

As a pilot program, the data collected by the Sayana Press partners remain outside the national system. The review team did not obtain information from the partners on whether they did data quality assessments. Coverage is still limited to selected sub-districts in the 28 program districts.

In conclusion, community-level logistics data are being collected through the national information system for both iCCM and family planning. Substantial efforts are needed, however, to assess and improve the data quality and reporting rates of the national data. Partners supporting the community health programs need to invest resources at facility and national levels to improve their quality and systematic collection, analysis, and use in national-level monitoring, quantification, and planning.

Supervision and Coordination

We looked at the supervision and mentorship related to VHT commodities by health workers and the coordination of VHT resupply at both district and MoH level.

The iCCM program uses a cascading supervision model. The MoH supervises the district team who in turn supervises the health workers, who finally supervise the VHTs. MoH has supervision guidelines (2005) that include aspects of supplies management by the health facility and VHT. According to the 2010 iCCM implementation guidelines, health workers are supposed to conduct supervision through home visits and quarterly meetings. During the quarterly meetings, VHTs are supposed to submit their HMIS 097b reports and receive their new supplies and facilitation payments. Health facility staff, usually two or three health workers, supervise VHTs attached to their facility. In the facilities visited, they reported being responsible for between 5 to 40 VHTs (in HCIIs it was 5–25 VHTs and in HCIIIs, 20–40 VHTs).

Health workers reported that they did not have sufficient time to adequately supervise VHTs. Due to staff shortages and lack of transportation, home visits were rarely conducted, if at all. The main supervision activities were carried out during the quarterly meetings. They reportedly reviewed the VHT/iCCM register (HMIS 097) for correct capture of dispensed data, however, they do not have any written guidelines or checklist to follow for the supervision activities. Some said they had not received any training prior to being given the responsibility. Implementing partners often provided

[15] The indicator defines an ACT as any tablet form containing Artemether/Lumefantrine 120/20mg, the specifically the 6x1 or 6x2 strips used in the iCCM program.
[16] Monitoring Sayana Press pilot introduction, October 2015.

transport facilitation for VHTs to attend the quarterly meetings, when this funding ended, the meetings became irregular or stopped completely.

Facilities participating in the Sayana Press pilot program hold monthly meetings for VHTs at the health facility. Health workers receive some facilitation to conduct the meetings. There is no supervision checklist or tool for health workers to use with the VHTs. In some facilities we visited, a few VHTs routinely helped out at the facilities, and health facility staff used this as an opportunity to supervise and coach VHTs. This method was popular with the VHTs and supervisors at the health facility and provided opportunities for resupply between the scheduled monthly meetings.

At the district level, the district VHT focal person (most often a health educator or health inspector) supervises VHTs in the district. However, some of the district health officials interviewed reported that with the exception of Child Health Days programs, they receive little support for supervision and other functions related to VHTs; community-level activities are therefore not prioritized. The district VHT focal persons did not have a structured or substantive role on any issues regarding the oversight and management of VHT commodities. Though reportedly available, we were not able to see a listing of VHTs and their contacts in a database managed at district level. The iCCM and Sayana Press pilot implementing partners reported that they conducted their own supportive supervision in the districts and always made efforts to engage the DHT.

Implementing partners drive most programs reaching VHTs, often in specific disease areas. As a result, the activities are coordinated through malaria or family planning focal persons. The medicine management supervisors, trained through the SPARS program, do not currently have a role in overseeing or coordinating or supervising the management of VHT supplies at the health facility. This is a missed opportunity because they have the knowledge and skills needed to review commodity management and receive resources to carry out regular facility visits.

Some partners have tried using VHT peer supervisors (parish coordinators). The experience from two districts suggests that while these peer supervisors are instrumental in following up reports from VHTs, and can better reach VHTs than the health workers, the model tends to die out once the implementing partner facilitating the parish coordinators is not in the picture, and therefore not sustainable for the district health system.

Community-level Supply Chain Models: Experiences from Other Countries

There is abundant information on every aspect of national supply chain management systems, but little literature about the design and operation of community-level supply chains. Much of the literature on community health programs describe or evaluate aspects such as training, supervision, or record-keeping related to service delivery and program outcomes. Few of these reports have much information detailing the procedures of how the CHW is supplied, what and how any data collected are used by CHWs, how the data are used to ensure regular availability and accountability, and what happens up the supply chain to ensure sufficient supplies are available at the community level.

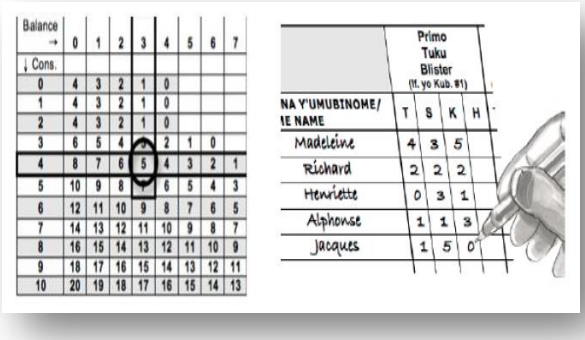
The most comprehensive and detailed of the community-level supply chain literature is from the experiences of the Supply Chain for Community Case Management (SC4CCM) Project implemented between 2010 and 2013 in Rwanda, Ethiopia, and Malawi. A primary focus of the supply chain interventions designed and tested in these community programs was on establishing a clearly defined resupply process using basic logistics data and simple resupply calculation tools that can be used by lower-level health facility staff and community health workers with limited training.

Case Study 1: Rwanda

A 2010 baseline assessment of Rwanda's community health supply chain found no established procedures in place for resupplying CHWs. CHWs reported to and were resupplied from multiple places (rarely to their resupply point); 62% of health facility staff said they based their decision on non-standard documentation, 19% used other methods. 8% gave out the same as last month, and 7% didn't know. Only 4% of staff said they used a formula. As a result, less than half of the CHWs had all the five iCCM products in stock on the day of visit. In addition, the flow of information and products were not aligned.[17]

The SC4CCM intervention was to establish a demand–based standard resupply procedures for CHWs. Three tools were introduced:[18]

- A simplified stock card for the CHW to record quantities dispensed and stock on hand at the end of the month
- The "magic calculator", a mathematical matrix that uses stock on hand and quantity dispensed in the previous month to determine the appropriate resupply quantity.
- A resupply worksheet to aggregate data for all CHWs in each month to submit to the health facility.



