



**ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES**

**EFFECTIVENESS OF SUPPORTIVE SUPERVISION TOWARDS THE
IMPROVEMENT OF HEALTH CENTER'S PERFORMANCE:
THE CASE OF INTRAHEALTH/CPMTCT PROJECT IN ADDIS ABABA**

By:

Habtamu Negash Gurmu

ID NO: SGS4Z/0363/2005

June, 2015

Addis Ababa, Ethiopia

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**A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY, SCHOOL OF
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ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
ARV	Antiretroviral
CPMTCT	Community Prevention of Mother-to-Child HIV Transmission
CSO	Civil Service Organizations
C&T	Counseling and Testing
HIV	Human Immunodeficiency virus
HC	Health centers
IOCC	International Orthodox Church Charities
L&D	Labor and Delivery
MNCH	Maternal Neo-natal Child Health
PATH	Program for Appropriate Technology in Health
PEPFAR	President's Emergency Plan for AIDS Relief
PMTCT	Prevention of Mother to Child Transmission of HIV/AIDS
PQI	Performance/Quality Improvement
RHB	Regional Health Bureaus
SNNP	Southern Nation, Nationalities, and Peoples'
STI	Sexually Transmitted Infections
USAID	United States Agency for International Development

ABSTRACT

Supportive supervision is a process of guiding, helping and encouraging staff to improve their work performance, provide better quality services, and meet the needs of their clients according to the defined standards of performance of their employer. This paper presents a case study of IntraHealth/ CPMTCT project that can serve as an example for other health programs wishing to use PQI-based supportive supervision in improving service quality and coverage. The regression discontinuity design or the cutoff design was used. All 22 CPMTCT supported health centers in Addis Ababa were covered in the study. It base primarily on examination of completed JSS checklists and facility monthly MNCH/PMTCT service delivery reports. Besides, an in-depth interview was conducted with health centers' managers. Quantitative data were analyzed using SPSS and qualitative data were examined using a content analysis methodology. The study reveals that a significant difference was observed in group of HCs with higher number of ARV coverage and group of health centers with relatively less ARV coverage. The more JSS conducted in health centers, the more will be its ARV coverage. Besides, in all HCs where JSS has been conducted, an improvement was observed in quality of service provision and coverage; although no difference was observed between the two groups of HCs in flow of clients for ANC, C&T and L&D services. The health center managers overwhelmingly reported that they found the quarterly joint supportive supervision visits using a checklist helpful. Particularly valued elements of JSS included: early identification of service delivery and other gaps, utilization of action plans, clarifying the roles and responsibilities of individual staff, and self-assessments serving as added motivation for staff. The major challenge in implementing JSS for the health facilities was that there were not enough financial and other resources to address many of the gaps that they identified during the JSS exercise. Supportive supervision is a promising approach to improve service quality and coverage. Programs that wish to use this approach can adapt best practices from CPMTCT project. Specifically, programs should involve all stakeholders, establish feedback mechanism, encourage facilities to conduct regular self-assessment, and have regular schedule and adequate budget for joint supportive supervision. Moreover, supervisors should be trained health care workers themselves, who are able to provide mentoring to health workers, modeling best practices, rather than just relying on observation and telling workers how to improve their work.

Keywords: Supportive supervision; Service quality and coverage; Performance and quality improvement

CHAPTER ONE: INTRODUCTION

This chapter presents background of the study, statement of the problem, objectives and significance of the study, and scope and limitation of the paper. It also describes research questions the paper aims to answer and the hypothesis to be tested. Besides, it states how the research paper is organized.

1.1 Background of the Study

In Ethiopia low utilization of maternal health services results in poor PMTCT achievement. Thirty percent of deaths in women 15-49 years attributed to maternal mortality. Only 34% of pregnant women are receiving skilled antenatal care. Moreover, only 10% births occur in health facilities, that means, 90% of births are unassisted by skilled providers. As a result, only 24% of HIV-positive pregnant women received antiretroviral therapy to prevent transmission (*Source: Ethiopia Demographic Health Survey 2011*).

In September 2009, IntraHealth International and its partners – Program for Appropriate Technology in Health (PATH), International Orthodox Church Charities (IOCC), and Pathfinder International – were awarded a five-year Community Prevention of Mother-to-Child HIV Transmission (CPMTCT) project in Ethiopia funded by USAID/PEPFAR. The project is in close collaboration with the Federal Ministry of Health (FMOH), Regional Health Bureaus (RHBs), Zonal/sub- city and Woreda Health Offices, health centers and civil service organizations (CSOs).

The goal of the CPMTCT project is to increase MNCH/PMTCT service uptake and case follow-up through the provision of PMTCT services at the community level, with the following four key objectives (*Source: IntraHealth/CPMTCT Project Plan 2009*):

1. Build the capacity of regional health bureaus, zonal/sub-city and woreda health offices and community-based organizations, to support and manage community-based PMTCT;
2. Increase access to MNCH/PMTCT services and improving referrals between services at all levels;
3. Increase the demand for MNCH/PMTCT services through community outreach;
4. Improve the quality of community and facility-based MNCH/ PMTCT services.

CPMTCT applies its expertise in training, performance/quality improvement, and referral-system development to scaling up and improving the quality of PMTCT and MNCH services. The project is operating in Addis Ababa, Amhara, Oromiya, SNNP (Southern Nation, Nationalities, and Peoples'), and

Tigray regional states. It has been supporting 519 health centers and their catchment areas, of which 22 were found in Addis Ababa.

To improve MNCH/PMTCT services, the Government of Ethiopia (GOE) has adopted and implemented policies for integrating PMTCT in maternal, neonatal and child health services. In support of these policies, IntraHealth's CPMTCT project promotes these services through a performance/quality improvement (PQI) approach that includes training, supportive supervision, and review meetings.

PQI is a systematic and ongoing process in which stakeholders consider the context of performance (e.g., clients, community, organization, health workers, external environment), identify performance or quality gaps and strengths, and identify their root causes, using tools to explore the categories of factors that influence performance and quality.

Based on the root causes, stakeholders then identify corresponding solutions or interventions to address the deficit or build on the accomplishment, with the aim of continually improving the quality of health services and ultimately improving health outcomes. Throughout the process, stakeholders monitor and evaluate workplace performance in order to measure any changes in the performance gaps or expansion of the high performing areas as a result of the process. Monitoring is done at every stage of the process, so that changes can be made as needed during the implementation or at the next cyclic phase.

A system of supportive supervision can facilitate improvements and help maintain high performance and quality of health services. Supportive supervision is a process of guiding, helping and encouraging staff to improve their work performance, provide better quality services, and meet the needs of their clients according to the defined standards of performance of their employer. Supportive Supervision is an important element of the PQI process!

IntraHealth/CPMTCT has been conducting PQI-based supportive supervision in project supported health centers since the beginning of the project in October 2009. This includes quarterly joint supportive supervision (JSS) visits to health centers, in which higher levels of the health structure (sub city health offices in Addis, and woreda health offices and/or zonal health departments in other regions) apply an integrated checklist to assess performance against standards/targets, identify causes of performance/quality gaps, develop action plans for addressing those gaps, and determine whether the gaps have been effectively addressed. Moreover, follow-up supportive supervision (FSS) and mentoring is provided by project's staff (program officers) once a month and aims to resolve bottlenecks in action plan implementation, including the provision of on-the-job training and coaching.

Research findings in the area of PQI and/or SS are scarce. This case study is thus intended to fill the literature gap in the area, and more specifically this study will serve as preliminary work for further study on this approach.

A study by Mogasale et. al. (2009) found out that “it is possible to improve quality over the long-term in STI interventions using an interactive and comprehensive supportive supervision tool which gives on-the-spot feedback”. Other two studies conducted by Marshall A, Fehringer J in Haiti (2013) and Ethiopia (2014) suggested that “supportive supervision is successful in promoting program ownership, improving data quality and data collection at the community-level, achieving a consistent use of tools to facilitate supervision, and providing feedback on staff performance”. Moreover, a study by G Babu et. al. (2010) inferred that “supportive supervision improves immunization coverage and also serves as an efficient tool to strengthen the local health system”.

