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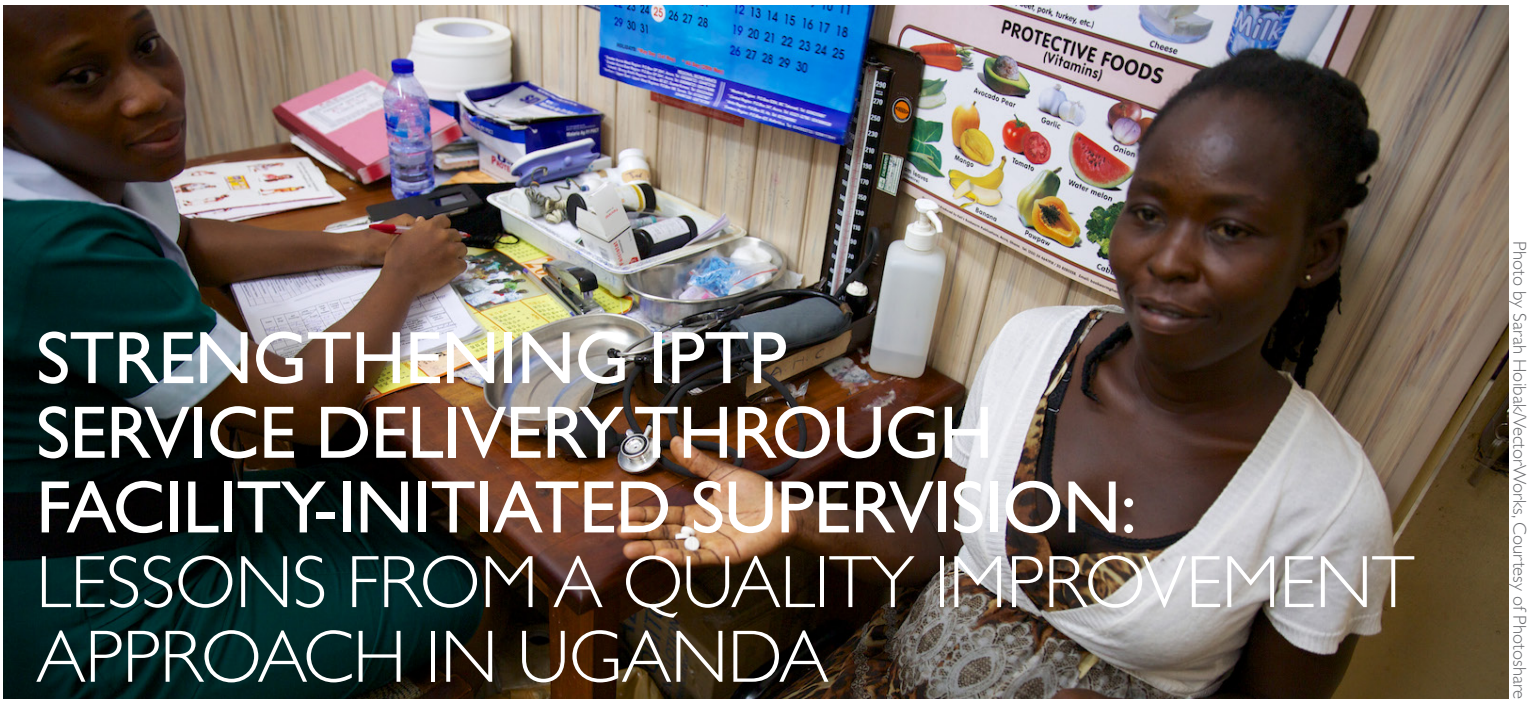

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STRENGTHENING IPTP SERVICE DELIVERY THROUGH FACILITY-INITIATED SUPERVISION: LESSONS FROM A QUALITY IMPROVEMENT APPROACH IN UGANDA

Background

Malaria remains a significant contributor to maternal morbidity and mortality in sub-Saharan Africa, the region that accounts for approximately 88 percent of all malaria cases globally.[1] Due to its link to various complications during and after pregnancy, the prevention of malaria among pregnant women is regarded as an important strategy for reducing mortality and adverse maternal and neonatal health outcomes, such as maternal anemia, low birth weight, and perinatal deaths.[2]