For supervision, CHWs were arranged into cells of 10 to 12 CHWs each, with a cell coordinator charged with collecting and aggregating data from CHWs each month and resupplying them with products to increase efficiency at the health center level. If scaled nationally, resupply procedures would result in monthly reports from approximately 2,150 cell coordinators rather than from 30,000 individual CHWs.

Quality improvement teams were also introduced to provide continuous on-the-job monitoring and supervision of staff and CHWs. Three indicators were added to the performance-based financing system to reinforce routine implementation: 1) stock card accuracy, 2) cell coordinator supervision visits using integrated supervision checklists, and 3) frequency of quality improvement team meetings at health centers by districts. At midline, 63% of CHWs in the quality improvement team districts had all five products in stock compared to only 38% in districts without the teams, and up from 49% of CHWs at baseline.[19]

Case Study 2: Malawi

A 2010 baseline assessment of community health supply chain showed that although the country was using a demand–based resupply system, health centers were using non–standardized forms and therefore the data and calculations used were not consistent. Product availability was low; only 47% of resupply points and 34% of CHWs had all three key iCCM products in stock on the day of visit.[20] CHW resupply was also not prioritized; 28% of resupply points reportedly turned down CHW

[17] SC4CCM. 2011. Rwanda Community Health Supply Chain Baseline Assessment Report. Arlington, Va.: SC4CCM.
[18] Rwanda Resupply Procedures and Magic Calculator for CHWs
[19] SC4CCM. 2014. *Strengthening Supply Chains at the Community Level: Findings from the SC4CCM Project in Malawi, Rwanda and Ethiopia.* Arlington, Va.: SC4CCM.
[20] SC4CCM. 2011. *Malawi Intervention Strategy for Improving the Community Health Supply Chain: Implementation & M&E Plan. January 2011 – February 2013*. Arlington, Va.: SC4CCM.

product requests because health workers had not planned for CHW commodity requirements and could not resupply them. CHW data were not disaggregated from health facility data which resulted in poor accountability and lack of information needed to plan for community programs.

The SC4CCM project introduced cStock[21], an SMS-based reporting tool that automatically calculates what the health facility should resupply the CHW on their next visit based on the CHW's stock on hand data. In addition, district product availability teams were established, comprising district management, health facility staff, and CHWs. The teams' role was to promote team performance and improve commodity availability.

A second model, the efficient product transport, was concurrently piloted where CHWs were trained in preventive bicycle maintenance to ensure they have transport available and greater flexibility in terms of the frequency and quantity of their resupply.

After 18 months of implementation, availability of the tracer iCCM products on the day of visit increased from 34% to 64% in the facilities supported by district product availability teams compared to 59% in the efficient product transport areas. Over the same period, stock-out rates of all six iCCM products were consistently lower among team-supported sites (below 10%) compared to transport intervention areas.

Case Study 3: Ethiopia

In 2010, Ethiopia's CHWs received their supplies in a pre-packed kit through a health facility. A baseline assessment of the community supply system showed that 74% of CHWs had experienced stock-outs in the previous 12 months; only 40% of CHWs reported being regularly resupplied every month, and only 5% knew how to correctly calculate resupply quantities. Very few CHWs and health facility staff had received logistics management training and they lacked the knowledge and skills to effectively manage their health commodities.[22]

To address the urgent knowledge and skills gap, SC4CCM developed short "ready lessons" that could be given in any order and repeated as often as necessary. The lessons enabled the CHWs to learn skills in different areas of supply chain management including how to store supplies properly, how to distribute and maintain adequate supplies; how to manage expired products; and how to record and report accurate information about supplies and their use. The lessons were combined with problem-solving exercises to address bottlenecks and identify gaps in skills that needed to be addressed. SC4CCM tested three different approaches to see which was the most effective. One approach used group training during monthly meetings at the health facility. The second used the same group training approach but combined it with intensive follow-up support by project and district staff. In the third approach, the health facility staff were trained and then required to have one-on-one sessions with CHWs using the ready lessons.

After 24 months, 87% of CHWs in the intensive follow-up group knew how to correctly calculate resupply quantities, compared to 59% in the non–intensive group, and 14% among CHWs in districts where group trainings were never conducted.[23]

[21] cStock is a simple mHealth reporting and resupply system that improves communication between the HSAs and their resupply points. http://sc4ccm.jsi.com/countries/malawi/

[22] Shewarega, Abiy, Paul Dowling, Welelaw Necho, Sami Tewfik, and Yared Yiegezu (PFSA). 2015. *Ethiopia: National Survey of the Integrated Pharmaceutical Logistics System.* Arlington, Va.: USAID | DELIVER PROJECT, Task Order 4, and Pharmaceuticals Fund and Supply Agency (PFSA).

[23] SC4CCM Project Team. 2014. Ethiopia SC4CCM Project Endline Evaluation Report, July 2014. Arlington, Va.: SC4CCM.

Table 10 summarizes the major features of the community-level supply chain systems in Rwanda, Malawi, and Ethiopia and compares them to the ICCM and Sayana Press pilot program.

Table 10: Resupply data, calculation and tools in Rwanda, Malawi and Ethiopia

Country	Frequency of Resupply	Logistics data reported by CHW	Resupply calculation	CHW Resupply Calculation Tool(s)	Community Logistics Data Reported Upwards
Rwanda ▪ CHW is a volunteer, with 4 weeks training ▪ Dispense 6-12 commodities for iCCM and/or family planning	Monthly	▪ Stock on Hand ▪ Quantity dispensed	[Quantity Dispensed x Resupply Period *(2 months)*] – Stock on Hand	▪ CHW Stock Card ▪ "Magic Calculator" ▪ Resupply Worksheet	▪ Stock on Hand ▪ Quantity dispensed
Malawi ▪ CHW is a paid cadre, with 12 weeks training ▪ Dispense 8-19 iCCM, family planning & HIV testing products	Monthly	▪ Stock on Hand ▪ *Quantity issued by health worker to CHW*	[Quantity Dispensed x Resupply Period *(2 months)*] – Stock on Hand	▪ cStock *(An SMS-based reporting used for calculating resupply)*	▪ Stock on Hand *Quantity issued by health worker to CHW*
Ethiopia ▪ CHW is a paid cadre, with one year training ▪ Dispense 55+ commodities including iCCM, family planning, HIV, vaccines and other essential medicines	Monthly	▪ Beginning Balance ▪ Quantity Received ▪ Losses/adjustments ▪ Stock on Hand	[Quantity Dispensed x Resupply Period *(2 months)*] – Stock on Hand *where Quantity Dispensed = [Beginning Balance + Quantity Received +/– Losses/adjustments* – Stock on Hand*]*	▪ Health Post Monthly Report & Request Form *(A manual tool completed by CHW to report and includes the resupply calculation)*	▪ Beginning Balance ▪ Quantity Received ▪ Losses/adjustments Stock on Hand
Uganda iCCM <3 weeks training	Quarterly *(in GF districts)* Monthly *(in UNICEF districts)*	▪ Number of clients tested or treated by disease	No standard calculation	None	▪ Number of clients tested or treated by disease
Sayana Press Pilot Program <3 weeks training	Monthly	▪ Quantity Dispensed *in all 28 districts* ▪ Quantities received, Losses/Adjustments and stock on hand *in 18 districts*	No standard calculation	None	None