Contrary to the above four papers, Criel B and De Brouwere V (March 2012) did a review on managerial supervision to improve primary health care in low- and middle- income countries; and concluded that “it is uncertain whether supervision has any substantive, positive effect on the quality of primary health care.. The long-term effectiveness of supervision is also unknown.”

This study, therefore, investigates effectiveness of PQI-based supportive supervision towards the improvement of health center’s performance at IntraHealth/CPMTCT project supported sites in Addis Ababa.

1.2 Statement of the Problem

The major purpose of supportive supervision is to enable health centers better satisfy the needs and expectations of its clients. Both technical or clinical and managerial support are hoped to enable health center staff know what to do and how to do it. Such services will contribute to high performance and as a result increase efficiency and effectiveness.

Supportive supervision is often consistent missing link in efficient implementation of public health programs in Ethiopia. However, IntraHealth has been doing PQI-based supportive supervision to its project sites for about ten years since it started operation in the country through its various projects.

PQI based Supportive supervision is a large and innovative component of IntraHealth projects including its current project, CPMTCT. Besides, more than 60% of the project’s annual program cost goes to expenses related to supportive supervision (*Source: IntraHealth International Ethiopia, Financial*

Report 2013). Nevertheless, no study has been conducted to assess the effectiveness of this approach in improving performance of health facilities in terms of MNCH/PMTCT service quality and coverage. So, it needs to capture the innovative nature of the JSS and FSS process, and counting the number of visits is not enough.

Although IntraHealth has been an advocate for PQI approach in supportive supervision of health facilities for more than a decade, there is a lack of documentation on how effectively supportive supervision has been applied at the health center level.

Therefore, this research was conducted to study whether this approach is effective or not in improving health centers' performance in terms of MNCH/PMTCT service coverage and quality. It also assessed issues or gaps identified and actions taken to resolve these problems during joint supportive supervision.

1.3 Research Questions and Hypothesis

This research was carried out to investigate effectiveness of PQI-based supportive supervision towards the improvement of health center's performance at IntraHealth/CPMTCT supported sites in Addis Ababa.

Possible answers were provided to the following basic questions.

- How has joint supportive supervision helped health centers in improving their performance (i.e. MNCH/PMTCT service coverage and quality)?
- What were the challenges in implementing joint supportive supervision?
- What kinds of issues or gaps were identified during joint supportive supervision?
- What approaches were taken to overcome gaps identified during supportive supervision?
- Do we see an association between the number of JSS and HCs performance in terms of MNCH/PMTCT service quality and coverage?

Moreover, the following hypotheses were tested:

- Whether there is a difference between HCs where more JSS was conducted and those HCs with fewer JSS in terms of the following service quality and coverage indicators:
 - *Quality of Service Score*
 - *ANC coverage*
 - *PWWKS coverage*
 - *ARV coverage*
 - *L&D coverage*

1.4 Objectives of the Study

General Objective:

The general objective of the study was to assess whether the number of joint supportive supervision visits relates to improvement in the quality¹ and coverage of MNCH/PMTCT services at health centers.

Specific Objectives:

The specific objectives of the study include:

- Assess implementation of the PQI-based supportive supervision;
- Identify challenges of the PQI-based supportive supervision;
- Assess strengths of the PQI-based supportive supervision;
- Assess areas for improvement of the PQI-based supportive supervision;
- Identify any common performance gaps for which the approach seems to be more effective/less effective;
- Compare health centers with respect to quality of service and coverage based on the frequency of joint supportive supervision;

1.5 Significance of the Study

Research findings in the area of PQI and/or SS are scarce. Thus, this case study is intended to fill the literature gap in the area. Moreover, this study will serve as preliminary work for further study on this approach.

Although IntraHealth has been conducting PQI-based supportive supervision to its various project sites for more than a decade, there is no evidence for the effectiveness of this innovative approach. The findings of the study, therefore, will definitely help the organization understand the problems/challenges associated with the implementation of PQI-based supportive supervision approach and take relevant and necessary remedial actions according to the result obtained or recommendations pertaining to the current approach.

The study will also benefit other international organizations involved in health programs on how to implement this approach to their project sites effectively.

¹ The quality measures are related to provision of services from review of records that shows appropriate service

1.6 Scope of the Study

The study focused only to IntraHealth/CPMTCT project supported health centers in Addis Ababa, and hence health centers in Addis supported by other implementing partners (IPs) were not covered. Besides, due to budget and time constraints health centers supported by the project in the other four regions, i.e., Amhara, Oromiya, SNNP and Tigray were not included in this study.

1.7 Limitation of the Study

The study suffered from limitations attributed to the use of secondary data. As secondary data is usually incomplete, illegible, and lost, it may be difficult to get data on some variables. However, since completed JSS checklists were kept in three copies (at the regional project office, at the health center being supervised (project sites), and at the sub-city health office) the limitations were not exaggerated. Moreover, there had been an intensive mentoring and follow-up to regions from the country office's technical, program and M&E team in record keeping of the checklists.

Lack of up-to-date literature in the study area was the other limitation of the research.

1.8 Organization of the Paper

The research study report is organized in five chapters.

Chapter one contains background of the study, statement of the problem, research objectives, hypothesis of the study, significance of the study, justification of the study, limitations and scope of the study.

Chapter two provides a literature review informing the reader of what is already known in this area of study, and findings from previous researches.

Chapter three discusses the research methodology employed in the study, including, research design, sample size and sampling technique, data source and collection method, procedure of data collection and method of data analysis.

Chapter four is about data analysis and discussion of results. Finally, *chapter five* contains summary, conclusions and recommendations.

The references list and annexes are attached at the end of the paper.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

This chapter provides the reader with a literature review concerning PQI-based supportive supervision. The basic concepts on performance and quality improvement, the PQI process, and definitions of supportive supervision are thoroughly discussed. Besides, previous studies are reviewed at the end.

2.1 Performance and Quality Improvement: Basic Concepts

Performance and Quality are interrelated concepts. Performance refers to “the tasks or activities that people, teams, or organizations do and the accomplishments or results of those tasks” (Gilbert, 1996; Harless, 1992; Dean, 1994). It is often measured in one or more of the following terms: quality, quantity, timeliness, and cost. Effort is NOT the same as Performance. Quality refers to the extent to which a product, process, or service conforms to specified requirements or standards.

Table 1: Measures of performance

Performance measures	Examples
<p><i>Quality</i></p> <ul style="list-style-type: none"> Does the performance match with the standard? Does the performance meet the expectations of clients/community? 	<ul style="list-style-type: none"> The provider should follow all 5 steps of good family planning counseling, with each client. The clinic should have 90% client satisfaction on the MOH client satisfaction survey form.
<p><i>Quantity</i></p> <ul style="list-style-type: none"> Does the performance happen as much or reach as many clients as it should (volume)? 	<ul style="list-style-type: none"> The provider sterilizes 4 sets of instruments at the beginning of each day.
<p><i>Timeliness</i></p> <ul style="list-style-type: none"> Does the performance happen on time? Does the performance happen as often as it should? How long does it take to get the job done? 	<ul style="list-style-type: none"> The provider should be ready to see clients by 9:00 a.m., every day. The provider should do family planning counseling with all eligible women and couples (100% of the time). The provider should explain the methods within a 10-minute talk.
<p><i>Cost</i></p> <ul style="list-style-type: none"> Does the performance maximize resources? 	<ul style="list-style-type: none"> The clinic stores medical supplies so that the first to expire are the easiest to reach, and therefore less likely to expire

Source: PQI/SS Training for Health Service Managers and Providers, Reference annual, IntraHealth, May 2012

Quality Improvement

Quality improvement has been defined as a cyclical process of measuring a performance gap; understanding the causes of the gap; testing, planning and implementing interventions to close the gap; studying the effects of the interventions; and planning additional corrective actions in response (Tawfik Y et. al., October 2010).