In areas with moderate-to-high malaria transmission rates, the World Health Organization (WHO) recommends intermittent preventive treatment for pregnant women (IPTp) at each scheduled antenatal care (ANC) visit starting early in the second trimester (13 weeks) as a key strategy for prevention, provided there has been at least one month since the last dose of IPTp with sulfadoxine-pyrimethamine (IPTp-SP).[3] Through IPTp, pregnant women are given a full therapeutic course of antimalarial medicine during routine ANC visits to reduce malaria episodes and related complications for mothers and newborns. Coverage rates for the recommended doses of IPTp-SP vary widely among African countries, but in all countries they decline after the first dose, and significantly lag behind ANC coverage rates.[4]

To improve the provision and use of IPTp, the United States Agency for International Development's (USAID) Bureau for Africa and its African Strategies for Health (ASH) project, in partnership with the President's Malaria Initiative (PMI), conducted a study in Uganda to explore service delivery practices, missed opportunities, and barriers at the facility level that impede IPTp service provision. The study also aimed to identify facility-level interventions that can improve the delivery and use of IPTp services. Based on the assumption that missed

ABOUT ASH

African Strategies for Health (ASH) is a five-year project funded by the U.S. Agency for International Development's (USAID) Bureau for Africa and implemented by Management Sciences for Health. ASH works to improve the health status of populations across Africa through identifying and advocating for best practices, enhancing technical capacity, and engaging African regional institutions to address health issues in a sustainable manner. ASH provides information on trends and developments on the continent to USAID and other development partners to enhance decision-making regarding investments in health.

opportunities for the provision of IPTp are common during the service delivery process, the study contributes to the existing quality improvement (QI) approach that complements the supervisory responsibility of Officers in Charge (OICs), and enables facility staff to track trends, identify bottlenecks, and revise strategies on an ongoing basis, ultimately contributing towards improved coverage of IPTp.[5]

Since the adequate provision and use of IPTp is intrinsically linked to ANC services, all interventions that focus on reducing missed opportunities and improving service delivery must consider the close relationship between IPTp and ANC. A comprehensive QI approach that addresses not only direct service provision but also support systems underpinning service delivery is required for improving IPTp coverage. These facility-level support systems include a secure supply chain for drugs, appropriate provision of supervised treatment through directly observed therapy (DOT), reliable record keeping practices, and the provision of relevant information to pregnant women.

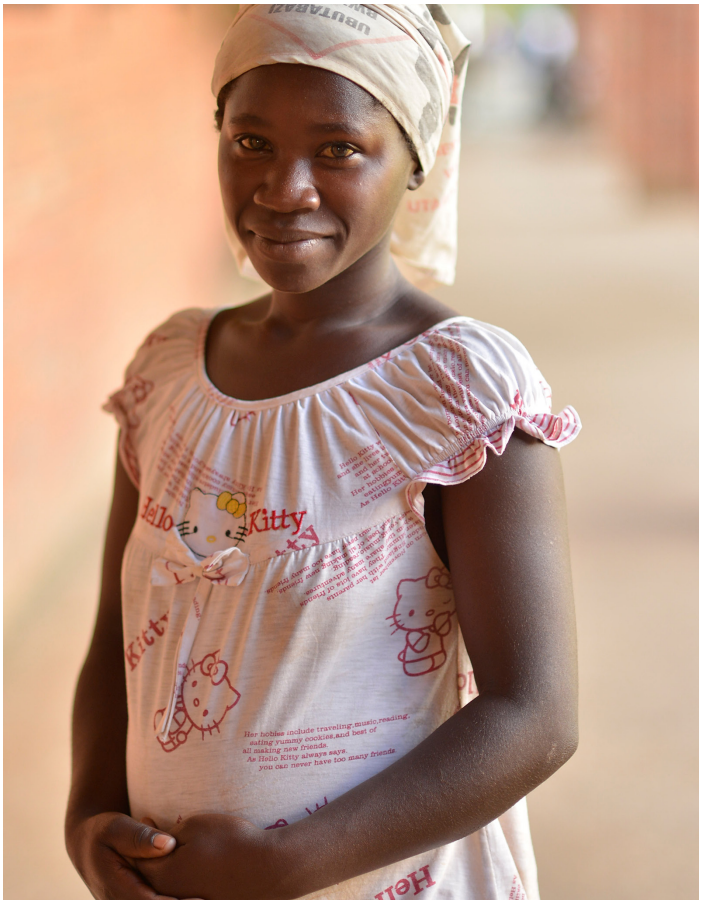
In collaboration with the Ugandan Ministry of Health (MoH) and PMI, ASH conducted an initial assessment of health facilities in two districts in Uganda. The assessments served to validate the barriers for IPTp service provision and to inform the design and pilot of an IPTp QI tool. This brief describes the development of the IPTp QI tool and the outcomes of the initial pilot in Uganda. A more detailed report on the facility assessments is available on the ASH website.