In the three countries, CHWs were resupplied monthly. They all used the same basic calculation to determine the appropriate quantity to resupply, and all used some type of manual or electronic tool to do the calculations. One interesting feature shared by all three models is that resupply quantities for CHWs were calculated prior to the monthly meetings at the health facilities. This relieves the burden from health facility staff who can then focus more on their supervisory role with the CHWs during the meetings Also in all the models, health facilities reported key logistics data to a higher level to be used in supply planning and monitoring.

Also noticeable was that the more training received by the CHWs, the greater the number of products they managed and complexity of logistics tools they used. The simplest system is in Rwanda where CHWs are volunteers and only trained for four weeks. The most complex is in Ethiopia, where CHWs are full-time, paid staff with 12 months of formal pre-service training.[24] In comparison, the resupply procedures Uganda are poorly defined. The resupply periods differ across partners; there is no standard resupply calculation; no tools are used to facilitate the process; little logistics data is collected and none is reported to the central level. The duration of training of VHTs is also lower than in the other three countries.

ISSUES AND RECOMMENDATIONS

Key Issues	Recommendations
National Policies and Guidelines	
Coverage of community health programs incomplete and inequitable; family planning high priority but coverage low in areas of greatest need	MoH to enforce district selection criteria. Prioritize support for community-level family planning to districts with highest unmet need
VHTs are not covered in health sector legal and regulatory framework	MoH and other relevant GoU bodies review and update legal and regulatory framework to incorporate all needed policies for community health providers (VHTs and community health extension workers) MoH to issue clear guidance to district health authorities and health facilities on how to sustain community-level programs
Contradictory National Drug Authority Act and MoH policies on VHT dispensing of antibiotics, antimalarials, DPMA injection	
DHTs do not consider community program requirements in their annual procurement/kit planning	
Health facilities do not routinely issue overstocked items to VHTs	
No policies/guidelines on how pharmaceutical products should be added or removed from list of products dispensed by community health workers	
National medicine management guidelines for facilities do not include community-level commodities: Districts, facilities and partners using different approaches with little oversight	Develop standardized management guidelines to be implemented and adhered to in all community-level health programs

[24] Perry H, Crigler L, editors. Developing and Strengthening Community Health Worker Programs at Scale: A Reference Guide and Case Studies for Program Managers and Policy Makers. Baltimore: USAID/Maternal and Child Health Integrated Program/Jhpiego Corporation; 2014.

Key Issues	Recommendations
Commodity Financing	
No central mechanism exists for tracking multiple partner finance and commodity contributions, e.g. iCCM program	GoU and partners support establishment and functioning of central commodity and tracking system to improve transparency and coordination
Adequacy of commodity financing for community-level programs is unknown because of insufficient data available on the proportion of family planning and other health commodities from facilities and partners that are distributed at community level	*See below*
Quantification & Procurement	
Quantification of community level commodity limited because of insufficient and unreliable quality of data in HMIS	MoH and partners support revision of HMIS tools to capture essential community-level logistics and improve reporting rates. QPPU needs to systematically identify and use other available data from studies, programs etc. to refine accuracy of quantifications.
The 2013-2016 iCCM quantification needs to be updated using international best practice methodology	Partners need to support QPPU with the necessary technical resources to conduct RMNCH quantifications and supply planning
Distribution and Delivery Systems	
NMS third party logistics companies collect facilities orders at DHO level instead of going directly from NMS central warehouse to facilities. This is less efficient and poses accountability risk.	In order to gain operational efficiency, NMS could explore feasibility of contracting third party companies to collect orders from central warehouse and deliver directly to all facilities, eliminating DHO level.
Two implementing partners are collecting and delivering Sayana Press themselves to facilities, outside of established channels	Sayana Press Pilot program should ensure funding for UHMG to manage all direct deliveries of Sayana Press for the duration of the pilot phase
NMS delivers pre-packed VHT kits of iCCM commodities. Most of the facilities are HCIIs and IIIs which also receive their EMHS in pre-packed kits. Neither kit content is based on demand which can result in stock outs and overstocking	A structured monitoring system or study needs to be designed and implemented by stakeholders to evaluate the appropriateness and effect of the VHT kit vis-à-vis the EMHS kit
NMS is contracted to supply of iCCM commodities to PNFP facilities. JMS is the established primary supplier of PNFPs. It is more cost-effective if JMS were to deliver the iCCM kits alongside their regular EMHS deliveries to PNFPs.	Funding agencies evaluate the situation and contract to ensure cost-efficient, harmonized national supply chain management
Some implementing partners send or deliver ad hoc supplies to districts or health facilities instead of going through established channels	MoH needs to issue and enforce a directive to implementing partners to stop this practice.

Key Issues	Recommendations
VHT Commodity Inventory Management, Reporting and Resupply	
There are no established procedures or tools available for facilities to use in calculating correct quantities to resupply VHTs	Develop standardized resupply procedures and simple-to-use tools for use across all of the community-level programs
Facility staff have limited time to review and calculate resupply quantities during VHT supervisory visits	MoH and partners to support roll-out of tools, e.g. mobile e-tool being explored by UNICEF, if viable should be mobilized from all stakeholders for use in all community programs
Different approaches are being used by facilities to record commodities issued to VHTs. Quantities issued and/or dispensed recorded in different places; VHT stock on hand data not captured anywhere. Traceability/accountability is poor	Standardized record(s) or stock book needs to be developed specifically for VHT commodities: issues, dispensed and stock on hand
Training of health workers and VHTs on logistics management of commodities differs across programs; logistics management is not prioritized	Standardized training module(s) on commodity management should be developed and used for all community health programs
Logistics Management Information	
Low and inconsistent facility reporting rates on community-level data, poor data visibility	MoH and partners support data quality assessments and interventions to increase and improve quality of reporting
Supervision and Coordination	
No structured supervision or assessment of VHT commodity management	VHT commodity management should be integrated into the medicine management supervisors and SPARS program

