



# Rapid Assessment to Determine Current Stock Availability of Contraceptives in Sindh and Punjab, Pakistan

Final Report



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## **USAID | DELIVER PROJECT, Task Order 4**

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### **Abstract**

In December 2015 and January 2016, the Ministry of Health, with technical assistance from the USAID | DELIVER PROJECT, Task Order 4, assessed the performance of the logistics management and supply chain systems for selected family planning commodities. The survey assessed the availability of eight contraceptives at district stores and service delivery points, and assessed how the logistics systems managed these selected family planning commodities at public health institutions operated by three/four stakeholders that provide reproductive health services to married couple in Sindh and Punjab, Pakistan. This report presents the findings of the assessment, as well as recommendations to strengthen the logistics system.

Cover photo: Routine Inventory Management

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# Acronyms

APEX	APEX Consulting–Pakistan
BHU	basic health unit
eLMIS	contraceptive logistic management information system
CHW	Central Warehouse
COC	combined oral contraceptive
CPR	contraceptive prevalence rate
DOH	Department of Health
DPMA	depo-medroxy progesterone acetate (Depo-Provera)
DPWO	District Population Welfare Office
DQA	data quality assurance
EC	emergency contraceptive
EDO	Executive District Officer
FGD	focus group discussion
FHC	family health clinic
FP	family planning
FWA	family welfare assistant
FWC	Family Welfare Centre
FWW	family welfare worker
GOP	Government of Pakistan
IDI	in-depth interviews
IUD	intrauterine device
LC-LQAS	Large Country-Lot Quality Assurance Sampling
LHS	Lady Health Supervisor
LHV	lady health visitor
LHW	lady health worker
LHWP	Lady Health Worker Program
LIAT	Logistics Indicator Assessment Tool
LMIS	logistics management information system
MNCH	maternal, neonatal, and child health
MONHSRC	Ministry of National Health, Services, Regulations and Coordination
MOPW	Ministry of Population Welfare
MOS	months of stock
NGO	nongovernmental organization
ODK	Open Data Kit
PDHS	Pakistan Demographic and Health Survey
POP	progestin-only pill
PPHI	People’s Primary Healthcare Initiative
PRSP	Punjab Rural Support program
RHC	Rural Health Centre
PWD	Population Welfare Department
SDP	service delivery point
SOP	standard operating procedure
USAID	U.S. Agency for International Development



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This report was developed by Dr. Syed Zakir Hussain Shah, team lead and consultant for APEX. We owe special thanks to Dr. Muhammad Tariq, Country Director; Ariella Bock, M&E Technical Advisor; Dr. Khurram Shahzad Manager, Logistics and Capacity Building; Yahya Khan; and Dr. Sadaf Gull, M&E Consultant from the USAID | DELIVER PROJECT, for providing the necessary information and assistance for this assessment. We very much appreciate the cooperation extended by the provincial departments and district offices of Health, Population Welfare, LHW Program, and PPHI for this assessment. It will help to improve the contraceptive logistics management system and flow of contraceptives to districts and service delivery points.

Finally, we must acknowledge the respondents, who are the health providers at the facilities, for sharing their time and for providing vital information for this study. Through this work, we have documented the information that will expand the availability of family planning services, and that will definitely improve the quality of women's lives in Pakistan.



# Executive Summary

In Pakistan, a key goal of the USAID | MCH program, under its supply chain technical assistance efforts by Component 4 (Health Commodity and Public Health Supply Chains), was to improve contraceptive availability within the public sector's family planning (FP) service delivery system, also known as last mile delivery. Since August 2009, the USAID-funded USAID | DELIVER PROJECT (the project) has provided technical assistance to the Government of Pakistan (GOP) to strengthen the supply chain system, including the implementation of the contraceptive logistics management information system (cLMIS) that provided nationwide visibility to contraceptive supply chain at the central, provincial, and district levels and funding support for transporting commodities from the Central Warehouse (CHW) to all districts. In addition, to overcome the challenge of contraceptive security, from January 2010–November 2015, USAID supplied contraceptives worth U.S.\$96.3 million through the project, including: male condoms, combined oral contraceptives (COC)—Microgynon; progestin-only pills (POP); Microlut; depo-medroxy progesterone acetate (DPMA), commonly referred by the brand name Depo-Provera; and intrauterine devices (IUDs), specifically TCu 380A.

Despite the efficiency at the central level, as a result of the commodity and supply chain strengthening technical support from the project, ensuring continuous stock availability at the last mile delivery remains a challenge. This study assessed the stock levels of eight contraceptive commodities at district stores and service delivery points (SDPs) to determine the last mile contraceptive availability and to identify gaps within the supply and distribution system in these provinces. The study also assessed three/four stakeholders—Population Welfare Department (PWD), Department of Health (DOH), Lady Health Worker (LHW); Program and, in Sindh, the People's Primary Healthcare Initiative (PPHI), that, through their facilities, provide services to married couples of reproductive age. A secondary purpose was to validate the accuracy of the cLMIS data reported by the GOP. The eight contraceptives included COC, DMPA, emergency contraception (EC), IUDs, Implanon, Jadelle, male condoms, and POP.

For the study, the team used a mixed methodology of quantitative and qualitative methods of inquiry. The survey, a modified version of the Large Country-Lot Quality Assurance Sampling (LC-LQAS) design, selected SDPs and districts where the lot was defined as the stakeholder within each province, while supervision areas were defined as the district that acted as an administrative unit to store and distribute contraceptives. Between December 2015 and January 2016, the team visited a total of 1,991 facilities (71 stores and 1,920 SDPs) over seven weeks; 952 facilities within 10 Punjab districts (30 stores and 922 SDPs) and 1,039 within 11 Sindh districts (41 stores and 998 SDPs).<sup>1</sup> Additionally, they visited 1,122 LHWs (614 in Punjab and 508 in Sindh). Data were collected through observations, physical inventory counts, assessment of records, and interviews with relevant facility personnel on the day of visit, using an adapted version of the Logistics Indicator Assessment Tool (LIAT) that was programmed into Open Data Kit (ODK) software and installed on Android smart phones.

The qualitative component included 14 in-depth interviews (IDIs) with district store managers and seven focus group discussions (FGDs) at the SDP level to support and expand on the findings of the quantitative survey and to better understand stock management and the logistics

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<sup>1</sup> For purposes of this assessment Lady Health Supervisor stores were considered as the LHW Program SDPs

management information system (LMIS). Respondents of the IDIs and FGDs included staff working at the district stores, SDPs, and in the community, belonging to each stakeholder.

APEX Consulting Pakistan carried out the assessment.

## **Key Results for Both Provinces**

### **Training and Provision of Long-Term-Acting Methods**

More than 25 percent of the visited facilities reported trained providers of implants, although some discrepancy was noted between provinces (40 percent in Sindh and 11 percent in Punjab). Of the facilities where trained providers were available, slightly less than 75 percent offered the implant services (Punjab: 54 percent and Sindh: 74 percent). Three-quarters of the facilities also reported that a trained provider of IUDs was available (89 percent in Punjab and 62 percent in Sindh); of which, 95 percent of SDPs offered IUD services. When disaggregated by stakeholder, more PPHI SDPs (62 percent) reported providers trained on implants than DOH (21 percent) and PWD (15 percent). Conversely, more PWD SDPs (82 percent) and DOH (75 percent) with trained providers on IUD insertion than SDPs run by PPHI (56 percent). Approximately two-thirds of SDPs of all stakeholders offer implant services, while IUD services were almost universal and consistent. (The LHW Program was excluded from the analysis because they do not provide long-acting methods).

### **Stock Availability on Day of Visit**

Overall, more than 95 percent of all stores (n=71) managed male condoms; COCs, and DMPA. More than 67 percent of stores managed IUDs, while only one-third managed POP. EC was managed by slightly more than a quarter of the visited 71 stores. Only 14 percent of stores managed Jadelle, while none managed Implanon. (These results were expected because of the current operating procedures for implants—they are delivered directly to SDPs) Similarly, more than 90 percent of SPDs managed COC, DMPA, and male condoms; approximately 60 percent manage the IUDs. Thirty percent of SDPs managed POP, while 19 percent managed EC, 13 percent managed Jadelle, and 3 percent managed Implanon. Patterns of product management by stores and SDPs were fairly similar and consistent across both the provinces, with the exception of IUDs that were comparatively managed by the smaller percentage of SDPs in Sindh (63 percent) than in Punjab (94 percent). While slight variations were noted across the stakeholders that managed short-term contraceptives, IUDs were managed by only 60 percent of PPHI SDPs during the previous year.

The survey found some degree of variability in contraceptive availability in the facilities. Overall, male condoms and IUDs were the most widely available contraceptive methods—more than 90 percent of the stores and 85 percent of SDPs that manage these products had them in stock on the day of visit. Availability was somewhat lower for the other products. On the day of visit, 17 percent of the district stores who reported managing the product were stocked out of DMPA and 11 percent were stocked out of COC. Seven (29 percent) of the 24 district stores that reported managing the product were stocked out of POP, while 4 (21 percent) of the 19 were stocked out of EC, and two (20 percent) of the 10 stores that managed Jadelle were stocked out. When disaggregated by stakeholder, stockouts were higher at PPHI stores on the day of visit; two-thirds were stocked out of POP, while one-third were stocked out of DMPA and one-fifth of Jadelle. In comparison, while half of the DOH stores were stocked out of POP, their stores had no other substantial stockouts. More than 80 percent of PWD stores had all the managed products available. Stockouts of DMPA were found at 25 percent of LHW Program stores, while one-fifth of these stores were stocked out of COC and 16 percent stocked out of male condoms.

Stockouts for all products at SPDs were relatively low (at or below 15 percent) on the day of visit, with the exception of POP (19 percent). Stakeholders had some variation. With the exception of EC (43 percent), stockout rates of DOH-SPDs were below 10 percent for all products on the day of visit. Similarly, stockout rates for all PWD SPDs was less than 18 percent. However stockouts were frequently found at the LHW program SPDs; one-third were stocked out of male condoms and/or COC and more than one-fifth were stocked out of DMPA. Stockout rates at LHW-SPDs were higher than stores, indicating possible issues related to distribution from the LHW store to the facility.

## **Stock Availability in Previous Months**

Based on available records, stockouts in the previous months were much more frequent at stores compared to SPDs.<sup>2</sup> Stockout rates for stores varied between 13 to 44 percent (in the case of Jadelle), while stockout rates for SPDs ranged from 7 to 23 percent. LHW and PWD district stores were more likely to have experienced a stockout of a product compared to the DOH and PPHI. Thirty-nine percent of LHW program stores were stocked out of COC and DMPA and 23 percent of male condoms at least once in the previous six months; whereas, PWD district stores stockout rates were IUDs (29 percent), DMPA (24 percent), and COC (22 percent) during past six months. All DOH district store, half of the PPHI, and one-third of the PWD stores had stockouts of POP in the previous six months. During the last six months, EC was out of stock at 44 percent of PWD stores, which is the only program to manage them. PPHI and LHW Program SPDs had more stockouts of various products than DOH- and PWD-operated facility. With the exception of EC, 25 percent of PWD SPDs that had a stockout in the previous three months, stockouts rates for all other products and stakeholders were below 18 percent. Stockout rates of DMPA (18 percent), male condoms (15 percent), and COC (12 percent) were found at PPHI SPDs during the previous three months; but, male condoms (17 percent), DMPA (14 percent) and COC (10 percent) during the previous three months were found at the LHW Program SPDs. Based on the records reviewed, stores and SPDs averaged slightly more than one stockouts of each contraceptive product during the previous three–six months. The average duration of the stockouts, however, was more than two months at district stores and more than one month at SPDs for all common short-term contraceptives.

## **Current Stock Levels**

Overall, with the exception of IUDs, the majority of district stores maintained stock below their appropriate level. Additionally, nearly 20–25 percent of district stores had more than six months of stock on hand, indicating the need to reassess requisition and distribution practices. Compared to stores, approximately one-third of SPDs were maintaining appropriate stock levels. The percentage of SPDs with less than the appropriate level of stock was approximately one-fifth across all products. However, more than 40 percent of all SPDs were overstocked for various products. These results (overstock at the SPD), combined with understocked results at the district stores, indicate a potential underlying issue that district stores are pushing stock down to the lower level. During the IDIs, participants shared that when new stock arrives at district stores, they send more contraceptives to the SPD stores than what was requested. This practice could have contributed to the understock at district stores and overstock at SPDs.

Overall, roughly three or more months of stocks (MOS) were available at district stores and SPDs for all products. Exceptions included the LHW Program stores for COC and male condoms (which had just over two months of stocks) and PWD stores for COC, DMPA, and

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<sup>2</sup> A six-month review period was used for the district-level records to capture two delivery cycles and, therefore, be able to better assess the duration of stockouts. A three-month review period was used at the SPD level because reporting and delivery occur on a monthly basis.

male condoms (which had slightly more than two months). At DOH and PPHI district stores, MOS for all product were appropriate or over the recommended level of three months; the exception was IUDs at PPHI stores that had just below three MOS of IUDs available at PPHI stores. Of the SDPs with available stock, across stakeholders, all contraceptive products had significant overstocking (more than four months).

## **Recordingkeeping Practices**

According to the current standard operating procedures (SOPs), SDPs are expected to maintain some form of both stock cards, as well as a stock ledger for each product. More than 90 percent of respondents at SDPs, as across both provinces, reported using the stock cards/bin cards/inventory control cards for stockkeeping. Approximately 40 percent of respondents—Punjab: 45 percent, Sindh: 33 percent—also mentioned using stock ledger/stock register for this purpose. During the FGDs, SDP respondents claimed to have no serious issue related to stock recording, although many reported that they did not receive any specific training. Similarly, during IDIs district levels respondents also reported a general lack of training, including additional responsibilities to stock management and stockkeeping at the stores, which can be challenging.

When data collectors reviewed facility records; stockkeeping records were found in more than 95 percent of stores and more than 90 percent of SDPs for all contraceptive products managed; the exception was PPHI stores, where only two-thirds had records for POPs. Of the facilities with available stock records, more than 80 percent had been updated in the previous 30 days. However, when disaggregated by stakeholders, 50 percent of the DOH stores did not have updated records for POP; but, approximately one-third of LHWs stores did not have updated stock records for any of the product they manage (i.e., COC, DMPA and male condoms). By comparison, more than 80 percent of SDPs by all stakeholders, with the exception of PPHI, had updated stock records for all products. When assessed for accuracy (less than a +/- 10 percent discrepancy between physical inventory and stock register balance), the majority of SDPs (more than 80 percent) and stores (more than 70 percent) had accurate stock records. When disaggregated by stakeholder, more than 80 percent of PWD and LHW Program stores and SDPs had accurate stock records for COC, male condoms, DMPA, and IUDs. Similarly, more than 70 percent of DOH stores and more than 80 percent of DOH SDPs had accurate stock register balances. However, only 57 percent of the PPHI stores had accurate stock register balance for condoms, DMPA, and IUDs.

During the FGDs, LHWs and their supervisor reflected that they were engaged in a variety of other activities, including polio immunization. Moreover, most of the time, they remain in the field/community because they are the community workers. Therefore, they find it challenging to keep their stock records updated. During the IDIs, a number of storekeepers in both Sindh and Punjab, reported have other duties or a different job description altogether, with storekeeping as an *add on* activity

## **Use and Reporting to cLMIS**

The survey also looked at various aspects of the LMIS, such as reporting to the cLMIS, accuracy of LMIS forms, and ordering (requisition). Just over 50 percent of the visited stores reported having appointed LMIS operators that maintain the cLMIS. Some differences exist between the two provinces; in Punjab fewer than half (43 percent) were appointed, compared with two-thirds of stores in Sindh. One hundred percent of stores in Punjab, and 93 percent of stores in Sindh where LMIS operators were appointed, reported that they received training. When disaggregated by stakeholder, approximately half of the PPHI, LHW Program, and DOH stores; and two-thirds of the PWD stores had an appointed cLMIS operator. All the DOH stores, and PWD

where LMIS operators were appointed, reported that they were trained in LMIS. An overwhelming 90 percent of LHW Program and 80 percent of PPHI stores had the same report. When combined, however, only 40 percent of PPHI and 45 percent of LHW Program district stores had an appointed and trained LMIS operator.

District managers reported a high use of CLR-6/cLMIS forms for reporting to higher levels by district stores in both provinces. Almost all SDPs reported using monthly contraceptive report and requisition form for reporting to the district level, which includes a column for the next month's requirements

As with stock registry, accuracy was determined by comparing stock balance on the CLR-6 or monthly contraceptive report with the closing balance of each contraceptive on the stockcards on or around the date (+/- 3 days) listed on the LMIS for COC, DMPA and male condoms. Based on available data, approximately 65 percent of all stores and 80 percent SDPs had accurate LMIS reports for COC, DMPA, and male condoms. Provinces and products had some variations; accuracy rates were lower in Punjab and for male condoms. Accuracy of the LMIS reports was found at higher percentages in the DOH and PPHI stores compared to the PWD and LHW Program stores. By comparison, over 80 percent of the SDPs managed by PWD, LHW Program), and DOH had accurate LMIS reports for the three products; PPHI SDPs accurate LMIS reports rates were lower (COC–72 percent, DMPA–68 percent, and male condoms–69 percent.)

Overall, more than 80 percent of stores were using web based cLMIS forms to requisition FP products, while slightly less than 75 percent of the stores reported SDP consolidated data in the cLMIS forms. There was little variation between provinces, although only 50 percent of PPHI stores used the web-based form and 40 percent reported SDP consolidated data. Most (85 percent) district managers reported that the stores placed orders once a quarter, with little variation between the two provinces. When timing of orders was verified through records, a slightly different situation was observed. Overall, more than half the district stores (55 percent) placed their order to CHW during the quarter (0–90 days). However, 31 percent sent an order between three–six months (91–180 days) and another 14 percent placed the order after more than six months (>180 days) gap. A larger percentage of stores in Sindh (69 percent) placed orders within one quarter compared to Punjab (36 percent); this indicates that Sindh had better time compliance by stores placing contraceptive orders to CWH compared to stores in Punjab.

## **Transportation of Contraceptives and Order Lag time**

Transportation of FP products from district stores to the SDPs was determined to be a main area of concern during both the quantitative and qualitative components. Fifty-eight percent of the SDPs reported they self-pick contraceptive products from the district office, while 42 percent reported that products were delivered to the SDPs. Around 80 percent of SDPs in Punjab were self-picking the products, while approximately 40 percent of the SDPs in Sindh reporting doing so; however, this is probably due to PPHI, which only operates in Sindh. There was some variation across stakeholders; most of the SDPs operated by LHW, PWD, and DOH—69, 77, and 50 percent respectively—self-picked the contraceptive products from the district, while only 12 percent of the PPHI SDPs did so. During the FGDs, many participants, especially LHS and PWD, and DOH managed SDP service providers, identified lack of transportation for delivering products as a major issue; using public transport, and paying their own expenses, they picked up the products. The main problems identified were unavailability or shortage of transport vehicles and fuel for vehicles from the district level, making the delivery sporadic. Another issue highlighted in Punjab was that the stock for the various departments (PWD, DOH and LHW Program), were delivered to SDPs in the same truck, and products are often mixed during delivery.

Despite these issues with transportation, around three-quarters of the SDPs in both provinces reported that it took less than two weeks to receive the products after they placed an order. Sixteen percent of SDPs reported that it took between two weeks and one month, while 5 percent of the SDPs were unsure. It is interesting to note that despite the significant differences in self-picking between provinces, the lag time was similar.

## Key Results for Sindh

A majority of district stores and SDPs reported managing COC, male condoms, DMPA, and IUDs. Almost all stores, and around 90 percent SDPs, were managing COC, male condoms, and DMPA. More than 90 percent of the stores, and 62 percent of the SDPs, were managing IUDs. Comparatively fewer stores and SDPs were managing the remaining four products—POP (stores: 42 percent, SDPs 34 percent), EC (stores: 29 percent, SDPs: 16 percent), and Jadelle (stores: 32 percent, SDP: 29 percent). None of the stores managed Implanon and only 4 percent of the SDPs managed them. Only PWD managed EC, while only PPHI managed Jadelle.

At the district stores, 12 percent were stocked out of COC on day of visit and 5 percent were stocked out of male condoms (including 20 percent of LHW Program stores). No stockout was found at any DOH operated district store. LHW Program SDPs had the highest stockout rates—42 percent for COC, 47 percent for male condoms, and 51 percent for DMPA. Implanon was stocked out at 75 percent of PWD SDPs, while 36 percent were stocked out of POP; 31 percent were stocked out of IUDs. PPHI SPDs were stocked out of EC (29 percent), DMPA (23 percent), and POP (21 percent). Half of the EC stockouts were found at DOH SDPs, followed by Implanon (14 percent).

In the previous six months, 25 percent of the district stores had a stockout of DMPA, while 18 percent had a stockout of COC, 19 percent for IUDs, and 12 percent for condoms. No stockouts were found at DOH stores and only 25 percent of PPHI stores had a stockout of IUDs, and 13 percent of DMPA and male condoms. More stockouts were found at LHW Program and PWD stores. LHW Program stores stocked out of DMPA (57 percent), COC (43 percent), and male condoms (29 percent); PWD stores have had stockouts for IUD (50 percent), DMPA (43 percent), and COC (38 percent). Except for EC (27 percent), stockouts at SDPs were below 15 percent for all other products in the previous three months. The DOH did not report any stockouts for POP, EC, or Implanon. In the months leading up to the survey, instances of stockouts was relatively low, but the average duration was long for all contraceptive methods. On average, the stores and SDPs had slightly more than one stockout of each contraceptive product in the previous three–six months. For short-term contraceptives, the average duration of stockouts was between two to three months at district stores and over one month at SDPs.

More than half of the district stores had stock levels below the appropriate level, while almost 25 percent of the stores had overstocked various contraceptive products. Compared to stores, approximate 33 percent of SDPs were maintaining appropriate stock levels for COC, condoms, and DMPA. However, more than 33 percent of the all SDPs were overstocked for various products.

With the exception of POP at PPHI district stores, stock records were available for all contraceptive methods at the district stores. Availability of records was slightly lower at SDPs, where it ranged from 85 percent to 95 percent, depending on the method and stakeholder. Stock records for COCs, male condoms, and DMPA were available at only two-thirds of the LHW Program SDPs. Of the facilities with available stock records, more than 60 percent of district stores and SDPs had been updated in the previous 30 days. Levels varied by product. The majority of SDPs (over 70 percent) and stores (over 70 percent) had accurate stock records (within a +/- 10 percent discrepancy) when the closing balance of each contraceptive on the

updated stockcards was compared to the physical count of each contraceptive on the day of the visit.

## Key Results for Punjab

Most of the district stores and SDPs managed four of the eight products—COCs, male condoms, DMPA, and IUDs—with little variation by partner. Only 20 percent of DOH stores and 11.7 percent of DOH SDPs managed POP. Only 1 percent of DOH SDPs and 81 percent of PWD SPDs managed EC. Very few stores and SDPs managed implants.

At district stores, stockouts were found for COC (10 percent), male condoms, and DMPA (7 percent), POP (18 percent), and EC (20 percent) on the day of the visit. At SDPs, stockouts were found at 9 percent of facilities for EC and male condoms. Jadelle was available at all the SDPs in Punjab.

Based on a record review, stockouts in the previous months were more prevalent at district stores than at the SDPs. During the last six months, stockouts of POP and EC were found at 30 percent of stores. Stockouts of COC (18 percent), male condoms and IUDs (13 percent), and DMPA (9 percent) were also found. On the other hand, except for EC (19 percent), stockout rates for any product during last three months were less than 10 percent at SPDs. Across stakeholders, DOH stores had stockouts of condoms (33 percent) and COC (17 percent); LHW Program stores of COC (33 percent), male condoms and DMPA (17 percent); and PWD stores of IUDs (20 percent), and COC and DMPA (10 percent). Except for the LHW Program—SDPs with stockouts of condoms (14 percent) and DMPA (10 percent) and DOH SDPs with condoms (7 percent)—no stakeholder's SDP reported stockouts of any of the short-term products or IUDs above 5 percent. Although the average number of stockouts was low, both stores and SDPs reported longer (one to two months) average duration for which they remained stocked out. Stores reported longer durations of stockouts compared to SDPs. The average duration of stockouts at stores was the longest for DMPA (82 days), followed by COC (two months), POP (51 days), EC (one and one-half months), IUDs (one month) and male condoms (23 days). At the SDPs, the average duration of stockouts was longest for Implanon and Jadelle (three months), compared to POP and EC (one and one-half months), and DMPA, IUD, COC, and male condoms (slightly more than a month).

Almost half the district stores had the stock quantities below the appropriate levels while more than 20 percent were overstocked. High rates of overstocking were found at SDPs, ranging from 41 percent (male condoms) to Implanon (85 percent). With the exception of Implanon and Jadelle, only 30 percent of SPDs had appropriate levels of stocks available. When disaggregated by stakeholder, there is a significant variation. The LHW Program stores had slightly more than one MOS available for COC and a little more than two MOS for male condoms. Similarly, the PWD stores have more than two MOS for COC, male condoms, and DMPA. Stocks of all managed products at DOH district stores were more than the recommended level of six months. With the exception of EC, DOH SDPs also had significant overstocking. Conversely, PWD stores were understocked for most products, while SPDs had appropriate levels or were overstocked.

Availability of stock records in district stores for all contraceptives was high, ranging between 90–100 percent. Availability at the SDPs was also high, ranging 94 percent–100 percent. At the DOH stores, the availability for COC, DMPA, and IUDs was 80 percent. At SDPs, with the exception of availability of stock records for Jadelle at 50 percent at DOH SDPs, all other stakeholders' SDPs reported almost a universal availability of stock records for all products. Of the facilities with available stock records, more than 70 percent of district stores and 89 percent SDPs had been updated in the previous 30 days. Levels varied by product; COC and DMPA were less than 70 percent at the stores. The majority of SDPs (over 80 percent) and stores (over

90 percent) had accurate stock records (within a +/- 10 percent discrepancy) when the closing balance of each contraceptive on the updated stockcards was compared to the physical count of each contraceptive on the day of the visit by data collectors.

## Data Quality in cLMIS

Overall, quality of the data, in terms of validity, declines further down the supply chain as the cLMIS shifts from electronic to paper. There was an exact match of 85 percent of the stock records at visited stores for COC, male condoms, and DMPA that were received by district stores from the CWH, and compared with the stock register and cLMIS (i.e., CLR-7) report for three products. There was very little provincial variation. An exact match of records for the three products was most common in the PWD stores (95–100 percent) compared to DOH (71–86 percent), LHW (84–89 percent); and was seen least at PPHI stores (60–80 percent). Eighty percent of hard copies and soft records matched for the three products when the stock register and corresponding soft copy (cLMIS form) at stores for the stock dispatched to the SDPs were compared across stakeholders, a complete match of records was more prevalent for PWDs (more than 80 percent for the three products), compared to the LHW Program (COC and condoms: 78 percent; DMPA: 80 percent), and least for DOH (COC and condoms: 61 percent; DMPA: 65 percent).

Overall, less than 60 percent of the records (COC and DMPA: 48 percent; condoms: 59 percent) were completely matched when records for stock of the three products dispatched by district stores, based on the CLR-7 were compared with the stock received by the SDPs, based on the CLR-7 and stock register. Greater percentages of records were matched exactly in Punjab (COC: 49 percent, condom: 65 percent, DMPA: 53 percent) compared to Sindh (COC: 47 percent, condom: 49 percent, DMPA: 38 percent).

More accurate records were found for PWD (COC: 60 percent, condom: 73 percent, DMPA: 59 percent) and least for the PPHI (COC: 39 percent, condom: 31 percent, DMPA: 38 percent). Exact matching of records varied for the DOH (COC: 52 percent; condom: 66 percent; DMPA: 53 percent) and the LHW Program (COC: 36 percent, condom: 53 percent, DMPA: 35 percent).

## Summary and Recommendations

Based on the above findings, the following are recommended.

- 1. Strengthen inventory management system:** More than 20 percent of district stores and 40 percent of SPDs maintained stock levels for products well above the current standard inventory guidelines. Conversely, a significant percentage of facilities (over 50 percent for district stores and over 20 percent of SDPs) maintained stock levels below the appropriate levels. Standard inventory management guidelines must be followed at all levels. To avoid stockouts, a buffer stock of at least three months must be maintained at the district store level and one month's stock at the SDP level. In compliance with the logistics manual, at the SDP level, a pull system based on consumption data should be used, instead of a push system. District stores should follow the demand made by SDPs, and not issue commodities without considering the actual demand—which contributes to the overstocking of many products. The logistics manual (SOPs) should be implemented at sub-district level to improve supply chain efficiency. Additionally, LHWs should be issued according to demand and they should maintain a minimum and maximum level just like the other SDPs.

Additionally, slightly less than half of all the visited LHWs had a stockout of at least one of the three products; i.e., COC, DMPA, or male condoms on the day of visit. LHWs are currently issued contraceptives on a fixed quota basis. Stockouts are likely as demand varies due to variation in the number of clients. **It is recommended that LHWs be issued**

according to demand and should maintain a minimum and maximum level like the other SDPs.

2. **Timely requisition and distribution of contraceptives:** Currently, facilities are requesting contraceptive products far outside the timeframe designated by their SOPs. The late requisitions are contributing to the long duration of stockouts that facilities are currently experiencing, and they are impeding last mile delivery. FDGs and IDIs provided anecdotal evidence that this is likely because of the failure to deliver product due to non-availability, lack of a storekeeper, and high workload for the LHS and LHWs.

More than 40 percent of district stores were found to have more than a three-month gap between orders to the CWH. Similarly, more than 20 percent of SDPs reported submitting requests to the district store more than one month apart. **To avoid stockouts, stakeholders in both provinces need to ensure all the facilities make timely requisitions for contraceptive products. A greater focus should be placed on ensuring compliance with requisition deadlines at the facility level, beginning with improved management practices to handle workload and staff turnover.**

3. **Training of store managers:** Results indicate significant gaps in recordkeeping and reporting practices, both in actually maintaining accurate stock cards/stock registries and submitting accurate reports to higher levels. Additionally, one-third of LHW stores were not updating stock records for any of the products they managed. During the qualitative components of the assessment, it was found that a large number of the participants who work as storekeepers, in both Sindh and Punjab, have other duties or a different portfolio altogether with storekeeping as an *add on* activity, which affected their focus on supply chain work. **Appointment and training of storekeeping staff on best practices of stock management and basic logistics and supply chain concepts is highly recommended at both the SDP- and district store-level. Training of LHS/LHWs on stockkeeping and demand generation needs special attention. In the future, PSM can organize these trainings, in collaboration with the government.**
4. **Reinforce PPHI stock management:** PPHI operated district stores and SDPs had consistently lower levels of available, updated, and accurate stockkeeping records and LMIS reports compared with other stakeholders. Stockouts were higher at PPHI stores on the day of visit, with two-thirds of facilities stocked out of POP, one-third for DMPA, and one-fifth for Jadelle. However, the duration of stockouts was also long for PPHI stores, with the average stockout lasting more than 90 days. Stockkeeping records were found in more than 95 percent of stores for all contraceptive products managed; one exception was in the PPHI stores, where only two-thirds had records for POPs.

**Given that this stakeholder operates as a private-public partnership, special consideration is needed. A detailed debriefing meeting should be conducted with the management sharing the findings of the study to highlight the issues and help them develop a plan to avoid problems like these in the future.**

5. **Availability of trained LMIS operator:** A trained LMIS operator plays a pivotal role on data reporting and data quality. Just over 50 percent of district stores actually had appointed and trained LMIS operators. Additionally, more than 30 percent of facilities were found to have inaccurate stock records; the LMIS with the LHW Program store had the lowest percentage of accurate LMIS reports. The possible reasons mentioned during the qualitative research include the lack of and quality of training on the LMIS, financial resources, and power supply. Trained LMIS operators must be available at all the district stores to avoid discrepancies in future reporting. **Appointment and training should be scaled up across all stakeholders, particularly in Punjab.**

6. **Ensure availability of complete range of contraceptives:** Only 50 percent of facilities had a trained provider and offered IUD insertions, while fewer than 20 percent of facilities had a trained provider and actually offered implant insertions. While respondents during the FGDs reported motivating clients to use an alternative (available) method during a stockout, all the methods (including long term) should be available at the facilities to enable clients to select their choice. **In addition to strengthening stockkeeping practices to avoid stockouts , training and provision of implants and IUDs should be expanded to all appropriate levels.** Additionally, efforts should be made to ensure the POP and EC are available at all levels.

7. **Improve storage conditions, particularly for LHW Program:**

Many SDP respondents reported inadequate room for storing products; which, in part, could be due to the significant overstocking of products. In addition, the LHW Program often lacked a separate storeroom at the SDPs for storing commodities. This leads to mixing and potential loss of commodities for the program. With strengthening inventory management practices and ensuring that facilities maintain proper stock level, storage conditions and space should be assessed. **Additionally, all facilities must ensure that specifically allocated space is available to appropriately store the LHW Program’s contraceptive commodities.**

8. **Data quality enhancement**

Data quality was validated for both the stocks issued and received, comparing the cLMIS and stock records. Discrepancies were noted at all the levels, starting from issuance by the CWH down to the SDP level. Discrepancies varied for different stakeholders and at different levels. Although data for the stock received at the district store from CWH and data for the stock dispatched by the district store to the SDP matched between 80–85 percent, less than 50 percent of the data for the stock received by the SDP from the district store matched completely.