Barriers to IPTp Service Delivery: Results from Facility Assessments in Uganda

Twenty-five facility assessments were conducted in two districts in Uganda during 2015. The facility assessment tools, adapted from the Rapid Health Facility Assessment methodology, were designed to explore quality and access factors at the primary health care level.[6] Data was collected through clinical observation, exit interviews, health worker (HW) interviews, record reviews, and health facility checklists (infrastructure, equipment, drugs, and supplies). The assessments identified a number of challenges with clinical service delivery and the associated facility-level support systems.

Health worker behavioral practices

Observations of client and HW interactions (87) in ANC consulting rooms indicated HWs were imprecise in determining eligibility for the provision of IPTp. For instance, gestational age was primarily assessed by manual palpation of fundal height (74%) rather than through calculations based on the last menstrual period (40%) or the use of symphysis-fundal height measurements, as suggested by Uganda's MoH guidelines.[7] Further, despite a high prevalence of HIV and AIDS in Uganda and a strong emphasis on prevention of mother-to-child transmission, HWs were unlikely to inquire about HIV status or the use of cotrimozazole preventative therapy (19%), a contraindication for the use of IPTp-SP. HWs also did not follow important programmatic guidelines during clinical interactions. Despite guidance that IPTp be provided through DOT, this only occurred in 35% of interactions. This contrasts strongly with



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findings obtained through HW interviews; 91% of HWs stated that they always or mostly used DOT to administer IPTp-SP. Record-keeping, a critical element required to determine eligibility for the follow-up dose of IPTp-SP and for the determination of the population coverage of IPTp, was similarly problematic. The study found that only half of HWs documented information in the ANC clinic register during the encounter, 26 percent did so after the visit, and in almost a quarter of instances no information was recorded. HWs documented information in the Mother/Baby passport or notebook in less than half of the observed interactions (45%).

Support system challenges

Most facilities had sufficient IPTp-SP and had experienced few stock-outs in the 12 months preceding the assessments. Other facility-level support systems did not perform as strongly; most facilities experienced stock-outs of required record-keeping and health management information systems (HMIS) materials including the official Mother/Baby passport; and there was limited availability of IPTp guidelines and job aids, found in only 32% and 16% of facilities, respectively. Further, only a few facilities set coverage targets for IPTp, and only 20% of facilities had received external supervision during the preceding 6 months. HWs reported more frequent internal supervision that occurred either quarterly (50% of interviewed HWs) or monthly (22% of interviewed HWs). Nearly 70% of OICs reported that they review the quality of ANC and IPTp during routine supervision.

Knowledge gaps about IPTp among pregnant women

Exit interviews with pregnant women indicated significant gaps in the understanding of IPTp. More women were aware of insecticide-treated bed nets (ITNs) (70.8%) and actually used them (78.7%), than they did IPTp-SP for the prevention of malaria in pregnancy (aware 21.3%, used 65.2%). Less than 30 percent of women reported that they received advice on the use of ITNs and only 21% reported they received advice on the use of SP during the facility visit. Related to the understanding of the timing of IPTp initiation, 25.8% said SP should be given as soon as possible, 21.3% said SP should be given whenever she visited the ANC clinic, and 21.3% noted SP should be given after three months of pregnancy. The client-HW interactions showed that most HWs (54%) did not discuss the protection provided by SP in the prevention of malaria in pregnancy, the safety of use of SP during pregnancy (17% of observed interactions), and that SP can be taken on an empty stomach (6% of observed interactions). A knowledge gap among pregnant women related to IPTp indicates a significant need for information, education, and communication (IEC) strategies and materials to educate pregnant women prior to and during pregnancy.