ANNEXES

Annex 1: List of Participants in Key Informant Interviews

Annex II. Interview Guides

Annex III. Record and Report Forms

Annex I. List of Participants in Key Informant Interviews

	Name	Title	Organization
1	Morries Seru	Ag. Assistant Commissioner, (Pharmacy)	Pharmacy Division, Ministry of Health
2	Dr. Jesca Nsungwa	Assistant Commissioner, (Child Health)	Child Health Division, Ministry of Health
3	Dr. Placid Mihayo		Reproductive Health Division, Ministry of Health
4	Caroline Kyozira	Senior Biostatistician	Resource Center, Ministry of Health
5	Dr. Collins Tusingwire	Assistant Commissioner, (Reproductive Health)	Reproductive Health Division, Ministry of Health
6	Dr. Anthony Kihika Mugasa	RMNCH Advisor, Uganda Health Systems Strengthening Project	Reproductive Health Division, Ministry of Health
7	Dr. Christopher Oleke	Principal Health Educationist	Ministry of Health
8	Dr. Albert Okui Peter	Program Manager, National Malaria Control Program	Ministry of Health
9	Lawrence Were	RHCS Coordinator	Ministry of Health/UNFPA
10	Sam Balyejusa	QPP Unit Coordinator	Ministry of Health
11	Belinda Blick	Technical Advisor - Strategic Information	Ministry of Health
12	Dr. Nuwa Anthony	Uganda Country Technical Coordinator	Malaria Consortium
13	Dr. Sam Gudoi	National iCCM Coordinator	Malaria Consortium
14	Dr. Denis Mubiru	Project Manager	Malaria Consortium
15	Dr. Flavia Mpanga	Health Specialist	UNICEF
16	Dr. Alex Opio Chono	Technical Advisor - iCCM	UNICEF
17	Dr. Neelam Bhardwaj	Health & Nutrition Specialist	UNICEF
18	Fredrick Mubiru		FHI 360
19	Roselline Achola	NPO - Maternal Health - RHCS	UNFPA
20	Dr. Emmanuel Mugisha	Country Team Leader	PATH
21	Fiona Walugembe	Project Coordinator, Sayana Press	PATH
22	Damien Kirchhoffer	Program Manager, Essential Child Medicines	CHAI
23	Lorraine Kabunga	Access to Medicine Analyst	CHAI
24	Dorah Anita Taranta	Project Manager HoPE-LVB/Sayana Press	Pathfinder
25	Caroline Nalwoga Ssekikubo	Monitoring and Evaluation Manager	Pathfinder
27	Laura Wando	Country Leader, Uganda	WellShare International
28	Suzan K. Nakawunde	Programme Management Specialist (Health Commodities)	USAID

	Name	Title	Organization
29	Christine Mugasha	Program Management Specialist (Maternal and Child Health)	USAID
30	Michelle Lang-Ali		USAID
31	Garoma Kena		USAID
32	Gloria Sebikari		USAID
33	Alfred Boyo	Nutrition and Child Health Specialist	USAID
34	Sharmin Sharif	Program Manager, Health	BRAC Uganda
35	Godfrey Nsereko	Pharmacist/Technical Manager	UHMG
36	Dr. Charles Tusiime	District Health Officer	Kyenjojo District Health Office
37	Paul Kibikyabu	District Health Inspector, District Malaria Focal Person	Kyenjojo District Health Office
38	Walter Sekonde	District Malaria Focal Person/ Medicines Management Supervisor	Kiryandongo District Health Office
39	Dr. William Mucunguzi	District Health Officer	Kamwenge District Health Office
40	Henry Namakola	District Health Educator	Luwero District Health Office
41	Dr. Agaba Henry	District Malaria Focal Person, Kasana HCIV In-Charge	

Annex II. Interview Guides

https://drive.google.com/open?id=0B0YC-ko30iXibV9UYlRacC1xVlk

Annex III. Record and Report Forms

A – ICCM REGISTERS AND REPORTING TOOLS

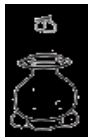
A1. HMIS FORM 097: VHT/ICCM REGISTER

Village: _____ **Household Number:** _____ **Head of household:** _____**Health Centre:** _____

Name of VHT Member: _____ **Reporting Period:** _____

A. General Info: All Household Members Above 5 Years									B. Pregnant Mothers								NEEDED FOLLOW-UP BY VHT
(1) (Name)	(2) Sex F	M	(3) Age	(4) Died	(5) Children not in school	(6) ART treatment	(7) TB treatment	(8) Use of FP Methods	(1) Expected Delivery month	(2) Antenatal Care Visits to H/C 1	2	3	4	(3) Danger Sign	(4) Referred	(5) Delivered at Home	(6) Maternal death	(7) Post Natal Check at H/C 1 day	1 week	6weeks	(8) Using LLIN	Make note of any household members or problem that need follow-up

C. General Info: Children 5 Years and Below														
(1) Household Members (5 years and below) (Name)	(2) Sex F	M	(3) Age	(4) Died	(5) ART Treatment	(6) Immunization Has Card	Up-to-date	(7) Received De-wormed 1st	2nd	(8) Received Vitamin A 1st	2nd	(9) Yellow MUAC	Red MUAC/ Oedema	(10) Using LLIN

Household: Water, Food and Sanitation & other services							
Find out if the household is using the following methods to prevent sickness. Tick the method (s) used by the family							
Protected water source	Bath Shelter	 Safe drinking water	 Kitchen	Drying rack for dishes	 Rubbish pit	 Clean & Safe Latrine	 Hand-washing area with soap near latrine

NEEDED FOLLOW –UP BY VHT

The VHT should make note of any household member or problems that need follow-up.

……

……..