**To ensure data quality (i.e., completeness, timeliness, accuracy and integrity), data must be validated before reporting into cLMIS to avoid these discrepancies. A comprehensive system with trained LMIS operators and regular monitoring mechanism should be operational at all the levels.**

9. **Budget allocation for transportation**

Currently, little budget and few vehicles are available for transporting commodities to SDPs. Nearly 60 percent of SDPs reported having to self-pick contraceptive products from district offices. Often, the transportation costs, as reported in the IDIs and FGDs, come directly out of the pocket of the service provider and they are rarely reimbursed. **To ensure a regular supply to the SDPs, the government should allocate a separate budget, in partnership with different donors, for transporting commodities.**

10. **Routine Monitoring and Evaluation/Follow-up Visits**

The assessment identified a number of gaps and challenges with practices that affect the supply chain and lead to stockouts. The lack of updated stock cards and stock records impacts the quality of data shared with the higher levels; which, in turn, affects the quantity of stocks distributed to the lower levels. **To ensure proper reporting, the district management should conduct a periodic review of cLMIS data and inventory documents. Additionally, scheduled monitoring and supervision by district management team is required at the district store and SDP level to streamline the supply chain mechanism.** The engagement of staff by the provincial and district

governments for regular monitoring, budget specifications, and use of appropriate monitoring tools are essential components to regularly carry out this activity in an organized way.

## **11. Improvements to the cLMIS**

The data validation of the cLMIS in this study was limited because of the non-availability of inventory data at the district level and the disaggregated data of SDPs for DOH/LHW Sindh. The availability of transactional data at districts greatly enhances the availability of managers to accurately track and trace the shipments and to easily identify the errors. Similarly, disaggregated SDP data is also critical to identify SDP stock sufficiency. **It is recommended that these two functionalities be included in the cLMIS.**



# I. Introduction

## I.1. Background on Pakistan

Pakistan ranks sixth among the significantly populous countries in the world; it has an annual growth rate of 2.1 percent. After independence in 1947, the population grew steadily—from 33 million to the current estimated population of 184.5 million (Sathar et. al 2013). However, the total fertility rate declined from 5.4 in 1990–1991 to 4.1 in 2006–2007 and to 3.8 in 2012–2013 (NIPS Pakistan 2008 and 2013). Fertility decline has been slow in Pakistan, compared to the regional countries. Current contraceptive prevalence rate (CPR) for modern methods is 27 percent (overall 35 percent) and unmet need is 20 percent. The stagnant CPR rate and high levels of unmet need for family planning (FP) lead to high levels of unwanted and unintended pregnancies, which contribute to adverse health consequences: maternal mortalities and morbidities (Arif and Kamran 2007; Gazdar, Khan, and Qureshi 2010). Pakistan is one of the world's largest youth bulge countries; almost two-thirds of its population is below the age of 30. The high fertility rate, in addition to a large percentage of the population who are in or about to enter their reproductive years, underlines the need for effective population management.

In 1999, responding to these challenges, the joint efforts of the federal ministries of Health and Population Welfare developed the Reproductive Health Service Package. It included comprehensive family planning along with other components. The government approved the Pakistan Population Policy in July 2002 to address population issues in a holistic manner, with a vision of achieving population stabilization (replacement level) by 2020. The prime objective of the population policy was to ensure universal access to safe FP methods. The October 2009 Karachi Declaration on Scaling up Maternal, Neonatal, and Child Health–Family Planning (MNCH–FP) Best Practices in Pakistan clearly pledges the provision of family planning services at the national level. After 18th Amendment in the constitution of Pakistan, the federal ministries of health and population were abolished; their functions were devolved to the provinces. The provincial governments face varied challenges of developing policies to sustain and promote family planning programs through the Department of Health (DOH) and Population Welfare Department (PWD).

### I.1.1. Overview of guidelines, protocols, and laws for providing contraceptives by partner

The Ministry of Population Welfare (MOPW) in 1995 developed the National Standards for Family Planning Services. These standards have been revised periodically and the latest edition was developed in 2009 with support from the U.S. Agency for International Development (USAID). The MOPW, through the Federal Technical Committee, developed checklists for quality of care and standardization of FP services. These checklists ensure client-oriented services, feedback, ongoing training, and maintenance of housekeeping and minimum stock levels based on the standards.

### I.1.2. Overview of FP services

Public sector is the major provider of family planning services in Pakistan where three main stakeholders provide services to married couples of reproductive age through their facilities: the PWD, DOH, and Lady Health Worker (LHW) Program.

Different stakeholder manage service delivery networks, provide contraceptives to static health facilities: the DOH, headed by the Executive District Officer (EDO); and PWD headed by the District Population Welfare Officer (DPWO). In some districts, basic health units (BHUs) are

contracted to People's Primary Healthcare Initiative (PPHI) in Sindh, and the Punjab Rural Support program (PRSP) in Punjab. The LHW Program's district coordinator manages the Health Houses of the National Program for Family Planning and Primary Health Care, who report to the EDO.

Providing family planning service is mandatory for all health facilities and LHWs; they are required to provide advice/counseling, pills, male condoms, and injectables to women of reproductive age in their respective communities. Family planning is a primary mandate for Family Welfare Centres (FWC) and family health clinics (FHC), which the PWD manages.

Five types of service delivery points (SDPs) for the four respective stakeholders—DOH, PPHI, PWD, and LHW Program—provide family planning services at the public sector, each with their own district store:

1. BHU, Rural Health Centre (RHC), tehsil and district headquarter hospitals, operated by the DOH
2. BHUs, operated by PPHI (in Sindh only)
3. FWCs and FHC, operated by PWD
4. LHW stores (The LHW Programs, operationally works under the DOH. However, they are considered separate stakeholder because they maintain a separate stock and reporting mechanisms than the other DOH facilities. LHW stores are maintained by a Lady Health Supervisor (LHS).

### **1.1.3. Overview of contraceptive supply chain in Pakistan by stakeholder**

At national level, contraceptives are stored at the Central Warehouse (CWH) in Karachi, which is currently headed by the federal government's Planning and Development Division. The CWH distributes contraceptives once a quarter directly to the PWD DPWOs, PPHI and EDOs of DOH. LHW Program receives contraceptives through the EDO at their district store. The DOH, PPHI, PWD and LHW Programs each have their own district warehouses and stores. The DOH and PPHI issue contraceptives to their respective facilities monthly, while the LHW Program supplies to the LHSs at health facilities administered either by EDO Health or PPHI quarterly. The LHWs are supplied contraceptive products monthly from health facilities through LHSs. PWD has a separate district warehouse/store that supplies the FWCs and FHCs monthly. DPWOs also deliver contraceptives to the nongovernmental organizations (NGOs).

The flow of commodities from central to facility level is dependent upon proper and timely requisitioning from districts as well as timely responsiveness and transportation from the central or provincial warehouses to the districts. CWH provides contraceptives based on a pull system to all districts of Pakistan. Using the logistics management information system (LMIS) reported consumption and/or manual reports received from SDPs, EDOs estimate the quantities needed for all its various service delivery points, including LHW stores, Maternal Neonatal and Child Health Services, and BHUs, and sends it to the DPWO on a quarterly basis. The DPWO compiles these requests, along with the stock requirements for the PWD and any NGO within the district into a single requisition form known as the Contraceptive Logistics Report 6 (CLR-6) that is submitted to the CWH on a quarterly basis. Each stakeholder's request is listed separately. The CLR-6, therefore, is one single order request containing the quantities of products demanded from all FP services providers (i.e., PWD, DOH, LHW Program, and in Sindh, PPHI) in the district. Once the central warehouse receives the CLR-6 from each DPWO, it will ship the required quantities to each of the district stakeholders stores separately, based on the required amounts in the CLR-6. These amounts should equal six month of stock (three each for replenishment and buffer).

Once the stakeholders have received their required quantities, the stores will distribute the products to their respective SDPs. Lady Health Visitors (LHVs) from health facilities are expected to collect contraceptives from the DOH store during their monthly meeting at the EDO's office, according to the *Manual of Contraceptive Logistics, 2007* (GOP 2007). In practice though, LHVs do not collect supplies from district stores directly; but once a month, from the Lady Health Supervisor (LHS)/health facilities to which they are attached. Lady Health Supervisors collect contraceptives from the district store during their monthly meeting at the district office. The family welfare workers (FWWs) or family welfare assistants (FWAs) from FWCs are also required to collect contraceptive supplies monthly from the PWD stores. In exceptional cases, such as emergency requisition for stockouts; however, the DPWO can arrange for delivery to FWCs. PPHI district offices deliver contraceptives to their health facilities.

## **1.2. USAID and USAID | DELIVER PROJECT in Pakistan**

In Pakistan, improving contraceptive availability within the public sector's family planning (FP) service delivery system, also known as last mile delivery, has been a key goal of the USAID | MCH program under its supply chain technical assistance efforts by Component 4 (Health Commodity and Public Health Supply Chains).

Since August 2009, the USAID funded USAID | DELIVER PROJECT has been providing technical assistance to the Government of Pakistan (GOP) to strengthen the supply chain system. The project works closely with the Ministry of National Health, Services, Regulations and Coordination (MONHSRC) on the central level, and with the DOH and the PWD on the provincial and regional levels. Additionally in Sindh province, where the government of Sindh (GOS) was able to make internal financing arrangements, technical assistance is also provided to the PPHI which manages the BHUs.

To support meaningful contraceptive availability, several system strengthening efforts are being carried out by the project on behalf of USAID. This includes the implementation of the contraceptive logistics management information system (cLMIS) that provides nationwide visibility to contraceptive supply chain at central, provincial and district levels. The project provides funding support for transportation of contraceptives on a quarterly basis from the CWH in Karachi to all district stores. Now that the district stores have adequate stock and sufficient budgets allocation through PC1<sup>3</sup> for transporting commodities from the CWH to district stores and service delivery outlets, the project has also secured a commitment from all provincial and regional governments to ensure transportation of commodities to SDPs. (Some, however, have yet to fulfil this commitments) In addition, to overcome the challenge of contraceptive security, from January 2010–November 2015, USAID supplied contraceptives worth U.S.\$96.3 million through the project, including: male condoms, combined oral contraceptives (COC), specifically Microgynon; progestin-only pills (POP), specifically Microlut; depot-medroxy progesterone acetate (DPMA), commonly called Depo-Provera; and intrauterine devices (IUDs), specifically TCu 380A.

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<sup>3</sup> Planning Commission Performa 1 (PC1) is the basic form or instrument of the present method for planning, processing, and reporting on development projects; all projects/schemes are required to use this to be drawn up.

### **I.3. Rationale for the survey**

Despite efficiency at the central level as a result of the commodity and supply chain strengthening technical support from USAID | DELIVER PROJECT, ensuring continuous stock availability at the last mile delivery remains an issue. The availability of transportation funds at the provincial level has remained limited for the LHW Program, especially after the 18th Constitutional Amendment and devolution of health functions to the provinces. Additionally, the requisitioning process from provincial and regional the DOHs and the LHW Program was not timely or accurate enough to effectively respond to contraceptive requirements at SDPs. The combined effect of the aforementioned factors resulted in frequent stockouts of contraceptives at district and sub district levels.

In 2010, a study by Adnan et al., (conducted in Pakistan) estimated a stockout rate of 60 percent. In 2012, a stock assessment survey that was representative of all regions estimated the contraceptive availability to be 67 percent. A rapid stock assessment in 2014 (Neilsen 2014), estimated the average contraceptive availability to be 84 percent across the surveyed provinces and regions reinforcing the efficacy of the actions taken post the 2012 survey.

Based on the project work plan and illustrative findings, confirmed by the 2014 assessment, a number of initiatives were taken with the provincial and regional government including implementing the *Contraceptive Logistic Manual* to improve sub district contraceptive supply and distribution systems, improving the quality of data being reported into the system to make the LMIS more robust and building capacity of the staff at SDP level to reduce errors in reporting. In this context, it was pertinent to conduct a rapid inquiry to assess the prevailing stock levels of contraceptives.

Provinces of Sindh and Punjab were selected for this survey due to their large population coverage and accessibility for implementation of research.

### **I.4. Survey Goals and Objectives**

The overall purpose of this research was to conduct an assessment to determine stock levels of contraceptive commodities at service delivery points and district stores in order to estimate the last mile contraceptive availability and determine efficiency of supply and distribution system. A secondary purpose was to validate the accuracy of the cLMIS data reported by the Government of Pakistan (GOP).

Specific objectives of the survey were to:

- Determine current stock availability of contraceptive commodities in SDPs and respective districts in Sindh and Punjab for each stakeholder.
- Identify factors related to stockouts at SDPs.
- Assess the contraceptive flow from the district stores to the facilities.
- Validate cLMIS data by comparing issuance and receipt documentation with data reported in cLMIS at the SDP and district level during the previous three to six months (Data Quality Assessment).

## 2. Methodology

A mixed methodology, applying both quantitative and qualitative methods of inquiry, was used for the study. The quantitative component used an adapted version of the Logistics Indicator Assessment Tool (LIAT). This is a standardized tool developed by the USAID | DELIVER PROJECT and has been applied to many countries around the world, including those in Asia. The tool was adapted and customized specifically for this study and the context within Pakistan. It was further revised with input during the training period and following a pilot test.

The quantitative assessment captured commodity availability at all levels of facilities in the public health system, including SDPs and district stores in Punjab and Sindh. Data were collected through observations, physical inventory counts, assessment of records, and by conducting interviews with relevant facility personnel on the day of visit.

The quantitative study was supported by a qualitative component to explore additional reasons for findings. (See annex 3 and 4 for the quantitative and qualitative tools used in the accompanying document.)

### 2.1. Products included

The following types of contraceptive commodities found at each SDPs and stores were included in the survey (see table 1).

**Table 1: Contraceptive Products Found at SDPs, by Type**

S#	Type	Contraceptive Product
1	Oral pills	COC/Microgynon
2		POP/Microlute
3		EC
4	Condoms	Male condom
5	Injectable	DMPA/Depo-Provera
6	IUDs	TCu 380A
7	Implants	Implanon
8		Jadelle

### 2.2. Sampling Frame

The survey used a modified version of the Large Country-Lot Quality Assurance Sampling (LC-LQAS) design to select SDPs and districts. The lot is defined as the stakeholder within each province, while supervision areas are defined as the district which acts an administrative unit to store and distribute contraceptives.

To obtain LQAS results on the district level, the minimum number of SDPs per supervision area (21) was determined based on an estimated average number of SDPs for each stakeholder in each district within each province, assuming an upper threshold of 80 percent, lower threshold of 50 percent, maximum  $\alpha$  error of 0.5 and maximum beta error 0.1.

As the number of facilities (for each stakeholder) varies within a district, a design effect of 1.36 was applied on the total number of SDPs required to achieve stock-out rates with 95 percent confidence interval and 5 percent margin of error at the provincial level for each stakeholder to account for clusters. The total number of districts (supervision areas) in each province as well as the number of facilities per district was calculated to achieve this result.

A total 23 districts were selected (13 in Sindh and 10 in Punjab) using multi-stage sampling according to the following criteria:

- Selection of districts in which the stakeholders were providing services through probability proportionate to size.
- Selection of SDPs within these districts using Systematic Random Sampling with random start technique.

Selected districts in Sindh included Badin, Dadu, Ghotki, Jamshoro, Kamber, Karachi, Khairpur, Larkana, Sukkur, Tando M. Khan, Tharparkar, Thatta and Umerkot. Whereas in Punjab, districts Bahawalnagar, Faisalabad, Hafizabad, Khanewal, Khushab, Lahore, Layyah, Mianwali, Narowal, and Okara were selected.

The total sample size for SDPs was estimated at approximately 2007 (1085 in Sindh and 922 in Punjab). Table 2 breaks down the number of SDPs by stakeholder in each province, in each district.

**Table 2: Selected Districts, Sampling Frame and Number of SDPs per District, by Stakeholder**

	DOH		PPHI		PWD		LHW Program*	
	S Frame	Sampled	S Frame	Sampled	S Frame	Sampled	S Frame	Sampled
Sindh	1103	276	652	275	765	280	1116	254
Badin	120	22	103	47	68	0	120	26
Dadu	49	22	49	24	52	24	62	24
Ghotki	56	22	48	26	53	21	56	21
Jamshoro	53	22	38	0	27	0	53	0
Kamber	68	27	0	0	0	0	68	22
Karachi	194	46	0	0	198	45	194	42
Khairpur	157	25	151	45	69	28	157	28
Larkana	63	22	47	22	65	31	63	21
Sukkur	47	22	37	23	57	27	47	28
TMK	40	0	35	21	29	21	40	0
Tharparkar	157	0	49	22	43	26	157	21
Thatta	37	22	53	23	61	31	37	0
Umerkot	62	24	42	22	43	26	62	21
Punjab	1068	316	0	0	593	299	1068	307
Bahawalnagar	127	38	0	0	59	28	127	34
Faisalabad	214	49	0	0	104	47	214	49
Hafizabad	43	31	0	0	36	21	43	25
Khanewal	114	36	0	0	60	33	114	35
Khushab	69	21	0	0	32	21	69	21
Lahore	164	41	0	0	128	43	164	33
Layyah	71	27	0	0	41	32	71	21
Mianwali	74	22	0	0	37	25	74	21
Narowal	<b>75</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>40</b>	<b>25</b>	<b>75</b>	<b>27</b>
Okara	<b>117</b>	<b>33</b>	<b>0</b>	<b>0</b>	<b>56</b>	<b>25</b>	<b>117</b>	<b>41</b>

*\*LHS stores are the SDPs for the LHW Program.*

LHWs were randomly selected from the LHW Program SPDs were sampled in each district. In the second step, two LHWs referred by the corresponding LHS, were selected and visited. Overall 1122 LHWs were visited; 614 in Punjab and 508 in Sindh, and interviewed.

Due to issue related to the number of available and operated DOH facilities in Sindh, the achieved sample size of SDPs was slightly smaller than plan. In the end, 71 district stores (Sindh: 41 and Punjab 30) and 1920 SDPs (Sindh: 998 and Punjab: 922) were visited and data was collected. (See table 3.)

**Table 3: Sampled and Surveyed SDPs, by Province and Stakeholders**

Province	Stakeholders	District Stores	SDPs	
			Estimated Sample Size	Surveyed
Sindh	DOH	11	276	190
	PPHI	10	275	275
	PWD	10	280	279
	LHW Program	10	254	254
<b>Total Sindh</b>		<b>41</b>	<b>1085</b>	<b>998</b>
Punjab	DOH	10	316	315
	PWD	10	299	300
	LHW Program	10	307	307
<b>Total Punjab</b>		<b>30</b>	<b>922</b>	<b>922</b>
<b>Grand Total</b>		<b>71</b>	<b>2007</b>	<b>1920</b>

### 2.2.1. Qualitative Selection Criteria

In order to elaborate on the findings of the quantitative survey, a qualitative component using in-depth interviews (IDIs) and focus group discussion (FGDs) was carried out in conjunction. IDIs were conducted at the district level with the person responsible for managing contraceptives at the district level and distributing them to the lower levels. Participants varied in title and included: Medical Officer, LHS, pharmacist, Medical technician, Nurse, Midwife, family welfare assistant, Medical Specialist. FGDs were held at the SDP level and comprised of staff from at least three different districts. Participants were generally the store keeper and data entry operator or who else performing responsibilities on behalf of these two.

A total of 14 IDIs and seven FGDs, comprising six–nine participants, were conducted across Sindh and Punjab (see table 4). To ensure homogeneity in the methodology, the FGDs and IDIs were carried out evenly across the two provinces (avoiding overlap) and amongst the stakeholders (DOH, PPHI, PWD and LHW Program). In other words, FGDs consisted of participants who worked at a facility operated by the same stakeholder.

**Table 4: Number of Completed FGDs and IDIs, by Province and Stakeholders**

Qualitative Method	Respondents	Stakeholders	Completed		
			Punjab	Sindh	Total
FGDs	Staff of health facilities	DOH	1	1	2
	Staff of health facilities	PPHI	0	1	1
	FWW, FWC, FWA	PWD	1	1	2
	LHWs, LHSs	LHW Program	1	1	2
<b>Total</b>			<b>3</b>	<b>4</b>	<b>7</b>
IDIs	District storekeepers	DOH	2	2	4
		PPHI	0	2	2
		PWD	2	2	4
		LHW Program	2	2	4
<b>Total</b>			<b>6</b>	<b>8</b>	<b>14</b>

### 2.3. Key Indicators and Definitions

A set of standard logistics indicators was selected to provide stakeholders with comprehensive information about the current situation at the facilities. Table 5 lists a selection of these indicators.

**Table 5: Selected Indicators with Data Sources**

Indicators	Data Source(s)
<b>Stock Status</b>	
Availability of contraceptive methods on the day of visit	Stockcard records, respondent, and physical inventory
Stocked out of products in the previous three/six months	Stockcard records, respondent, and physical inventory
Duration of stocked out in the previous three/six months	Stockcard records, respondent, and physical inventory
Instances of stockouts of a product in the previous three/six months	Stockcard records, respondent, and physical inventory
Facilities stocked according to plan	Stockcard records and physical inventory
<b>Recordkeeping</b>	
Availability of stock records by product	Presence of stock records
Updated stock records updated by product	Evidence of use of stock records in specified time period
Accuracy of stock records for the products they manage	Comparison of stock record balance and physical inventory count
<b>Logistics Management Information System</b>	
District personnel trained in cLIMS	Respondent
Available and updated stockcards by product	Presence of stockcards and evidence of use in facilities and stores
Accuracy of inventory records	Comparison of stockcard balance and inventory records
<b>Reporting</b>	

<b>Indicators</b>	<b>Data Source(s)</b>
Reporting to higher levels	Respondents reporting sending monthly consumption reports to higher level
Complete and accurate reports	Presence of CLR-6/monthly contraceptive reports and comparison of stockcard balance with CLR-6/ or monthly contraceptive report balance

For purposes of the stock status the follow definitions and calculations were used:

**1. Stocked out on the day of the visit**

This is one of the key indicators to measure product stockouts (or the inverse product availability) on the day of visit. It is calculated based on direct observation of useable stock inventory on the day of the visit for product X managed by the facility in the previous 12 months.

**2. Availability of stock cards by product**

This indicator measures the percentage of facilities that have stock cards available for each product. It is calculated by filtering for those facilities that manage product X at the facility and then running a crosstab between facility type variable and stock card available variable.

**3. Updated stock cards by product**

It measures the percentage of facilities with updated stock cards within the last 30 days prior to the date of the visit.

This indicator is calculated by filtering for those facilities that have stock card available for product X and then running a crosstab between facility type variable and stock card updated variable.

**4. Stocked out of product X from August–October 2015/May–October 2015**

This indicator measures the percentage of facilities that experienced a stockout of product “X” during the three/six months prior to the assessment (6 months for stores and 3 months for SDPs).<sup>4</sup> It provides a retrospective measure of for commodity availability at facilities.

It is calculated by filtering for those facilities that manage this product at the facility and updated stock card. A crosstab is then run between facility type variable and stockout in most recent three months variable.

**5. Frequency of stockouts of a product in the previous three/six months**

This indicator measures an average for the total number times (how frequently) a facility is stocked out of product X during the three/six month period prior to the assessment. It provides a measure for determining whether stockouts are common or infrequent occurrences. It is calculated by taking the total instances of stockouts for each product (i.e., zero balance) from an updated stock card.

**6. Duration of stocked outs of a product in the previous three/six months**

This indicator measures on average the number of days facilities did not have product X during the previous three/six months by level. It is calculated by filtering for those facilities that manage product X and updated stockcard and then running a means function.

<sup>4</sup> A six-month review period was used for the district level records to capture two delivery cycles and, therefore, be able to better assess instances and duration of stockouts. A three-month time period was used at the SDP level because reporting and delivery occur on a monthly basis. Therefore, the data reflects three delivery cycles from the district store.

## 7. Stocked according to plan

This indicator measures average months of stock available at the facility on the day of the visit. The indicator helps determine whether the facility is adequately stocked to meet the needs of its clients.

It is calculated by first filtering for facilities that manage the product and where updated stockcard are available. Then in a new variable, difference between number of days of available data and total number of days stocked out variable is calculated. The value thus obtained is divided by 30. The value in this new variable is noted. Another new variable is calculated by counting the physical inventory and it is divided by total issued in the most recent 3 months variable. This value is divided by the value of new variable that was noted earlier. Running a descriptive function of the obtained value, disaggregated by facility type variable gives the months of stock in hand.

The findings for the facilities were segregated by three categories:

	<b>Store</b>	<b>SDP</b>
1. <b>Understocked</b>	Less than or equal to 2.99 months	Less than or equal to 0.99 month
2. <b>Stocked appropriately</b>	3.0–5.99 months	1.0–3.0 months
3. <b>Overstocked</b>	6.0 months or more	3.1 months or more

## 8. Accuracy of stock cards and/or inventory report

This indicator measures the accuracy in recordkeeping of logistics data. It is calculated by taking discrepancy (exact match and within +/- 10 percent) between the physical inventory and stock card balance (or inventory report and stock card) for product X at each facility level.

## 2.4. Data collection

Separate tools were developed for quantitative and qualitative components. For the quantitative survey, data were collected using HUAWEI mobile smart phones and Open Data Kit (ODK) Data Collect, a mobile application that facilitates transfer of data through pre-sent forms on smart phones and enables transmission of data from the phones directly to the Internet. Data collectors also used a supplemental paper-based tool to record any notes for the facilities. Three structured questionnaires were designed for each level (district store, SDP, and LHW) and administered. A separate form was also developed to collect distribution (issues) data from the districts to SDPs, for purposes on the data quality assurance (DQA). Qualitative interview/facilitator guidelines for interviews were developed and translated into Urdu to conduct FGDs and IDIs (See annex 2 and annex 3 for paper versions of the tools used.)

All selected district stores and SDPs were informed about upcoming stock assessment visit in order to ensure proper permission and availability of staff. However, the actual visits were unannounced.

Prior to the start of the survey, a six day training of master trainers was conducted in Islamabad from December 6–11 2015. During this training, the USAID | DELVIER PROJECT provided training on the technical aspects and objectives of the assignment including review of stakeholders, products, composition of facilities, reviewing stock cards and CLR-6 and supply chain techniques/methods. Training materials were also developed to be used during roll out.

Overall, 92 field teams carried out the data collection process. Each team consisted of one supervisor and one enumerator. Thus, a total of 184 persons were hired who completed the data collection process in approximately two weeks (see table 6). Seven rollout trainings (four in

Sindh and three in Punjab) were conducted simultaneously by the master trainers to train data collection and coordination teams. In all trainings pre-post tests were conducted.

**Table 6: Rollout Training Schedule of Data Collectors**

S. No.	District	No. of Trainees	Location	Training Dates
1	Badin	30	Hyderabad	14 Dec to 17 Dec, 2015
	Dadu			
	Jamshoro			
	Karachi			
2	Tando M. Khan	24	Hyderabad	14 Dec to 17 Dec, 2015
	Tharparkar			
	Thatta			
	Umerkot			
3	Ghotki	20	Sukkur	14 Dec to 17 Dec, 2015
	Kambar			
	Larkana			
4	Khairpur	24	Sukkur	14 Dec to 17 Dec, 2015
	Sukkur			
5	Bahawalnagar	28	Lahore	14 Dec to 17 Dec, 2015
	Hafizabad			
	Khanewal			
	Khushab			
6	Narowal	28	Lahore	14 Dec to 17 Dec, 2015
	Lahore			
	Okara			
7	Faisalabad	30	Islamabad	14 Dec to 17 Dec, 2015
	Layyah			
	Mianwali			
<b>Total</b>		<b>184</b>		

## 2.5. Data management and analysis

Quantitative data was cleaned and analyzed using Statistical Package for the Social Sciences (SPSS) software. Data tables were generated with descriptive statistics; including frequencies, cross tabulation, and averages for each state, as well as disaggregated by facility type. Qualitative information was transcribed and organized in matrices using Microsoft Excel software. Main themes, nodes, and sub-nodes were used to collate the information. Later, qualitative information was triangulated with the quantitative findings to complement or elaborate the evidence.

## 2.6. Study limitations

The study had some limitations:

- A list of SDPs by province and by stakeholder, provided by the government, was used for the sampling frame. The list, however, was incomplete and included some SDPs that were not the focus of this study. Additionally, 383 selected facilities were non-functional or found closed on day of visit. Facilities were replaced within following detailed parameters (i.e., DOH facility was replaced by DOH facility either in the same district if available or in an adjoining district per direction from client.) While the sampling frame was designed for results to be self-weighted, some variation might exist.
- During implementation, PPHI was found to be operating many more facilities in Sindh (and DOH were operating fewer) than expected. Given the timing and lack of an updated complete facility list for either stakeholder, the initial targets were maintained. The planned sample was not met in six districts -Badin, Dadu, Kamber, Karachi, Umerkot, and Thatta. Consequently, PPHI and DOH facilities might have over- or undersampled in the final results. Additionally, LQAS could not be carried out for these six districts.
- Since respondents self-reported their actions and institutional practices (e.g., frequency of reporting, there was a potential for interview bias during the quantitative assessment.
- Some facilities had incomplete and missing records such as stockcards and CLR-6 or monthly contraceptive reports. As such, these facilities were excluded from calculations, thereby potentially impacting some key indicators; e.g., month of stock available, accuracy of cLMIS, etc.
- Accuracy of cLMIS for the data validation was gauged by comparing hard copies of record and electronic copies of cLMIS. However, soft copies of cLMIS were not available for 5 (7 percent) district stores. In addition, records were not available for 924 (52 percent) of SDPs. Therefore, results of accuracy for provincial comparison were limited.
- The LQAS district level point prevalence results are not statistically representative. LQAS results should be interpreted as whether the district as a whole has passed (or not passed) an 80 percent target.

# 3. Results for Both Provinces

Analysis and findings in this study are presented within three broad categories:

- *total* findings
- summary findings for Sindh
- summary findings for Punjab.

The national aggregate findings present data on indicators measuring stock status and logistics system performance from all sites that manage contraceptives throughout the 23 districts in the sample. For some indicators, the analysis is segregated into stores and service delivery points (SDPs) by stakeholders to provide more comprehensive information about the elements of the system. The comparison findings present data on key indicators for four stakeholders (i.e., DOH, PPHI, PWD, and LHW Program) to identify influences of managing agency. Some findings for LHW Program are also presented separately to differentiate the static clinic and community situation. LQAS based analysis by districts and by stakeholders and DQA are also included in this report. The findings are supported by triangulation of qualitative data to further elaborate the results.

Additional tables as well as LQAS analysis for district level results can be found in Annex 1 and 2 in the accompanying document.

## 3.1. Description of Facilities

A total of 1,991 facilities (71 stores and 1,920 SDPs) were visited during this assessment, 952 of which were visited in the province of Punjab (30 stores and 922 SDPs) and 1,039 were visited in Sindh (41 stores and 998 SDPs). Of all the visited facilities 525 were managed by DOH (20 stores and 505 SDPs), 285 by PPHI (10 stores and 275 SDPs), 600 by PWD (21 stores and 579 SDPs) and 581 by the LHW Program (20 stores and 561 SDPs) (see table 7). All the facilities in the sample were listed in the DOH, PPHI, PWD, and LHW Program databases as providing FP services, and all efforts were made to replace non-providing sites.

**Table 7: Distribution of Facilities Assessed during the Survey**

Stakeholder	Facility Assessed	Punjab	Sindh	Total
DOH	Stores	10	10	20
	SDPs	315	190	505
PPHI	Stores	--	10	10
	SDPs	0	275	275
PWD	Stores	10	11	21
	SDPs	300	279	579
LHW Program	Stores	10	10	20
	SDPs	307	254	561
Total	Stores	30	41	71
	SDPs	922	998	1920

At each of the facilities, interviews were conducted with the personnel responsible for managing FP products at the district and SDP stores. As shown in table 8 and table 9, titles of respondents varied. Of the 71 interviews conducted at stores, nearly 60 percent respondents were store

managers/keepers, 14 percent were account supervisors, and 11 percent were Assistant. The remaining (one-quarter) of interviews were carried out with various other respondents (<5 percent for each category). These included data entry operators, dispensers, senior clerks, etc.

**Table 8: Titles of Respondents at District Stores, by Stakeholder**

Title	DOH		LHS/LHW		PPHI		PWD		Total	
	%	N	%	N	%	N	%	N	%	N
Store manager/keeper	70.0	14	10.0	2	100	10	76.2	16	59.2	42
Accounts supervisor	0.0	0	50.0	10	0	0	0	0	14.1	10
Assistant	15.0	3	20.0	4	0	0	4.8	1	11.3	8
Other	15.0	3	20.0	4	0	0	19.2	4	15.4	11
<b>Total</b>	<b>100</b>	<b>20</b>	<b>100</b>	<b>20</b>	<b>100</b>	<b>10</b>	<b>100</b>	<b>21</b>	<b>100</b>	<b>71</b>

*Others include data entry operator, dispenser senior clerk, DPWO, LDC, demographic officer*

At the SDPs, 22 percent were Lady Health Supervisors (LHS), 16 percent with LHWs, 13 percent dispensers and about 10 percent each with FWWs and medical technicians. In the remaining (around one-fourth) of the interviews, respondents were FWCs, SDP storekeepers, medical officers, doctors, and midwives.