Findings from the facility assessments provide insight into some of the factors affecting the quality of clinical service and the challenges in the ability of facility-level systems to effectively deliver services. Importantly, many of the challenges identified are amenable to quality improvement approaches that can be implemented by facility staff with limited need for external support.

The Facility-Level QI Approach and IPTp QI Tool

The development of the IPTp QI tool was influenced by three factors: (i) the strengths and weaknesses of IPTp service provision as identified in the facility assessments; (ii) the areas in which facility staff can improve service delivery; and (iii) the operational context of implementation.

Significant positive findings from the assessments indicate that most facilities had a regular and secure supply of drugs, water, and essential materials for the implementation of DOT (e.g., buckets and mugs). The findings also verified that internal supervision was more likely to occur than external supervision. In contrast, it became apparent that HWs are imprecise in the determination of gestational age and often do not follow programmatic guidelines. As a result, the design of the IPTp QI tool focused on aspects that are essential for effective service delivery and particularly on challenges that, when addressed, may have a significant positive impact.

The second factor that influenced the development of the IPTp QI tool was to determine those aspects of service delivery that can be remedied by facility-level staff and are substantively independent of inputs from the district level or reliant on inputs from stakeholders such as donors. Findings from the facility assessments point to several opportunities: OIC's can work with providers to improve all aspects of the clinical service provision process by emphasizing and ensuring correct clinical practices, standards, and adherence to guidelines, including the determination of gestational age. Similarly, providers can be encouraged to accurately record data in facility registers and in the Mother/Baby passport. Further, appropriate messaging for IPTp can be incorporated in the provision of health education in ANC waiting areas while providers can be encouraged to discuss the importance of the prevention of malaria in pregnancy during the clinical assessment of pregnant women. Finally, OICs can also ensure that unhygienic practices such as the re-use of unwashed mugs are eliminated.

The third factor that impacted the development of the IPTp QI tool relates to the operational context of implementation. Supervision by OICs at facilities, in contrast to district-driven supervision, can result in more hands-on and rapid monitoring, and lead to improved and timely support. However, two issues will impact the role of the OIC as leader of the QI process: time constraints and capacity skills of the OIC. The OIC is likely to be a provider with limited time to conduct supervision-related activities, and also likely to be multi-purpose/generalist HW, with little in-depth programmatic training and capacity when compared to a supervisor with a specific programmatic focus. The tool therefore acts as a guide and aide memoire that enables the OIC to comprehensively review the most important aspects of IPTp service delivery on a regular basis. Information gathered through the tool can be used by OICs to implement corrective measures on the spot when necessary, highlight and address problems at regular staff meetings, and identify creative solutions to improve the coverage for three doses of IPTp. Finally, this supervisory approach may be conducted with a focus on IPTp only or can be incorporated into a broader assessment that emphasizes malaria prevention activities within ANC service delivery assessments. Importantly, the introduction of the IPTp QI tool through the QI process needs to be adapted to the context of service delivery in a particular facility and district.

Supervision enables improved service delivery

In one of the facilities assessed, midwives did not have focused supervision prior to the use of the IPTp tool. An OIC using the IPTp QI tool, was surprised when a midwife did not educate a mother on why she should take SP. Upon questioning the midwife, the OIC determined she was concerned with a lack of supplies and clean water for the mother to take the drugs. The OIC mobilized funds, purchased a jerry can to ensure there was water and cups for use by the ANC clients. The midwife was appreciative and began to educate mothers on the importance of this treatment.

Piloting the QI approach and IPTp QI Tool

The pilot activity, conducted in two districts in Uganda from March to May 2016, aimed to document the OIC's experience implementing the IPTp QI tool at facility level and identify and document necessary changes to the QI tool. Select District Health Office representatives from the two districts and OICs from each of the 25 health facilities that participated in the assessments were oriented to the IPTp QI tool and agreed to participate in review meetings. Two rounds of facility-based supervision by OICs were followed by a one-day meeting during which OICs discussed and reflected on the use of the IPTp QI tool.