……

For Children 5 years and below

	GENERAL INFO							**PROBLEM**					**TREATMENT** (given by VHT)						**OUTCOME**	
													Diarrhoea		**Fast Breathing**	**Fever**	**Fever+Danger Sign**			
Date	**Patient Name**	**SEX**		**AGE**	**Respiratory**	**RDT Result**		**Fast**	**Diarrhoea**	**Fever**	**Danger**	**Treated within 24 hrs**	**ORS**	**ZINC**	**AMOXICILLIN**	**ACT**	**RECTAL ATESUNATE**	**Referred**	**Recovered**	**Bad Medicine Reaction**
		M	**F**		**Rate**	**+**	**-**	**Breathing**			**Sign**									
Total																				

NEWBORNS											
Date	Newborn Name	SEX		AGE (days)	Respiratory Rate	Routine Newborn Care	Home Visit by VHT			Danger Sign	Referred
		M	F				Day 1	Day 3	Day 7		

Drug Availability Status

Name of Village	Drug Stock Out Status(Tick if out of stock for the specified period)		
	First Line Anti Malarial	Amoxycillin	ORS

A2. HMIS FORM 097a: QUARTERLY HOUSEHOLD SUMMARY

Village: _____ **Household Number:** _____ **Head of household:** _____ **Health Centre:** _____

Name of VHT Member: _____ **Reporting Period:** _____

GENERAL INFORMATION SUMMARY												
	Less than 1 month		1-11 months		1-5 Years		6-14 Years		15-49 Years		50 Years & Older	
	M	F	M	F	M	F	M	F	M	F	M	F
Household Members												
Died												

ADULT SUMMARY			PREGNANT WOMEN SUMMARY						CHILDREN SUMMARY					
Using Family Planning Method	ART Treatment	No. of TB patients on Treatment	No. ANC Visits	Died during Child birth	Delivered at Home	Died during Pregnancy	Died before Post Natal	Using LLIN	Immunization Up-to Date	Red MUAC/Oedema	Using LLIN	ART Treatment	Received VitA	Dewormed

ENVIRONMENT SUMMARY								
	safe drinking water	**safe water source**	**bathroom/bath shelter**	**clean/safe latrine**	**Drying racks**	**Rubbish Pit**	**Kitchen**	**Hand Washing Facility**
No. of House holds								

ICCM										
	Sick Children 2months-5yrs seen by VHT	**Sick Children 2months-5yrs with Diarrhoea**	**Sick Children 2months-5yrs with Malaria**	**Sick Children 2months-5yrs with fast breathing**	**Newborns visited twice in first week of life by VHT**	**Under 5 years with red MUAC**	**Under 5 years referred**	**Villages with Stock out of First Line Anti Malarial**	**Villages with Stock out of Amoxycillin**	**Villages with Stock out of ORS**
Total No.										

A3. HMIS FORM 097b: VHT/ICCM QUARTERLY REPORT

VHT/ICCM QUARTERLY REPORT

Reporting Months: ……
Village: ……
Parish ……
Health Center: ……
Sub-County: ……
Health-Sub-District: ……
District: ……
Name/Title/Signature of Person Reporting: ……
Name/Title/Signature of Person Receiving the Report: ……

Date Received: ……

SN	PARAMETER	MALE	FEMALE	TOTAL
SECTION A: VHT				
1	Number of children under 5 years			
2	Number of children under 1 year			
3	Number of children under 1 yrs fully immunized			
4	Number of children under 5 yrs received vitamin A in last 6 months			
5	Number of children under five yrs dewormed in the last 6 months			
6	Number of children under 5 yrs who sleep under LLIN			
7	Number of children died >1yr but ≤5=yrs			
8	Number of children died 0-28 days			
9	Number of children died >28 days but ≤1yr			
10	Total number of pregnant women			
11	Number of deliveries at home			
12	Number of women who died within 6 weeks after delivery			
13	Number of pregnant mothers sleeping under LLIN			
14	Number of HIV positive followed by VHT			
15	Number of people using Family Planning services (information & methods)			
16	Number of adolescents (under 18yrs) who died due to pregnancy related causes			
17	Number of women who died during pregnancy			
18	Number of women who died while giving birth			
19	Number of HIV/AIDS patients on ART			
20	Number of TB patients on treatment			
21	Number of households with safe drinking water			
22	Number of households in village with safe water source			
23	Number of households in village with clean/safe latrine			
24	Number of households with bathroom / bath shelter			
25	Number of households with drying racks			
26	Number of households with rubbish pit			
27	Number of households with kitchen			
28	Number of households with hand washing facilities			
SECTION B: ICCM				
1	Total Number of sick Children 2 months – 5 years seen/attended to by the VHT			
2	Total Number of sick CHildren 2 months – 5 years with Diarrhoea			
3	Total Number of sick Children 2 months – 5 years with Malaria			
4	Total Number of sick Children 2 months – 5 years with fast breathing / Pneumonia			
5	Total Number of New Borns visited twice in the first week of life by the VHT			

SN	PARAMETER	MALE	FEMALE	TOTAL
6	Total Number of Children under 5 years with red MUAC			
7	Total Number of Children under 5 years referred to the Health Unit			
8	Total number of Villages with stock out of the first line anti Malarial			
9	Total Number of Villages with Stock out of Amoxycillin			
10	Total Number of Villages with stock out of ORS			

General Observations noted in the Village for example disease outbreaks

_____

_____

_____

_____

_____

_____

_____

A4. TABLE 15a: HEALTH UNIT QUARTERLY VHT/ICCM SUMMARY BY VHT

Name of Health Unit _____ Quarterly reporting period: _____ to _____(months)
Financial Year____ Page ___of pages _____

NAME OF REPORTING VILLAGE																HEALTH UNIT TOTAL	
SN	PARAMETER	M	F	M	F	M	F	M	F	M	F	M	F	M	F	MALE	FEMALE
SECTION A: VHT																	
1	Number of children under 5 years																
2	Number of children under 1 year																
3	Number of children under 1 yrs fully immunized																
4	Number of children under 5 yrs received vitamin A in last 6 months																
5	Number of children under five yrs dewormed in the last 6 months																
6	Number of children under 5 yrs who sleep under LLIN																
7	Number of children died >1yr but ≤5=yrs																
8	Number of children died 0-28 days																
9	Number of children died >28 days but ≤1yr																
10	Total number of pregnant women																
11	Number of deliveries at home																
12	Number of women who died within 6 weeks after delivery																
13	Number of pregnant mothers sleeping under LLIN																
14	Number of HIV positive followed by VHT																
15	Number of people using Family Planning services (information & methods)																
16	Number of adolescents (under 18yrs) who died due to pregnancy related causes																
17	Number of women who died during pregnancy																
18	Number of women who died while giving birth																
19	Number of HIV/AIDS patients on ART																
20	Number of TB patients on treatment																
21	Number of households with safe drinking water																
22	Number of households in village/cell with safe water source																
23	Number of households in village with clean/safe latrine																
24	Number of households with bathroom / bath shelter																