**Table 9: Titles of Respondents at SDPs, by Stakeholder**

Title	DOH		LHS/LHW		PPHI		PWD		Total	
	%	N	%	N	%	N	%	N	%	N
Lady Health Supervisor	3.2	16	69.9	392	2.2	6	1.4	8	22	422
Lady health visitor	42.6	215	13.4	75	3.3	9	1.9	11	16.1	310
Dispenser	22.6	114	5.9	33	38.9	107	0.5	3	13.4	257
FWW	0.6	3	0	0	0	0	35.4	205	10.8	208
Family welfare assistant	1.4	7	0.4	2	0.4	1	32.8	190	10.4	200
Medical technician	9.7	49	5	28	29.1	80	0.5	3	8.3	160
FWC counselor	0	0	0.2	1	0	0	15	87	4.6	88
Store manager/keeper	6.9	35	1.1	6	6.5	18	1.4	8	3.5	67
Medical officer/senior medical officer	5.1	26	0.9	5	9.8	27	1.6	9	3.5	67
Other	8	40	3.5	19	9.8	27	9.5	55	7.6	141
<b>Total</b>	<b>100</b>	<b>505</b>	<b>100</b>	<b>561</b>	<b>100</b>	<b>275</b>	<b>100</b>	<b>579</b>	<b>100</b>	<b>1920</b>

*Others include doctor, midwife, assistant, support staff, FWC in-charge, nurse, social mobilizer, vaccinator, medical specialist, pharmacist, and data entry operators.*

### 3.1.1. Average numbers of facilities served by district store

District store managers were asked about the number of facilities served by the districts. Based on responses, each store serves on average 52 service delivery points with a substantial variability (SD±36). In Punjab, each store serves on an average 73 SDPs (SD±39) and in Sindh 36 (SD±25) facilities are catered by a store (see table 10). Though the average is fairly constant across all stores managed by various stakeholders; the variability is larger for DOH (SD ±53) compared to PPHI and PWD (SD ±24). However, more facilities were reported to be served by

the PWD stores (mode 76) than by the PPHI (mode 49) and LHW Program (mode 39) stores; and the fewest by DOH stores (mode 12).

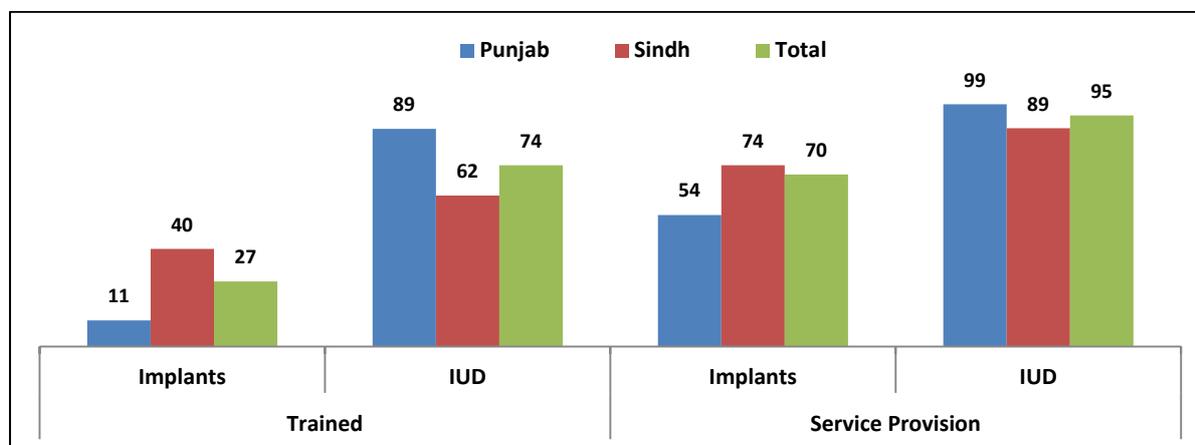
**Table 10: Average Numbers of Facilities Served, by District Store**

	DOH	PPHI	PWD	LHW Program	Total
Mean	47	53	53	55	52
Standard deviation	53	24	24	34	36
Median	17	49	48	44	46
Mode	12	49	76	39	12
N	20	10	21	20	71

### 3.1.2. Training and Provision of implants and IUDs at SDPs

The head of the SDP, or the person responsible for managing the FP products, were interviewed about training and provision of long-acting methods. Slightly more than one-quarter of the visited facilities reported trained provider of implants although there was some discrepancy between provinces. 40 percent SDPs in Sindh reported trained providers of implants, while just 11 percent in Punjab (11 percent). Of the facilities where trained providers were available, slightly less than three-quarters were offering the implant services (Punjab: 54 percent and Sindh: 74 percent). Three-quarters of the facilities reported that there was a trained IUD provider available (89 percent in Punjab and 62 percent in Sindh). Of these, an overwhelming 95 percent of SDPs were offering IUD services (see figure 1).

**Figure 1: Trained Providers and Implants and IUDs Services Provided at SDPs**



As shown in table 11, when disaggregated by stakeholder, more PPHI SDPs (62 percent) reported providers trained on implants than DOH (21 percent) and PWD (15 percent).<sup>5</sup> Conversely, more PWD SDPs (82 percent) and DOH (75 percent) had trained providers on IUD insertion than SDPs run by PPHI (56 percent). Approximately two-thirds of SDPs of all stakeholders were offering implant services, while IUD services were nearly universal and consistent. (LHW Program was excluded from analysis because they do not provide long-acting methods.)

<sup>5</sup> It should be noted that in 2007, 2008, 2012, and 2013, 233 doctors working in DOH and PWD facilities in both provinces were trained in implant insertion, with technical support provided by the USAID | DELIVER PROJECT.

**Table 11: Trained Providers and Implants and IUDs Services Provided at SDPs, by Stakeholder**

Products		Trained Providers				Provision of Products			
		DOH	PPHI	PWD	Total	DOH	PPHI	PWD	Total
Implants	%	20.6	61.8	15.2	26.6	60.6	78.2	67.0	70.4
	N	104	170	88	362	63	133	59	255
IUDs	%	74.5	56.4	82.2	74.1	95.7	88.4	95.8	94.6
	N	376	155	476	1007	360	137	456	953

*Note: LHW Program was excluded.*

## 3.2. Stock Availability

The following section discusses the availability of products and identifies potential gaps within the system. Three key questions that help to determine how well facilities have been able to provide the necessary products to clients, when needed, are examined.

1. Does the facility manage the product per national operating procedures and guidelines?
2. Is the facility able to provide the product on the day of visit?
3. How well is the facility managing its inventory?

The indicators—**product management, stock availability, instances and duration of stockouts in previous months, and current facility stock levels (i.e., stocked according to plan)**—are used to answer these questions. The findings are presented under the following headings: management and availability of products on day of visit, stockouts during the previous months and current stock levels.

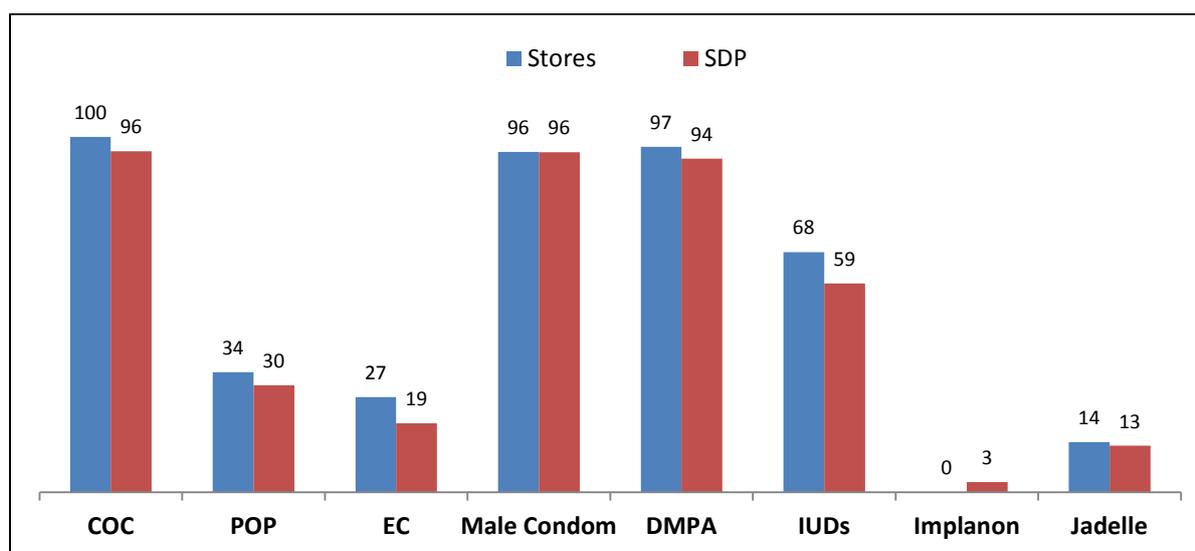
### 3.2.1. Management and Availability of FP Products

#### Management of FP Product

Product management looks at whether or not a product is generally offered at the facility (i.e., in the previous 12 months), regardless of whether or not it was in stock on the day of the visit; and it provides insight on whether or not facilities are being provided with products per national guidelines. Overall, more than 95 percent of all stores (N=71) manage male condoms, COC, and DMPA. More than 67 percent of stores managed IUDs and only one-third managed POP. EC was managed by slightly more than one-quarter of the visited 71 stores. The two outliers were Implanon and Jadelle; just 14 percent of stores managed Jadelle, while none managed the Implanon. (It should be noted that these results were not unexpected. Per operating procedures and guidelines, with the exception of PPHI operated facilities, district stores do not manage Implanon and Jadelle. Rather, the CHW supplies these products directly to the SDPs. As PPHI is a public-private partnership, per policy, the CHW delivers to the stores, which are then responsible for distributing to their facilities; the 14 percent of stores that manage Jadelle in this study are all operated by PPHI.)

SDPs (n=1920) management patterns were approximately the same, with more than 90 percent managing COC, DMPA, and male condoms; and about 60 percent managing the IUDs. Just over 30 percent of SDPs managed POP, while 19 percent managed EC; 13 percent managed Jadelle; and 3 percent managed Implanon (see figure 2). On average, of the 1,991 facilities carrying products, most stores and SDPs managed four of the eight products-- COC, DMPA, male condoms, and IUDs.

**Figure 2: Percentage of Family Planning Products Managed, by Facility Type**



Almost all stores managed COC, DMPA, male condoms, and IUDs, regardless of the stakeholder. (LHW Program stores do not manage IUDs because LHWs are not permitted to insert them.) Only PWD stores managed EC, while PPHI stores were the only ones to manage Jadelle. More than 90 percent of the PWD stores managed POP, while only 30 percent of PPHI and 10 percent of DOH stores managed the product. Few DOH and PPHI SDPs managed POP (63 DOH, 52 PPHI, 2 DOH, and 3 PPHI stores). See table 12.<sup>6</sup>

**Table 12: Percentage of Facilities Managing Products, by Stakeholder and Type**

	DOH		PPHI		PWD		LHW Program		Total	
	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
	n=20	n=505	n=10	n=275	n=21	n=579	n=20	n=561	n=71	n=1920
COC	100.0	93.3	100.0	93.8	100.0	98.6	100.0	96.8	100.0	96.0
POP	10.0	12.5	30.0	18.9	90.5	73.4	--*	--*	33.8	30.1
EC	0.0	1.4	0.0	2.5	90.5	60.8	--*	--*	26.8	19.4
Male condoms	95.0	92.9	90.0	93.5	100.0	99.0	95.0	96.1	95.8	95.7
DMPA	100.0	92.5	90.0	89.1	95.2	95.5	100.0	95.9	97.2	93.9
IUDs	100.0	78.0	100.0	58.9	85.7	85.5	--*	--*	67.6	58.8
Implanon	--*	2.0	--*	5.8	--*	4.5	--*	--*	0.0	2.9
Jadelle	0.0	11.1	100.0	50.9	0.0	6.0	--*	--*	14.1	13.1

-- \*= Product not managed by level or program

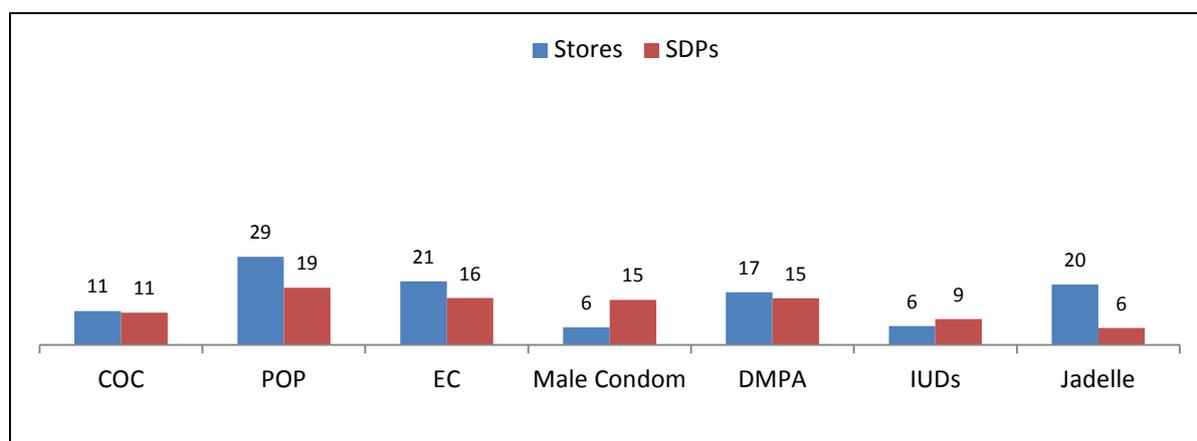
### Stockouts on Day of Visit

Stockouts measure the ability of the facility to manage its inventory; they are examined in two ways—current (i.e., day of visit), as well as retrospectively (i.e., in the previous three–six months). A physical count of commodities on the day of the visit determined contraceptive availability (or stocked out) from those facilities that reported managing the product.

<sup>6</sup>It should also be noted that some LHW Program stores and SDPs reported managing POP and EC, and product was found in several facilities. However, these cases were excluded from all analysis (managed, stockout on day of visit, etc.) because per policy LHW Program only manages COC, male condoms, and DMPA, which would impact overall results.

The survey found that the facilities had some degree of variability in contraceptive availability. Overall, male condoms and IUDs were the most widely available contraceptive method, with more than 90 percent of the stores and 85 percent of SDPs that manage these products stocking them on the day of visit. Availability was somewhat lower for the other products. On the day of visit, 17 percent of the district stores who reported managing the product stocked DMPA and 11 percent were stocked out of COC. Seven (29 percent) of the 24 district stores who reported managing the product were stocked out of POP, while four (21 percent) of the 19 were stocked out of EC, and two (20 percent) of the 10 stores that managed Jadelle were stocked out (see figure 3). It should be noted that POP and EC have not been in full supply during the past two years; frequent central-level stockouts have impacted the rest of the system. This could help explain why stockout rates, especially for POP, are relatively high at both stores and at SDPs.<sup>7</sup>

**Figure 3: Percentage of Facilities with Stockouts on Day of Visit, by Type**



*\*Results for POP and Jadelle are based on fewer than 25 district stores and should be interpreted with caution.*

When disaggregated by stakeholder, stockouts were higher at PPHI stores on the day of visit; two-thirds were stocked out of POP, one-third were out of DMPA, and one-fifth of Jadelle. By comparison, while half of the DOH stores were stocked out of POP, they had no other substantial stockouts in their stores. More than 80 percent of PWD stores had availability of all the managed products. Stockouts of DMPA were found at one-quarter of LHW Program stores, while one-fifth of these stores were stocked out of COC and 16 percent stocked out of male condoms (see table 13).

Overall, stockouts for all products at SDPs were relatively low (at or below 15 percent); the exception was for POP (at 19 percent), but stakeholders had some variation. Slightly less than one-third of PPHI SDPs were stocked out of EC, and about one-fifth of POP and DMPA. With the exception of EC (at 43 percent), DOH SDPs did not have any substantial shortfalls. Stock positions at PWD SDPs was relatively better, with stockouts of a few products at less than 18 percent of SDPs.

Stockouts were frequently found at LHW Program SDPs; one-third were stocked out of male condoms and/or COC, and more than one-fifth were stocked out of DMPA. Stockout rates at LHW Program SDPs were higher than stores, indicating possible issues related to distribution from the LHW store to the facility.

**Table 13: Percentage of Facilities with Stockouts on Day of Visit, by Stakeholder and Type**

<sup>7</sup> As of Oct, Nov. and Dec. 2015 MOS for POP at CWH was 1.4, 0.6, and 0.5, respectively (source: web-based cLMIS). For financial reasons, POP is procured less than the country requirements.

	DOH		PPHI		PWD		LHW Program		Total	
	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
<b>COC</b>	5	4.7	0	8.9	14.3	7.2	20	20.4	11.3	10.7
<b>POP</b>	50	6.3	66.7	21.2	21.1	18.4	--*	--*	29.2	18.9
<b>EC</b>	--*	42.9	--*	28.6	21.1	13.4	--*	--*	21.1	15.5
<b>Male condoms</b>	0	7.9	0	13.6	4.8	5.2	15.8	31.7	5.9	14.9
<b>DMPA</b>	5	4.9	33.3	22.9	15	8.1	25	28.4	17.4	15.4
<b>IUDs</b>	0	3.8	0	3.1	16.7	13.5	--*	--*	6.3	8.6
<b>Implanon</b>	--*	10.0	--*	18.8	--*	15.4	--*	--*	--*	14.5
<b>Jadelle</b>	--*	3.6	20	6.4	--*	8.6	--*	--*	20.0	5.6

-- \*=product not managed by level or program

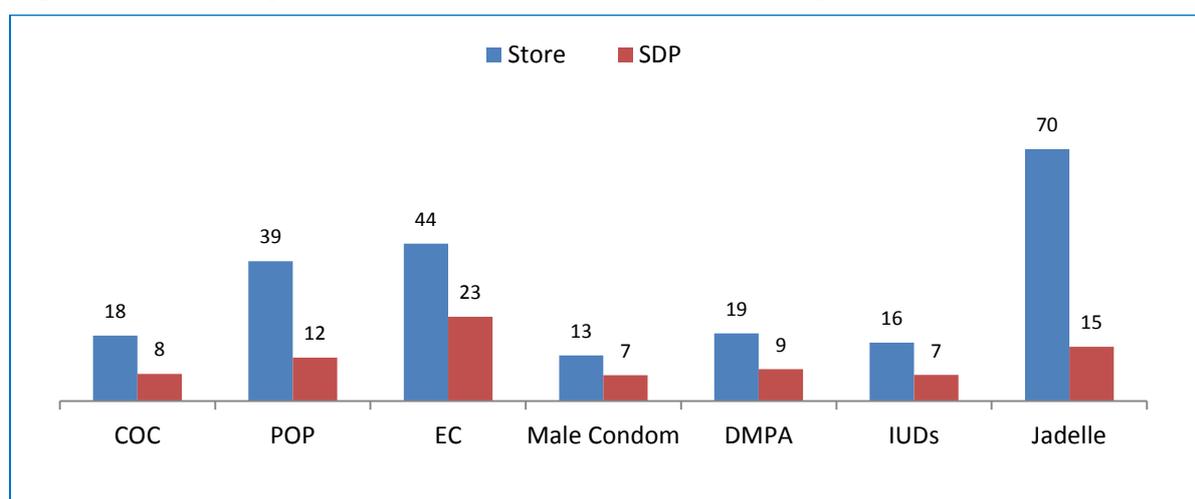
### 3.2.2. Stockouts during Previous Months

To understand the availability of FP methods at facilities, data collectors looked at stockcards and stock records for the occurrence of stockouts, the number of times each facility stocked out of any commodity, and the average duration of the stockouts over the six-month period preceding the survey (May–October 2015) for stores and three months preceding the survey (August–October 2015).<sup>8</sup> **The following results are based on available and updated records (i.e., the records were updated in the previous 30 days prior to the visit) for contraceptives managed by the facility.**

#### Stockouts in the previous months

Based on available records, stockouts were much more frequent at stores compared to SDPs. As shown in figure 4, stockout rates for stores varied between 13 to 44 percent (in the case of Jadelle). By comparison, stockout rates for SDPs ranged from 7 to 23 percent.

**Figure 4: Percentage of Facilities Stocked Out of Contraceptives in Previous Months**



\*Results for POP and Jadelle stores are based on fewer than 20 facilities and should be interpreted with caution.

When disaggregated by stakeholder, however, LHW and PWD district stores were more likely to have stocked out of a product when compared to the DOH and PPHI. Of LHW Program

<sup>8</sup>As already mentioned, a six-month review period was used for the district level records to capture at least one (and possible two) delivery cycles and, therefore, better assess instances and durations of stockouts. A three-month review was used at the SDP level because reporting and delivery are once a month.

stores, 39 percent were stocked out of COC and DMPA and 23 percent of male condoms at least once in the previous six months; whereas, PWD district stores stockout rates were IUDs (29 percent), DMPA (24 percent), and COC (22 percent) during the past six months. All DOH district stores, half of the PPHI, and one-third of the PWD stores had stockouts of POP in the previous six months.. EC was found to be out of stock at 44 percent of PWD stores, which is the only program to manage them during the last six months (see table 14).

Stockouts, overall, were lower at the SDPs compared to the stores. More PPHI and LHW Program SDPs experienced stockouts of various products than DOH- and PWD-operated facilities. Interestingly, with the exception of EC, 25 percent of PWD SDPs that had a stockout in the previous three months, stockouts rates for all other products and stakeholders was below 18 percent. Stockout rates of DMPA (18 percent), male condoms (15 percent), and COC (12 percent) were found at PPHI SDPs during the previous six months; but, at LHWs SDPs, male condoms (17 percent), DMPA (14 percent), and COC (10 percent) were found during the previous six months. Stock positions remained most stable at the stores, as well as the SDPs managed by the DOH.

**Table 14: Percentage of Facilities Stocked Out of Contraceptives in Previous Months, by Stakeholder and Level**

	DOH		PPHI		PWD		LHW Program		Total	
	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
<b>COC</b>	6.7	6.0	0.0	12.4	22.2	6.7	38.5	10.0	18.2	8.2
<b>POP</b>	100.0	6.1	50.0	3.1	33.3	13.6	--*	--*	38.9	12.2
<b>EC</b>	--*	0.0	--*	0.0	43.8	24.2	--*	--*	43.8	23.6
<b>Male condoms</b>	13.3	7.7	12.5	15.1	5.3	3.8	23.1	17.4	12.7	9.8
<b>DMPA</b>	0.0	6.7	12.5	17.9	23.5	7.0	38.5	13.6	18.9	10.1
<b>IUDs</b>	0.0	5.8	25.0	7.1	28.6	8.6	--*	--*	16.2	7.1
<b>Implanon</b>	--*	0.0	--*	10.0	--*	8.7	--*	--*	--*	6.8
<b>Jadelle</b>	--*	9.5	70.0	18.6	--*	10.7	--*	--*	70.0	14.7

--\* Product not managed at facility,

Results for POP and Jadelle stores are based on fewer than 20 facilities and should be interpreted with caution.

### Instance and duration of stockouts in previous months

Results indicate that although the number of stockouts of contraceptives was relatively low, the average duration of stockouts was long for all contraceptive methods during the three to six months leading up to the survey. Based on the records reviewed, stores and SDPs averaged slightly over one stockout for each contraceptive product during the previous months. The average duration of the stockouts, however, was more than two months at district stores and more than one month at SDPs for all common short-term contraceptives.

At stores, the shortest duration of the stockouts for IUDs and male condoms and longest for COC and EC; while at SDPs, male condoms had the shortest duration and both type of implants the longest. The average duration of stockouts for the remaining products at SDPs was around 40 days in the previous three months (see table 15). Service personnel responsible for managing the commodities reported similar patterns for occurrences and duration of stockouts during the IDIs and FGDs.

**Table 15: Instances and Duration of Stockouts in the Previous Months, by Level**

	Average Number of Stockouts		Average Number of Days of Stockouts	
	Stores	SDPs	Stores	SDPs
<b>COC</b>	1.3	1.1	78.9	38.5
<b>POP</b>	1.3	1.1	68.9	42.3
<b>EC</b>	1.9	1.3	74.3	46.2
<b>Male condoms</b>	1.3	1.2	58.6	35.8
<b>DMPA</b>	1.2	1.2	64.7	41.9
<b>IUDs</b>	1.3	1.2	57.0	44.7
<b>Implanon</b>	--*	1.0	--*	82.7
<b>Jadelle</b>	1.3	1.1	91.1	55.2

--\*Product not managed at facility or no observed stockout during record review. Results for POP and Jadelle stores are based on fewer than 20 facilities and should be interpreted with caution.

A similar and consistent pattern of stockouts was found across all stakeholder stores (see table 16). However, the duration of stockouts was longest for PPHI and LHW stores, averaging stockouts lasting more than 90 days compared to slightly over 45 days for DOH and PWD stores.

**Table 16: Instances and Duration of Stockouts in the Previous Six Months (May–October 2015) at Stores, by Stakeholder**

	Stores							
	Average Number of Stockouts				Average Number of Days of Stockouts			
	DOH	PPHI	PWD	LHW Program	DOH	PPHI	PWD	LHW Program
<b>COC</b>	1.0	0.0	1.3	1.4	13	0.0	46	119
<b>POP</b>	1.0	1.0	1.4	--*	101	156	45	--*
<b>EC</b>	--*	--*	1.9	--*	--*	--*	74	--*
<b>Male condoms</b>	1.5	1.0	1.0	1.3	34	105	30	69
<b>DMPA</b>	0.0	1.0	1.0	1.4	0.0	59	41	85
<b>IUDs</b>	0.0	1.0	1.5	--	0.0	76	48	--*
<b>Implanon</b>	--*	--*	--*	--*	--*	--*	--*	--*
<b>Jadelle</b>	--*	1.3	--*	--*	--*	91	--*	--*

--\*Product not managed at facility or no observed stockout during record review. Results for POP and Jadelle stores are based on fewer than 20 facilities and should be interpreted with caution.

SPDs averaged one stockout in the previous three months across all stakeholders (see table 17). On average, stockouts for COC, DMPA, male condoms, and IUDs) lasted 30 days or more for all stakeholders. PPHI and PWD SDPs reported stockouts lasting over 60 days for IUDs and COC was stocked out at SDPs operated by LHW and DOH for over 45 days. Stockouts for POP and EC at PWD SDPs lasted approximately 45 days. Duration of stockouts was also mentioned by respondents during FGDs.

*“Sometimes, it happens that some of the requested products are not delivered due to unavailability in store. Last time, condoms were stockout and I waited for two months.” (LHV- MCH Centre, Punjab)*

Interestingly, it was also shared during the FGDs that in case of non-availability or stockout of a product, the provider would encourage the client to use the other (available) method.

*“We motivate our clients to use second method if there was shortage of any method. For example OP (oral pills) were not available then we motivated the client to use injection.” (SDP staff- PWD Sindh)*

Implanon and Jadelle were stocked out for over 50 days at SDPs where they were managed. As mentioned earlier, these products (with the exception of Jadelle at PPHI facilities) are shipped directly from the CWH to SDPs, indicating a possible issue between the two facility levels.

**Table 17: Instances and Duration of Stockouts in the Previous Three Months (August–October 2015) at SDPs, by Stakeholders**

	SDPs							
	Average Number of Stockouts				Average Number of Days of Stockouts			
	DOH	PPHI	PWD	LHW	DOH	PPHI	PWD	LHW
<b>COC</b>	1.1	1.2	1.1	1.1	44.6	33.3	27.3	48.3
<b>POP</b>	1.0	1.0	1.1	--*	29.7	12.0	42.5	--*
<b>EC</b>	--*	--*	1.3	--*	--*	--*	45.6	--*
<b>Male condoms</b>	1.3	1.1	1.4	1.2	42.5	31.0	30.6	36.6
<b>DMPA</b>	1.3	1.3	1.2	1.1	41.1	47.0	41.6	35.0
<b>IUDs</b>	1.1	1.3	1.2	--*	44.9	70.5	60.9	--*
<b>Implanon</b>	--*	1.0*	1.0*	--*	--*	68.0*	90.0*	--*
<b>Jadelle</b>	1.0*	1.2	1.0*	--*	50.3	52.1	58.7	--*

--\*= Product not managed at SDP or no observed stockouts during record review.

\* SDPs receive product directly from CWH.

During FGDs, another highlighted issue was space for keeping stock, which remains a challenge for departments, especially the LHW Program; it leads to issues of stockouts. The district store managers validated this.

*“Store rooms are under custody of PPHI and they don’t allow keeping our products in the storeroom.” (FGD-LHS, LHW Program, Umerkot, Sindh)*

*“To avoid stockouts, I will suggest that the medicines should be issued only when LHS of facility demands order. The extra medicines become burden for facilities and there is also no proper place for storage in the facilities.” (IDI, DOH district Manager, Punjab)*

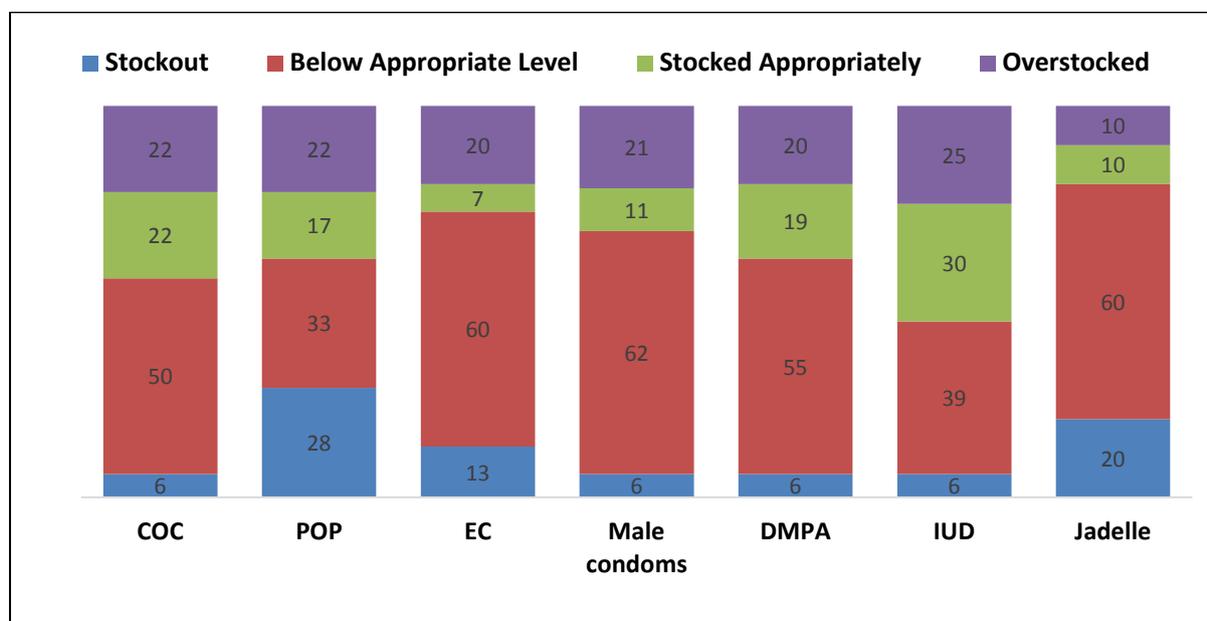
### 3.2.3. Current Stock Levels

Stock position by month and method shows how many months of stock facilities have available. Low levels or non-availability of stock increases the likelihood of stockouts at facilities before the next delivery cycle. Overstock of products leads to challenges with expires or damaged product because of storage issues. Facilities are required to submit their requisitions based on their stock consumption and they should be replenished accordingly. As mentioned earlier, the following categories, based on the system design, were used to assess stock levels:

	Store	SDP
1. <b>Understocked</b>	Less than or equal to 2.99 months	Less than or equal to 0.99 month
2. <b>Stocked appropriately</b>	3.0–5.99 months	1.0–3.0 months
3. <b>Overstocked</b>	6.0 months or more	3.1 months or more

Overall, with the exception of IUDs, most district stores maintained stock below the appropriate level. Additionally, nearly 20–25 percent of district stores had more than six months of stock on hand, indicating the need to reassess requisition and distribution practices (see figure 5).