The Model for Improvement developed by Gerald Langley, et al. has been used for health care quality improvement. The Model requires teams to ask three questions:

1. *What are we trying to accomplish? (**Aim**) Here, participants determine which specific outcomes they are trying to change through their work.*
2. *How will we know that a change is an improvement? (**Measures**) Here, team members identify appropriate measures to track their success.*
3. *What changes can we make that will result in improvement? (**Changes**) Here, teams identify key changes that they will actually test.*

Key changes are then implemented in a cyclical fashion: teams thoroughly plan to test the change, taking into account cultural and organizational characteristics; they do the work to make the change in their standard procedures, tracking their progress using quantitative measures; they closely study the results of their work for insight on how to do better; and they act to make the successful changes permanent or to adjust the changes that need more work.

Performance Improvement

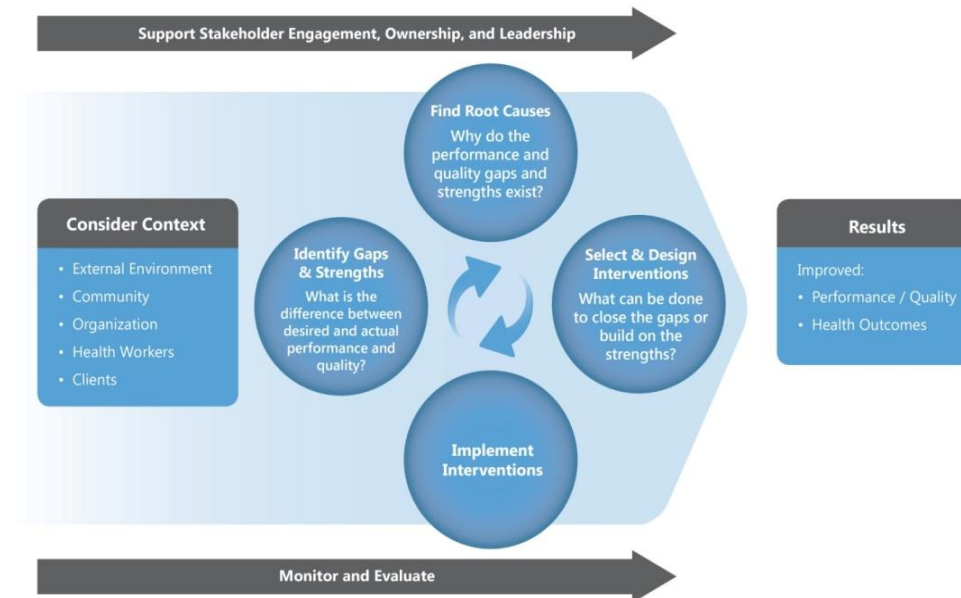
- A step-by-step methodology for finding out what is needed to ensure and sustain good performance, and delivering it.
- A continuous process for achieving desired institutional and/or individual results
- Goal: the provision of high quality sustainable health services for clients

2.2 The Performance and Quality Improvement (PQI) Process

PQI is a process for analyzing the performance of health workers, organizations, and systems and setting up interventions to improve performance and quality or build on strengths and successes. It is a systematic and ongoing process consisting of seven stages and a variety of tools and techniques to

ensure the quality of new health services that are being introduced or to improve the quality of existing health services. Often the first two stages occur at the same time or sometimes in reverse order, especially if the team leading the process is internal to the organization or health facility.

Figure 1: Performance and Quality Improvement Framework (IntraHealth 2012)



Following is a description of each of the seven stages, as described by Murphy C and Sebikali B (April 2014).

Stage 1: Consider context—external environment, community, organization/facility, health workers, clients

The health team must understand the overall context within which the PQI process takes place. This includes the “external environment and community surrounding the organization or health facility, the organization’s structure and culture, and the perspectives of employees/health workers and the clients and community served by the facility”.

Stage 2: Support stakeholder engagement, ownership, and leadership

An important early step in the PQI process is to determine the key stakeholders and decision-makers who must be involved throughout the process, including those whose performance is hindered or facilitated by the system in question. The purpose of this stage is “to increase the likelihood of successfully implementing improvements that individuals might not be able to undertake on their own.”

Stage 3: Identify gaps and strengths

This stage involves three main steps. The PQI team and other stakeholders define the desired performance or expected quality standards, assess actual performance and quality, and compare the two levels to identify gaps and strengths in performance and quality.

Statements of desired performance, actual performance, and gaps and strengths are all described according to “the same specific, observable, and measurable outcomes that support organizational goals.’

Stage 4: Find root causes

Purpose of root cause analysis is to “find the underlying reasons for the gaps and/or strengths so that interventions can target these root causes and will therefore be more effective in improving performance”. The reasons for poor or high performance are not always immediately obvious and there may be several reasons.

The stakeholder group participates in a root cause analysis to uncover the factors that are impeding good performance or contributing to high-level performance.

Stage 5: Select and design interventions

The stakeholder group next selects interventions that will address the root causes of priority gaps or build upon the successful performance elements discovered during the previous stage. When root causes are identified in terms of missing performance factors, potential solutions become clear.

There are six main categories of factors that are known to affect the performance of health workers, teams, organizations and systems, and therefore the quality of care. Five categories are divided among organizational and individual/team factors: *organizational systems, incentives, tools and physical environment, skills and knowledge, individual attributes*. The sixth category includes factors in the *environment external to the organization or facility*.

During this stage, the team plays a major role in designing the selected interventions. This includes reaching agreement on a design or action plan, including the process to be used to implement the interventions, the timeframe, roles and responsibilities, resources needed, monitoring and evaluation plan for measuring progress, etc.

Some interventions are “just do it” solutions, such as just fix the water tap or leaking roof, or just disseminate existing guidelines or job descriptions, or just adjust the facility’s hours of operation. In these cases, the solutions are quick and can produce rapid results.

Stage 6: Implement interventions

During the implementation stage, the PQI team assures organizational readiness, applies the interventions, and helps enable and monitor organizational change. In accordance with the design plan, each aspect of the interventions is carried out by the person or team with assigned responsibility for it, and all actions are continually monitored to determine how the process is moving forward and modify the process as needed.

Implementation action plan includes planned *activities*, *person responsible* for each activity, *required resources*, *date* by which each activity will be accomplished, and *expected result* and how it will be measured

Stage 7: Monitor and evaluate

Throughout the PQI process, workplace performance should be monitored and evaluated in order to measure any changes in the performance gaps or expansion of the high performing areas as a result of the process. Monitoring is done on an ongoing basis, at every stage of the process, so that changes can be made as needed during the implementation or at the next cyclic phase.

Monitoring is “the routine tracking of data that measure progress toward achieving objectives of a program or intervention”. The purpose of monitoring is to ensure activities are implemented according to plan; to identify activities or resource allocation in need of adjustment or improvement in order to achieve desired results; to provide information for program evaluation; for reporting requirements and to facilitate advocacy. On the other hand, evaluation is “the process of collecting and analyzing data in order to measure how well a program or intervention has met expected objectives and/or the extent to which changes in outcomes can be attributed to the program or intervention, or to other factors”.

With the level of performance updated to reflect the recent advances, new desired performance levels can be set and fresh interventions implemented in a cycle of continuing performance and quality improvement.

2.3 Supportive Supervision

In international health programs, supervision plays an important role in the management of human resources to improve the quality of health care and health service delivery. However, the traditional ‘inspect and control’ approach of supervision limits the performance of basic supervision tasks and demoralizes staff (Marquez & Kean, 2002). Supportive supervision is a facilitative approach to supervision that promotes continuous improvements in the quality of care by providing the necessary leadership and support for quality improvement processes and by emphasizing mentorship, joint problem solving and two-way communication between supervisors and supervisees (Marquez & Kean, 2002).