Key Findings

The review and feedback from OICs demonstrated the capacity of the QI approach to identify service gaps and to generate potential facility-based solutions for identified problems. Additionally, participants provided input on using the IPTp QI tool and noted important factors requiring attention prior to larger scale implementation. Key findings are presented in Tables 1 and 2.

Conclusion

USAID's Bureau for Africa, through the ASH project, and in partnership with PMI, set out to explore service delivery practices, missed opportunities, and facility-level barriers that impede the provision and use of IPTp in Uganda, and to identify interventions at the facility level that can improve the delivery and use of IPTp services. The facility assessments demonstrated weaknesses in clinical service delivery practices and in the ability of facility-level support systems to provide services. In particular, many of the issues identified are behavioral in nature, and occur when HWs are non-compliant with programmatic guidelines. While regular and close monitoring and support can bring about improvements in HW performance and behaviors, the facility assessments confirmed that this is unlikely to be provided through external programmatic supervision. In the instance of IPTp, effective external supervision is further complicated as it relies on inputs from both reproductive, maternal, neonatal and child health and national malaria control programs.

The experiences in Uganda demonstrate that engaging facility OICs in providing the necessary oversight and monitoring

Table 1. Identification of Service Delivery Gaps and Potential Solutions

Identification of service delivery gaps through the IPTp QI tool
■ The use of the tool showed how pregnant women may not be captured into the process of ANC service provision. Pregnant women may enter facilities through the outpatient department (OPD) rather than through ANC clinics and may not receive IPTp during an OPD attendance. This highlights the need for HWs to be vigilant during clinical assessment to ensure that all pregnant mothers are identified and referred to ANC as soon as possible.
■ The review of IPTp counselling found that effective treatment is compromised through the perceived exclusiveness of certain HW roles. For instance, counsellors working in maternity wards may not discuss IPTp with pregnant women because of pre-conceived notions that this is the role of the midwife.
■ A gap in IEC messages related to IPTp was revealed; IPTp messages are not always incorporated into the general health education that takes place daily especially at the outpatient department.
Identification of facility-level solutions following the use of the QI tool
Data collection practices and monitoring could be improved by:
■ Monitoring data quality and providing ongoing support to records assistants during supervision.
■ Using monthly QI team meetings to monitor important IPTp indicators (coverage and dropout rate).
■ Ensuring use of graphs to track performance trends of important indicators including IPTp coverage IPTp1, and the drop-out rate between IPTp1 and IPTp3.
Information dissemination for IPTp could be improved by:
■ Providing health education at all facility entry points, ensuring that the importance of ANC and benefits of IPTp are incorporated into materials across all departments.
■ Engaging networks and information outlets such as the local radio, community cops, religious leaders, markets, and in functions like burials and weddings, to disseminate messages about ANC and IPTp.
Access to services at facilities could be improved by:
■ Identifying and addressing those factors that impact on the timing and number of facility attendances. For instance, facilities' village health teams can promote ANC attendance during the first trimester through their routine interactions with communities. To increase follow-up visits, facilities can prioritize rapid attention and care of ANC attendees during instances when patients' external commitments take precedence. This may include a review and revision of client flow through a facility to optimize access to ANC services and informing communities about the prioritization of services for pregnant women.
■ Ensuring that Uganda's strong emphasis on male involvement does not negatively impact on attendance in those instances where husbands are unable to attend due to other commitments such as farming or work responsibilities. Similarly, sensitivity needs to be displayed in instances where women may present with unwanted pregnancies.