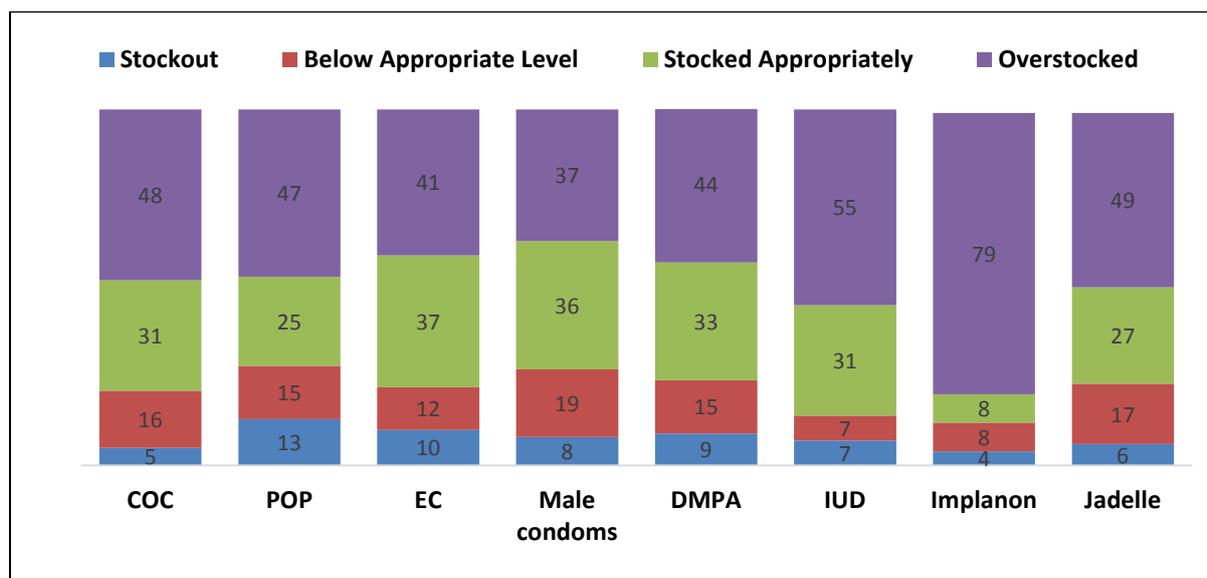
**Figure 5: Percentage of District Stores Maintaining Appropriate Stock Levels, by Product**



*Results for POP and Jadelle stores are based on fewer than 20 facilities and should be interpreted with caution.*

Compared to stores, approximately one-third of SDPs were maintaining appropriate stock levels. The percentage of SDPs with below the appropriate level of stock was slightly below one-fifth across all products. However, more than 40 percent of all SDPs were overstocked for various products. See figure 6.

**Figure 6: Percentage of SDPs Maintaining Appropriate Stock Levels, by Product**



As shown in table 18, approximately three or more months of stocks (MOS) were available at district stores and SDPs for all products. Exceptions included the LHW Program stores for

COC and male condoms (which had just over two MOS) and PWD stores for COC, DMPA, and male condoms (with slightly more than two months). At DOH and PPHI district stores, the MOS for all products was appropriate or over the recommended level of three months; the exception was IUDs at PPHI stores, which were just below three months stock of IUDs available at PPHI stores. Although very few DOH stores manage POP, there was no stock available for this product at DOH stores.

**Table 18: Average Months of Stock Available at Facilities, by Stakeholders and Level**

	DOH		PPHI		PWD		LHW Program		Total	
	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
<b>COC</b>	8.2	23.9	6.2	3.8	2.1	3.0	2.3	8.8	4.4	10.0
<b>POP</b>	0.0	13.9	4.4	2.3	2.9	4.4	--*	--*	2.9	5.4
<b>EC</b>	--*	0.7	--*	8.9	5.5	4.6	--*	--*	5.5	4.5
<b>Male condoms</b>	8.6	10.9	6.8	7.1	2.1	2.4	2.1	4.4	4.5	5.7
<b>DMPA</b>	8.8	7.8	17.7	2.0	2.2	2.8	4.8	6.3	7.00	5.0
<b>IUDs</b>	12.4	17.0	2.8	12.7	2.9	4.0	--*	--*	6.6	9.7
<b>Implanon</b>	--*	7.1	--*	3.5	--*	3.4	--*	--*	--	3.7
<b>Jadelle</b>	--*	4.5	3.0	6.1	--*	34.7	--*	--*	3.0	11.5

--\*Product not managed at facility

Results for POP and Jadelle stores are based on fewer than 20 facilities and should be interpreted with caution.

These results, overstocking at the SDPs combined with understocked results at the district stores, indicate a potential underlying issue that district stores are pushing stock down to the lower level. This practice may have contributed to the understock at district stores and overstock at SDPs. During the IDIs, participants shared that when new stock arrives at district stores, they send more contraceptives to SDP stores than they requested, primarily due to lack of space.

*“We send out supplies as soon we receive them mainly because of lack of space. This leads to stock-outs. Recently, we had stock-outs of condoms. We need more space to store products.”* (IDI, LHW Program District Manager, Punjab.)

### 3.3. Expired product at facilities

During facility visits, data collectors checked for and collected information on expired products, when found. As shown in table 19, expired units of COC and DMPA were found in the stores (10 percent of PPHI stores and 5 percent of LHW stores had expired COC; 11 percent of PPHI stores had expired DMPA). With the exception of COC, expired products were found at less than one percent of SDPs. Comparatively more SDPs of the LHW Program were found with expired products than at any other stakeholders’ SDP.

**Table 19: Percentage of Facilities with Products, by Stakeholder**

	DOH		PPHI		PWD		LHW Program		Total	
	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
	n=10	n=505	n=10	n=275	n=21	n=579	n=20	n=561	n=71	n=1920
<b>COC</b>	0.0 (0)	1.7 (8)	10.0 (1)	0.0 (0)	0.0 (0)	1.1 (6)	5.0 (1)	2.0 (11)	2.8 (2)	1.4 (25)
<b>POP</b>	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	--*	--*	0.0 (0)	0.2 (1)
<b>EC</b>	--*	--*	--*	--*	0.0 (0)	0.3 (1)	--*	--*	0.0 (0)	0.3 (1)
<b>Male condoms</b>	0.0 (0)	0.2 (1)	0.0 (0)	0.8 (2)	0.0 (0)	0.2 (1)	0.0 (0)	0.7 (4)	0.0 (0)	0.4 (8)
<b>DMPA</b>	0.0 (0)	0.2 (1)	11.1 (1)	0.0 (0)	0.0 (0)	0.2 (1)	0.0 (0)	0.4 (2)	1.4 (1)	0.2 (4)
<b>IUDs</b>	0.0 (0)	1.0 (4)	0.0 (0)	1.2 (2)	0.0 (0)	0.6 (3)	--*	--*	0.0 (0)	0.9 (10)
<b>Implanon</b>	--*	--*	--*	--*	--*	--*	--*	--*	--*	--*
<b>Jadelle</b>	--*	1.8 (1)	0.0 (0)	0.0 (0)	--*	--*	--*	--*	0.0 (0)	0.4 (1)

*Numerators shown in parenthesis.*

*--\*Product not managed at facility.*

With the exception of DMPA (an average number of 30 vials, all at PPHI stores), and 1–2 cycles of COC at PPHI and LHW stores, no other expired product was found at any of the district stores. However, on average, 305 pieces of male condoms, 87 cycles of COC, 23 injections of DMPA, and 13 pieces of expired IUD were found (see table 20).

Most of the expired condoms were found at the DOH SDPs (average 700 pieces), followed by LHW (average 390 pieces), and PWD (average 100 pieces). Most of the expired COCs were found at the LHW Program SDPs (average 151 cycles), compared to PWD and DOH SDPs (average 41 and 35 cycles, respectively). Similarly, expired DMPA injections were found at LHW, PWD, and DOH SDPs (average 39, 11, and 3 vials, respectively). The most noticeable quantity of expired IUDs was found at PWD SDPs (average 34 sets). Five cycles of POP were also found at the LHW Program SDPs.

**Table 20: Average Quantity of Expired Products at Facilities, by Stakeholders**

	DOH		PPHI		PWD		LHW Program		Total	
	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
<b>COC</b>	--*	35	1	0	--*	41	2	151	1.5	87
<b>POP</b>	--*	0	--*	0	--*	0	--*	5	--*	5
<b>EC</b>	--*	--*	--*	--*	--*	1	--*	--*	--*	1
<b>Male condoms</b>	--*	700	--	39	--*	100	--*	390	--*	305
<b>DMPA</b>	--*	3	30	0	--*	11	--	39	30	23
<b>IUDs</b>	--*	6	--*	3	--*	34	--*	3	--*	13
<b>Implanon</b>	--*	--*	--*	--*	--*	--*	--*	--*	--*	--*
<b>Jadelle</b>	--*	3	--*	0	--*	--*	--*	--*	--*	3

*--\*Product not managed at facility or no observed expiry during physical count.*

During the FGDs, respondents described the process for returning expired products, including sending back expired products to district stores and recording in stock records. They also shared that they check the date of expiry for every product and try to use the product with the near-to-expiry date first. The participants did not identify any issue related to handling expired products.

*“We make an entry in stock register on daily basis. It has previous balance. We add new stock and then get the remaining balance of stock.”* (Family welfare worker during FGD in Punjab)

*“Every medicine has separate bin card. We use one bin card for each product to record its expiry date, issued date and the number of remaining stock.”* (DOH SDP staff during FGD in Punjab)

### 3.4. Logistics System Performance

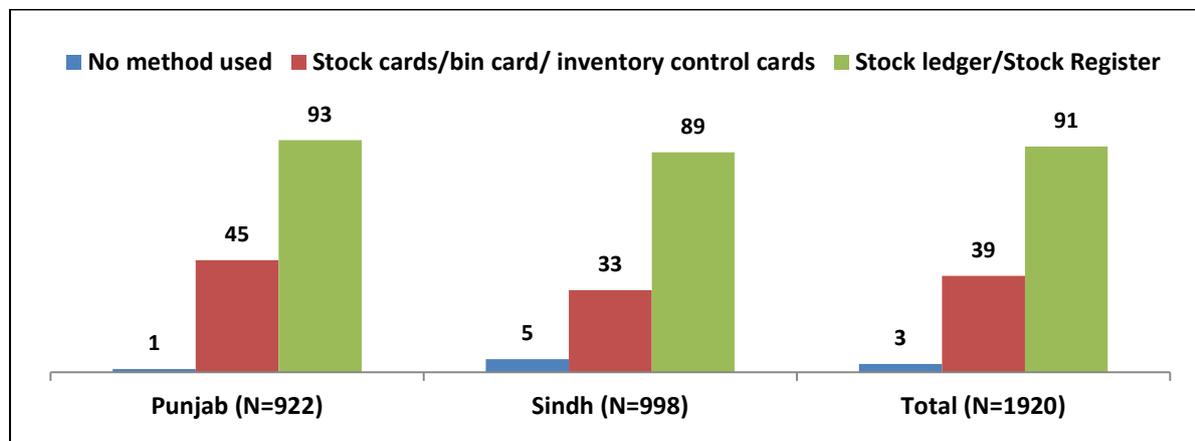
The findings in this section indicate the level of performance of the contraceptive logistics management system (cLIMS), as well as a measure of the progress of system performance. Findings are under the following headings: (1) recordkeeping, (2) use and reporting to cLMIS, (3) requisitioning, and (4) transporting FP products.

#### 3.4.1. Recordkeeping Practices

##### Types of forms used for stockkeeping at SDPs

Heads of the SDP, or the person responsible for managing the FP products, were asked about the types of stockkeeping forms used at the facility. More than 90 percent of respondents, across both provinces, reported using the stock cards/bin cards/inventory control cards for stockkeeping. Around 40 percent of respondents (Punjab: 45 percent, Sindh: 33 percent) also mentioned using stock ledger/stock register for this purpose (see figure 7). No substantial differences were noted across the four stakeholders from the overall trend of types of forms used for stockkeeping.

**Figure 7: Percentage of Facilities by Type of Forms Used for Stockkeeping**



*\*Multiple responses*

During the FGDs, SDP respondents claimed to have no serious issue related to stock recording. Many providers shared that they had separate records for every product and they found it easy to maintain the record. However, many reported that they did not receive any specific training on stockkeeping and suggested that training be arranged for them.

Respondents during IDIs mentioned that they have responsibilities in addition to the stock management and stockkeeping at the stores; at times, this has been challenging. Similar to FGDs, respondents reported a general lack of training.

*“I have not attended any training for stock management but I have learnt while working. It has been 5 years that I am awaiting for complete professional training to be provided from the department.”* (PPHI district storekeeper)

Upon receiving the stock, IDI respondents reported that they do a physical count to verify, using either bin cards or vouchers to receive and manage the stock. They said it was rare to find a discrepancy in the number of stock delivered.

### Availability of stock records

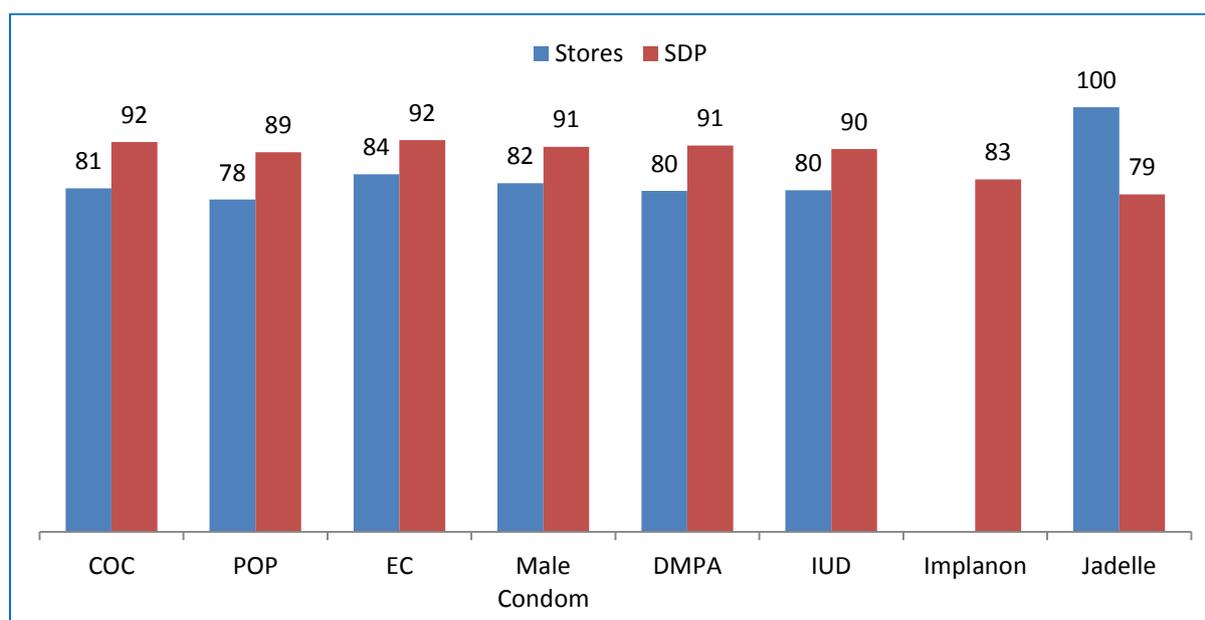
As mentioned earlier, data collectors also reviewed facility records; stockkeeping records were found in over 95 percent of stores and over 90 percent of SDPs for all contraceptive products managed. The one exception was in the PPHI stores, where only two-thirds had records for POPs (see table 21).

**Table 21: Percentage of Facilities with Available Stock Records, by Stakeholder**

	DOH		PPHI		PWD		LHW Program		Total	
	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
<b>COC</b>	90.0	93.2	100.0	96.9	100.0	95.6	95.0	84.9	95.8	92.0
<b>POP</b>	100.0	87.3	66.7	86.5	100.0	96.0	--*	--*	95.8	92.0
<b>EC</b>	--*	100.0	--*	100.0	100.0	94.6	--*	--*	100.0	93.6
<b>Male condoms</b>	94.7	93.8	100.0	96.1	100.0	96.2	100.0	84.4	98.5	92.1
<b>DMPA</b>	90.0	93.4	100.0	95.1	100.0	96.4	95.0	84.2	95.7	91.8
<b>IUDs</b>	90.0	94.2	100.0	93.8	100.0	94.9	--*	--*	95.8	94.0
<b>Implanon</b>	--*	90.0	--*	100.0	--*	96.2	--*	--*	--*	96.4
<b>Jadelle</b>	--*	94.6	100.0	95.0	--*	94.3	--*	--*	100.0	95.2

Of the facilities with available stock records, more than 80 percent were updated in the previous 30 days (see figure 8). However, when disaggregated by stakeholders, half of the DOH stores did not have updated records for POP, whereas almost one-third of LHW's stores did not have updated stock records for any of the product they manage (i.e., COC, DMPA, and male condoms). In comparison, more than 80 percent of SDPs by all stakeholders, with the exception of PPHI, were found to have updated stock records for all products (see table 22).

**Figure 8: Percentage of Facilities with Updated Stock Records**



Results for POP and Jadelle stores are based on fewer than 20 facilities and should be interpreted with caution.

**Table 22: Percentage of Facilities with Updated Stock Records, by Stakeholder**

	DOH		PPHI		PWD		LHW Program		Total	
	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
<b>COC</b>	83.3	91.8	90.0	93.2	85.7	95.1	68.4	87.2	80.9	91.8
<b>POP</b>	50.0	89.1	100.0	71.1	78.9	91.9	--*	--*	78.3	89.5
<b>EC</b>	--*	85.7	--*	57.1	84.2	93.1	--*	--*	84.2	92.3
<b>Male condoms</b>	83.3	92.0	88.9	85.8	90.5	96.0	68.4	85.7	82.1	90.7
<b>DMPA</b>	83.3	93.1	88.9	88.8	85.0	94.2	68.4	86.3	80.3	91.0
<b>IUDs</b>	83.3	93.0	80.0	74.3	77.8	93.6	--*	--*	80.4	90.2
<b>Implanon</b>	--*	88.9	--	62.5	--*	92.0	--*	--*	--*	83.0
<b>Jadelle</b>	--*	79.2	100.0	76.7	--*	84.8	--*	--*	100.0	79.5

Data filtered for products managed & stock records available at the facility.

--\* Facilities do not manage the product.

During the FGDs, LHWs and their supervisor reflected that they were engaged in a variety of other activities, including polio immunization. Moreover, most of the time, they remain in the field/community because they are the community workers. Therefore, they find it challenging to keep their stock records updated.

*“We are facing problem of record keeping because we serve in field. Along with National program (LHW Program), we are given polio work (EPI), which is an additional burden. Moreover, store keeper of PPHI does not allow us to keep products in the storeroom.”* (LHS during FGD, Sindh)

During the IDIs a number of participants in both Sindh and Punjab who work as storekeepers reported they have other duties, or a different portfolio altogether, with storekeeping as an *add on* activity. Most of them report to the district officers.

*“I am working as accounts supervisor. My responsibility is to get stock from warehouse, maintain it properly in the district store and provide that stock to facilities. Now the hospitals are working 24/7 throughout Punjab.”*

*Nutritional program is also under my control. The referral system is introduced for each LHW. LHW has to send referral data to their LHS. LHS sends monthly report of referrals to the district accounts supervisor. There are 860 LHWs whose referral data has to be maintained. This is my responsibility to record this data. Each LHW has at least 3 to 4 referrals. Now I have to record data of maternal deaths. I am also performing other works in office. So you can imagine the burden of work.” (IDI, District Storekeeper in Punjab)*

Some participants suggested shifting the recordkeeping practice from manual to electronic as a way to help with the challenges.

*“The record of stock should be completed using software. The manual record keeping is very difficult. There are also chances of mistakes in entering data in the registers. But computer can detect errors and easy correct it.” (Family Welfare Counselor- FWC, Punjab)*

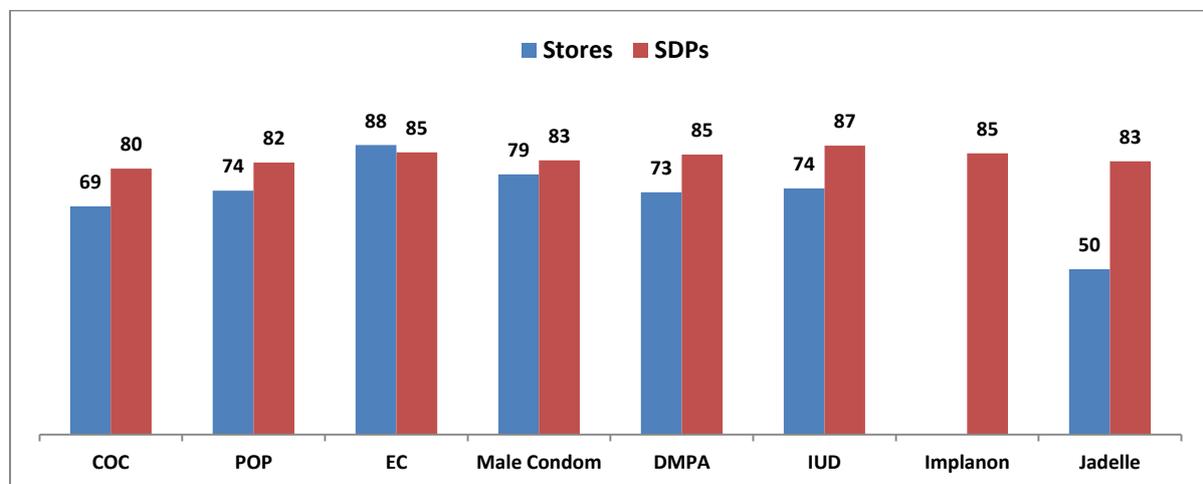
Similar views were shared by the district store staff of DOH:

*“We should provide laptops and computers at SDPs, so that dispenser can record the stock. The provincial or head office then can check what they need. It will become easy for us. Sometimes we face internet and electricity problem in record keeping process.” (Storekeeper- DOH Punjab)*

### Accuracy of stock records

Facilities were also asked to assess the accuracy of the balance entries on stock records. Accuracy was calculated by comparing the closing balance of each contraceptive on the updated stock cards with the physical count of each contraceptive on the day of the visit by the data collectors. Stock records were considered accurate if there was less than a +/- 10 percent discrepancy between the physical inventory and stock register balance. As shown in figure 9, most of the SDPs (over 80 percent) and stores (over 70 percent) had accurate stock records.

**Figure 9: Percentage of Facilities with Accurate Stock Records (within +/-10%)**



*Stockcards that had not been updated in previous 30 days were excluded from analysis.*

*Results for POP and Jadelle stores are based on fewer than 20 facilities and should be interpreted with caution.*

When disaggregated by stakeholders, over 80 percent of PWD and LHW Program stores and SDPs had accurate stock records for COC, male condoms, DMPA, and IUDs. Similarly, more than 70 percent of DOH stores and over 80 percent of DOH SDPs had accurate stock register balances. However, only 57 percent of the PPHI stores had accurate stock register balances for condoms, DMPA, and IUDs. Accuracy of stock register balances for COC was found at only one-third of PPHI stores. More than 70 percent of PPHI SDPs were observed with accurate stock balance entries for all managed products (see table 23).

**Table 23: Percentage of Facilities with Accurate Stock Records (within +/-10%), by Stakeholder**

Products	DOH		PPHI		PWD		LHW Program		Total	
	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
<b>COC</b>	73.3	84.6	33.3	70.2	82.4	81.5	90.9	80.1	73.1	80.3
<b>POP</b>		75.6		74.1	75.0	83.3			69.2	82.2
<b>EC</b>		50.0		66.7	85.7	86.3			85.7	85.3
<b>Male condoms</b>	73.3	83.3	57.1	78.8	83.3	83.8	100.0	83.1	80.8	82.8
<b>DMPA</b>	73.3	85.3	57.1	76.4	81.3	84.5	83.3	88.0	76.0	84.6
<b>IUDs</b>	80.0	86.6	57.1	85.2	92.3	88.1			80.0	87.3
<b>Implanon</b>		85.7		62.5		95.5				85.0
<b>Jadelle</b>		78.0	50.0	81.4		96.4			50.0	82.6

However, when considering the complete accuracy (0 percent discrepancy), overall, stockcards were found accurate at only 4 percent of the SDPs and less than 1 percent of the stores. Except EC and POP, there was little difference in the accuracy of stockcards for various products. Similarly, very little stakeholder variation was found for the level of accuracy (see table 24)

**Table 24: Percentage of Facilities with Accurate Stock Records (within 0%), by Stakeholder**

	DOH		PPHI		PWD		LHW Program		Total	
	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
<b>COC</b>	0.0	2.5	0.0	8.2	0.0	0.6	0.0	3.2	0.0	2.9
<b>POP</b>	0.0	8.2	0.0	9.4	0.0	4.5		21.1	0.0	5.9
<b>EC</b>		0.0		25.0	6.3	10.0		50.0	6.3	10.2
<b>Male condoms</b>	0.0	4.9	0.0	7.1	0.0	0.6	0.0	3.8	0.0	3.5
<b>DMPA</b>	6.7	2.7	0.0	10.1	0.0	2.2	0.0	3.3	1.9	3.7
<b>IUD</b>	0.0	3.5	0.0	5.3	0.0	2.0		3.4	0.0	3.0
<b>Implanon</b>		12.5		10.0		4.3		0.0		6.8
<b>Jadelle</b>		4.8	0.0	6.9		0.0		0.0	0.0	4.7
<b>Total</b>	1.6	3.6	0.0	8.0	1.0	2.8	0.0	3.7	0.8	3.9

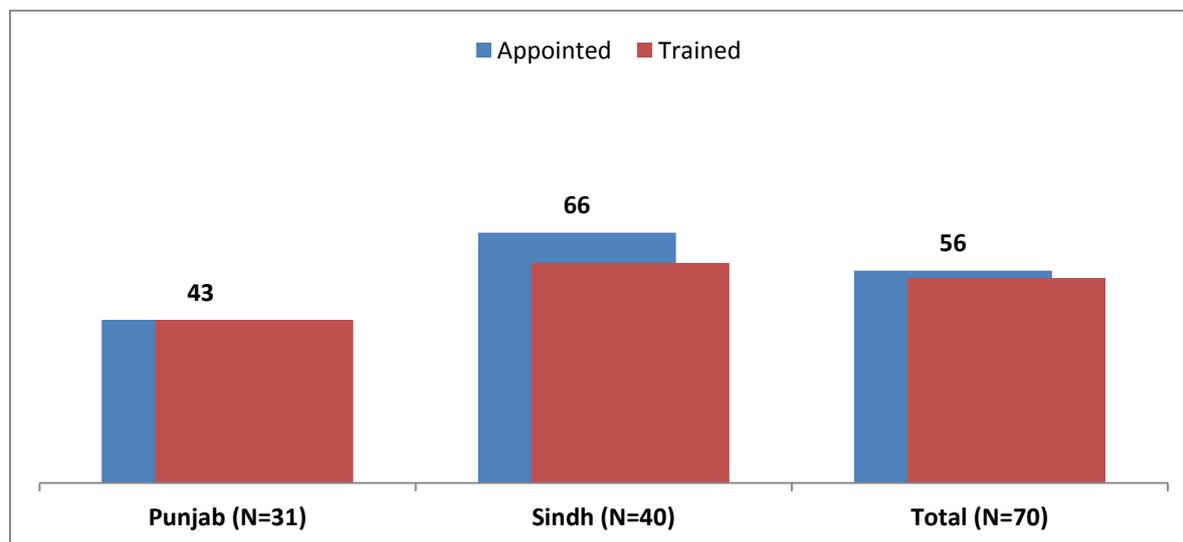
### 3.4.2. Use and Reporting to cLMIS

The cLMIS, an online web application, captures the contraceptive stock indicators data from SDPs and informs its users about stock positions, stockouts, and consumption pattern to ensure a smooth supply of family planning commodities by quantification and procurement of commodities. The cLMIS collects data about contraceptive commodities; this information is often used for activities, such as filling routine supply orders for health facilities. As mentioned earlier, according to current operating procedures, LMIS operators submit a CLR-6 form to the CHW, on behalf of EDOs, once a quarter. The CLR-6 contains quantities required for resupply for the entire district, which the EDO calculated using monthly consumption reports received from the SDPs.

### LMIS operators at the district

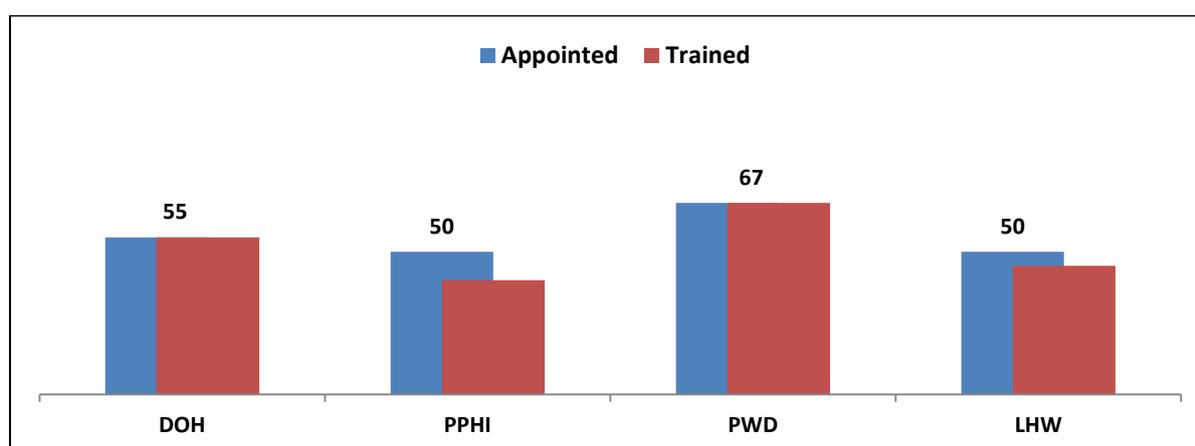
Just over half of the visited stores reported having appointed LMIS operators to maintain the cLMIS. The two provinces have some differences; in Punjab, fewer than half (43 percent) were appointed compared to two-thirds of stores in Sindh. All stores in Punjab where LMIS operators were appointed reported that the operators were trained. An overwhelming majority (93 percent) of the stores in Sindh with an appointed LMIS operator reported the same (see figure 10).

**Figure 10: Percentage of Stores with LMIS Operators Appointed and Trained**



When disaggregated by stakeholder, approximately 50 percent of the PPHI, LHW Program, and DOH stores; and two-thirds of the PWD stores, had an appointed CLMIS operator. All stores of DOH and PWD where LMIS operators were appointed reported that they were trained in LMIS. An overwhelming 90 percent of LHW Program and 80 percent of PPHI stores reported the same. When combined, however, only 40 percent of PPHI and 45 percent of LHW Program district stores had an appointed and trained LMIS operators (see figure 11).

**Figure 11: Percentage of Stores with LMIS Operators Appointed and Trained, by Stakeholder**

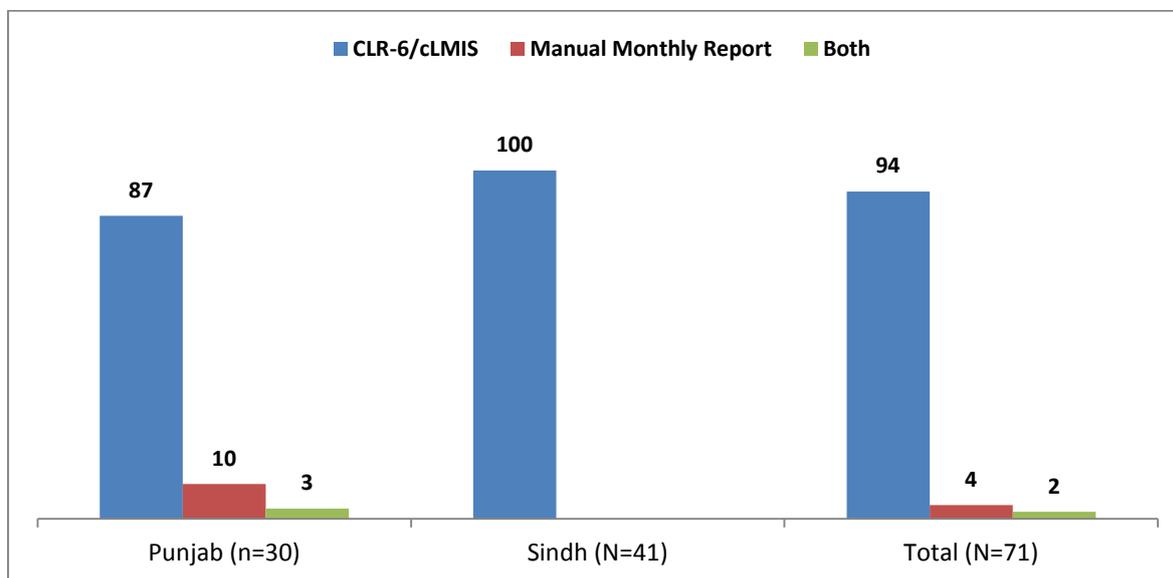


### Types of forms used by stores for reporting

District managers in district stores in both provinces reported a high use of CLR-6/cLMIS forms for reporting to higher levels. In Sindh, 100 percent of stores were using CLR-6/cLMIS

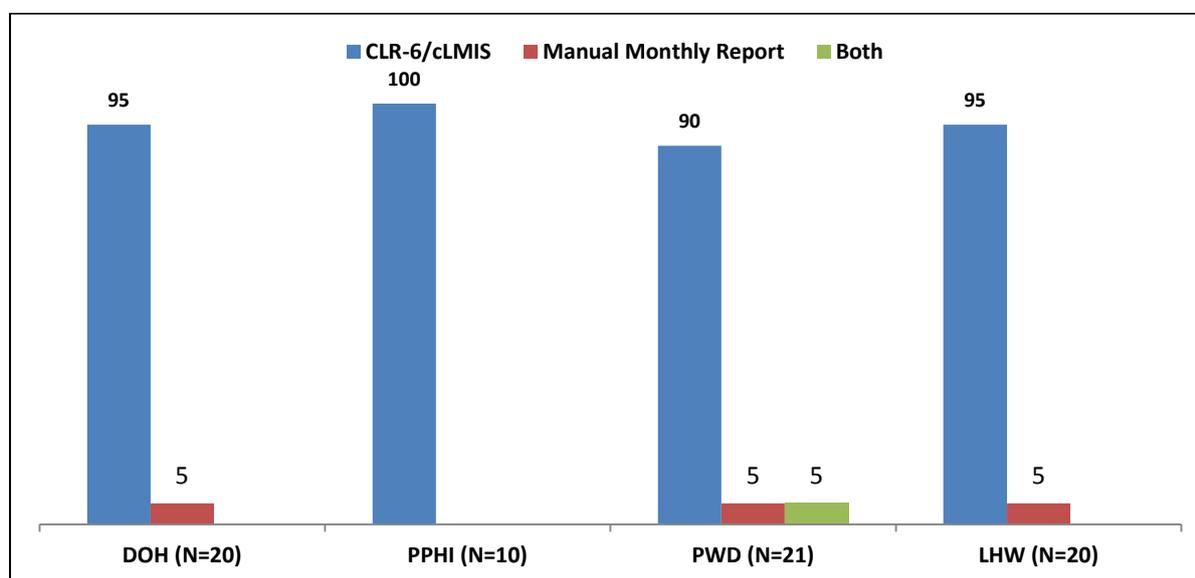
forms for reporting; 87 percent of stores in Punjab were using this form for reporting, while the remaining stores were either reporting through the manual monthly report or by both mechanisms. (See figure 12.)