In a supportive supervision model, supervision happens continuously as part of a team effort implemented by multiple parties, and focuses on problem-solving to assure quality and meet client needs (Marquez & Kean, 2002). Supportive supervision encounters typically include: performance observation and comparison of actual practices with standards; facilitative feedback on performance; provision of guidelines or technical updates; use of client input and data to ascertain opportunities for improvement; problem solving as a team, and; follow-up of previously noted problems (Marquez & Kean, 2002). In a supportive supervision model, staff typically employs job aids such as checklists and assessment forms to facilitate supportive supervision (Marquez & Kean, 2002).

Supportive supervision promotes quality at all levels of the health system by strengthening relationships within the system, focusing on the identification and resolution of problems, and helping to optimize the allocation of resources, promoting high standards, teamwork, and better two-way communication (Marquez and Kean, 2002). It is an important element of the PQI process!

People do better work when they actively participate in setting goals and creating solutions. Constructive feedback also plays an important role in supportive supervision. Workers need to feel that the supervisor listens to them. In this style the supervisor treats staff well, encourages them to do a good job, gives recognition for work well done, and sets clear expectations when they need to improve their performance.

The PQI approach and its focus on factors that influence performance helps guide supervisors in facilitating organizational support that then permits high performance and quality, including effective management, good coordination, and inspiring leadership—all of which help determine the extent to which performance factors are in place at all levels in an organization.

2.4 Previous Studies

Research findings in the area of PQI and/or SS are scarce. The following are five of the very few papers to be discussed and compared; however, the author of this paper can only find one research paper conducted on the topic in Ethiopia.

Mogasale et. al. for example, studied the impact of supportive supervision in STI intervention in India. In their study, they tracked the quality of STI services in five performance areas: coverage, quality of clinic and services, referral networks, community involvement and technical support. They found out that it was possible to improve quality over the long-term in STI interventions for sex workers, men who have sex with men and injection-drug users using an interactive and comprehensive supportive supervision tool which gives on-the-spot feedback.

Marshall A, Fehringer J conducted two case studies to examine the use of supportive supervision in Monitoring and Evaluation with Community-based Health Staff in HIV Programs in Haiti (November 2013) and Ethiopia (August 2014). Data were collected through key informant interviews, direct observations of supervision visits, and document review. Findings of these studies suggest that the supportive supervision project was successful in promoting program ownership, improving data quality and data collection at the community-level, achieving a consistent use of tools to facilitate supervision, and providing feedback on staff performance. Both studies concluded that supportive supervision is a promising approach to improve routine data collection for M&E of community-based programs. However, the projects in both countries were less successful at promoting data use for decision making.

Other authors called G Babu et. al. (2010) studied the role of supportive supervision in improving immunization coverage in developing country settings. Doing a comparison of immunization coverage before and after the initiation of supportive supervision, the study inferred that supportive supervision improves immunization coverage and also serves as an efficient tool to strengthen the local health system.

Contrary to the above four papers, Criel B and De Brouwere V (March 2012) did a review on managerial supervision to improve primary health care in low- and middle- income countries; and concluded that it is uncertain whether supervision has any substantive, positive effect on the quality of primary health care. The long-term effectiveness of supervision is also unknown. The reviewers searched the Cochrane Central Register of Controlled Trials for suitable articles. Of the nine studies that met the inclusion criteria, three had compared supervision with no supervision, five had compared

enhanced supervision (involving any measure to strengthen routine supervision) with routine supervision, and one study had compared less intensive supervision with routine supervision. In two studies comparing supervision with no supervision, small benefits with regard to provider practice and knowledge were found. Seven other studies – five on enhanced supervision and two on more frequent supervision visits – demonstrated small, non-significant benefits related to the health-care workers' performance. In the study which had compared less intensive supervision with routine supervision, reduced frequency of visits had no impact on the use of services.

Of the five papers reviewed, four showed the effectiveness of supportive supervision in improving performance and data quality while one concluded that it is uncertain whether supervision has any substantive, positive effect on the quality of primary health care.

However, the author of this paper believes that effective supportive supervision has tremendous value in improving performance of health care services. The author has participated in various joint supportive supervision visits to IntraHealth/CPMTCT supported health centers and witnessed the importance of JSS mainly in identifying area for improvement (gaps) and taking measures for actions.

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

This chapter presents details of the research design and methodology. A research design is the logic that links the data to be collected (and conclusions to be drawn) to the initial questions of a study (or a strategy or plan of action that links methods to outcomes) (Creswell, 2003). The research approach, sample size and sampling technique, sources of data and data collection method, study design and data analysis are thoroughly discussed.

3.1 Research Approach

The research problem along with the philosophy of research methodology would guide the choice of the appropriate research method. Creswell (2009) characterizes research approach into quantitative, qualitative and mixed.

Quantitative research is “generally associated with the positivist/postpositivist paradigm. It usually involves collecting and converting data into numerical form so that statistical calculations can be made and conclusions drawn. It follows scientific approach and bias from the researcher’s influence is less. It can also employ large sample size and can test the validity and reliability of the instrument so that the results can be believed and generalized for larger population”.

Qualitative research is “the approach usually associated with the social constructivist paradigm which emphasizes the socially constructed nature of reality. It is about recording, analyzing and attempting to uncover the deeper meaning and significance of human behavior and experience, including contradictory beliefs, behaviors and emotions’. Researchers are interested in gaining a rich and complex understanding of people’s experience and not in obtaining information which can be generalized to other larger groups. It helps to explore issues which are not studied in the past though it is criticized of bias because of researcher’s interference”.

It is believed that people are constantly trying to attribute meaning to their experience. Therefore, it would make no sense to limit the study to the researcher’s view or understanding of the situation and expect to learn something new about the experience of the participants. Consequently, the methods used may be more open-ended, less narrow and more exploratory (particularly when very little is known about a particular subject). The researchers are free to go beyond the initial response that the participant gives and to ask why, how, in what way etc. In this way, subsequent questions can be tailored to the responses just given.

Mixed methods approach, which is believed to mitigate the biases of quantitative and qualitative approaches, is “one in which a researcher tends to base knowledge claims on pragmatic grounds employing strategies of inquiry that involve collecting both quantitative and qualitative data either concurrently or sequentially to best understand research problems. Being able to mix both quantitative and qualitative methods, it has the advantages of enabling triangulation’. Triangulation is a common feature of mixed methods studies. It involves, for example the use of a variety of data sources (data triangulation); the use of several different researchers (investigator triangulation); the use of multiple perspectives to interpret the results (theory triangulation); and the use of multiple methods to study a research problem (methodological triangulation).

Considering the above points in the mind of the researcher, this study adopted the mixed research approach in collecting and analyzing data in order to better understand the research problem. The main reason for such a choice was to use qualitative results to assist in explaining and interpreting the findings of a primarily quantitative study. Besides, employing this approach was used to neutralize or cancel the biases (limitations) of applying any of a single approach and a means to offset the weaknesses inherent within method with the strengths of the other method (Creswell, 2003, pp. 15 & 217).

This research approach posed the researcher the need for extensive data collection, the time-intensive nature of analyzing both text and numeric data, and the requirement for the researcher to be familiar with both quantitative forms of research (Creswell, 2003, p. 210). Moreover, the researcher collected both forms of data at the same time during the study and integrated the information in the interpretation of the overall results (Creswell, 2003, p. 16).

3.2 Sample Size and Sampling Technique

IntraHealth/CPMTCT project had been supporting 22 health centers in Addis Ababa. These sites were found in 7 of the 10 sub-cities in Addis Ababa. All of these sites were covered in the quantitative study. It is recommended to carry out a study on a census basis than taking a sample for a smaller number of facilities (Measure Evaluation, July 2001).