Table 2. Observations on the Use of the QI Tool and Considerations for Scale-Up

Practical observations on the use of the IPTp QI tool
■ OICs reported that the tool is manageable and easy to complete, however, commitment is required to carry out the supervision activity.
■ The importance of IPTp is highlighted when OICs conduct supervision activities. The tool serves to focus attention to IPTp-related processes and service delivery.
■ Use of the tool facilitates proactive assessments and supervision, and assists OICs to better understand operations of individual departments within a facility.
■ OICs reported that conducting 12 exit interviews was burdensome considering the competing workload demands. Alternatives include decreasing the number of client exit interviews or replacing them with random reviews of Mother/Baby passports or notebooks.
Considerations for large scale implementation
■ The use of the IPTp QI tool needs to be aligned with the service delivery context of a facility. OIC facility supervision should be scheduled to occur when the service delivery burden is low and should be conducted in an unobtrusive fashion. This requires a conversation between the OIC and staff about timing, the style of supervision, purpose, and intent. Client observations represent a new dimension of supervision and require explanation to staff.
■ OICs need support to address the challenge of linking available staff resources with service delivery needs. An example is where staff shortages impact on important activities such as data collection. OICs with district level inputs need to ensure that adequate resources are available for the collection of quality data.
■ The use of the IPTp QI tool will identify important issues such as the availability of water for implementation of DOT during the dry season. Facilities will require assistance to ensure the availability of clean potable water and that sufficient resources are set aside to replace old and damaged DOT supplies such as jerry cans and cups.

represents an opportunity to address these challenges. The nature of the role of OICs differs from programmatic supervisors; therefore, it is important to consider local contexts (i.e., timing and duration of supervision and facility workload) as supervision activities are taken on. In addition, supervisory roles can be strengthened and reinforced through training and exposure to programmatic guidelines with the use of tools such as checklists or simple supervision job aids. The impact of supervision and monitoring by the OIC is likely to increase when incorporated into a QI approach.

The pilot application of the IPTp QI tool illustrates the potential of working with facility-based staff under the leadership of OICs to address challenges and barriers to IPTp service delivery. OICs reported that the tool was manageable and easy to complete and that it helped to focus attention on IPTp-related processes and service delivery. OICs noted the importance of aligning the QI approach, including the use of the IPTp QI tool, with the service delivery context of a facility. The two latter points indicate the need expressed by OICs to consider individual programmatic needs and demands as one of many service commitments of the OIC. Similarly, in terms of tool design, a balance between comprehensiveness and brevity must be reached. Long term effectiveness of the intervention should be quantitatively measured with a focus on important indicators including the coverage of IPTp3 and a strong focus on tracking missed opportunities. The brief nature of the pilot did not allow for the quantifiable tracking of indicators.

Internal monitoring should be complemented by routine external supervision, particularly for issues that are best addressed through district-level interventions requiring district management team support, such as ensuring a secure supply of potable water to a health facility. The Uganda pilot activity suggests that internal facility-driven supervision, packaged within a QI approach, can potentially address service delivery issues and improve coverage of three doses of IPTp. ■

This technical brief was prepared by Dr. Rudi Thetard and JoAnn Paradis (both ASH), with contributions from USAID's Bureau for Africa, the President's Malaria Initiative, Sarah Konopka and Tabitha Kibuka (both ASH), and Indira Narayanan (ASH consultant). The ASH project is grateful to the USAID, PMI, and MSH teams in Uganda for their coordination and management of and contributions to this study.

ENDNOTES

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ANNEX: IPTp SERVICE PROVISION CHECKLIST FOR FACILITY OFFICER IN CHARGE

IPTp Quality Improvement Approach

Assumptions

- Tools will primarily be used by Officers in Charge (OIC) of facilities and representatives
- Tools address primarily facility level issues
- Tools need to be adapted to local circumstances
- Support is required for basic inputs – training, provision of guidelines, and job aids
- OICs are assisted in developing capacity to understand the key elements of IPTp programming and monitoring. This would include exposure to key aspects such as supply chain management, messaging for IPTp and quality control for data management.
- District level staff are involved and supportive of the process

Process

- Use QI process that facility staff understand and may have experienced in the past
- QI process involves all staff involved in the delivery of IPTp
- The QI process is integrated into routine facility systems for meetings and supervision

Key aspects for monitoring

- The use of HMIS data is key and OIC or representatives should develop the capacity to develop and interpret basic indicators
- Suggested indicators include:

Missed opportunity indicator (*OICs select data from the health facility's ANC register to review and analyze*).