**Figure 12: Types of Forms Used by District Stores for Reporting**



The trend of using CLR-6/cLMIS was similar, and almost consistent, across various stakeholders. Five percent of the DOH, PWD, and LHW Program stores were still reporting through manual monthly report. (See figure 13.)

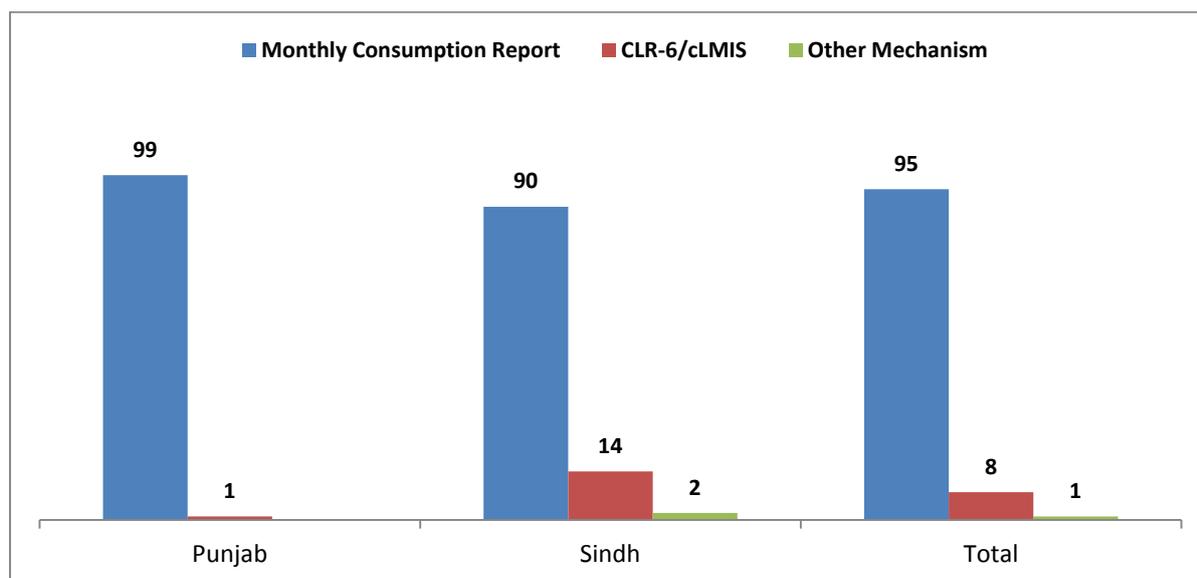
**Figure 13: Types of Forms Used by District Stores for Reporting, by Stakeholder**



**Types of forms used by SDPs for reporting**

Almost all SDPs reported using monthly consumption reports for reporting to the district level. In Sindh, 14 percent of SDPs reported using CLR-6/cLMIS for reporting monthly consumption to the district. When disaggregated by stakeholder, slightly more than one-fifth of PPHI SDPs and 10 percent of DOH SDPs were using CLR-6/cLMIS form for reporting (see figure 14).

**Figure 14: Percentage of SDPs by Types of Forms Used for Reporting**



\*Multiple responses

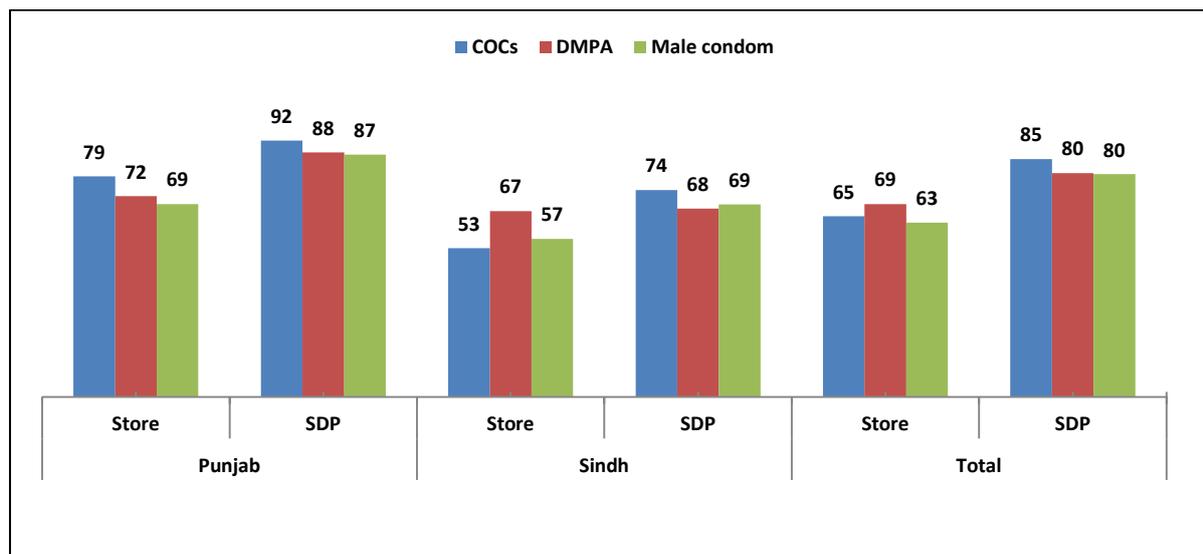
### Accuracy of LMIS Reports

As mentioned earlier, one of the objectives of the assessment was to determine the quality of the data within the system. Critical to this is determining the accuracy of the CLR-6, or monthly contraceptive report, sent to the higher level. As with the stock registry, accuracy was determined by comparing the stock balance on the LMIS report with the closing balance of each contraceptive on the stockcards, on or around the date (+/- 3 days) listed on the LMIS report. The record was excluded if the closing date was more than three days from the date the LMIS report was submitted. The LMIS report was considered accurate if the discrepancy between the LMIS report and stock register balances was less than +/- 10 percent. Analysis was, therefore, limited to facilities with both the LMIS report and updated stock records within the LMIS report time period. Additionally, given that management of products varied by stakeholder and SDP level, analysis was limited to COC, DMPA, and male condoms, which are per guidelines managed and used across all levels and stakeholders.

Overall, out of 71 stores, 68 (27: Punjab, 41 Sindh) had updated stockcards for COC, 66 for DMPA (27: Punjab, 39 Sindh), and 27 for condoms (27: Punjab, 40: Sindh); 66 CLR-6s were found. However, due to unmatched dates in the stock register or unavailability of records, only 56 stores were included in the accuracy of the LMIS analysis. Similarly, of all the SDPs, stockcards were available for COC at 1,696 SDPs (905: Punjab, 791: Sindh); DMPA at 1,655 SDPs (893: Punjab, 762: Sindh); and for condoms at 1,693 SDPs (903: Punjab, 790: Sindh). At SDPs, 1,584 monthly contraceptive reports were located. However, due to unmatched dates in the stock register, or the unavailability of registers, 1,275 facilities were included in the accuracy of LMIS analysis.

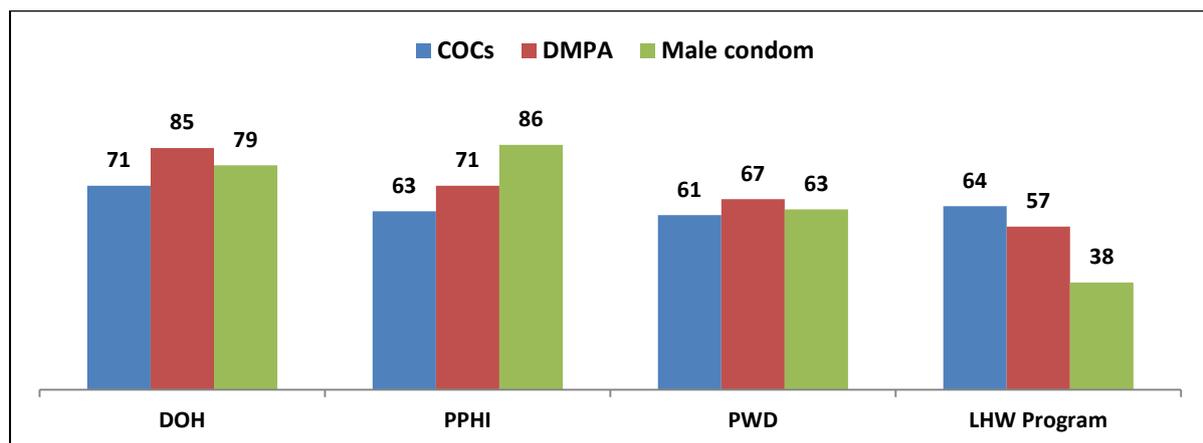
Based on analysis, approximately 65 percent of all stores and 80 percent of SDPs had accurate LMIS reports for COC, DMPA, and male condoms. Some variation was noted by province and product; accuracy rates were lower in Punjab and among male condoms (see figure 15).

**Figure 15: Percentage of Facilities with Accurate LMIS Reports (within +/-10%)**



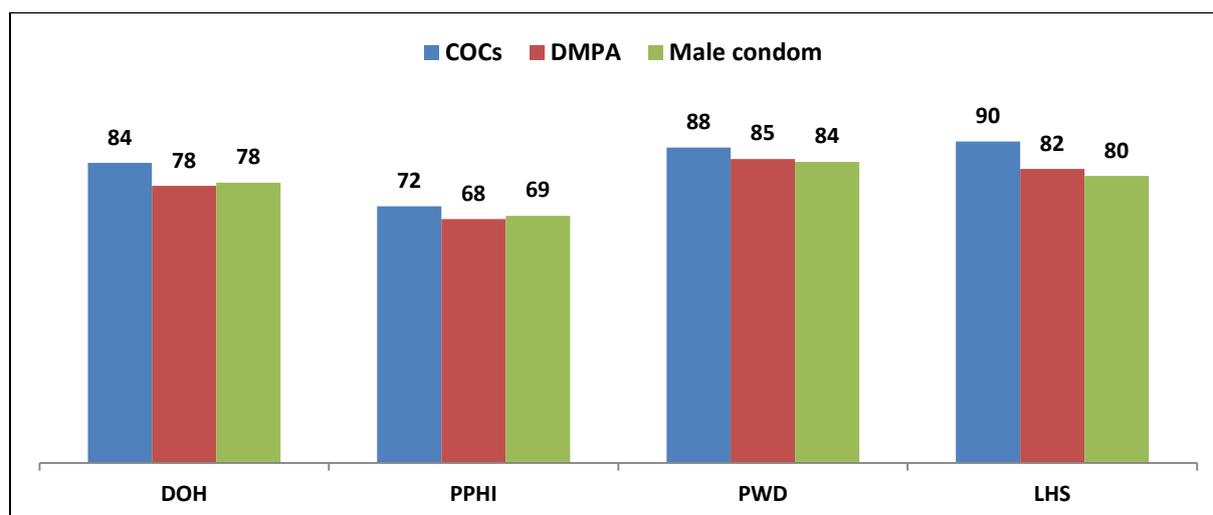
Across the stakeholders, the accuracy of the LMIS reports was higher at DOH and PPHI stores compared to the PWD and LHW Program stores. Approximately 80 percent or above of the DOH stores had accurate LMIS reports for DMPA and condoms; 71 percent for COCs. Similarly, accurate LMIS reports for condoms, DMPA, and COCs were found at PPHI stores (86 percent, 71 percent, and 63 percent, respectively). Around two-thirds of PWD stores had accurate LMIS reports for the three products (COC: 61 percent, DMPA: 67 percent, condoms: 63 percent). However, this was true in only 64 percent of the LHW Program store LMIS reports for COC, 57 percent for DMPA, and 38 percent of male condoms (see figure 16). It is interesting to note that despite having fewer appointed and trained LMIS operators, DOH LMIS reports were, overall, more accurate compared to PWD district stores, which had the highest percentage of trained staff.

**Figure 16: Percentage of District Stores with Accurate LMIS Reports, by Stakeholder (within +/-10%)**



Compared to the stores, over 80 percent of the SDPs managed by PWD, LHS, and DOH had accurate LMIS reports for the three products. However, as shown in figure 17, comparatively fewer percentages of PPHI SDPs had accurate LMIS reports for COC (72 percent), DMPA (68 percent), and male condoms (69 percent).

**Figure 17: Percentage of SDPs with Accurate LMIS Reports for COC, DMPA, and Male Condoms by Stakeholder (within +/-10%)**



Possible reasons mentioned during the qualitative component attributed the issues at the LHW Program to the lack and quality of training on the LMIS, financial resources, and power supply.

*“LHS/LHWs learn the process of management and recording of stock management by doing it. No proper training was given to them for stockkeeping and reporting to cLMIS.”* (FGD- Punjab)

*“No budget since 2010 is given for NP [LHW Program], Fuel is not available to deliver products on facilities and we cannot work on cLMIS due to load shedding of electricity.”* (An officer at District office LHW Program- Sindh)

While familiar with LMIS, one of the key problems reported with the cLMIS, however, was the lack of visibility at the lowest level. As expressed by a district storekeeper—

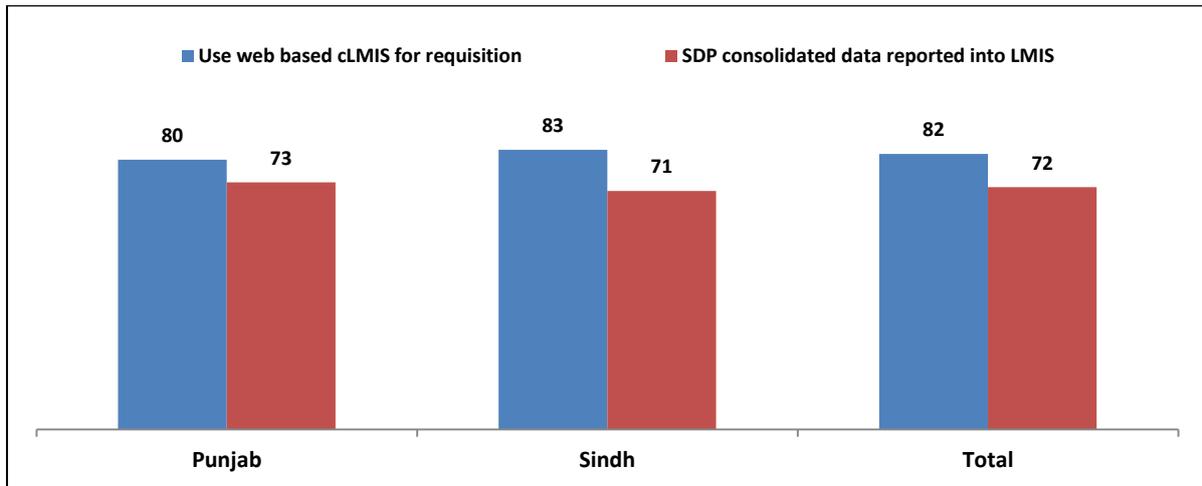
*“cLMIS records whatever we issue, but whatever SDPs used I have no idea because I am not receiving reports I am just ordering on the basis of issuance. It means cLMIS is not authentic.”* (IDI- Storekeeper, PPHI, Thatta, Sindh).

This may be directly linked to the fact that most of the respondents in Punjab had formal training for cLMIS, while the majority in Sindh learned on the job.

### **Requisition and reporting of FP products**

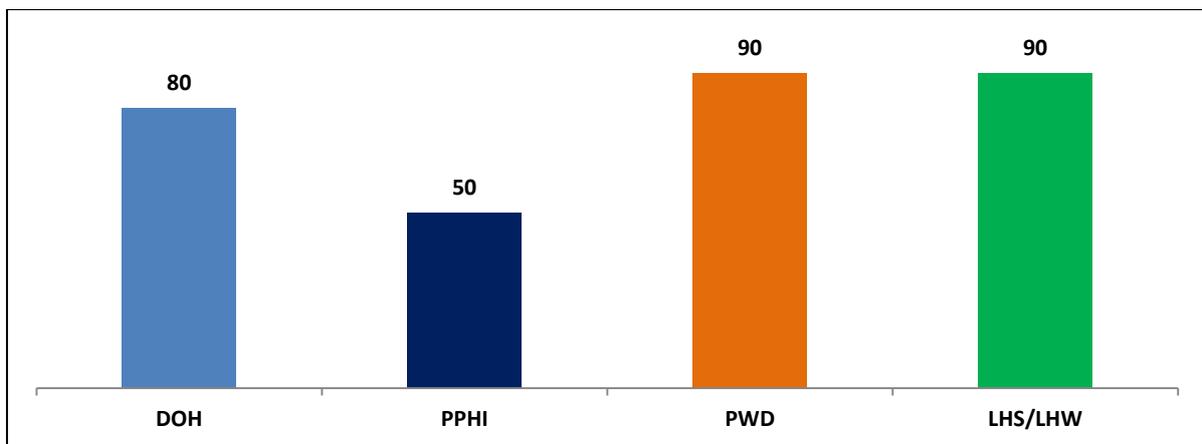
The web-based cLMIS allows for timelier reporting to the higher levels, allowing the CWH to receive the data almost instantly and process orders more quickly. When the CLR-6 is submitted using paper, this process is delayed. Overall, more than 80 percent of stores were using web-based cLMIS forms to requisition FP products, while slightly less than three-fourths of the stores were reporting SDP consolidated data in the cLMIS forms (see figure 18). These percentages are similar in both provinces.

**Figure 18: Percentage of Stores Using Web-Based cLMIS for Requisitions and SDP Consolidated Data Reported in cLMIS**

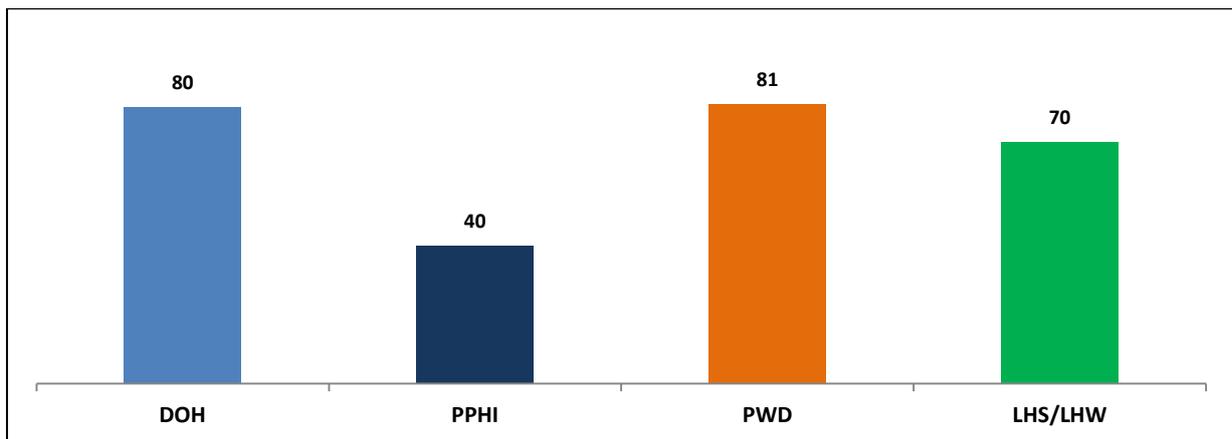


While 90 percent of PWD and LHW Program stores, and 80 percent of DOH stores were using web-based cLMIS forms for requisitions, only half of PPHI stores were doing so (see figure 19). Similarly, 80 percent of PWD and DOH, and 70 percent of LHW Program stores, were reporting SDP consolidated data in cLMIS forms; while only 40 percent of PPHI reported a similar practice (see figure 20).

**Figure 19: Percentage of Stores Using Web-Based cLMIS for Requisitions, by Stakeholder**



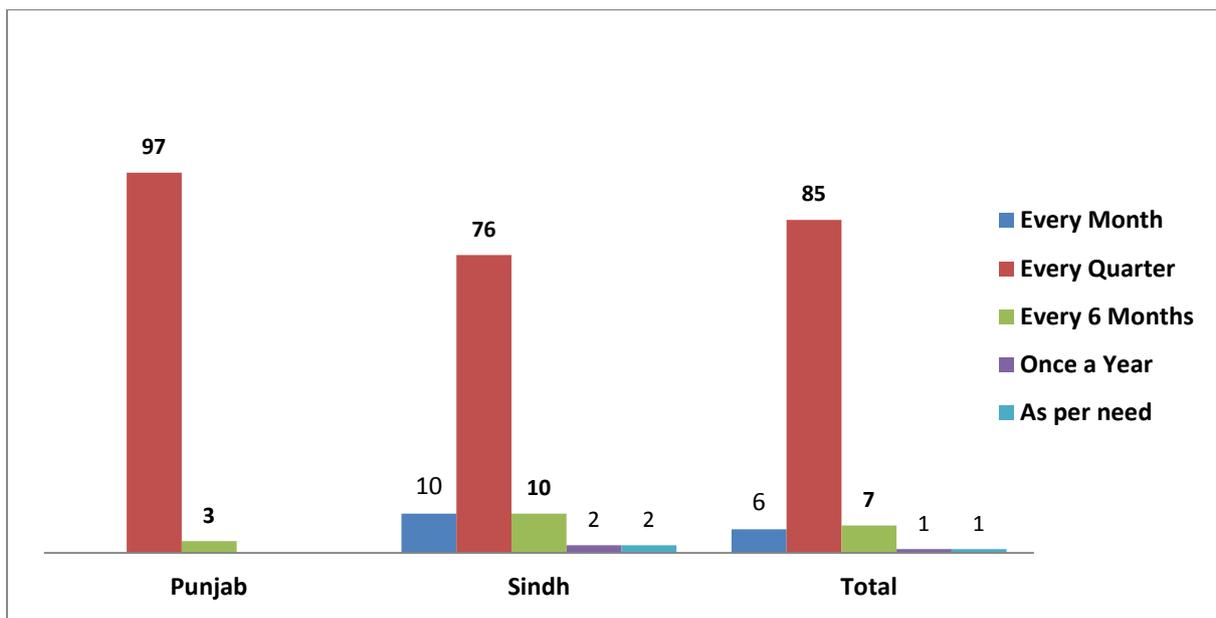
**Figure 20: Percentage of Stores with SDP Consolidated Data Reported in cLMIS, by Stakeholder**



### 3.4.3. Frequency for Ordering Contraceptives by District Stores

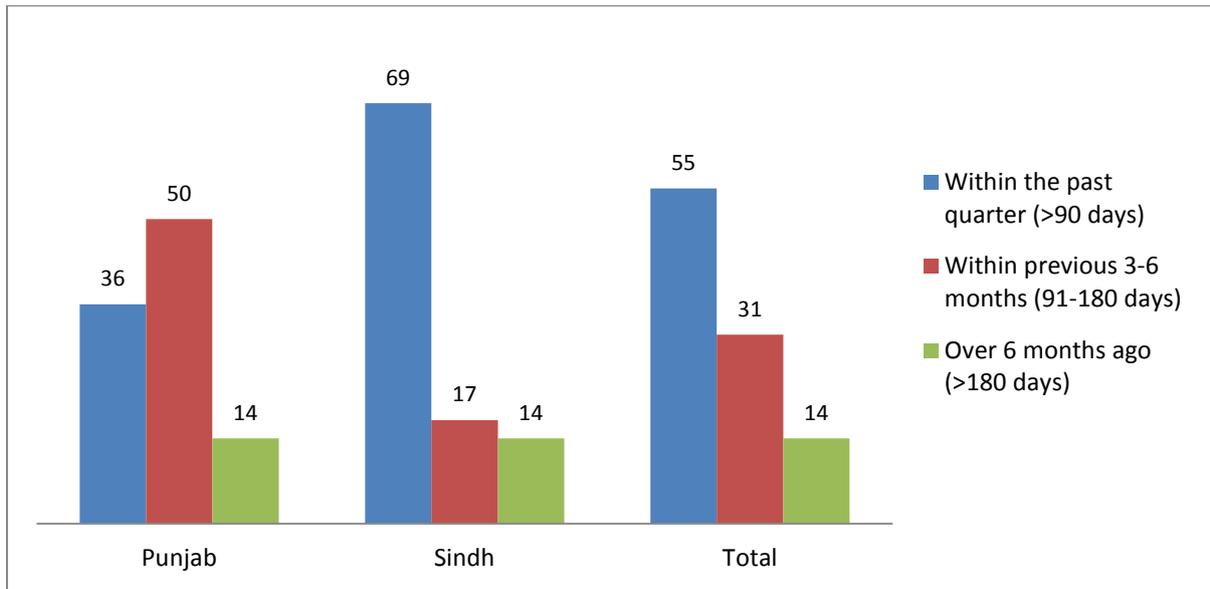
The survey teams asked district stores how often they order contraceptives from the central warehouse. Later, hard copies of last two consecutive orders (CLR-6) were requested for verification, ideally including the most recent one. Most (85 percent) reported that the stores placed orders once a quarter ; the two provinces had slight variations (see figure 21).

**Figure 21: Timing of Order by Stores for Contraceptive According to District Managers**



When the timing of orders was verified through records, a slightly different situation was observed. Overall, more than half of the district stores (55 percent) placed their order to CHWs within a quarter timeframe (0–90 days). However, 31 percent sent an order between three to six months (91–180 days) and another 14 percent placed the order with a more than six months (>180 days) gap (see figure 22). A greater percentage of stores in Sindh (69 percent) had orders placed within a quarter timeframe compared to Punjab (36 percent), indicating a better time compliance by stores in Sindh for placing contraceptive orders to CWH compared to stores in Punjab.

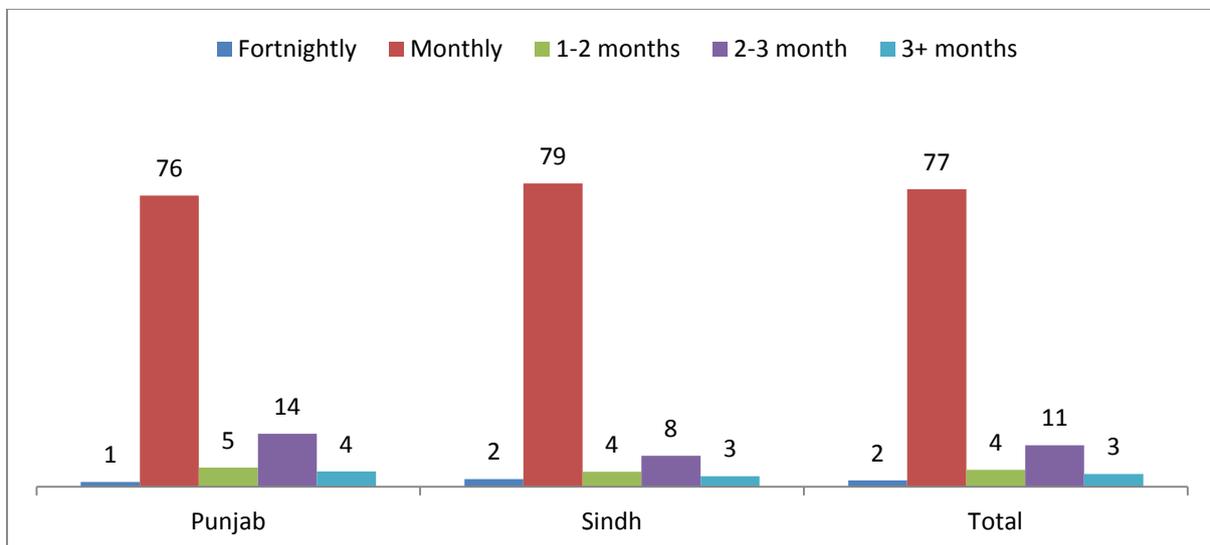
**Figure 22: Timing of Most Recent Order by Stores for Contraceptives as Verified by Record (CLR-6)**



### 3.4.4. Ordering and Reporting by SDPs

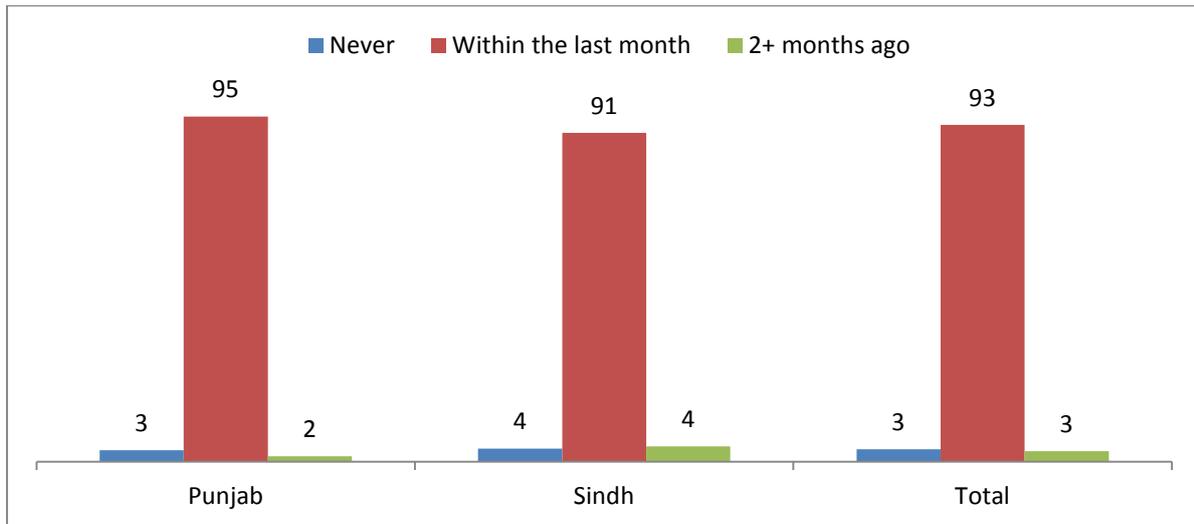
According to the current guidelines, SDPs are supposed to order and receive products on a monthly basis. When SDP managers were asked about how frequently they place an order for FP products, overall, more than 75 percent of SDPs reported they ordered once a month. In Punjab, 18 percent of respondents; and, in Sindh, 11 percent, reported that they place an order every two–three months or more. See figure 23.

**Figure 23: Frequency of SDPs Ordering Contraceptives According to SDP Managers**



As shown in figure 24, more than 90 percent of the SDPs in Punjab and Sindh provinces sent their consumption reports within the last month. All stakeholders reported sending consumption reports to the district offices at a similar frequency (data not shown).

**Figure 24: Frequency of Sharing Monthly Consumption Reports According to SDP Managers**



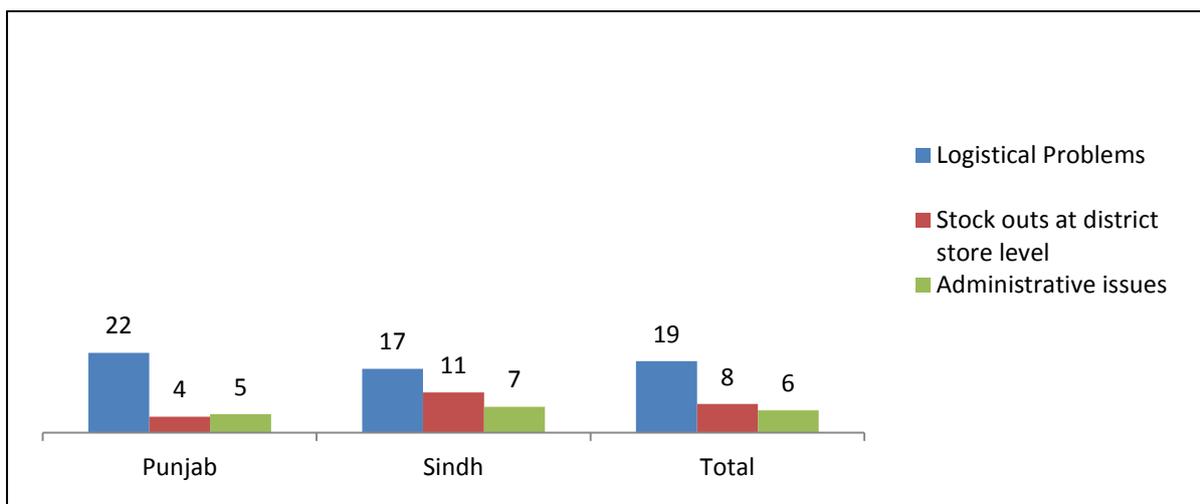
While a large majority of SDPs did not report any problems in ordering the FP products, approximately one-fifth of SDPs reported logistical problems (Punjab: 22 percent, Sindh: 17 percent); 8 percent mentioned stockouts at the district store level (Punjab: 4 percent, Sindh: 11 percent) and 6 percent reported administrative issues (Punjab: 5 percent, Sindh: 7 percent) when ordering. See figure 25.