Besides, one health center head from each sub-city where IntraHealth/CPMTCT operates was randomly selected and interviewed.

3.3 Sources of Data

The study used both primary and secondary sources of data. It base mainly on examination of completed JSS checklists and health centers’ MNCH/PMTCT monthly service delivery (or Health Management

Information System) data. Both completed JSS checklists and service delivery data are secondary data that the researcher received from Addis Ababa CPMTCT project office with permission.

Besides, interview with health centers' managers was conducted using an open-ended structured questionnaire (see Annex 2).

3.3.1 Completed JSS checklist [Secondary data]

IntraHealth/CPMTCT project has been using the JSS checklist as a tool for internal performance improvement since the beginning of the project. The regional program officers, sub-city health office staff (and sometimes the RHB representative, and country office staff) jointly with the health centers' managers conduct supportive supervision to project supported sites once every quarter. These same program officers also conduct follow-up supervision in the following month(s) before the next JSS visit to these sites. All these completed supportive supervision checklists were kept in three copies: at the sub city health, at the health center and at the project's regional office.

The researcher received all completed JSS checklists, and service delivery data from the Addis Ababa project office and made the analysis. Though these data were routinely collected for monitoring and evaluation of the project, the research used scientific research methods to analyses these data for this paper. The researched has also been involved developing the JSS checklist and all M&E data collection tools during the commencement of the CPMTCT project in 2009.

3.3.2 HCs monthly MNCH/PMTCT service delivery data [Secondary data]

MNCH/PMTCT service delivery statistics such as the number of new ANC clients, number of pregnant women with known HIV status, number of HIV+ women who received ARV prophylaxis, and number of deliveries attended by a skilled birth attendant, among others are routinely collected from all IntraHealth/CPMTCT supported health centers. These data were available in the project's database and were used to calculate service coverage for the key MNCH/PMTCT indicators for each health centers under investigation for the assessment period.

3.3.3 In-depth Interview with HCs' managers [Primary data]

In addition to referring completed JSS checklists and HCs monthly MNCH/PMTCT service delivery data, an interview was conducted with HCs' managers (see Annex 2).

3.4 Data Collection Method

At first, the researcher received all completed JSS checklists for the 22 IntraHealth/CPMTCT supported health centers in Addis Ababa from the project office. Next, the researcher got a copy of all monthly MNCH/PMTCT service delivery data for these sites from the project's database. These data were collected since CPMTCT intervention in these sites in October 2009 to end of project in September 30, 2014.

Besides, in order to understand the impressions and experiences of those who actually implemented the JSS system, an interview was conducted to 7 of the 22 health centers' managers as key informants. The researcher feels comfortable that saturation of information was achieved by interviewing one health center manager randomly selected from of the 7 sub-cities the project had been operating in Addis Ababa.

3.5 Methods of Data Analysis

3.5.1 Quantitative Data Analysis

In the quantitative component of the study, the regression discontinuity design (RDD) or the cutoff design was used. RDD is a quasi-experimental pretest-posttest design that elicits the causal effects of interventions by assigning a cutoff or threshold above or below which an intervention is assigned. By comparing observations lying closely on either side of the threshold, it was possible to estimate the local average treatment effect.

The basic idea behind such design is that assignment to different groups is determined, by the value of an assignment variable; in this case the *performance scores* (i.e. *service coverage and quality of service provision*), calculated from completed joint supportive supervision checklist (i.e. the average quality of service score of all health centers included in the sample) and average number of clients for year 5 for ANC, C&T, ARV, L&D services, being on either side of a fixed threshold.

SPSS (version 20.0) was employed for the quantitative data analysis. Besides, trend of health centers service delivery were also analyzed.

3.5.2 Unit of Analysis

Since the supportive supervision is targeted at IntraHealth/CPMTCT supported health centers and the assessment focuses on performance improvement of health centers, the unit of analysis was a *health center*. The unit of analysis refers to the level of aggregation of the data collected during the data analysis stage.

3.5.3 Quality of Service Provision

In order to calculate a health center's quality of service score, data collected during joint supportive supervision was entered into Microsoft Excel. Then the 'Yes' or 'No' answers for each question in the checklist was added up using the COUNTIF function. At first, quality of service score was computed for each sub-unit included in the JSS at health center level by quarter. Then, sub-units score were aggregated to come up with the percentage performance score for the six units namely; ANC/PMTCT, LABOR & DELIVERY, UNDER FIVE SERVICES, FAMILY PLANNING, LABORATORY, and PHARMACY. At last, the average of the six performance scores generates service quality score of the health center for each JSS.

Following this, health centers included in the sample were grouped into two based on their service quality score. Health centers with service quality score at or above the cut-off quality of service percentage score (i.e. the average quality of service score of all health centers included in the sample: 84%) were assigned as *Group 1*, and health centers that are at or below the average service quality score were assigned as *Group 2*.

Then the differences between the two groups were assessed using Chi-square test. Moreover, linear regression method was used to assess the relationship between joint supportive supervision visits and health centers' quality of MNCH/PMTCT service provision.

3.5.4 Service Coverage

Four indicators were used to assess change in MNCH/PMTCT service coverage at IntraHealth/CPMTCT supported health centers.

These indicators were health center level service delivery outcome indicators that help to measure effectiveness of the JSS visits pertained to the number of: (1) new ANC clients (2) pregnant women with

known HIV status (3) HIV+ women who received ARV prophylaxis, and (4) deliveries attended by a skilled birth attendant;

Average number of clients for year 5 (i.e. ANC, C&T, ARV, L&D clients) were used to divide health centers into two, being on either side of a fixed threshold. Similarly, the differences between the two groups were assessed using Chi-square test.

Moreover, the increasing trend in MNCH/PMTCT service coverage since CPMTCT intervention in 2009 to 2014 has been assessed.

3.5.5 Qualitative Data Analysis

As the purpose of supportive supervision is to improve performance of health centers in terms of MNCH/PMTCT service quality and coverage, the qualitative component of the study tried to show HOW and WHY supportive supervision is improving services. So, the study also tried to get at some of this information, specifically asking the health centers' managers (as key informants) to describe their experience with SS, how it's helped them or hindered their work, what kinds of issues/gaps were identified during SS, and actions taken to resolve those issues.

The qualitative data were examined using a content analysis methodology.

3.6 Ethical Consideration

The researcher kept primary data collected through an interview and study results anonymous and confidential for privacy reasons.

Besides, the researcher has got approval from IntraHealth International-Ethiopia to use CPMTCT project's data (146 completed JSS checklist, and service delivery data since service initiation in 2009).

CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION

This chapter of the paper is concerned with analysis of quantitative data (MNCH/PMTCT service delivery data from project's database and service quality score extracted from completed JSS checklist) and qualitative data (interview results). The following analysis implies a careful examination of the collected and recorded data with the problem statement.

4.1 Results of Quantitative Data Analysis

IntraHealth/CPMTCT project has been using a checklist (Annex 4) that was completed by the supervisory team in every joint supportive supervision visit to project supported sites. The researcher received around 146 completed JSS checklists from the project's office for the 22 HCs in Addis Ababa and reviewed them all. Besides, monthly health centers' performance data for key MNCH/PMTCT indicators were analyzed. The researcher received the entire IntraHealth/CPMTCT project database where health centers' performance data for service delivery was recorded since CPMTCT project intervention in October 2009 to end of project in September 2014.

4.1.1 Assessing the Effect of JSS on HCs' Performance using Chi-square Test

A Chi-square method was used to assess whether health centers at which more frequent JSS were conducted will have better performance (i.e. quality of MNCH/PNTCT service provision and coverage) than those health centers with less frequent JSS or not.

Quality of MNCH/PMTCT Service Provision vs. JSS

In order to assess the effect of JSS on the quality of service provision, health centers were grouped into two based on their quality of MNCH/PMTCT service score. HCs with quality of service score at or above the average score of all health centers included in the sample (84%) were assigned as Group 1 and health centers that were below the average quality of service score (84%) were assigned as Group 2.