Numerator: *# of registered women eligible for IPTp who did not receive IPTp*

Denominator: *# of registered women eligible for IPTp*

Eligibility:

- *>first trimester OR gestational age >13 weeks*
- *HIV negative,*
- *not on CTX*
- *a total of 4 weeks have lapsed since the last SP dose*

The checklist on the following pages highlights the salient points required to review and strengthen IPTp service provision through supervision and mentoring that is primarily driven from the facility level. The checklist below can be restructured to add or remove key elements that need to be reviewed for IPTp service provision and can be reorganized into a more traditional supervision checklist commonly used for facility-level supervision. Ideally, the review of IPTp service provision should take no more than an hour to complete.

Service Availability: ANC services are provided according to an established schedule for services (timing of service delivery posted and most days of the week)
Waiting area
☐ Health education materials on IPTp are posted
☐ Health education materials are available for VHT to use during group education sessions (include flip charts)
☐ Health education sessions carried out by VHT
☐ Health education takes place, sessions incorporate the following key messages
■ Why SP is necessary for the pregnant woman and her baby
■ Eligibility for IPTp (criteria for woman to receive IPTp)
■ Recommended number of doses of SP during pregnancy
■ Need for supervised provision of IPTp/DOT
■ Discusses use of ITNs
■ Discusses protection against malaria among HIV positive pregnant women
■ Informing attending room attendees (women and partners) that SP can be given on full or empty stomach
Consultation room
☐ HW assesses gestational age and the period since last dose of SP
☐ HW confirms client's HIV status
☐ HW provides appropriate IPTp counseling/messaging to client
■ Why SP is protective for mother and child
■ Eligibility for IPTp (criteria for woman receiving IPTp)
■ # Recommended doses of SP during pregnancy
■ Need for supervised provision of IPTp/DOT
■ Discusses use of ITNs
■ Discusses protection against malaria among HIV positive pregnant women
■ Informing woman that SP can be given on full or empty stomach
■ Informs woman of when to return for next ANC visit
☐ HW records data in the ANC Register
☐ HW records data in the ANC Card/ mother baby passport/notebook
☐ HW provides SP under direct supervision through DOT or informs where the client should proceed to receive supervised DOT
☐ DOT is appropriately implemented
■ adequate supplies of water
■ sufficient cups available
■ cups not reused without washing
Review of client records when they exit the facility
☐ OICs should collect five patient held records and review them to determine key pieces of information related to the facility visit such as whether SP was provided and documented and whether a return date is indicated.
Male involvement
■ Male participation is encouraged
■ Women who come to ANC without a partner are advised to bring them at the next visit but are not turned away

MANAGING IPTp

Essential guidelines and job aids available to service providers

- Current National Malaria guidelines available
- Job aids posted in all consulting areas

Drug store

☐ Confirm stock is available (If not available in the store, verify medication exists at site where dispensed and that demand has been sent to the appropriate authorities

☐ Confirm stock card is up to date

Data management

☐ Essential HMIS forms/register available

- Integrated ANC Register
- ANC Cards (mother baby passports/ notebooks)
- Other forms indicating key coverage indicators including IPTp
  - HMIS 105 - Monthly report
  - HMIS 107 - Annual Report
  - HMIS 015 - Stock Card
  - HMIS 083 - Stock Book
  - HMIS 033B - Weekly surveillance
  - HMIS 106b - Quarterly assessment report

☐ All targets set to permit calculating coverage as a percentage/proportion

☐ Data monitored (through trend graphs or regular feedback from officer responsible for HMIS) and discussed at monthly meetings

☐ Missed opportunity indicator tracked on a monthly basis

IPTp is addressed during facility meetings and in-service updates are scheduled.

- Review data and trends over the previous 3 months. Key indicators include:
  - Proportion of women completing 4 antenatal visits;
  - Proportion women receiving (a) IPTp 2 or (b) IPTp3 or more; and
  - Proportion of eligible women who did not receive IPTp (Missed opportunity indicator).
- Discussion and documentation of problems identified
- Discussion and documentation of possible solutions
- IPTp incorporated into refresher updates/mentoring and includes all staff engaged in service delivery to pregnant women

Additional information can be obtained from:
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