The key logistic issues reported by the SDPs were related to transportation of products from the district stores to the SDPs.

*“Sometimes, the storekeeper goes on long leave. During his absence, the stock arrives but remains in the DOH office.”* (FGD-DOH Punjab)

*“Transportation from the district store remains a challenge and the LHWs pick their orders themselves.”* (FGD-LHW Program, Sindh)

**Figure 25: Issues with Ordering and Receiving Contraceptives from District Stores According to SDP Managers**



*\*Multiple responses*

During the FGDs with the LHW Program, it was noted that no mechanism is available to record the order when the LHS places it. LHSs described that after submitting an order to the district

office, they had to send multiple reminders before they received the medicines. Additionally, they never received confirmation after they placed an order. This was explained that often account supervisors (mid-level managers at the district program office) have limited capacity to issue and record distributed medicines.

*“If we send any request, we do not receive any verification according to the requisition.”* (FGD- LHS from District Ghotki, Sindh)

*“Sometimes, it happens that some of the requested products are not delivered due to unavailability in store. Last time, condoms were stockout and I waited for two months.”* (FGD- LHV from MCH Centre under DOH, Lahore, Punjab)

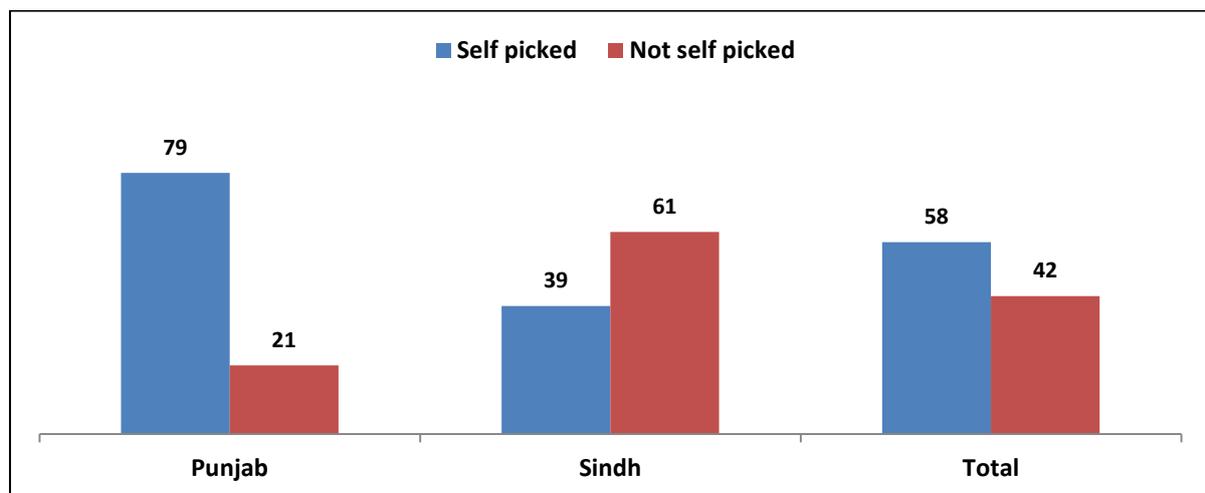
*“We send requisition on every first date of the month and receive supply on 3rd or 4th date every month.”* (FGD- Medical Officer, PPHI, Thatta, Sindh)

### 3.4.5. Transportation of Products to SDPs

As shown in figure 26, 58 percent of the SDPs reported they self-pick contraceptive products from the district office, while 42 percent reported that products were delivered to the SDPs. Approximately 80 percent of SDPs in Punjab were self-picking the products, while approximately 40 percent SDPs in Sindh reporting doing so.

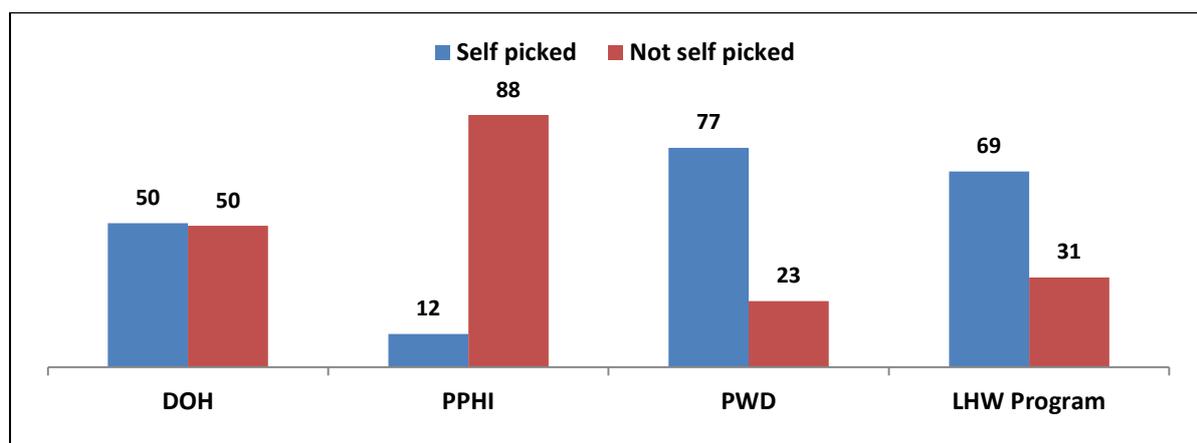
This difference between provinces, however, is probably because the PPHI district stores, which only operates in Sindh, usually delivers products to PPHI SDPs (see figure 27).

**Figure 26: Responsibility for Transporting Family Planning Products to SDP According to SDP Managers Province**



Some variations were noted across stakeholders for transporting contraceptive products. Where only 12 percent of PPHI SDPs reported that products were self-picked, most of the PWD (77 percent) and LHW Program (69 percent) SDPs reported self-picking contraceptive products from the district stores. One-half of DOH SDPs reported self-picking products from district stores.

**Figure 27: Percentage SDPs by Method of Transportation of Family Planning Products, by Stakeholder**



During the FGDs, many participants, especially LHS, PWD, and DOH-managed SDP service providers identified lack of transportation for delivering products as a major issue. They were responsible for using public transport to pick up the products and they had to pay the expenses out of their own pocket, which were rarely reimbursed. One LHS said that, because of the unavailability of transportation, she collects medicines from the district with her husband’s help, using her own transport to take medicines to the communities. District-level managers also recognize this as an issue.

*“Major issue during transportation of products is that our centers have no vehicle facility and female have to carry product herself by a rickshaw or even by local transport.” (IDI-PWD Punjab)*

*“LHWs share funds for transport, because there is no budget available for transport and no vehicles are available.” (LHS- Sindh)*

*“Yes we pay rent if we send any male or watchman to receive product from district store. And we wait for district store vehicle if they come to deliver. USAID is dealing project then I am suggesting that provide one vehicle to every SDP. Stock should be provided for more than 3 months.” (FGD- Family Welfare Counselor [FWC], PWD, Karachi, Sindh)*

Storekeepers at the district stores providing the FP products during some IDIs verified this.

*“The transportation of stock is the most difficult task. We are taking products to the center through our own transport by bearing carriage charges.” (FWW- FWC, Punjab)*

*“We send FP with deliverance of vaccine or with any transport going to field, with this process it is impossible to deliver on time.” (IDI-LHW Program, Sindh)*

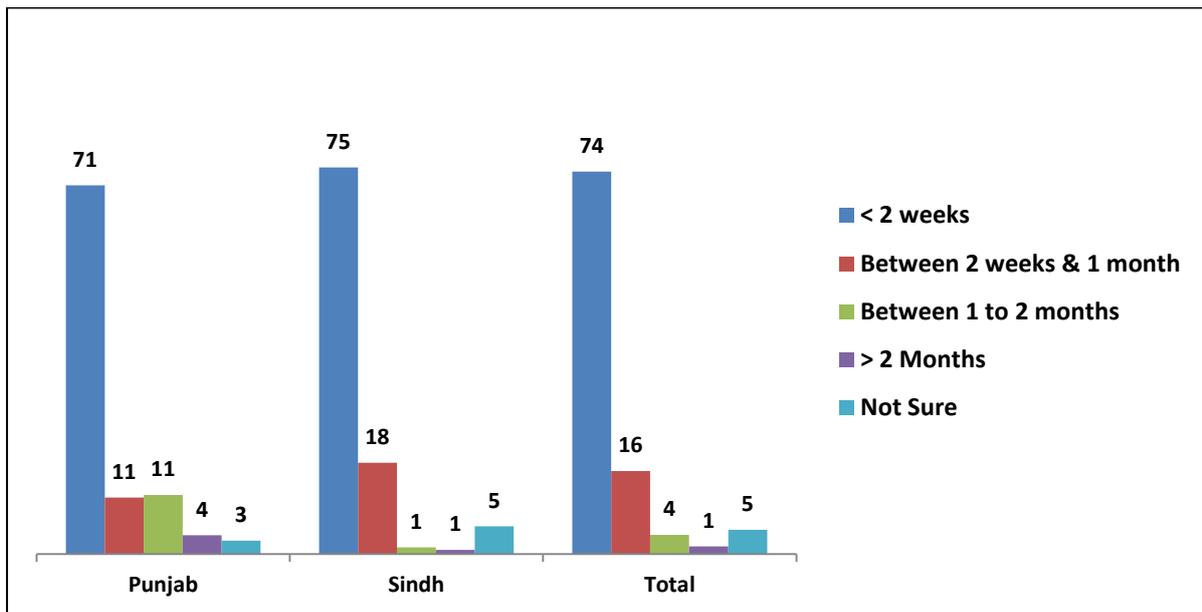
The main problems identified by the LHW Program in Sindh were unavailability or shortage of transport vehicles, and fuel for vehicles. Another issue that was highlighted in Punjab is that the stock for the various departments (PWD, DOH, and LHW Program), when delivered to SDPs, are transported in the same truck; they are often mixed together at the time of delivery.

*“We receive less than three month’s products in the same carton which is a problem. They put supplies of 3 or 4 centers (in a single carton) which are situated at the same route for delivering and they deliver one by one.” (FGD- FWW, PWD, Khairpur, Sindh)*

### 3.4.6. Lag Time between Ordering and Receiving Contraceptive Products

Respondents at the SDPs were asked about the average time it took to receive the products after they submitted a report that included placing the order. Approximately 75 percent of the SDPs reported that it took less than two weeks to receive the products after placing the order. This was more or less true for the SDPs in both provinces. Sixteen percent of SDPs reported it taking between two weeks and one month, while 5 percent of the SDPs were not sure. It is interesting to note that, despite the large differences in self-picking between provinces, lag time was similar. See figure 28.

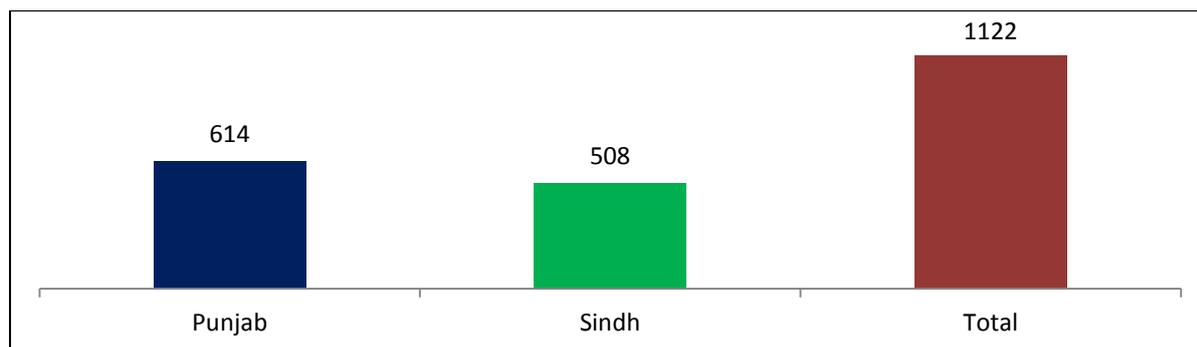
**Figure 28: SDPs by Lag Time between Ordering and Receiving Products According to SDP Managers**



## 4. LHW Program

The community health workers program known as the National Program for Family Planning and Primary Health Care (FP&PHC), was launched in 1994. The program is popularly known as the Lady Health Workers Program (LHWP). Currently, the program has an estimated 934 LHWs in Sindh and 46,155 in Punjab. A separate questionnaire was used to collect information from LHWs about available stock of FP products and recordkeeping *at the last mile*. During the survey, 1,122 LHWs were visited (Punjab: 614, Sindh: 508) in their communities. (See figure 29.)

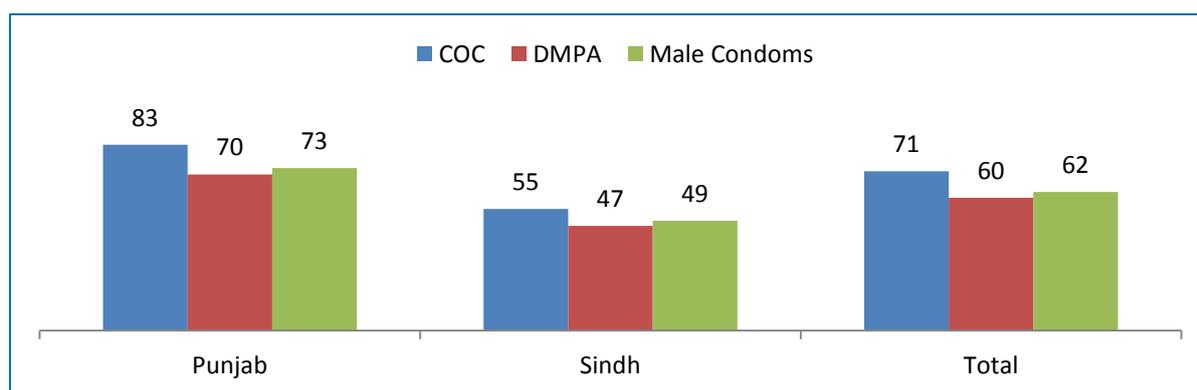
**Figure 29: Number of LHWs Visited, by Province**



### 4.1. Availability of Products on Day of Visit

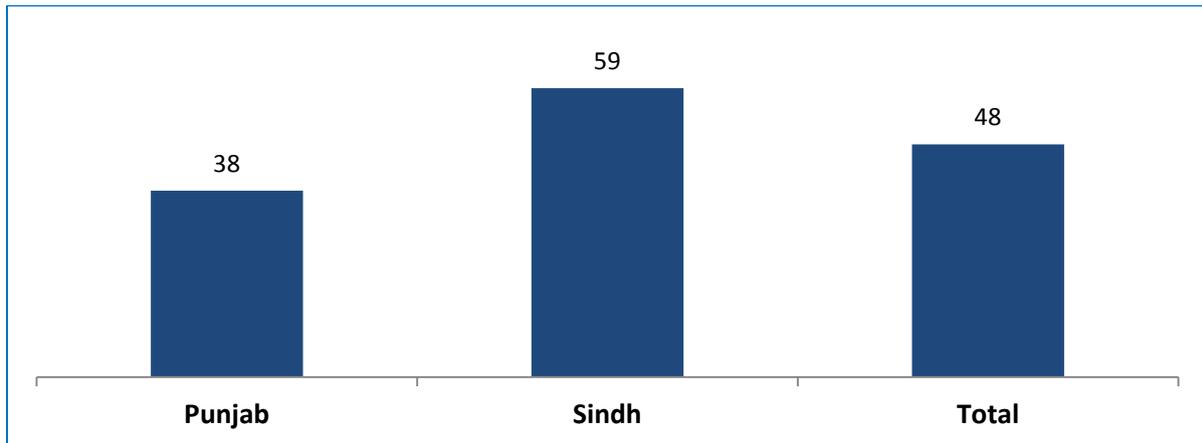
LHWs were asked for the availability of COC, DMPA, and male condoms. LHWs are currently expected to be provided with a monthly quota of 100 condoms, 10 cycles of pills, and three vials of DMPA. Overall, 71 percent of the LHWs reported the availability of COC, 60 percent for DMPA, and 62 percent for male condoms. Availability was higher in Punjab (COC: 83 percent, DMPA: 70 percent, condoms: 73 percent) compared to Sindh (COC: 55 percent, DMPA: 47 percent, condoms: 49 percent). Of those with any product, on average, had nine cycles of COC, four vials of DMPA, and 76 pieces of male condoms on the day of visit. (See figure 30.)

**Figure 30: Percentage of LHWs with Available Contraceptives, by Province**



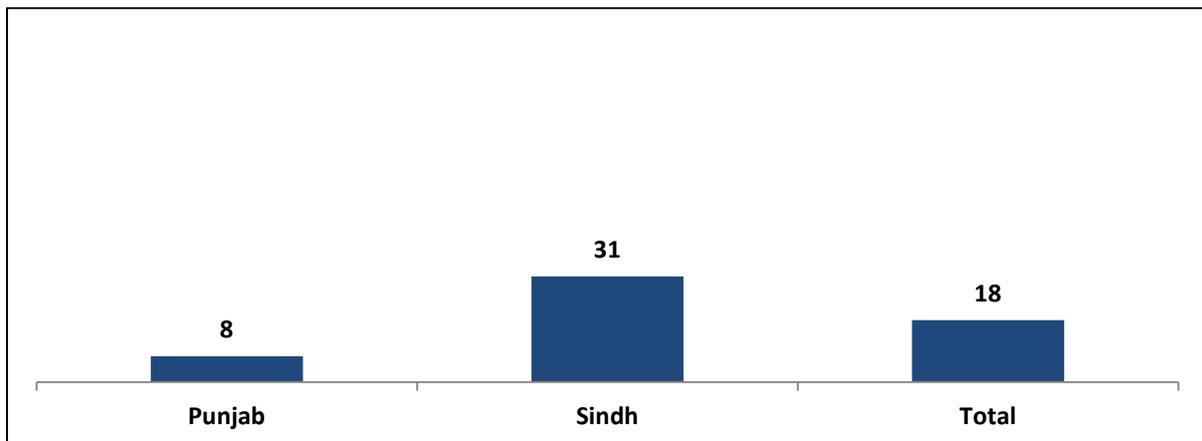
The survey looked at stockouts of any of the three products on the day of visit. Overall, just under half of all the visited LHWs were experiencing a stockout of at least one of the three products (i.e., COC, DMPA, or male condoms). More than one-third (38 percent) of the LHWs in Punjab was currently stocked out of a product, compared to 59 percent of the LHWs in Sindh. (See figure 31.)

**Figure 31: Percentage of LHWs Stocked Out of Any of Products on Day of Visit, by Province**



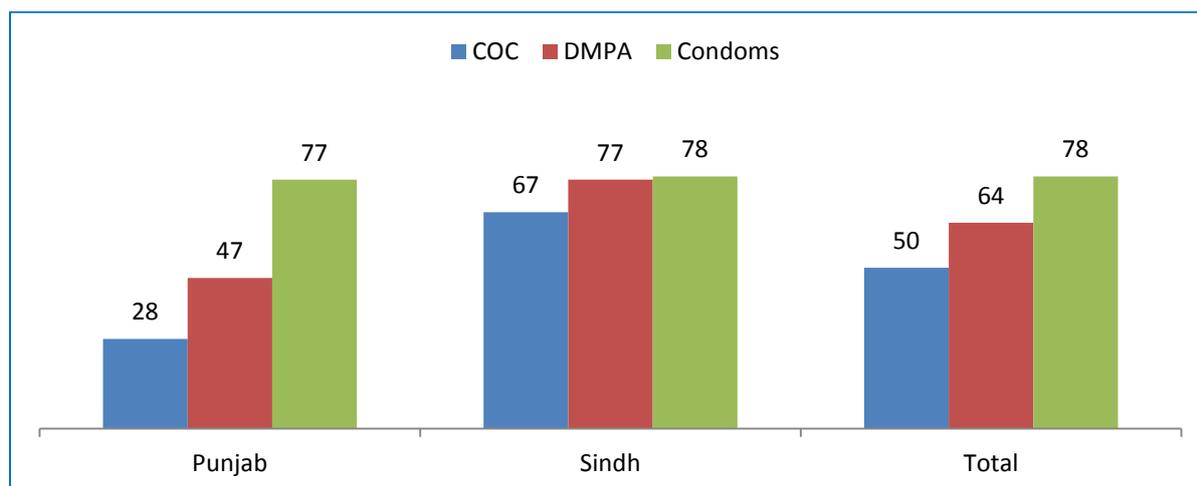
However, when analyzed for a stockout of all three products on day of visit, 18 percent of the LHWs were found to be stocked out of all products. Interestingly, slightly less than one-third of the LHWs in Sindh were stocked out of all products, compared to only 8 percent in Punjab. (See figure 32.)

**Figure 32: Percentage of LHWs Stocked Out of All Three Products on Day of Visit, by Province**



LHWs were also asked whether, in the previous six months, they were ever stocked out of any of the FP products. As shown in figure 33, 48 percent of LHWs reported being stocked out of one or more of the three products. Stockouts were more substantial in Sindh; more than two-thirds of the LHWs reported the stockout for COC, 77 percent for DMPA, and 78 percent for condoms.

**Figure 33: Percentage LHWs Stocked Out by Type of Product and Province**

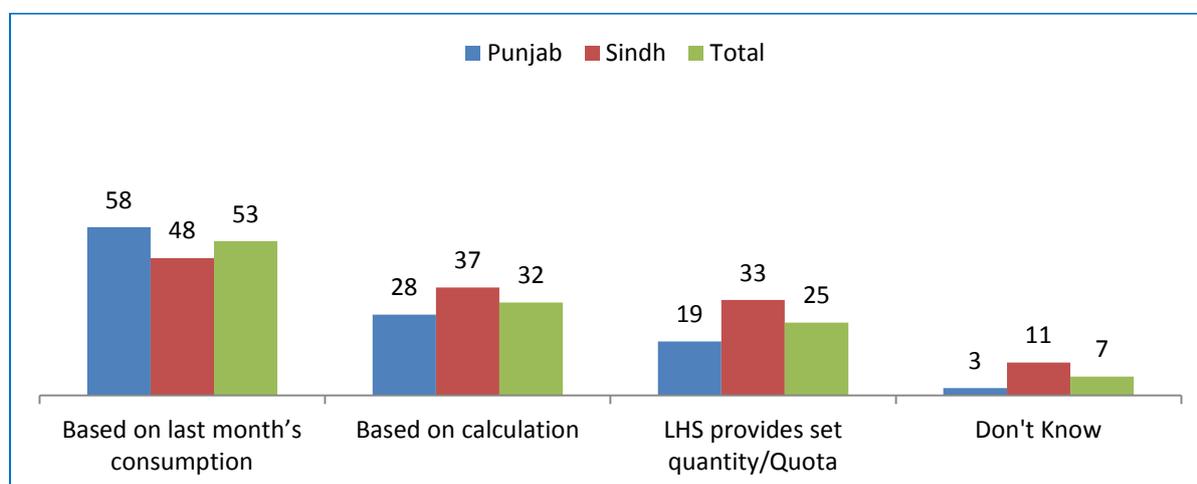


*Note: Response is based on six-month recall and records were not verified.*

## 4.2. Mechanism of Replenishment of Products

LHWs were asked about the mechanisms they use to replenish contraceptive products. Most (53 percent) of the LHWs reported basing their request on last month's consumption; whereas, one-third of LHWs send requests based on the calculation method. As shown in Figure 34, more LHWs in Punjab (58 percent) than in Sindh (48 percent) reported the mechanism based on last month's consumption. Higher percentages of LHWs in Sindh use the calculation-based method (37 percent) and set quantity/quota by LHS (33 percent), compared to the LHWs in Punjab (28 and 19 percent, respectively).

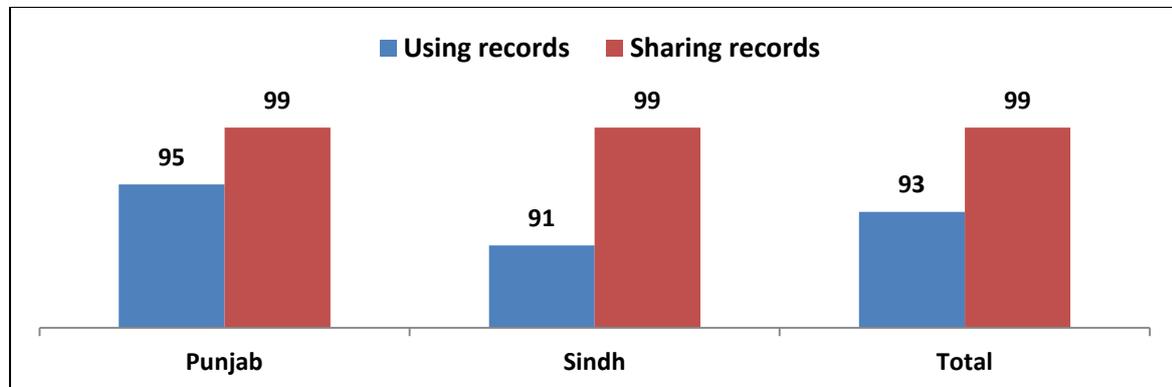
**Figure 34: Mechanism of Replenishing Products for LHWs**



### 4.3. Use of Records and Sharing to Higher Level

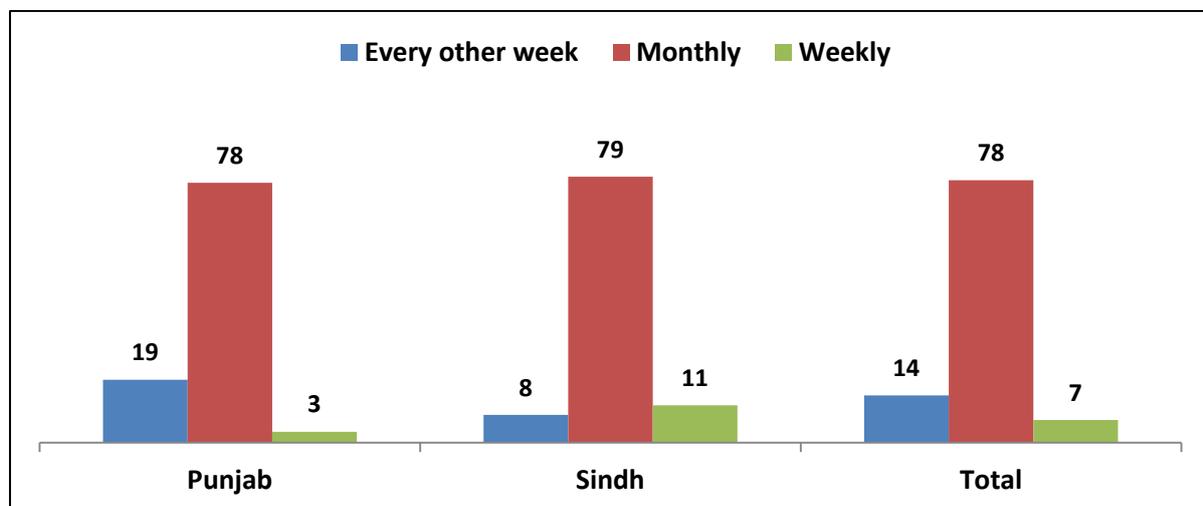
More than 90 percent of LHWs overall, and in both provinces, reported they are using the records. Almost all who use records are also sharing these records with their supervisors (see figure 35).

**Figure 35: Percentage of LHWs Using and Sharing Records, by Province**



Almost 80 percent of the LHWs sharing the records reported doing so once a month (in both provinces). A small percentage of the LHWs in Punjab (19 percent) and Sindh (8 percent) share their records every other week. Another 11 percent of LHWs in Sindh reported sharing records on a weekly basis (see figure 36).

**Figure 36: Percentage of LHWs by Frequency of Sharing Records, by Province**



# 5. Summary Findings for Sindh

## 5.1. Description of Facilities

A total of 1,039 facilities (district stores and SDPs) were visited in 13 districts in Sindh. Of those, 41 district stores were managed—10 each by DOH, LHW Program, PPHI—and 11 by PWD (the targeted district store of DOH in Karachi was not visited). Similarly, DOH managed 998 SDPs (190), PPHI managed 275 SDPs, PWD managed 279 SDPs, and LHW Program managed 254 visited SDPs. See table 25.

**Table 25: Number of Facilities Visited by District and Stakeholder**

Districts	DOH		PPHI		PWD		LHW Program		Total	
	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
Badin	1	1	1	47	0	0	1	23	3	71
Dadu	1	7	1	24	1	24	1	30	4	85
Ghotki	1	27	1	26	1	21	1	18	4	92
Jamshoro	1	31	0	0	0	0	0	0	1	31
Kamber	1	16	0	0	0	0	1	22	2	38
Khairpur	1	29	1	45	1	28	1	28	4	130
Karachi	0	9	0	0	2	45	1	42	3	96
Larkana	1	22	1	22	1	31	1	21	4	96
Sukkur	1	22	1	23	1	26	1	28	4	99
Tharparkar	0	0	1	22	1	26	1	21	3	69
Thatta	1	11	1	23	1	31	0	0	3	65
TM Khan	0	4	1	21	1	21	0	0	2	46
Umerkot	1	11	1	22	1	26	1	21	4	80
<b>Total</b>	<b>10</b>	<b>190</b>	<b>10</b>	<b>275</b>	<b>11</b>	<b>279</b>	<b>10</b>	<b>254</b>	<b>41</b>	<b>998</b>

### 5.1.1. Average numbers of facilities served by district store

In Sindh, on average, each store serves 36 SDPs, but with a substantial variability ( $SD \pm 25$ ). However, a larger number of stores reported serving 49 facilities (mode 49). Across the stakeholders, each PPHI store served a larger average number of SDPs (average: 53; mode: 49), followed by PWD (average 44; mode 17), LHW Program (average 38; mode: 39) and least by the DOH store (average 10; mode: 12). The variability was higher for LHW and PPHI stores ( $SD \pm 25$  approx.) than the PWD ( $SD \pm 19$ ); and it was smaller for the DOH stores ( $SD \pm 7$ ) (see table 26).

**Table 26: Average Number of SDPs Served by District Store, by Stakeholder**

	DOH	PPHI	PWD	LHW Program	Total
Mean	10	53	44	38	36
Std. deviation	7	24	19	25	25
Median	10	49	40	38	49
Mode	12	49	17	39	49
Valid N	10	10	11	10	41

### 5.1.2. Training and Provision of Implants and IUDs at SDPs

In Sindh’s 13 districts, 40 percent of the visited facilities reported having a trained provider of implants. Of the SDPs reporting trained providers, most were the PPHI SDPs (62 percent), followed by DOH (42 percent), but only 16 percent of PWD SDPs. However, overall, almost 75 percent of the SDPs reporting trained providers of implants also offered implant services (PPHI: 78 percent, DOH: 69 percent, and PWD: 67 percent). Less than two-thirds (62 percent) of the visited SDPs had trained providers of IUDs. More PWD SDPs (72 percent) than PPHI (56 percent) and DOH (54 percent) SDPs reported trained IUD providers. Of these SDPs, an overwhelming 90 percent of SDPs offer IUD services, with a similar and consistent percentage across the three stakeholders. See table 27.

**Table 27: Percentage of Facilities Reporting Trained Providers and Services for Implants and IUDs, by Stakeholder**

Trained Providers		Provision of Products							
		DOH	PPHI	PWD	Total	DOH	PPHI	PWD	Total
Implants*	%	43.2	61.8	16.1	39.9	69.5	78.2	66.7	74.1
	N	82	170	45	297	57	133	30	220
IUDs	%	53.7	56.4	72.4	61.7	89.2	88.4	90.1	89.3
	N	102	155	202	459	91	137	182	410

## 5.2. Stock Availability

The following section discusses the availability of products and identifies potential gaps within the system. Three key questions help determine how well facilities have provided the necessary products to clients, when needed.

1. Does the facility manage the product per national operating procedures and guidelines?
2. Is the facility able to provide the product on the day of visit?
3. How well is the facility managing its inventory?

The indicators—**product management, stock availability, instances and duration of stockouts in the previous months, and current facility stock levels (i.e., stocked according to plan)**—are used to answer these questions. The findings are presented under the following headings: (1) management and availability of products on day of visit, (2) stockouts during previous months, and (3) the current stock levels.