Table 2: Number of JSS conducted versus Quality of service score of health centers

		Group of HCs		Total
		Quality Score \geq 84%	Quality Score $<$ 84%	
Total number of JSS	NJSS $>$ 5	10	4	14
	NJSS \leq 5	6	2	8
Total		16	6	22

To assess the difference between the two groups, the following hypothesis was tested using Chi-squared test.

HO: There is no difference between Quality of Service Score \geq 84% group of HCs and Quality of Service Score $<$ 84% group of HCs

HA: There is difference between Quality Score \geq 84% group of HCs and Quality Score $<$ 84% group of HCs

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.033 ^a	1	.856		
Continuity Correction ^b	.000	1	1.000		
Likelihood Ratio	.033	1	.856		
Fisher's Exact Test				1.000	.631
Linear-by-Linear Association	.031	1	.860		
N of Valid Cases	22				

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 2.18.

b. Computed only for a 2x2 table

Note: Since one cell has count value less than 5 we should take the Likelihood ratio of the above Chi-Square tests table.

$\chi^2_{\text{calc}} = 0.033$ and χ^2_{tab} with $df = 1$, at .05 level of significance = 3.84

Since $\chi^2_{\text{calc}} < \chi^2_{\text{tab}}$ we accept the null hypothesis i.e. there is no difference between the two groups due to number of JSS conducted at those health centres.

The results show that there was no difference between group one and group two health centers.

Interpretation of Results:

No matter how effort has been exerted by CPMTCT project to improve quality of MNCH/PMTCT services through joint supportive supervision, there were still gaps that hinder this effort. These gaps were beyond the mandate or scope of the project, that is, in relation to equipment, infrastructure, and commodities.

This was the major challenge encountered during implementation of JSS as there was not enough financial resource to address these gaps. There was often a perception that the NGOs participating in the

JSS should be able to address resource needs identified during the process, which was not always the case.

MNCH/PMTCT Service Coverage vs. JSS

To measure the effectiveness of JSS visits to the service coverage of health centers' service delivery outcome indicators: *New ANC clients, Pregnant women with known HIV status, HIV+ women who received ARV prophylaxis, and Deliveries attended by skilled birth attendant* were independently assessed against the number of JSS visits conducted in all CPMTCT supported health centers in Addis Ababa included in the sample. For all indicators the average number of clients for each type of service in all health centers assessed was taken as a cut-off point in the analysis.

ANC Service Delivery vs. JSS

Table 3: Number of JSS conducted versus number of new ANC clients

		Group of HCs		Total
		ANC >1,000	ANC <= 1,000	
Group of JSS	NJSS > 5	5	9	14
	NJSS <=5	3	5	8
Total		8	14	22

The following hypothesis was tested using Chi-squared test:

HO: There is no difference between HCs with ANC coverage > 1000 per year and ANC coverage <=1000 per year

HA: There is difference between HCs with ANC coverage > 1000 per year and ANC coverage <=1000 per year

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.007 ^a	1	.933		
Continuity Correction ^b	.000	1	1.000		
Likelihood Ratio	.007	1	.933		
Fisher's Exact Test				1.000	.642
Linear-by-Linear Association	.007	1	.935		
N of Valid Cases	22				

a. 1 cell (25.0%) have expected count less than 5. The minimum expected count is 2.91.

b. Computed only for a 2x2 table

Note: Since one cell have count less than 5, we should take the Likelihood ratio of the above Chi-Square tests table.

$\chi^2_{\text{calc}} = 0.007$ and χ^2_{tab} with $df = 1$, at .05 level of significance = 3.84

Since $\chi^2_{\text{calc}} < \chi^2_{\text{tab}}$ we accept the null hypothesis i.e. there is no difference between the two groups due to number of JSS conducted at those health centres.

Interpretation of Results:

Demand creation and community mobilization (DCCM) programme had been conducted in all the 22 HCs catchment area through CSO volunteers, Community mother support groups, and spiritual fathers. The main objective of the DCCM programme was to improve health seeking behaviour of the population in the reproductive age group living in the HCs catchment with special emphasis to pregnant women and their partners for MNCH/PMTCT services (mainly for ANC, C&T and L&D services). This contributed to the increase in flow of clients for ANC, C&T and L&D services in all sites where DCCM was conducted. Therefore, the difference between the two groups of HCs vanishes in terms of these indicators.

C&T Service Delivery vs. JSS

Table 4: Number of JSS conducted versus number of pregnant women with known status (PWWKS)

		Group of HCs		Total
		PWWKS >950	PWWKS <=950	
Total number of JSS	NJSS >5	5	9	14
	NJSS <=5	3	5	8
Total		8	14	22

The following hypothesis was tested using Chi-squared test:

HO: There is no difference between HCs with PWWKS coverage > 950 per year and PWWKS coverage < =950 per year

HA: There is difference between HCs with PWWKS coverage > 950 per year and PWWKS coverage < =950 per year

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.007 ^a	1	.933		
Continuity Correction ^b	.000	1	1.000		
Likelihood Ratio	.007	1	.933		
Fisher's Exact Test				1.000	.642
Linear-by-Linear Association	.007	1	.935		
N of Valid Cases	22				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.91.

b. Computed only for a 2x2 table

Note: Since one cell have count less than 5, we should take the Likelihood ratio of the above Chi-Square tests table

$\chi^2_{calc} = 0.007$ and χ^2_{tab} with $df = 1$, at .05 level of significance = 3.84

Since $\chi^2_{\text{calc}} < \chi^2_{\text{tab}}$ we accept the null hypothesis i.e. there is no difference between the two groups due to number of JSS conducted at those health centres.

Interpretation of Results:

The results for C&T service delivery had similar interpretation as that of ANC explained above.

ARV Provision vs. JSS

Table 5: Number of JSS conducted versus number of HIV+ pregnant women who received ARV

		Group of HCs		Total
		ARV >17	ARV <= 17	
Total number of JSS	NJSS >5	5	9	14
	NJSS <=5	0	8	8
Total		5	17	22

The following hypothesis was tested using Chi-squared test:

HO: There is no difference between HCs with ARV coverage > 17 per year and ARV coverage <=17 per year

HA: There is difference between HCs with ARV coverage > 17 per year and ARV coverage <=17 per year

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.697 ^a	1	.054		
Continuity Correction ^b	1.943	1	.163		
Likelihood Ratio	5.333	1	.021		
Fisher's Exact Test				.115	.076
Linear-by-Linear Association	3.529	1	.060		
N of Valid Cases	22				

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.82.

b. Computed only for a 2x2 table

Note: Since one cell have count less than 5, we should take the Likelihood ratio of the above Chi-Square tests table

$\chi^2_{calc} = 5.333$ and χ^2_{tab} with $df = 1$, at .05 level of significance = 3.84

Since $\chi^2_{calc} > \chi^2_{tab}$ we reject the null hypothesis i.e. there is difference between the two groups due to number of JSS conducted at those health centres.

Interpretation of Results:

A significant difference is observed in group of health centers with higher number of ARV coverage and group of health centers relatively less ARV coverage. This is mainly because more emphasis has been given to improve the ARV coverage of health centers during JSS so as to achieve the main goal of the project, that is, prevention of mother-to-child transmission of HIV/AIDS through provision of ARV prophylaxis both for HIV- positive mothers and exposed infants born from these mothers. The more JSS conducted in health centers, the more will be its ARV coverage. Therefore, joint supportive supervision is effective in improving ARV coverage of health centers.