NAME OF REPORTING VILLAGE																HEALTH UNIT TOTAL	
SN	PARAMETER	M	F	M	F	M	F	M	F	M	F	M	F	M	F	MALE	FEMALE
25	Number of households with drying racks																
26	Number of households with rubbish pit																
27	Number of households with kitchen																
28	Number of households with hand washing facilities																
SECTION B: ICCM																	
1	Total Number of sick Children 2 months – 5 years seen/attended to by the VHT																
2	Total Number of sick CHildren 2 months – 5 years with Diarrhoea																
3	Total Number of sick Children 2 months – 5 years with Malaria																
4	Total Number of sick Children 2 months – 5 years with fast breathing / Pneumonia																
5	Total Number of New Borns visited twice in the first week of life by the VHT																
6	Total Number of Children under 5 years with red MUAC																
7	Total Number of Children under 5 years referred to the Health Unit																
8	Total number of Villages with stock out of the first line anti Malarial																
9	Total Number of Villages with Stock out of Amoxycillin																
10	Total Number of Villages with stock out of ORS																

A5. TABLE 15b: HEALTH UNIT QUARTERLY VHT/ICCM SUMMARY

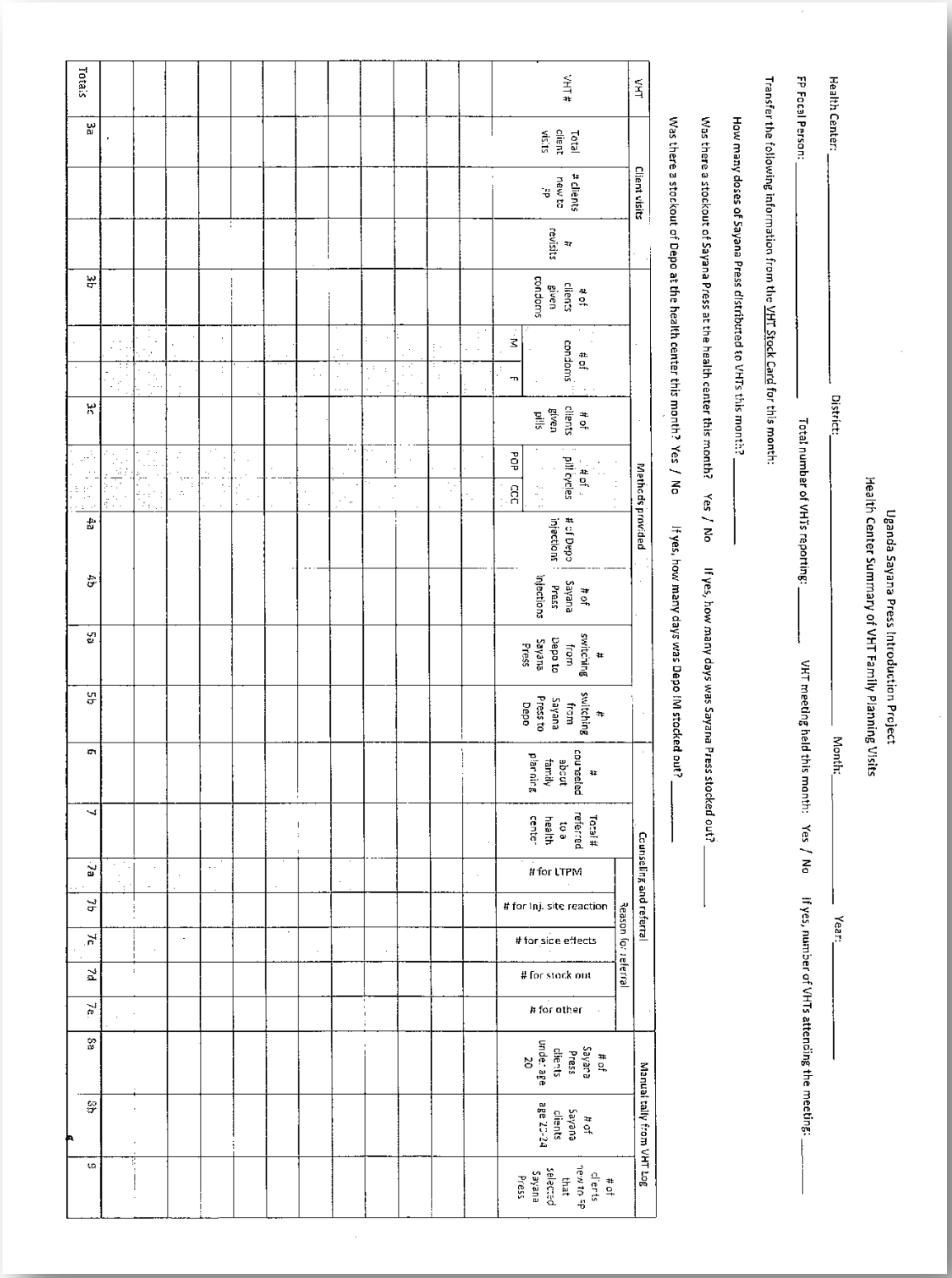
Name of Health Unit: _____Financial Year_____ Page _____of pages__

QUARTER		QUARTER 1 (Jul – Sept)		QUARTER 2 (Oct – Dec)		QUARTER 3 (Jan – Mar)		QUARTER 4 (Apr – Jun)		ANNUAL TOTAL	
SN	PARAMETER	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
SECTION A: VHT											
1	Number of children under 5 years										
2	Number of children under 1 year										
3	Number of children under 1 yrs fully immunized										
4	Number of children under 5 yrs received vitamin A in last 6 months										
5	Number of children under five yrs dewormed in the last 6 months										
6	Number of children under 5 yrs who sleep under LLIN										
7	Number of children died >1yr but ≤5=yrs										
8	Number of children died 0-28 days										
9	Number of children died >28 days but ≤1yr										
10	Total number of pregnant women										
11	Number of deliveries at home										
12	Number of women who died within 6 weeks after delivery										
13	Number of pregnant mothers sleeping under LLIN										
14	Number of HIV positive followed by VHT										
15	Number of people using Family Planning services (information & methods)										
16	Number of adolescents (under 18yrs) who died due										

QUARTER		QUARTER 1 (Jul – Sept)		QUARTER 2 (Oct – Dec)		QUARTER 3 (Jan – Mar)		QUARTER 4 (Apr – Jun)		ANNUAL TOTAL	
SN	**PARAMETER**	**MALE**	**FEMALE**	**MALE**	**FEMALE**	**MALE**	**FEMALE**	**MALE**	**FEMALE**	**MALE**	**FEMALE**
	to pregnancy related causes										
17	Number of women who died during pregnancy										
18	Number of women who died while giving birth										
19	Number of HIV/AIDS patients on ART										
20	Number of TB patients on treatment										
21	Number of households with safe drinking water										
22	Number of households in villages with safe water source										
23	Number of households in village with clean/safe latrine										
24	Number of households with bathroom / bath shelter										
25	Number of households with drying racks										
26	Number of households with rubbish pit										
27	Number of households with kitchen										
28	Number of households with hand washing facilities										
SECTION B: ICCM											
1	Total Number of sick Children 2 months – 5 years seen/attended to by the VHT										
2	Total Number of sick Children 2 months – 5 years with Diarrhea										
3	Total Number of sick										