## 5.2.1. Management and Availability of Family Planning Products on Day of Visit

### Management of FP Products

Product management looks at whether or not a product is usually offered at the facility (i.e., in the previous 12 months), regardless of whether or not it was in stock on the day of the visit. This shows whether or not facilities are being provided with products based on the national guidelines. Most district stores and SDPs reported managing COC, male condoms, DMPA, and IUDs. Almost all stores, and approximately 90 percent of the SDPs, were managing COC, male condoms, and DMPA. More than 90 percent of the stores, and 62 percent of the SDPs, were managing IUDs. A fewer percentage of stores and SDPs were managing the remaining four products—POP: (stores: 42 percent, SDPs 34 percent); EC: (stores: 29 percent, SDPs: 16 percent); and Jadelle: (stores: 32 percent, SDP: 29 percent). Implanon was not managed by any of the stores and was managed by just 4 percent of SDPs. Almost a similar pattern was observed across various stakeholders. EC was managed only by PWD while Jadelle was managed only by PPHI. LHW, PPHI and PWD SDPs managed COC, male condoms and DMPA almost universally compared to over 80 percent of DOH SDPs. IUD was managed by over half of the DOH (54 percent) and PPHI (59 percent) SDPs compared to three fourth of the PWD (74 percent) SDPs. See table 28.

**Table 28: Percentage of Facilities Managing Contraceptive, by Stakeholders**

Sindh										
	DOH		PPHI		PWD		LHW Program		Total	
	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
	n=10	n=190	n=10	n=275	n=11	n=279	n=10	n=254	n=41	n=998
<b>COC</b>	100.0	84.7	100.0	93.8	100.0	97.5	100.0	92.9	100.0	92.9
<b>POP</b>	0.0	13.7	30.0	18.9	90.9	62.4	--*	--*	41.9	33.9
<b>EC</b>	0.0	2.1	0.0	2.5	81.8	39.1	--*	--*	29.0	16.1
<b>Male condoms</b>	100.0	82.1	90.0	93.5	100.0	98.2	100.0	92.5	97.6	92.4
<b>DMPA</b>	100.0	82.6	90.0	89.1	90.9	93.9	100.0	91.7	95.1	89.9
<b>IUDs</b>	100.0	53.7	100.0	58.9	72.7	73.8	--*	--*	90.3	63.2
<b>Implanon</b>	0.0	3.7	0.0	5.8	0.0	1.4	--*	--*	0.0	3.6
<b>Jadelle</b>	0.0	28.4	100.0	50.9	0.0	6.8	--*	--*	32.3	28.6

### Stockouts on day of visit

A physical count of commodities on the day of visit determined contraceptive availability and stockouts from the facilities that reported managing the product. At the district stores, 12 percent were stocked out of COC on day of visit and 5 percent were stocked out of male condoms. Only LHW Program stores had stockouts of male condom (20 percent). None of the DOH operated district stores had a stockout. More stockouts were found for POP (39 percent), EC (22 percent), and Jadelle and DMPA (20 percent each). POP was stocked out at two-thirds of PPHI and 30 percent of PWD stores. PPHI stores also registered 33 percent stockouts for DMPA. Except for male condoms and Jadelle, PWD stores registered stockouts for COC (18 percent), POP (30 percent), EC (22 percent), DMPA (30 percent), and IUDs (38 percent).

LHW Program SDPs had the highest stockouts rates—42 percent for COC, 47 percent for male condoms, and 51 percent for DMPA. Implanon was stocked out at 75 percent of PWD SDPs, while 36 percent were stocked out of POP, and 31 percent stocked out of IUDs. PPHI SPDs were stocked out of EC (29 percent), DMPA (23 percent), and POP (21 percent). Half of the EC stockouts were found at DOH SDPs, followed by Implanon (14 percent). See table 29.

**Table 29: Percentage of Facilities Stocked Out on the Day of Visit, by Stakeholder**

	DOH		PPHI		PWD		LHW Program		Total	
	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
<b>COC</b>	0.0	10.6	0.0	8.9	18.2	13.2	30.0	42.4	12.2	19.0
<b>POP</b>	0.0	7.7	66.7	21.2	30.0	35.6	--*	--*	38.5	29.8
<b>EC</b>	0.0	50.0	0.0	28.6	22.2	23.9	--*	--*	22.2	25.0
<b>Male condoms</b>	0.0	13.5	0.0	13.6	0.0	9.9	20.0	46.8	5.0	20.9
<b>DMPA</b>	0.0	10.2	33.3	22.9	30.0	16.0	40.0	50.6	25.6	25.9
<b>IUDs</b>	0.0	8.8	0.0	3.1	37.5	31.1	--*	--*	10.7	16.6
<b>Implanon</b>	--*	14.3	--*	18.8	--*	75.0	--*	--*	--*	25.9
<b>Jadelle</b>	--*	3.7	20.0	6.4	--*	15.8	--*	--*	20.0	6.6

--\* = Product not managed by level or program.

\*Results for POP and Jadelle are based on fewer than 15 district stores and should be interpreted with caution.

### 5.2.2. Stockout in the Previous Months

For further insight into the availability of FP methods at facilities, data collectors looked at stockcards and stock records for stockouts, the number of times each facility stocked out of any commodity, and the average duration of the stockouts over the six-months preceding the survey (May–October 2015) for stores and three-month preceding the survey (August–October 2015).<sup>9</sup> **The results presented here are based on available and updated records (i.e., the records were updated in the previous 30 days prior to the visit) for contraceptives managed by the facility.**

As shown in table 30, 25 percent of the district stores had a stockout of DMPA in the previous six months, while 18 percent had a stockout of COC, 19 percent for IUDs, and 12 percent for condoms.. No stockouts were found at DOH stores and only 25 percent of PPHI stores had a stockout of IUDs, and 13 percent of DMPA and male condoms. More stockouts were found at the LHW Program and PWD stores. LHW Program stores stocked out of DMPA (57 percent), COC (43 percent), and male condoms (29 percent); whereas, PWD stores had stockouts for IUDs (50 percent), DMPA (43 percent), and COC (38 percent).

For the remaining products, Jadelle—managed only at PPHI stores—was stockedout at 70 percent of the PPHI stores in the last six months. Similarly, EC, which only the PWD district stores managed, was stockedout at 67 percent of their stores. POP was stockedout at half of PPHI and PWD stores during the last six months.

Except for EC (27 percent), stockouts at SDPs were below 15 percent for all other products in the previous three months. DOH did not report any stockouts for POP, EC, and Implanon. PWD reported the most stockouts in the last three months for Implanon (50 percent). See table 30.

<sup>9</sup>As mentioned earlier, a six-month review period was used for the district level records to capture two delivery cycles and to better assess the duration of stockouts. A three-month review period was used at the SDP level because reporting and delivery are on a monthly basis.

**Table 30: Percentage of Facilities Stocked Out of Contraceptives in Previous Months, by stakeholder and Level**

Products	DOH		PPII		PWD		LHW Program		Total	
	Store	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
<b>COC</b>	0.0	8.8	0.0	12.4	37.5	11.3	42.9	21.6	18.2	12.9
<b>POP</b>	0.0	0.0	50.0	3.1	50.0	24.0	--*	--*	50.0	14.2
<b>EC</b>	0.0	0.0	0.0	0.0	66.7	35.4	--*	--*	66.7	27.4
<b>Male condoms</b>	0.0	10.2	12.5	15.1	11.1	7.8	28.6	23.4	12.1	13.1
<b>DMPA</b>	0.0	10.6	12.5	17.9	42.9	9.9	57.1	22.6	25.8	14.7
<b>IUDs</b>	0.0	8.6	25.0	7.1	50.0	15.5	--*	--*	19.0	9.0
<b>Implanon</b>	--*	0.0	--*	10.0	--*	50.0	--*	--*	--*	8.0
<b>Jadelle</b>	--*	9.8	70.0	18.6	--*	15.4	--*	--*	70.0	12.4

--\* Product not managed at facility or level.

Results for POP and Jadelle stores are based on fewer than 10 facilities and should be interpreted with caution.

### Instance and duration of stockouts in the previous months

Table 31 shows the average number of times during the previous months before the survey that stores and SDPs stocked out of any of the methods; and the average number of days the stockouts lasted, based on updated stock cards. In the months leading up to the survey, instances of stockouts were relatively low, but the average duration is long for all contraceptive methods. On average, the stores and SDPs experienced slightly over one stockout of each contraceptive product in the previous three–six months. The average duration of stockouts was between two–three months at district stores and more than one month at SDPs for short-term contraceptives.

**Table 31: Instances and Duration of Stockouts in Previous Months, by Level**

	Average Number of Stockouts		Average Number of Days of Stockouts	
	Stores	SDPs	Stores	SDPs
<b>COC</b>	1.3	1.2	91	39.6
<b>POP</b>	1.3	1.2	82	41.6
<b>EC</b>	2.3	1.3	96	45.0
<b>Male condoms</b>	1.3	1.3	85	38.3
<b>DMPA</b>	1.1	1.3	60	44.6
<b>IUDs</b>	1.5	1.2	72	48.8
<b>Implanon</b>	--*	1.0	--*	79.0
<b>Jadelle</b>	1.3	1.2	91	51.0

--\*Product not managed at facility or no observed stockout during record review.

Results for POP and Jadelle stores are based on fewer than 10 facilities and should be interpreted with caution.

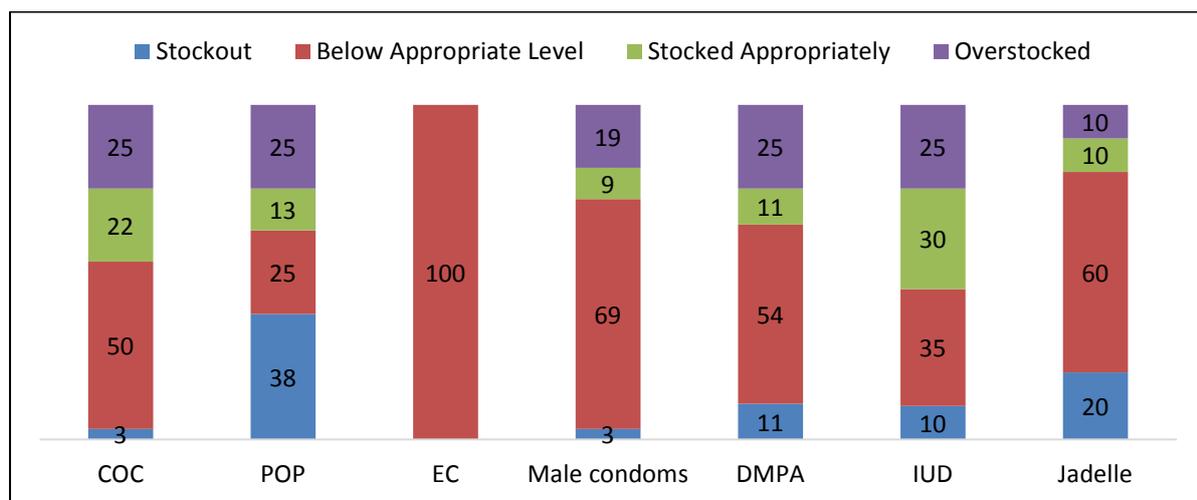
### 5.2.3. Current Stock Levels

Stock position by month and method shows how many months of stock facilities have available. Low levels or non-availability of stock increases the likelihood of stockouts at facilities before the next delivery cycle. Overstock of products leads to challenges with expires or damaged product because of storage issues. Facilities are required to submit their requisitions based on their stock consumption and should be replenished accordingly. As mentioned earlier, the following categories, based on the system design, were used to assess stock levels:

	Store	SDP
1. Understocked	Less than or equal to 2.99 months	Less than or equal to 0.99 month
2. Stocked appropriately	3.0–5.99 months	1.0–3.0 months
3. Overstocked	6.0 months or more	3.1 months or more

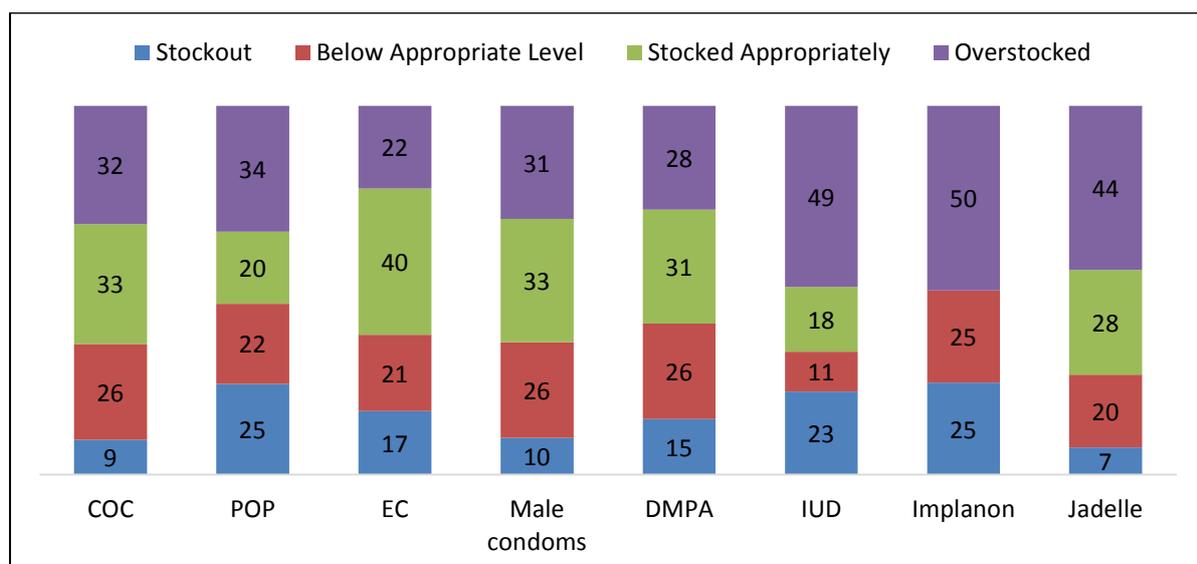
As shown in figure 37, more than half of district stores had stock levels below the appropriate level, while nearly one-fourth had various contraceptive products overstocked.

**Figure 37: Percentage of District Stores Maintaining Appropriate Stock Levels**



Compared to stores, about one-third of SDPs were maintaining appropriate stock levels for COC, condoms, and DMPA. However, more than one-third of all SDPs were overstocked for various products (see figure 38).

**Figure 38: Percentage of SDPs Maintaining Appropriate Stock Levels**



As shown in table 32, approximately three or more months of stocks were available at district stores and SDPs for all products. However, PWD stores showed less than one month of stock for EC and just over one month of stock for IUDs. Similarly, the LHW Program stores had

three months and two months stocks for COC and male condoms, respectively. Stocks of all managed products at DOH and PPHI district stores were reported to be sufficient and over the recommended level of three months, with the exception of IUDs (two months) and Jadelle (three months) at PPHI district stores. At SDPs, significant levels of overstocking were seen across stakeholders. However, stocks were found insufficient (less than three months)—POP and male condoms at PWD, and DMPA at PPHI and PWD SDPs.

**Table 32: Average Months of Stock Available at Facilities, by Stakeholders and Level**

	DOH		PPHI		PWD		LHW Program		Total	
	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
<b>COC</b>	5.3	11.7	6.1	3.8	1.5	3.2	2.9	5.9	3.9	5.3
<b>POP</b>	--*	3.5	3.6	2.3	2.7	1.9	--*	--*	2.9	2.1
<b>EC</b>	--*	0.7	N/A	8.9	0.5	1.9	--*	--*	0.5	2.2
<b>Male Condom</b>	9.3	23.1	6.1	7.1	1.5	2.1	2.0	3.0	4.6	6.8
<b>DMPA</b>	9.4	5.5	17.5	2.0	1.4	2.7	2.8	3.4	7.4	3.1
<b>IUDs</b>	7.9	57.9	2.0	12.7	1.3	5.7	--*	--*	4.0	16.3
<b>Implanon</b>	--*	0.2	--*	3.5	--*	--*	--*	--*	--*	0.4
<b>Jadelle</b>	--*	3.2	3.1	6.1	--*	19.6	--*	--*	3.1	6.8

--\* = Product not managed at facility level

## 5.3. Recordkeeping Practices

### 5.3.1. Availability of Stock Records

As mentioned earlier, data collectors also reviewed facility records. With the exception of POP at PPHI district stores, stock records were available for all contraceptive methods at the district stores. Availability of records was slightly lower at SDPs—from 85 percent to 95 percent—depending on the method and stakeholder (see table 33). Stock records for COC, male condoms, and DMPA were available at only two-thirds of the LHW Program SDPs.

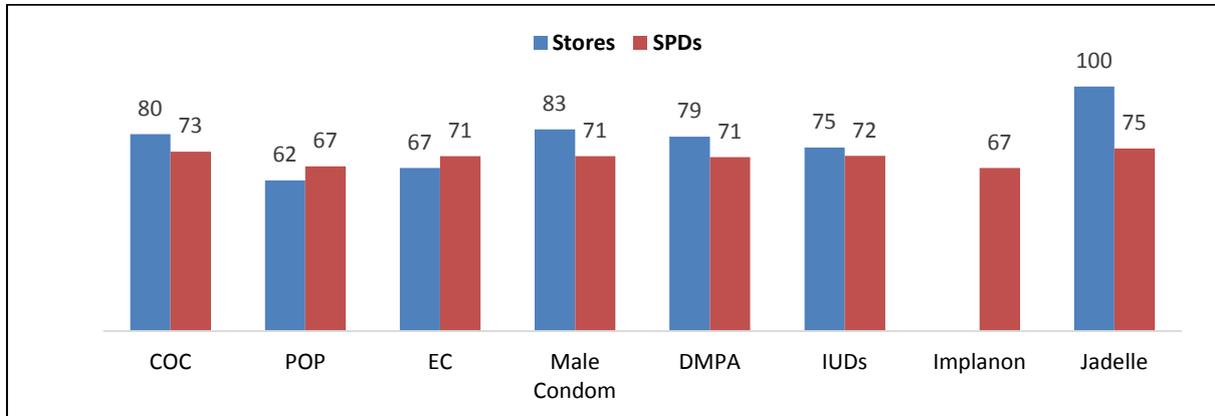
**Table 33: Percentage of Facilities with Available Stock Records, by Stakeholder and Level**

	DOH		PPHI		PWD		LHW Program		Total	
	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
<b>COC</b>	100	83.2	100	96.9	100	91.5	100	66.9	100	85.3
<b>POP</b>	0	84.6	66.7	86.5	100	90.8	--*	--*	92.3	89.3
<b>EC</b>	0	100	0	100	100	87.2	--*	--*	100	88.3
<b>Male Condom</b>	100	84.6	100	96.1	100	92.7	100	66.8	100	85.7
<b>DMPA</b>	100	84.1	100	95.1	100	92.7	100	66.1	100	84.9
<b>IUDs</b>	100	83.3	100	93.8	100	89.3	--*	--*	100	89.6
<b>Implanon</b>	--*	85.7	--*	100	--*	75	--*	--*	--*	92.6
<b>Jadelle</b>	0	96.3	100	95	0	89.5	--*	--*	100	94.8

### 5.3.2. Updated Stock Records

Of the facilities with available stock records, more than 60 percent of district stores and SDPs were updated in the previous 30 days. Levels varied by product (see figure 39).

**Figure 39: Percentage of Facilities with Updated Stock Records**

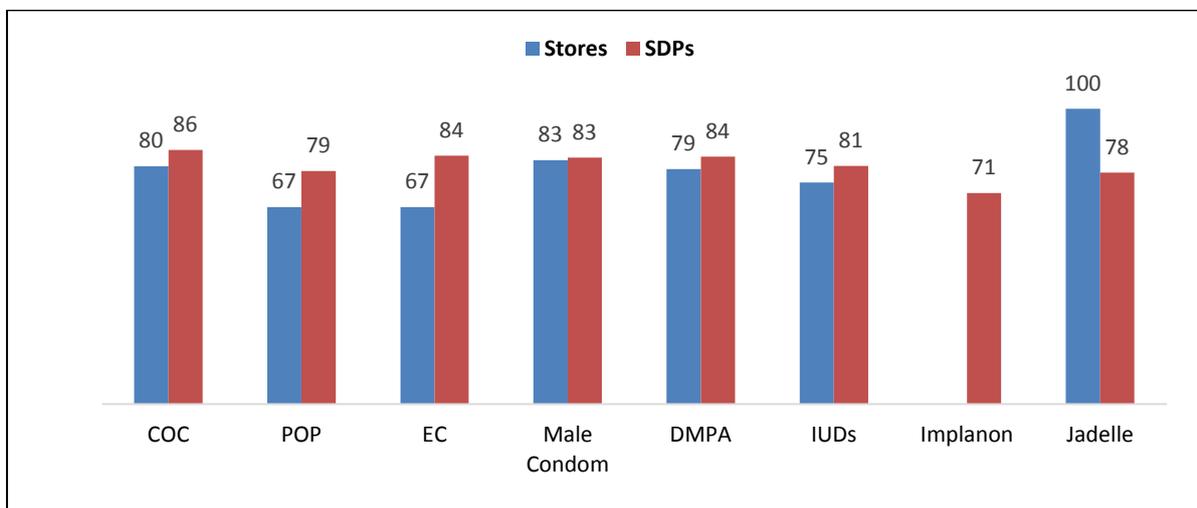


*Results for POP and Jadelle stores are based on fewer than 10 facilities and should be interpreted with caution.*

### 5.3.3. Accuracy of stock records

Facilities were also assessed on the accuracy of the balance entries on stock records. Accuracy was calculated by comparing the closing balance of each contraceptive on the updated stockcard with the physical count of each contraceptive on the data collectors' day of visit. Stock records were considered accurate if there was less than a +/- 10 percent discrepancy between physical inventory and stock register balance. As shown in figure 40, the majority of SDPs (over 70 percent) and stores (over 70 percent) had accurate stock records.

**Figure 40: Percentage of Facilities with Accurate Stock Records (within +/- 10%)**



*This analysis excluded stockcards that had not been updated in previous 30 days.*

*Results for POP and Jadelle stores are based on fewer than 20 facilities and should be interpreted with caution.*

# 6. Summary Findings for Punjab

## 6.1. Description of Facilities

A total of 952 facilities (district stores and SDPs) were visited in the 10 districts of Punjab. Of these 30 district stores, the DOH, LHW Program, and PWD managed 10 each. Similarly, of the 922 SDPs, 315 were managed by DOH, 300 managed by PWD and 307 managed by LHW Program. See table 34.

**Table 34: Number of Facilities Visited, by District and Stakeholder**

District	DOH		PWD		LHW Program		Total	
	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
Bahawalnagar	1	38	1	28	1	34	3	100
Faisalabad	1	49	1	47	1	49	3	145
Hafizabad	1	31	1	21	1	25	3	77
Khanewal	1	35	1	33	1	35	3	103
Khushab	1	21	1	21	1	21	3	63
Lahore	1	41	1	43	1	33	3	117
Layyah	1	27	1	32	1	21	3	80
Mianwali	1	22	1	25	1	21	3	68
Narowal	1	18	1	25	1	27	3	70
Okara	1	33	1	25	1	41	3	99
<b>Total</b>	<b>10</b>	<b>315</b>	<b>10</b>	<b>300</b>	<b>10</b>	<b>307</b>	<b>30</b>	<b>922</b>

### 6.1.1. Average Numbers of Facilities Served by District Store

In Punjab, on average, each store serves 73 SDPs with a significant variability ( $SD \pm 39$ ). The variability factor for DOH is higher ( $STD \pm 54$ ) than LHS/LHW ( $STD \pm 33$ ) and PPHI ( $STD \pm 25$ ). More facilities reported being served by the LHW Program stores (mean: 73, mode 39) than other stakeholder (see table 35).

**Table 35: Average Number of SDPs Served by District Store, by Stakeholder**

Variable	Punjab			
	DOH	PWD	LHW Program	Total
Mean	83	63	73	73
Std. deviation	54	25	33	39
Median	77	40	38	49
Mode	12	17	39	49
Valid N	10	10	10	30

### 6.1.2. Training and Provision of Implants and IUDs at Implants and IUDs at SDPs

In Punjab's 10 districts, 11 percent of the visited facilities reported trained providers of implants. Of them, 14 percent were found at PWD and the remainder (7 percent) at DOH. Of these, two-thirds of PWD SDPs reported actually providing implant services at PWD, while 27 percent of DOH facilities reported providing implant services. Half of the visited SDPs had trained

providers of IUDs—87 percent at DOH and 91 percent at PWD—almost all reported providing IUDs insertions (see table 36).

**Table 36: Percentage of Facilities Reporting Trained Providers and Services for Implants and IUDs, by Stakeholder**

Products		Trained Providers			Provision of Products		
		DOH	PWD	Total	DOH	PWD	Total
Implants*	%	7.0	14.3	10.6	27.3	67.4	53.8
	N	22	43	65	6	29	35
IUDs	%	87.0	91.3	50.2	98.2	100.0	99.1
	N	274	274	548	269	274	543

## 6.2. Stock Availability

The following section discusses the availability of products and identifies potential gaps within the system. Three key questions helped determine how well facilities have provided the necessary products to clients, when needed.

1. Does the facility manage the product per national operating procedures and guidelines?
2. Is the facility able to provide the product on the day of visit?
3. How well is the facility managing its inventory?

The indicators—**product management, stock availability, instances and duration of stockouts in previous months, and current facility stock levels (i.e., stocked according to plan)**—are used to answer these questions. The findings are presented under the following headings: (1) management and availability of products on day of visit, (2) stockouts during previous months, and (3) current stock levels.

### 6.2.1. Management and Availability of FP Products on Day of Visit

#### Management of FP Products

Product management looks at whether or not a product is usually offered at the facility (i.e., in the previous 12 months), regardless of whether or not it was in stock on the day of visit. This shows whether or not facilities are being provided with products based on the national guidelines. Most of the district stores and SDPs managed four of the eight products—COC, male condoms, DMPA, and IUDs (see table 37).

**Table 37: Percentage of Facilities Managing Contraceptives, by Stakeholders**

	DOH		PWD		LHW Program		Total	
	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
	n=10	n=315	n=10	n=300	n=10	n=307	n=30	n=922
<b>COC</b>	100.0	98.4	100.0	99.7	100.0	100.0	100.0	99.3
<b>POP</b>	20.0	11.7	90.0	83.7	--*	--*	55.0	46.8
<b>EC</b>	0.0	1.0	100.0	81.0	--*	--*	50.0	40.0
<b>Male Condom</b>	90.0	99.4	100.0	99.7	90.0	99.0	93.3	99.3
<b>DMPA</b>	100.0	98.4	100.0	97.0	100.0	99.3	100.0	98.3
<b>IUDs</b>	100.0	92.7	100.0	96.3	--*	--*	100.0	94.5
<b>Implanon</b>	0.0	1.0	0.0	7.3	--*	--*	0.0	4.1
<b>Jadelle</b>	0.0	0.6	0.0	5.3	--*	--*	0.0	2.9

\*= product not managed by level or program

### Stockouts on day of visit

A physical count of commodities on the day of visit determined contraceptive availability and stockouts from facilities that reported managing the product. At district stores, stockouts were found for COC (10 percent), male condoms, and DMPA (7 percent); POP (18 percent); and EC (20 percent) on the day of the visit. At SDPs, stockouts were found at 9 percent of facilities for EC and male condoms. Jadelle was available at all the SDPs in Punjab (see table 38).

**Table 38: Percentage of Facilities Stockout on the Day of Visit, by Stakeholder**

	DOH		PWD		LHW Program		Total	
	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
<b>COC</b>	10.0	1.6	10.0	1.7	10	3.6	10.0	2.3
<b>POP</b>	50.0	5.4	11.1	6.4	--*	--*	18.2	6.3
<b>EC</b>	--*	33.3	20.0	8.6	--*	--*	20.0	8.9
<b>Male condoms</b>	0.0	5.1	10.0	1.0	11.1	20.1	7.1	8.7
<b>DMPA</b>	10.0	2.3	0.0	1.0	10	11.5	6.7	5.0
<b>IUDs</b>	0.0	2.1	0.0	1.0	--*	--*	0.0	1.5
<b>Implanon</b>	--*	0.0	--*	4.5	--*	--*	--*	4.0
<b>Jadelle</b>	--*	0.0	--*	0.0	--*	--*	--*	0.0

--\*= product not managed by level or program

\*Results for POP are based on fewer than 10 district stores and should be interpreted with caution.

### 6.2.2. Stockout in the Previous months

For further insight into the availability of FP methods at facilities, data collectors looked at stockcards and stock records for the occurrence of stockouts, the number of times each facility stocked out of any of the commodities, and the average duration of the stockouts during the six-month period preceding the survey (May–October 2015) for stores and three months preceding the survey (August–October 2015) for SDPs. **The results presented in the following are based on available and updated records (i.e., the records had been updated in the previous 30 days prior to the visit) for contraceptives managed by the facility.**

Stockouts were more prevalent at district stores than SDPs. Overall, during the last six months, stockouts of POP and EC were found at 30 percent of the stores. Stockouts of COC (18 percent), male condoms and IUDs (13 percent), and DMPA (9 percent) were also found. On the other hand, except for EC (19 percent), stockout rates of any of the product during last three months were less than 10 percent at SPDs.

Across stakeholders, DOH stores had stockouts of condoms (33 percent) and COC (17 percent); LHW Program stores of COC (33 percent), male condoms, and DMPA (17 percent); and PWD stores of IUDs (20 percent), and COC and DMPA (10 percent). Except for the LHW Program SDPs with stockouts of condoms (14 percent) and DMPA (10 percent), and DOH SDPs with condoms (7 percent), no stakeholder's SDP reported stockouts of any of the short-term products or IUDs above 5 percent (see table 39).

**Table 39: Percentage of Facilities Stocked Out of Contraceptives in Previous Months, by Stakeholder and Level**

	DOH		PWD		LHW Program		Total	
	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
<b>COC</b>	16.7	4.6	10.0	3.4	33.3	5.3	18.2	4.4
<b>POP</b>	100.0	9.1	22.2	8.0	--*	--*	30.0	8.1
<b>EC</b>	0.0	0.0	30.0	19.3	--*	--*	30.0	19.1
<b>Male condoms</b>	33.3	6.5	0.0	0.7	16.7	14.4	13.6	7.2
<b>DMPA</b>	0.0	4.9	10.0	4.8	16.7	9.7	9.1	6.5
<b>IUDs</b>	0.0	4.9	20.0	4.9	--*	--*	12.5	4.9
<b>Implanon</b>	--*	0.0	--*	4.5	--*	--*	--*	4.0
<b>Jadelle</b>	0.0	0.0	0.0	6.3	--*	--*	0.0	5.9

--\* = product not managed by level or program

\*Results for POP are based on fewer than 10 district stores and should be interpreted with caution.

### Instance and duration of stockouts in the previous months

On average, stores and SDPs experienced one stockout for all contraceptive products during the last three–six months. Although the average number of stockout was low, both stores and SDPs reported they remained stocked out for longer average duration (one to two months). Stores reported longer durations of stockouts compared to SDPs. The longest average duration of stockouts at stores was DMPA (82 days), followed by COC (two months), POP (51 days), EC (one and one-half months), IUDs (one month), and male condoms (23 days). At the SDPs, the average duration of stockouts was longest for Implanon and Jadelle (three months), compared to POP and EC (one and one-half months), and DMPA, IUD, COC, and male condoms (slightly more than one month). See table 40.