L&D Service Delivery vs. JSS

Table 6: Number of JSS conducted versus number of L&D clients

		Group of L&D clients		Total
		Delivery > 420	Delivery <= 420	
Total number of JSS	NJSS >5	5	9	14
	NJSS <=5	3	5	8
Total		8	14	22

The following hypothesis was tested using Chi-squared test:

HO: There is no difference between HCs with Delivery > 420 and Delivery <=420

HA: There is difference between HCs with Delivery > 420 and Delivery <=420

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.007 ^a	1	.933		
Continuity Correction ^b	.000	1	1.000		
Likelihood Ratio	.007	1	.933		
Fisher's Exact Test				1.000	.642
Linear-by-Linear Association	.007	1	.935		
N of Valid Cases	22				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.91.

b. Computed only for a 2x2 table

Note: Since one cell have count less than 5, we should take the Likelihood ratio of the above Chi-Square tests table

$\chi^2_{\text{calc}} = 0.007$ and χ^2_{tab} with $df = 1$, at .05 level of significance = 3.84

Since $\chi^2_{\text{calc}} < \chi^2_{\text{tab}}$ we accept the null hypothesis i.e. there is no difference between the two groups due to number of JSS conducted at those health centres.

Interpretation of Results:

The results for L&D had similar interpretation as that of ANC explained above.

4.1.2 Assessing the Effect of JSS on HCs' Performance using Linear Regression Model

Quality of MNCH/PMTCT service provision vs. JSS

Table 7: Number of JSS conducted versus quality of service

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	81.320	3.025		26.882	.000
Number of JSS conducted at health center	.363	.428	.186	.847	.407

a. Dependent Variable: Quality of service score

$$\text{Quality of service score} = 81.320 + 0.363 \times \text{JSS visits}$$

Interpretation: Per each JSS visit the quality of service score will increase by 0.363. JSS visit and quality of service score have direct relationship.

Number of ANC Clients vs. Number of JSS

Table 8: Number of JSS conducted versus number of ANC clients

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	22.408	406.037		.055	.957
	Number of JSS conducted at health center	151.754	57.475	.508	2.640	.016

a. Dependent Variable: Total ANC clients at health center

$$\text{ANC Clients} = 22.408 + 151.754 \times \text{JSS visits}$$

Interpretation: Per each JSS visit the total number of ANC clients will increase by 151.754. JSS visit and numbers of ANC clients at health centers have direct relationship.

Number of C&T Clients vs. Number of JSS

Table 9: Number of JSS conducted versus quality of service

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	22.823	318.693		.072	.944
	Number of JSS conducted at health center	140.047	45.111	.570	3.105	.006

a. Dependent Variable: Pregnant women with known status

$$\text{PWWKS} = 22.823 + 140.047 \times \text{JSS visits}$$

Interpretation: Per each JSS visit the total number of PWWKS will increase by 140.047. JSS visit and numbers of PWWKS have direct relationship.

Number of Clients who received ARV prophylaxis vs. Number of JSS

Table 10: Number of JSS conducted versus number of clients who received ARV

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.805	9.032		.311	.759
	Number of JSS conducted at health center	2.098	1.279	.344	1.641	.116

a. Dependent Variable: HIV positive women who received ARV

$$ARV = 2.805 + 2.098 \times \text{JSS visits}$$

Interpretation: Per each JSS visit the ARV coverage will increase by 2.098. JSS visit and ARV coverage have direct relationship.

Number of L&D Clients vs. Number of JSS

Table 11: Number of JSS conducted versus number of deliveries attended by SBAs

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-115.754	191.482		-.605	.552
	Number of JSS conducted at health center	80.894	27.104	.555	2.985	.007

a. Dependent Variable: Total deliveries attended by SBA at health centers

$$\text{Delivery} = -115.754 + 80.894 \times \text{JSS visits}$$

Interpretation: Per each JSS visit the Delivery will increase by 80.894. JSS visit and Delivery have direct relationship.

4.1.3 Trend Analysis in Key MNCH/PMTCT Service Delivery Indicators

Trends in key MNCH/PMTCT indicators were also assessed for CPMTCT supported health centers for the past five years of project period.

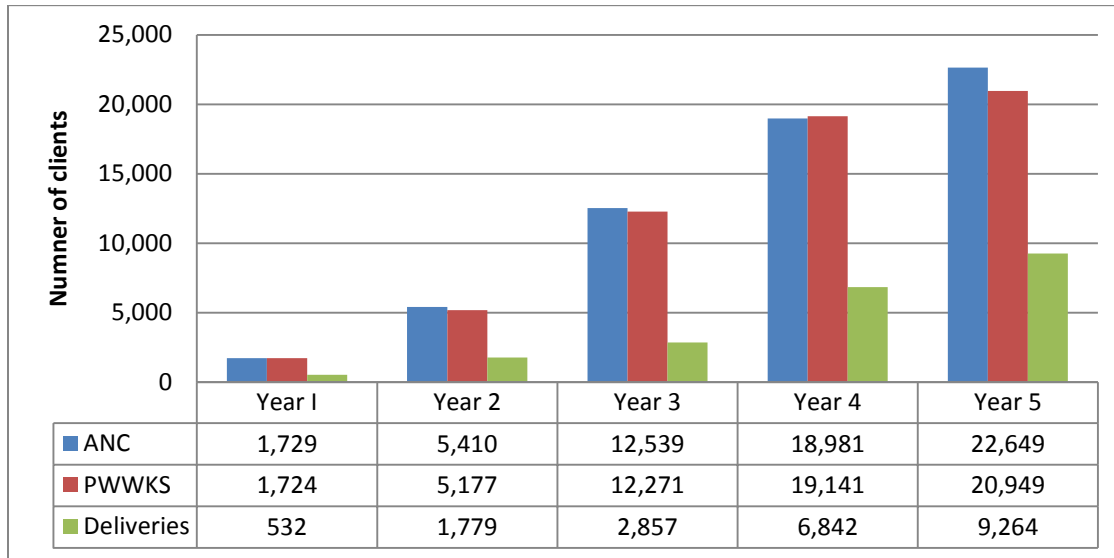


Chart 1: Annual number of ANC, C&T and L&D clients in CPMTCT supported sites

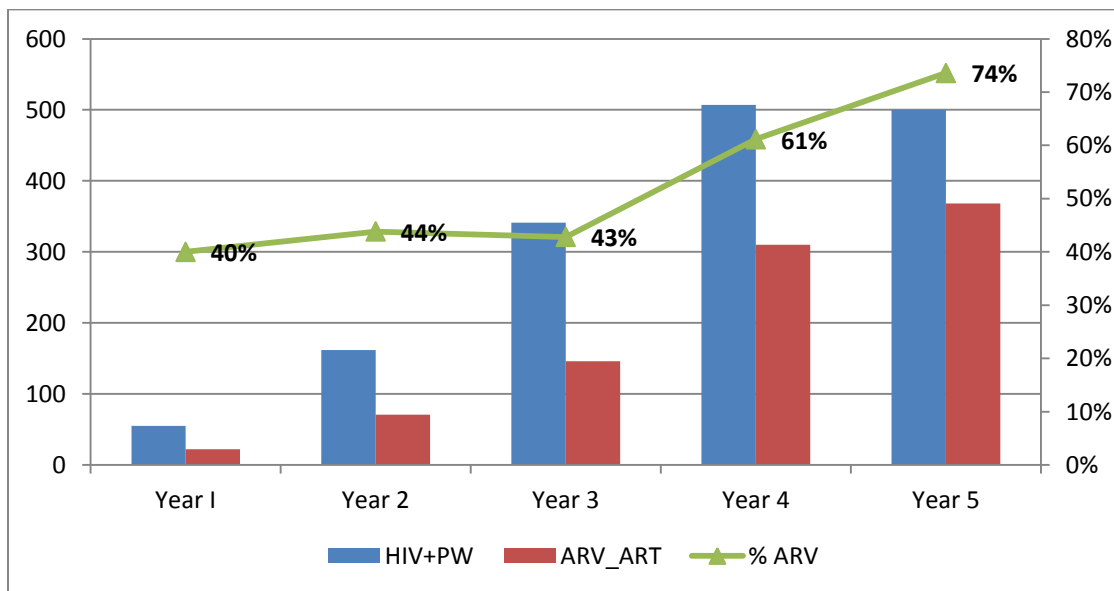


Chart 2: Annual number (percentage) of HIV+ pregnant women who received ARV/ART

Both charts depict the increasing trend in HCs performance in terms of the key MNCH/PMTCT service use indicators. For example, the annual percentage change for new ANC clients in CPMTCT supported HCs included in the study range from 19% to 213%. Similarly, the annual percentage change ranges from 9% to 200% for C&T; 19% and 223% for ARV provision; 35% to 234% for L&D.