QUARTER		QUARTER 1 (Jul – Sept)		QUARTER 2 (Oct – Dec)		QUARTER 3 (Jan – Mar)		QUARTER 4 (Apr – Jun)		ANNUAL TOTAL	
SN	**PARAMETER**	**MALE**	**FEMALE**	**MALE**	**FEMALE**	**MALE**	**FEMALE**	**MALE**	**FEMALE**	**MALE**	**FEMALE**
	Children 2 months – 5 years with Malaria										
4	Total Number of sick Children 2 months – 5 years with fast breathing / Pneumonia										
5	Total Number of New Borns visited twice in the first week of life by the VHT										
6	Total Number of Children under 5 years with red MUAC										
7	Total Number of Children under 5 years referred to the Health Unit										
8	Total number of Villages with stock out of the first line anti Malarial										
9	Total Number of Villages with Stock out of Amoxycillin										
10	Total Number of Villages with stock out of ORS										

B – SAYANA PRESS TOOLS
B1. Health Center Summary of VHT Family Planning Visits



Uganda Sayana Press Introduction Project
Health Center Summary of VHT Family Planning Visits

Health Center: _____ District: _____ Month: _____ Year: _____

FP Focal Person: _____ Total number of VHTs reporting: _____ VHT meeting held this month: Yes / No If yes, number of VHTs attending the meeting: _____

Transfer the following information from the VHT Stock Card for this month:

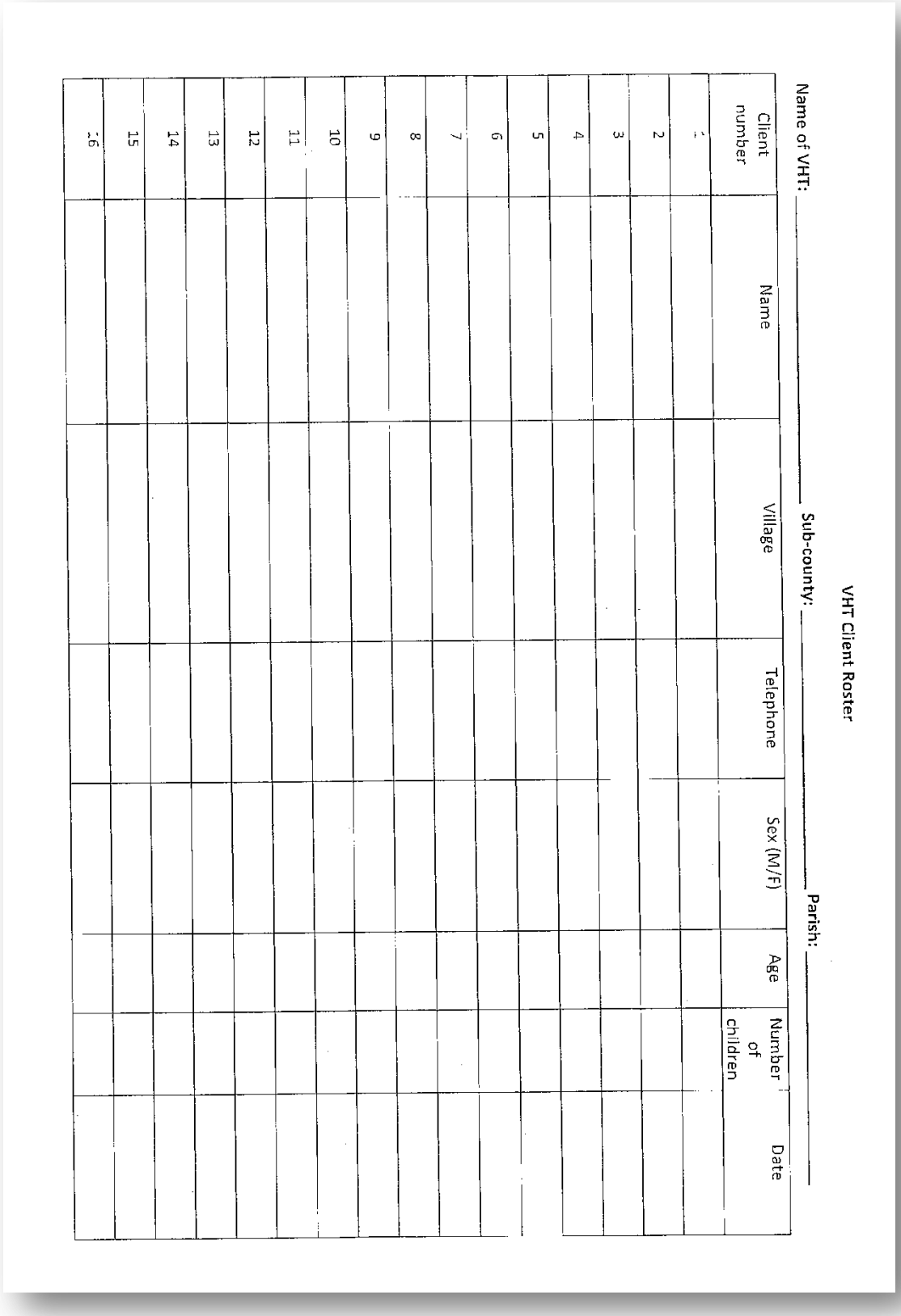
How many doses of Sayana Press distributed to VHTs this month?: _____

Was there a stockout of Sayana Press at the health center this month? Yes / No If yes, how many days was Sayana Press stocked out? _____

Was there a stockout of Depo at the health center this month? Yes / No If yes, how many days was Depo IM stocked out? _____

VHT	Client visits			Methods provided						Counseling and referral					Manual tally from VHT Log		
											Reason for referral						
VHT #	Total client visits	# clients new to FP	# revisits	# of clients given condoms	# of condoms		# of clients given pills	# of pill cycles		# of Depo injections	# of Sayana Press injections	# switching from Depo to Sayana Press	# switching from Sayana Press to Depo	# counseled about family planning	Total # referred to a health center	# for LTPM	# for Inj. site reaction	# for side effects	# for stock out	# for other	# of Sayana Press clients under age 20	# of Sayana clients age 20-24	# of clients new to FP that selected Sayana Press
					M	F		POP	CCC													
	3a		3b			3c				4a	4b	5a	5b	6	7	7a	7b	7c	7d	7e	8a	8b	9
Totals																							