**Table 40: Instances and Duration of Stockouts in Previous Months, by Level**

	Average Number of Stockouts		Average Number of Days of Stockouts	
	Stores	SDPs	Stores	SDPs
<b>COC</b>	1.3	1.1	61	36
<b>POP</b>	1.3	1.0	51	43
<b>EC</b>	1.3	1.3	46	47
<b>Male condoms</b>	1.3	1.2	23	33
<b>DMPA</b>	1.5	1.1	82	38
<b>IUDs</b>	1.0	1.1	27	39
<b>Implanon</b>	--*	1.0	--*	90
<b>Jadelle</b>	--*	1.0	--*	90

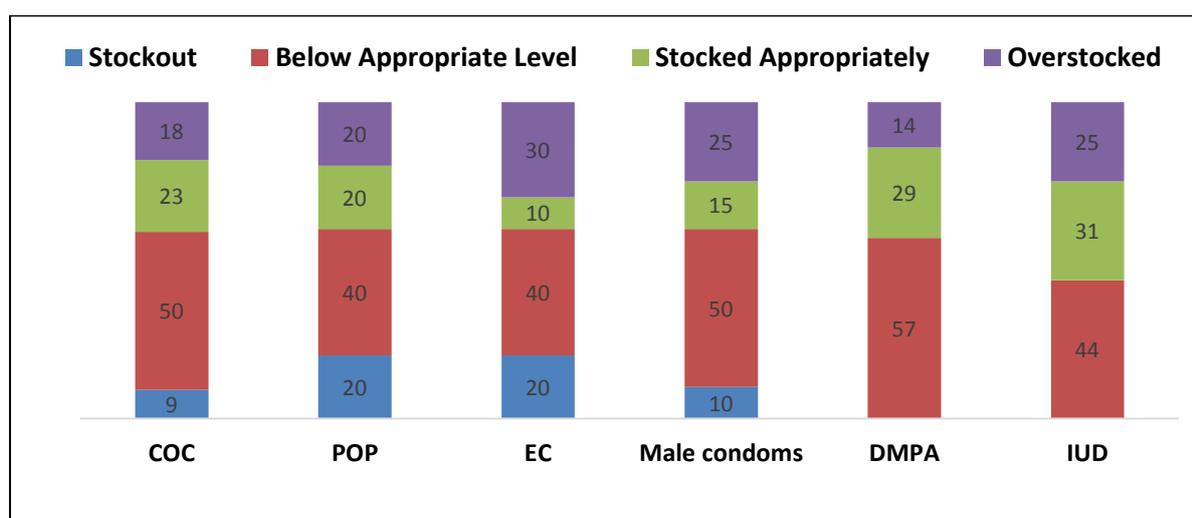
### 6.2.3. Current Stock Levels

Stock position, by month and method, shows how many months of stock facilities have available. Low levels or non-availability of stock increases the likelihood of stockouts at facilities before the next delivery cycle. Overstock of products leads to challenges with expired or damaged product because of issues in storage. Facilities are required to submit their requisitions based on their stock consumption; they should be replenished accordingly. As mentioned earlier, the following categories, based on the system design, were used to assess stock levels:

	<b>Store</b>	<b>SDP</b>
Understocked	Less than or equal to 2.99 months	Less than or equal to 0.99 month
Stocked appropriately	3.0–5.99 months	1.0–3.0 months
Overstocked	6.0 months or more	3.1 months or more

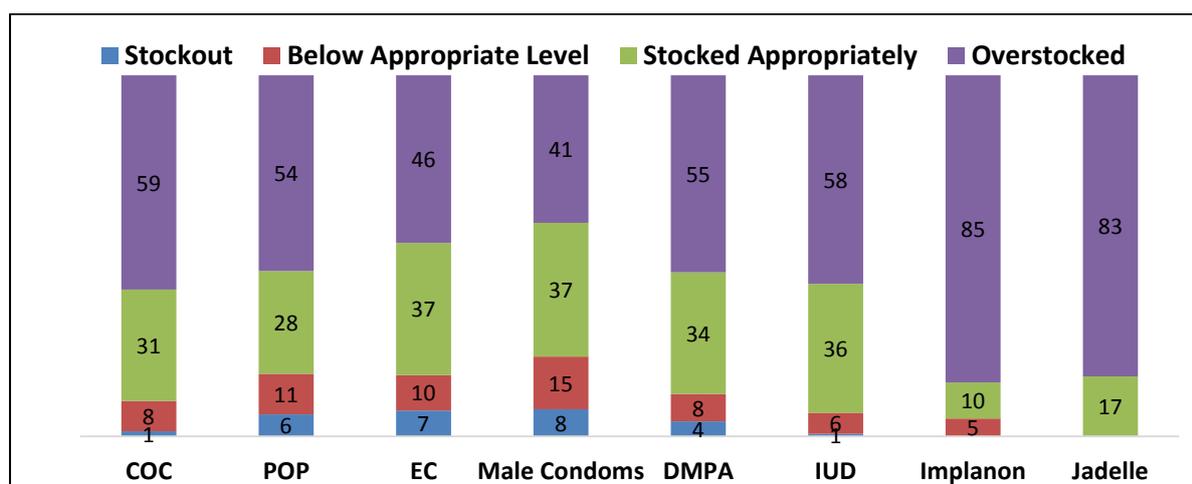
As shown in figure 41, almost half of the district stores had the stock below the appropriate levels, while more than 20 percent were overstocked.

**Figure 41: Percentage of District Stores Maintaining Appropriate Stock Levels**



High rates of overstocking were found at SDPs, ranging from 41 percent (male condoms) to Implanon (85 percent). With the exception of Implanon and Jadelle, 30 percent of SDPs had the appropriate levels of stocks available (see figure 42).

**Figure 42: Percentage of SDPs Maintaining Stock Levels, by Product**



As table 41 shows, an average of three or more MOSs are available at district stores and SDPs for all products in Punjab; however, stakeholders have significant variations. The LHW Program stores had slightly more than one MOS available for COC and slightly more than two MOS for male condoms. Similarly, the PWD stores had more than two MOS for COCs, male condoms, and DMPA. Stocks of all managed products at the DOH district stores were over the recommended level of six months. With the exception of EC, DOH SDPs also had significant overstocking. Conversely, PWD stores were understocked for most products, while SDPs had appropriate levels or were overstocked.

**Table 41: Average Months of Stock Available at Facilities, by Stakeholders and Level**

Products	DOH		PWD		LHW Program		Total	
	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
<b>COC</b>	10.7	28.8	2.3	2.7	1.2	10.5	4.6	13.8
<b>POP</b>	0.0	18.4	3.3	5.9	--*	--*	3.0	7.0
<b>EC</b>	--*	0.8	7.5	5.5	--*	--*	7.5	5.4
<b>Male condoms</b>	8.2	6.7	2.5	2.6	2.3	5.2	4.0	4.8
<b>DMPA</b>	7.9	8.7	2.5	2.9	5.6	8.2	4.8	6.6
<b>IUDs</b>	18.2	10.3	3.8	3.1	--*	--*	9.2	6.6
<b>Implanon</b>	--*	16.6	--*	13.5	--*	--*	--*	14.3
<b>Jadelle</b>	--*	31.1	--*	47.0	--*	--*	--*	45.7

## 6.3. Recordkeeping Practices

### 6.3.1. Availability of Stock Records

As mentioned earlier, data collectors also reviewed the facility records. The availability of stock records in district stores for all contraceptives was high: between 90–100 percent. Availability at the SDPs was also high: 94–100 percent. At the DOH stores the availability for COC, DMPA, and IUDs was 80 percent. At SDPs—except the availability of stock records for Jadelle at 50 percent—DOH SDPs, and all other stakeholders’ SDPs reported an almost universal availability of stock records for all products. See table 42.

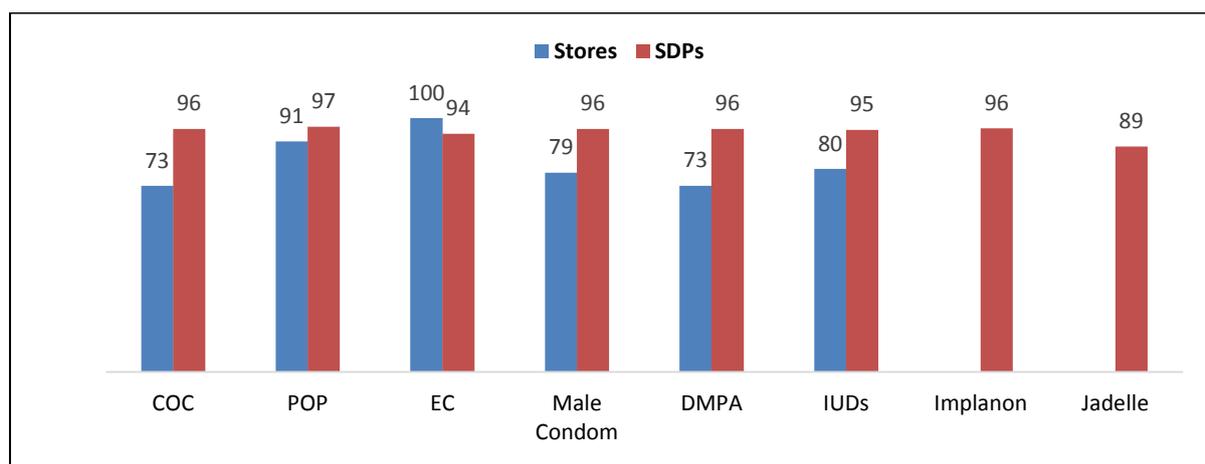
**Table 42: Percentage of Facilities with Available Stock Records, by Stakeholder**

Products	DOH		PWD		LHW Program		Total	
	Stores	SDPs	Stores	SDPs	Stores	SDPs	Stores	SDPs
COC	80.0	98.4	100.0	99.3	90.0	98.7	90.0	98.8
POP	100.0	89.2	100.0	99.6	--*	--*	100.0	98.3
EC	--*	100.0	100.0	97.9	--*	--*	100.0	98.0
Male condoms	88.9	98.4	100.0	99.3	100.0	98.0	96.4	98.6
DMPA	80.0	98.1	100.0	99.7	90.0	98.0	90.0	98.6
IUDs	80.0	97.9	100.0	99.0	--*	--*	90.0	98.5
Implanon	--*	100.0	--*	100.0	--*	--*	--*	100.0
Jadelle	--*	50.0	--*	100.0	--*	--*	--*	94.4

### 6.3.2. Updated Stock Records

Of the facilities with available stock records, more than 70 percent of district stores and 89 percent of the SDPs were updated in the previous 30 days. Levels varied by product; COC and DMPA were less than 70 percent at the stores (see figure 43).

**Figure 43: Percentage of Facilities with Updated Stock Records**

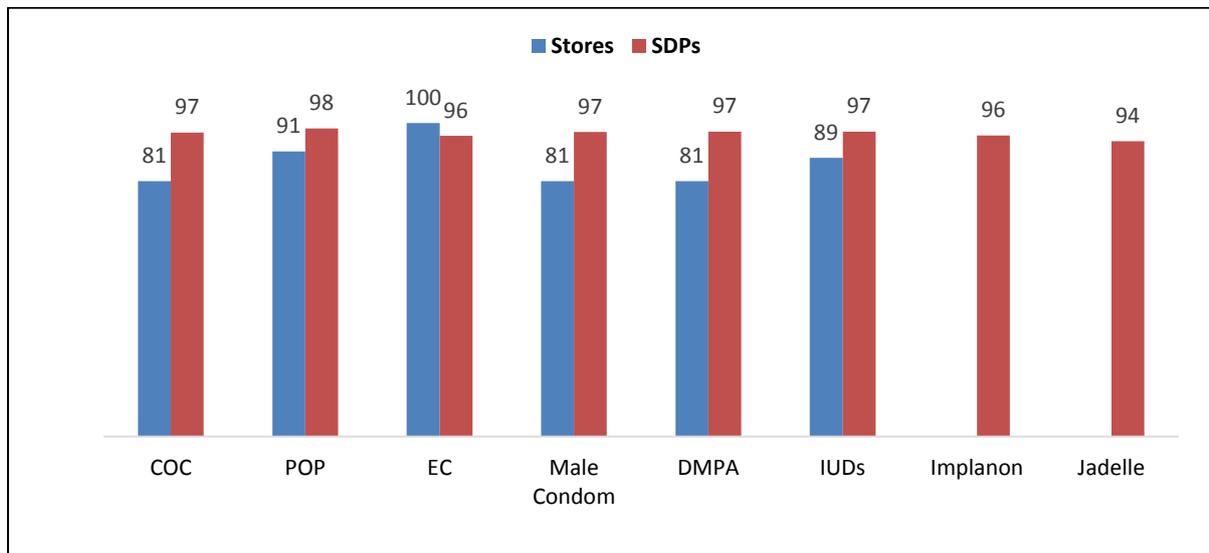


### 6.3.3. Accuracy of Stock Records

Facilities were also assessed on the accuracy of the balance entries on stock records. Accuracy was calculated by comparing the closing balance of each contraceptive on the updated stock cards with the physical count of each contraceptive on the day of visit by data collectors. Stock records were considered accurate if there was less than a +/- 10 percent discrepancy between

physical inventory and stock register balance. As shown in figure 44, most of the SDPs (over 80 percent) and stores (over 90 percent) had accurate stock records.

**Figure 44: Percentage of Facilities with Accurate Stock Records (within +/- 10%)**



# 7. Validating Data Quality in CLMIS

As part of a separate objective, the assessment validated (in term of accuracy) the data quality in the cLMIS. The accuracy of stocks, both dispatched by the higher level and received by the store/SDP, were verified through online data in the cLMIS using the Monthly Store/Facility Report for Stakeholder (hereinafter referred to as the cLMIS report/soft copy), as well as the stock register and the CLR-7 (hereinafter referred to as hard copy). The cLIMS reports and CLR-7 were checked from the CWH to the district stores and from the district stores to the SDPs. Because management of products varied by stakeholder and SDP level, the analysis (and record review) was limited to COC, DMPA, and male condoms, which are per guidelines managed and used across all levels and stakeholders. After discussions with the USAID | DELIVER PROJECT team, data was included in the analysis if the month in the two sources matched.

Out of the 71 district stores, the research team found matching records at 66 stores; web-based cLMIS records were not available for five of the visited stores. Similarly, of the 1,920 SDPs, matching hard copies (at the district stores) of dispatched stock were only found for 996 SDPs. Therefore, the remaining SDPs (N: 924; 52 percent) are not included in the DQA analysis.

## 7.1. Accuracy of cLMIS at District Stores

### 7.1.1 Accuracy of Hard (stock register) and Soft (cLMIS) Records of Stock Received at District Stores from CWH

This analysis is based on a comparison of the stock received by the district store on a hard copy (stock register); versus stock received by the district store, based on cLMIS (soft copy). The stock records for COC, male condoms, and DMPA received by district stores from CWH were compared to the hard copy (stock register) and soft copy (cLMIS report). Overall, 85 percent of the visited stores had an exact match of hard and soft copies of the receiving records for the three products. There was very little provincial variation. Match of records was most prevalent for PWD stores, (100 percent) for condoms and DMPA; and 95 percent for COC, compared to the LHW Program (84 to 89 percent), DOH (71 to 86 percent), and least at the PPHI stores (60–80 percent) for the three products (see tables 43, 44, and 45).

**Table 43: Accuracy of Hard (stock register) and Soft (cLMIS) Records of Stock Received at District Stores from CWH, by Province and Stakeholder—COC**

		Matched		Unmatched		Total	
		%	N	%	N	%	N
Punjab	DOH	71%	5	29%	2	100%	7
	LHW Program	80%	8	20%	2	100%	10
	PWD	100%	10	0%	-	100%	10
	<b>Total</b>	<b>85%</b>	<b>23</b>	<b>15%</b>	<b>4</b>	<b>100%</b>	<b>27</b>
Sindh	DOH	80%	8	20%	2	100%	10
	LHW Program	89%	8	11%	1	100%	9
	PPHI	80%	8	20%	2	100%	10
	PWD	90%	9	10%	1	100%	10
	<b>Total</b>	<b>85%</b>	<b>33</b>	<b>15%</b>	<b>6</b>	<b>100%</b>	<b>39</b>
Total	DOH	76%	13	24%	4	100%	17
	LHW Program	84%	16	16%	3	100%	19
	PPHI	80%	8	20%	2	100%	10
	PWD	95%	19	5%	1	100%	20
	<b>Total</b>	<b>85%</b>	<b>56</b>	<b>15%</b>	<b>10</b>	<b>100%</b>	<b>66</b>

**Table 44: Accuracy of Hard (stock register) and Soft (cLMIS) Records of Stock Received at District Stores from CWH, by Province and Stakeholder—Male Condoms**

		Matched		Unmatched		Total	
		%	N	%	N	%	N
Punjab	DOH	86%	6	14%	1	100%	7
	LHW Program	90%	9	10%	1	100%	10
	PWD	100%	10	0%	0	100%	10
	<b>Total</b>	<b>93%</b>	<b>25</b>	<b>7%</b>	<b>2</b>	<b>100%</b>	<b>27</b>
Sindh	DOH	80%	8	20%	2	100%	10
	LHW Program	89%	8	11%	1	100%	9
	PPHI	60%	6	40%	4	100%	10
	PWD	100%	10	0%	-	100%	10
	<b>Total</b>	<b>82%</b>	<b>32</b>	<b>18%</b>	<b>7</b>	<b>100%</b>	<b>39</b>
Total	DOH	82%	14	18%	3	100%	17
	LHW Program	89%	17	11%	2	100%	19
	PPHI	60%	6	40%	4	100%	10
	PWD	100%	20	0%	0	100%	20
	<b>Total</b>	<b>86%</b>	<b>57</b>	<b>14%</b>	<b>9</b>	<b>100%</b>	<b>66</b>

**Table 45: Accuracy of Hard (stock register) and Soft (cLMIS) records of Stock Received at District Stores from CWH, by Province and Stakeholder—DMPA**

		Matched		Unmatched		Total	
		%	N	%	N	%	N
<b>Punjab</b>	DOH	71%	5	29%	2	100%	7
	LHW Program	80%	8	20%	2	100%	10
	PWD	100%	10	0%		100%	10
	<b>Total</b>	<b>85%</b>	<b>23</b>	<b>15%</b>	<b>4</b>	<b>100%</b>	<b>27</b>
<b>Sindh</b>	DOH	70%	7	30%	3	100%	10
	LHW Program	89%	8	11%	1	100%	9
	PPHI	70%	7	30%	3	100%	10
	PWD	100%	10	0%	-	100%	10
	<b>Total</b>	<b>82%</b>	<b>32</b>	<b>18%</b>	<b>7</b>	<b>100%</b>	<b>39</b>
<b>Total</b>	DOH	71%	12	29%	5	100%	17
	LHW Program	84%	16	16%	3	100%	19
	PPHI	70%	7	30%	3	100%	10
	PWD	100%	20	0%	-	100%	20
	<b>Total</b>	<b>83%</b>	<b>55</b>	<b>17%</b>	<b>11</b>	<b>100%</b>	<b>66</b>

### 7.1.2 Accuracy of Hard (issuance voucher) and Soft (cLMIS) Records of Stock Dispatched from District Stores, by Province and Stakeholder to SDPs

The research team looked for the exact match between the issuance voucher for the stock dispatched from the district store and the soft record (cLMIS) of the stock received at the corresponding SDPs; 1,855 sets of issuance vouchers (for the stock dispatched to the same number of SDPs) matched. It should be noted that in Punjab the cLMIS form is available for all stakeholders within the cLMIS; currently, this function is only available for PWD and PPHI in Sindh.

Overall, the hard and soft records for the three products matched exactly close to 80 percent of the time. Generally, no difference was noted in the accuracy of records across the three products. The exact match of records was more frequent in Sindh (85 percent plus) compared to Punjab (slightly over 75 percent).

Across stakeholders, a complete match of records was more prevalent for PWD and PPHI—more than 80 percent for the three products—compared to the LHW Program (COC and condoms: 78 percent, DMPA: 80 percent) and least for DOH (COC and condoms: 61 percent, DMPA: 65 percent) (see tables 46, 47, and 48).

**Table 46: Accuracy of Hard (issuance voucher) and Soft (cLMIS) Records of Stock Dispatched from District Stores, by Province and Stakeholder—COCs**

		Matched		Unmatched		Total	
		%	N	%	N	%	N
Punjab	DOH	61%	51	39%	32	100%	83
	LHW Program	78%	174	22%	49	100%	223
	PWD	80%	192	20%	49	100%	241
	<b>Total</b>	<b>76%</b>	<b>417</b>	<b>24%</b>	<b>130</b>	<b>100%</b>	<b>547</b>
Sindh	PPHI	84%	144	16%	27	100%	171
	PWD	91%	124	9%	13	100%	137
	<b>Total</b>	<b>87%</b>	<b>268</b>	<b>13%</b>	<b>40</b>	<b>100%</b>	<b>308</b>
Total	DOH	61%	51	39%	32	100%	83
	LHW Program	78%	174	22%	49	100%	223
	PPHI	84%	144	16%	27	100%	171
	PWD	84%	316	16%	62	100%	378
	<b>Total</b>	<b>80%</b>	<b>685</b>	<b>20%</b>	<b>170</b>	<b>100%</b>	<b>855</b>

**Table 47: Accuracy of Hard (issuance voucher) and Soft (cLMIS) Records of Stock Dispatched from District Stores, by Province and Stakeholder—Male Condoms**

		Matched		Unmatched		Total	
		%	N	%	N	%	N
Punjab	DOH	61%	51	39%	32	100%	83
	LHW Program	78%	174	22%	49	100%	223
	PWD	80%	192	20%	49	100%	241
	<b>Total</b>	<b>76%</b>	<b>417</b>	<b>24%</b>	<b>130</b>	<b>100%</b>	<b>547</b>
Sindh	PPHI	92%	158	8%	13	100%	171
	PWD	91%	124	9%	13	100%	137
	<b>Total</b>	<b>92%</b>	<b>282</b>	<b>8%</b>	<b>26</b>	<b>100%</b>	<b>308</b>
Total	DOH	61%	51	39%	32	100%	83
	LHW Program	78%	174	22%	49	100%	223
	PPHI	92%	158	8%	13	100%	171
	PWD	84%	316	16%	62	100%	378
	<b>Total</b>	<b>82%</b>	<b>699</b>	<b>18%</b>	<b>156</b>	<b>100%</b>	<b>855</b>

**Table 48: Accuracy of Hard (issuance voucher) and Soft (cLMIS) Records of Stock Dispatched from District Stores, by Province and Stakeholder—DMPA**

		Matched		Unmatched		Total	
		%	N	%	N	%	N
Punjab	DOH	65%	54	35%	29	100%	83
	LHW Program	80%	178	20%	45	100%	223
	PWD	81%	196	19%	45	100%	241
	<b>Total</b>	<b>78%</b>	<b>428</b>	<b>22%</b>	<b>119</b>	<b>100%</b>	<b>547</b>
Sindh	PPHI	84%	143	16%	28	100%	171
	PWD	92%	126	8%	11	100%	137
	<b>Total</b>	<b>87%</b>	<b>269</b>	<b>13%</b>	<b>39</b>	<b>100%</b>	<b>308</b>
Total	DOH	65%	54	35%	29	100%	83
	LHW Program	80%	178	20%	45	100%	223
	PPHI	84%	143	16%	28	100%	171
	PWD	85%	322	15%	56	100%	378
	<b>Total</b>	<b>82%</b>	<b>697</b>	<b>18%</b>	<b>158</b>	<b>100%</b>	<b>855</b>

## 7.2. Accuracy of cLMIS at SDPs

Records also matched for the stock of the three products dispatched by district stores, based on the hard copy (issuance voucher); and the stock received by the SDP, based on the hard copy (stock register). Out of 996 pairs (issuance voucher and stock register), 482, 588, and 474 exactly matched for COC, male condoms, and DMPA, respectively. Overall, less than 60 percent of the records (COC and DMPA: 48 percent, condoms: 59 percent) totally matched. Larger percentages of records were accurate in Punjab (COC: 49 percent, condoms: 65 percent, DMPA: 53 percent) compared to Sindh (COC: 47 percent, condoms: 49 percent, DMPA: 38 percent).

More accurate records were found for PWD (COC: 60 percent, condom: 73 percent, DMPA: 59 percent) and fewer for the PPHI (COC: 39 percent, condoms: 31 percent, DMPA: 38 percent). Exact matching of records was variable for the DOH (COC: 52 percent, condoms: 66 percent, DMPA: 53 percent), and the LHW Program (COC: 36 percent, condom: 53 percent, DMPA: 35 percent) (see tables 49, 50, and 51).

**Table 49: Accuracy of Records (CLR-7) for Stock Dispatched from Store and Received at SDP (stock register), by Province and Stakeholder—COCs**

		Matched		Unmatched		Total	
		%	N	%	N	%	N
Punjab	DOH	52.7	87	47.3	78	100.0	165
	LHW Program	36.4	83	63.6	145	100.0	228
	PWD	58.4	143	41.6	102	100.0	245
	Total	49.1	313	50.9	325	100.0	638
Sindh	DOH	47.4	9	52.6	10	100.0	19
	LHW Program	34.0	18	66.0	35	100.0	53
	PPHI	38.8	62	61.3	98	100.0	160
	PWD	63.5	80	36.5	46	100.0	126
	Total	47.2	169	52.8	189	100.0	358
Total	DOH	52.2	96	47.8	88	100.0	184
	LHW Program	35.9	101	64.1	180	100.0	281
	PPHI	38.8	62	61.3	98	100.0	160
	PWD	60.1	223	39.9	148	100.0	371
	Total	48.4	482	51.6	514	100.0	996

**Table 50: Accuracy of Records (CLR-7) for Stock Dispatched from Store and Received at SDP (stock register), by Province and Stakeholder—Male Condoms**

		Matched		Unmatched		Total	
		%	N	%	N	%	N
Punjab	DOH	67.3	111	32.7	54	100.0	165
	LHW Program	56.6	129	43.4	99	100.0	228
	PWD	71.0	174	29.0	71	100.0	245
	Total	64.9	414	35.1	224	100.0	638
Sindh	DOH	52.6	10	47.4	9	100.0	19
	LHW Program	37.7	20	62.3	33	100.0	53
	PPHI	30.6	49	69.4	111	100.0	160
	PWD	75.4	95	24.6	31	100.0	126
	Total	48.6	174	51.4	184	100.0	358
Total	DOH	65.8	121	34.2	63	100.0	184
	LHW Program	53.0	149	47.0	132	100.0	281
	PPHI	30.6	49	69.4	111	100.0	160
	PWD	72.5	269	27.5	102	100.0	371
	Total	59.0	588	41.0	408	100.0	996

**Table 51: Accuracy of Records (CLR-7) for Stock Dispatched from Store and Received at SDP (stock register), by Province and Stakeholder—DMPA**

		Matched		Unmatched		Total	
		%	N	%	N	%	N
<b>Punjab</b>	DOH	53.9	89	46.1	76	100.0	165
	LHW Program	36.8	84	63.2	144	100.0	228
	PWD	66.9	164	33.1	81	100.0	245
	Total	52.8	337	47.2	301	100.0	638
<b>Sindh</b>	DOH	47.4	9	52.6	10	100.0	19
	LHW Program	26.4	14	73.6	39	100.0	53
	PPHI	38.1	61	61.9	99	100.0	160
	PWD	42.1	53	57.9	73	100.0	126
	Total	38.3	137	61.7	221	100.0	358
<b>Total</b>	DOH	53.3	98	46.7	86	100.0	184
	LHW Program	34.9	98	65.1	183	100.0	281
	PPHI	38.1	61	61.9	99	100.0	160
	PWD	58.5	217	41.5	154	100.0	371
	Total	47.6	474	52.4	522	100.0	996



# 8. Summary and Recommendations

These recommendations are based on the findings in this report.

## 1. Strengthen inventory management system

More than 20 percent of district stores and 40 percent of SPDs maintained stock levels for products well above the current standard inventory guidelines. Conversely, a significant percentage of facilities (over 50 percent for district stores and over 20 percent of SPDs) maintained stock levels below the appropriate levels. Inventory management needs strengthening at the district store level and it must be implemented at the SDP level, as well. Requisitioning and issuing of commodities, as per the contraceptive logistic manual, is to prevent the overstocking and understocking at stores. More than half the district stores and one-third of SPDs reported stock availability below the appropriate level, indicating that the SOPs are not being followed. Standard inventory management guidelines must be followed at all levels.

**To avoid stockouts, a buffer stock of at least three months must be maintained at the district store level and one month's stock at the SDP level. In compliance with the logistics manual, at the SDP level, a pull system, based on consumption data, should be used instead of a push system. District stores should follow the demand made by SDPs, instead of issuing commodities without considering actual demand. To improve supply chain efficiency, the logistics manual (SOPs) should be implemented at the sub-district level.**

Additionally, slightly less than half of all the visited LHWs had stockouts of at least one of the three products (i.e., COC, DMPA, and male condoms) on the day of visit. LHWs are currently issued contraceptives on a fixed quota. Stockouts are likely because demand changes as the number of clients change. It is recommended that **LHWs be issued according to demand and they should maintain a minimum and maximum level, which is the same at the SDPs.**

## 2. Timely requisition and distribution of contraceptives

Currently, facilities are requesting contraceptive products far outside the timeframe designated by their SOPs. The tardy requisitions are contributing to the long duration of stockouts that facilities are currently experiencing and they are impeding last mile delivery. FDGs and IDIs provided anecdotal evidence for this because of the failure to deliver product due to non-availability, absence of storekeepers, and high workload for the LHS and LHWs.

LMIS functions were found at most of the visited facilities with recommended reporting and requisitioning practices. However, more than 40 percent of the district stores had more than a three-month gap between orders to the CWH. Similarly, over 20 percent of SPDs reported submitting requests to the district store more than one month apart. **To avoid stockouts, stakeholders in both provinces need to ensure the facilities make timely requisitions for contraceptive products. More attention should be placed on ensuring compliance with requisition deadlines at the facility level, beginning with improved management practices to handle workload and staff turnover.**

### 3. Training of store managers

Results indicate significant gaps in recordkeeping and reporting practices, both in terms of actually maintaining accurate stockcards/stock registries and submitting accurate reports to higher levels. Additionally, one-third of LHW stores were not updating stock records for any of the products they manage. During the qualitative components of the assessment, it was found that a large number of the participants in both Sindh and Punjab who work as storekeepers have other duties, or a different portfolio, with storekeeping as an *add on* activity; this has affected their focus on supply chain work.

**Appointment and training of storekeeping staff on best practices of stock management and basic logistics and supply chain concepts is highly recommended at both the SDP and district store level. Training of LHS/LHWs on stockkeeping and demand generation needs special attention. PSM can organize these trainings in the future, in collaboration with the government.**

### 4. Reinforce PPHI stock management

PPHI-operated district stores and SDPs have consistently lower levels of available, updated, and accurate stockkeeping records and LMIS reports compared with other stakeholders. Stockouts were higher at PPHI stores on the day of visit, with two-thirds of facilities stocked out of POP, one-third for DMPA, and one-fifth for Jadelle. The duration of stockouts were also long for PPHI stores, with the average stockout lasting more than 90 days. Stockkeeping records were found in more than 95 percent of stores for all contraceptive products managed—the exception was the PPHI stores, where only two-thirds had records for POPs.

**Because this stakeholder operates as a private-public partnership, special consideration is needed. A detailed debriefing meeting should be conducted with the management to share the findings of the study, highlight the issues, and help them develop a plan that would avoid these problems in the future.**

### 5. Availability of trained LMIS operator

A trained LMIS operator plays a pivotal role for data reporting and data quality. Just over 50 percent of district stores had appointed and trained LMIS operators (56 percent of stores had LMIS operators; 54 percent were trained). LMIS operators were appointed at about two-thirds of stores in Sindh and 43 percent of stores in Punjab, respectively. Additionally, over 30 percent of facilities had inaccurate stock records; the LMIS with the LHW Program store had the lowest percentage of accurate LMIS reports. The possible reasons mentioned during the qualitative research include the lack of and quality of training on LMIS, financial resources, and power supply.

**Trained LMIS operators must be available at all the district stores to avoid discrepancies in future reporting. Appointment and training should be scaled up across all stakeholders, particularly in Punjab.**

### 6. Ensure availability of complete range of contraceptives

Only 50 percent of facilities had a trained provider and offered IUD insertions, while fewer than 20 percent of facilities had a trained provider and offered implant insertions. While respondents reported motivating clients to use an alternative (available) method when a stockout occurs, all the methods (including long term) should be available at the facilities for clients to choose for themselves. **In addition to strengthening stockkeeping practices to avoid stockouts, training and provision of implants and IUDs should be expanded to all appropriate levels.** Additionally, efforts should be made to ensure the POP and EC are available at all levels.

## 7. Improve storage conditions of LHW Program

Many SDP respondents reported inadequate room for storing products; which, in part, may be due to the significant overstocking of products. In addition, the LHW Program often lacks a separate storeroom at the SDPs for storing commodities. This leads to mixing of products, and potential loss of commodities, for the program. With strengthening inventory management practices and ensuring that facilities maintain proper stock level, storage conditions and space should be assessed. **Additionally, specifically allocated space for storing of LHW Program’s contraceptive commodities and their appropriate storage must be ensured at all facilities.**

## 8. Data quality enhancement

Data quality was validated for both the stocks issued and received, comparing the cLMIS and stock records. Discrepancies were noted at all the levels, starting from issuance by CWH down to the SDP level. Discrepancies varied for different stakeholders and at different levels. Although data for the stock received at the district store from CWH, and data for the stock dispatched by the district store to the SDP, matched between 80–85 percent, less than 50 percent of the data for the stock received by the SDP from the district store matched exactly.

**To ensure data quality (i.e., completeness, timeliness, accuracy, and integrity), data must be validated before reporting into cLMIS—this will avoid these discrepancies. A comprehensive system with trained LMIS operators and regular monitoring mechanism should be operational at all the levels.**

## 9. Budget allocation for transportation

Currently, little budget and few vehicles are available for transporting commodities to the SDPs. Almost 60 percent of SDPs reported having to self-pick contraceptive products from the district offices. The transportation costs often, as reported in the IDIs and FGDs, come directly from the service provider and they are rarely reimbursed. **The government should allocate a separate budget, in partnership with different donors, for transporting commodities to ensure a regular supply to the SDPs.**

## 10. Routine monitoring and evaluation/follow-up visits

The assessment identified a number of gaps and challenges with practices that affect the supply chain and lead to stockouts. Lack of updated stockcards and stock records impacts the quality of data shared with the higher levels; which, in turn, affects the quantity of stocks distributed to the lower levels. **The district management should conduct periodic reviews of cLMIS data and inventory documents to ensure proper reporting. Additionally, scheduled monitoring and supervision by the district management team is required at district stores and the SDP level to streamline the supply chain mechanism.** Regular engagement of staff by the provincial and district governments for monitoring, budget specifications, and use of appropriate monitoring tools are essential components to organize and carry out this activity.

## 11. Improvements to the cLMIS

The data validation of the cLMIS performed in this study was limited due to non-availability of inventory data at the district level and disaggregated data of SDPs for DOH/LHW Sindh. Availability of transactional data at districts greatly enhances the ability of managers to accurately track and trace the shipments and to easily identify the errors. Similarly, disaggregated SDP data is also critical to identify SDP stock sufficiency.

**It is recommended that the cLMIS be enhanced to include these two functionalities.**

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