B2. VHT Client Roster

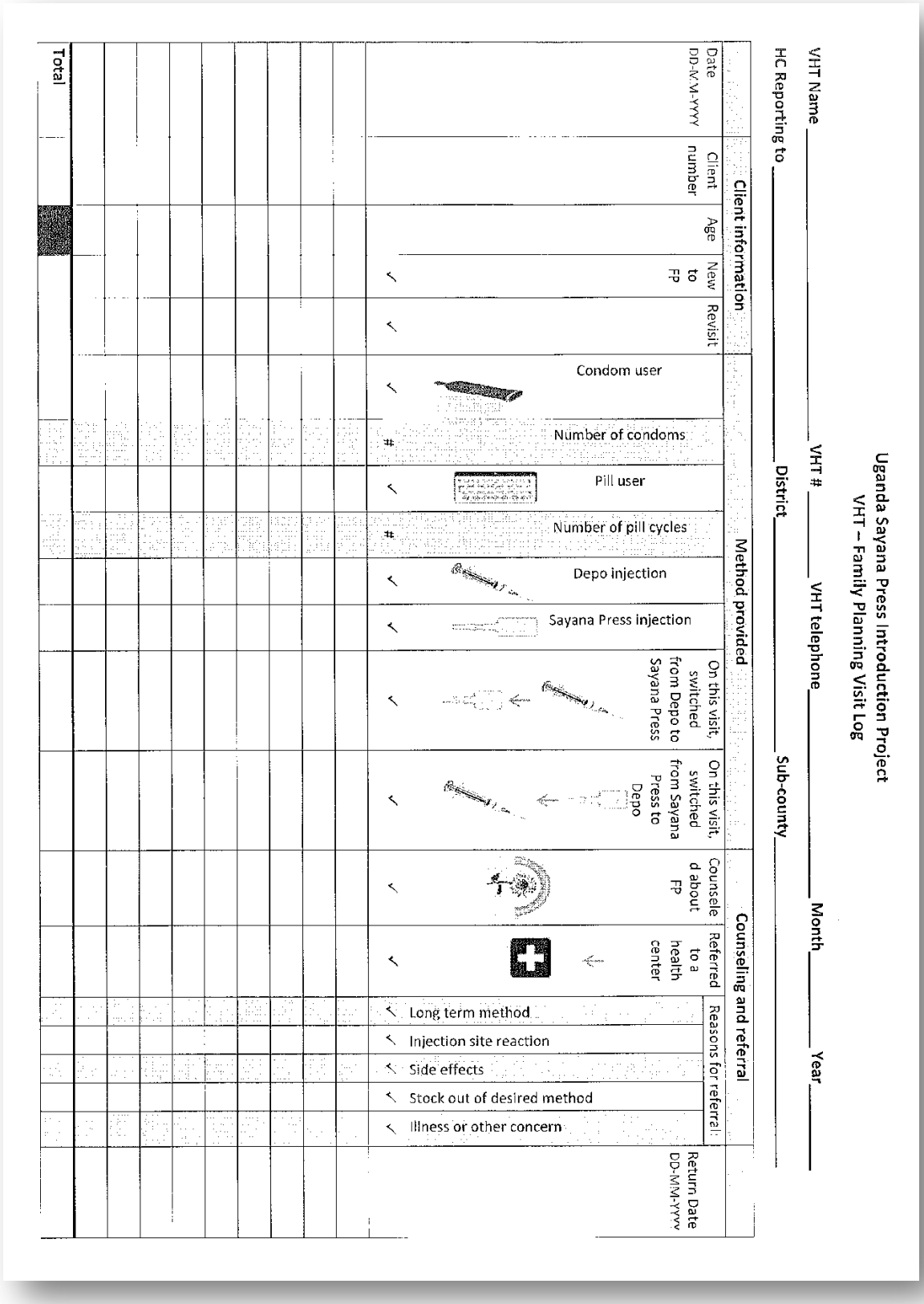


VHT Client Roster

Name of VHT: _____ Sub-county: _____ Parish: _____

Client number	Name	Village	Telephone	Sex (M/F)	Age	Number of children	Date
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

B3. VHT Family Planning Visits Log



Uganda Sayana Press Introduction Project
VHT – Family Planning Visit Log

VHT Name _____ VHT # _____ VHT telephone _____ Month _____ Year _____

HC Reporting to _____ District _____ Sub-county _____

Client information					Method provided						Counseling and referral						
Date DD-M-YYYY	Client number	Age	New to FP	Revisit	Condom user	Number of condoms	Pill user	Number of pill cycles	Depo injection	Sayana Press injection	On this visit, switched from Depo to Sayana Press	On this visit, switched from Sayana Press to Depo	Counseled about FP	Referred to a health center	Reasons for referral: Long term method	Injection site reaction	Side effects	Stock out of desired method	Illness or other concern	Return Date DD-MM-YYYY
			✓	✓	✓	#	✓	#	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Total																				

B4.Health Center VHT Stock Card (for stock distributed to VHTs)

Health Center VHT Stock Card (for stock distributed to VHTs)

District: _____ Sub-county: _____Health Center: _____

Name of person completing form: _____ Month _____ Year _____

			Family Planning Commodities				
Date Dispensed (DD-MM-YYYY)	Name of VHT	VHT #	Sayana Press (# doses)	Depo (# vials)	Condoms (# pieces)	Pills (# cycles)	VHT initials
Total methods dispensed to VHTs							
Method stock outs (X)							
Number of days method was stocked out (#)							

B5. Community Based Family Planning – VHT Daily Client Register

Community Based Family Planning Program - VHT Daily Client Register

Health Centre: _____ VHT Name: _____ VHT I.d Number: _____ VHT Telephone: _____ District: _____ Sub County: _____

Experienced any stockout this month (yes/No): _____ What methods had a stockout? (List) _____

Visit Date	Client Name	Client ID	Sex	Age	Village	Has the Client Used FP before		Counselled			Service/method dispensed today												New Client or returning to VHT	Returning Date	Comment
											Injectable		Condoms	Pills (Cycles)					Natural Methods		Referred				
			M / F			Yes/No If yes, name previous method	Is this your first visit between July 1st and 30th June	Yes individual	Yes Couple	No.	Depo - IM	Depo - sayana Press	(Pieces)	Lofemenoid	microgynon	Overette	Microlut	ECP	LAM	SDM/Moon beads	Yes/No	New/ Returning	Date	
Total																									