This was mainly due to the increase in number of CPMTCT supported HCs in Addis Ababa from two in Yr1 to eight in Yr2 and twenty two as of Yr3 to Yr5. Moreover, the DCCM program contributed to the increase in ANC, C&T and L&D services. The increase in ARV provision (number and percentage) is attributed mainly to the joint supportive supervision.

4.2 Results of In-depth Interview with HCs' Managers

In order to promote quality health care in PMTCT, the project built the capacity of health care providers and health center managers in quality improvement. Health centers' managers attended a three-days training on performance and quality improvement and supportive supervision. The training was followed by regular JSS visits with project staff (program officer), sub-city health office and RHB representatives, and the health center manger using a standard supportive supervision checklist (Annex 4). The JSS team visited the ANC, Labor and Delivery, Family Planning, and Under-five services, as well as the Laboratory and Pharmacy. Findings from supportive supervision were shared with respective offices and this opportunity was used to advocate for issues such as fee exemptions and improved logistics and supplies. In addition, CPMTCT Program Officers performed follow-up supervision visits and mentoring in between the JSS visits to monitor the status of the action plans developed during JSS.

So as to assess how JSS helped health centers, challenges encountered in implementation of JSS and issues/gaps identified and actions taken to resolve those issues, an interview was conducted to 7 health centers' managers in Addis as key informants. These managers were randomly selected from the 7 sub-cities the project was operational. Of these, 2 were female and 5 were male.

4.2.1 How joint supportive supervision was helpful

The interviewees unanimously stated that they found the quarterly joint supportive supervision visits using JSS checklist so helpful. It was useful in ensuring quality of service delivery to clients and early identification of gaps or areas for improvement in the health centers. The JSS also helped with integration of services, that is, allowing for providing several services to a client during one visit. The

action plans created as a part of the performance and quality improvement process also helped them to focus on solving these gaps. Most of the HC managers also reported appreciating being able to compare their performance to that of other health facilities.

The interviewees stated that the JSS process allowed them assess performance of their staff members. They used JSS findings for identifying those staff members who are performing to expectation, and those who are not. Understanding of expectations was strengthened between health workers and there was a sense that accountability was enhanced because staff members knew their work was being measured. All have agreed that supervision is not a fault-finding mechanism, but supportive in finding solutions to problems.

JSS visits are meant to be integrated supervisions with participation by regional, sub-city health officials, health providers and supervisors. All agreed that it is important to involve actors at multiple levels. There was also some hope that conducting the JSS visits together could improve relationships among the levels. However, health facilities often reported that it was a challenge to get the full range of actors involved.

Many of the facilities reported that they consult the work plans weekly and/or have them posted on the walls of the clinic for easy reference.

4.2.2 What challenges were encountered in implementing JSS

The major challenge in implementing JSS was that there were not enough financial and other resources to address many of the gaps that were identified during the JSS exercise. Resources needed included equipment, infrastructure, and commodities. While several facilities tried to avail resources from government sources (e.g., the National Pharmaceutical Fund and Supply Agency and sub-city health officials), what they needed was not always available from these entities.

The other challenge was that the JSS visits were not conducted on a regular schedule. Some stated that the visit was conducted infrequently and with unreliable schedule. Although direct observation of service delivery is included in the design of JSS, many facilities reported that it was done infrequently.

The JSS process is relatively labor intensive and several managers expressed anxiety that it would not continue following the closure of the CPMTCT project.

4.2.3 What gaps were identified and actions taken during JSS

The managers reported common gaps and actions taken in addressing these gaps during JSS visits. The gaps range from inadequate equipment and supplies to training need to lack of community awareness and involvement in the health system. The health facilities reported utilizing a number of approaches to overcome the gaps they had identified. The most commonly mentioned were:

- Training
- Ensuring availability of commodities and small equipment
- Conducting frequent internal evaluations to track progress and enhance accountability
- Placement of essential drugs, equipment (i.e., in delivery room)
- Improving referral linkages, particularly between urban extension professionals and health facilities
- Improved management of drug supply
- Improved accuracy of HMIS

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter of the paper provides summary, conclusion, and recommendations based on the data gathering and analysis.

5.1 Summary

One of the principal tools the CPMTCT project used to improve MNCH/PMTCT service coverage and quality of service provision in its sites was the process of joint supportive supervision (JSS).

The study reveals that a significant difference was observed in group of health centers with higher number of ARV coverage and group of health centers with relatively less ARV coverage. The more JSS conducted in health centers, the more will be its ARV coverage. This was mainly because more emphasis was given to improve the ARV coverage of health centers during JSS so as to achieve the main goal of the project, that is, prevention of mother-to-child transmission of HIV/AIDS through provision of ARV prophylaxis both for HIV- positive mothers and exposed infants born from these mothers. Besides, in all health centers where JSS has been conducted, an improvement was observed in quality of MNCH/PMTCT service provision and service coverage in terms of key performance indicators such as *number of new clients, number of pregnant women with known HIV status, number of HIV+ pregnant women with known HIV status, and number of deliveries by a skilled birth attendant.*

However, there was not any difference between the two groups of health centers in the other service coverage indicators such ANC, counseling and testing and delivery services. This was mainly due to the DCCM program that was implemented in all CPMTCT supported health centers' catchment. The main focus of the DCCM program was increasing demand for ANC, C&T and L&D services.

Besides, the study revealed that there was an increasing trend in HCs performance in terms of the key MNCH/PMTCT service use indicators. The annual percentage change for new ANC clients in CPMTCT supported HCs included in the study range from 19% to 213%. Similarly, the annual percentage change ranges from 9% to 200% for C&T; 19% and 223% for ARV provision; 35% to 234% for L&D. The increase in ARV provision in particular is attributed mainly to the joint supportive supervision.

During in-depth interviews with health center manager, nearly all reported that they found the JSS checklist and process to be helpful. The managers felt that the inclusive process helped their facilities plan to address gaps in quality of MNCH/PMTCT service and to clarify roles and responsibilities of staff members. They particularly valued the involvement of regional, sub-city, facility and community-

level actors in the JSS visits, although it was not always possible to mobilize all of these actors to participate.

The biggest challenge in implementation of JSS is that it was accompanied with few financial or material resources to address identified gaps. In some cases, health centers were able to utilize existing resources to address them, but oftentimes it was not possible without outside assistance that the CPMTCT project could not provide.

5.2 Conclusion

The major purpose of supportive supervision is to enable health centers better satisfy the needs and expectations of its clients. It is often consistent missing link in efficient implementation of public health programs in Ethiopia. However, IntraHealth has been doing PQI-based supportive supervision to its project sites for about ten years since it started operation in the country through its various projects including CPMTCT. Nevertheless, no study has been conducted to assess the effectiveness of this approach in improving performance of health facilities in terms of MNCH/PMTCT service quality and coverage. Therefore, this research was carried out to investigate effectiveness of PQI-based supportive supervision towards the improvement of health center's performance at IntraHealth/CPMTCT supported sites in Addis Ababa. It also assessed issues or gaps identified and actions taken to resolve these problems during joint supportive supervision.

The study concluded that joint supportive supervision is effective in improving ARV service provision. The more JSS conducted in health centers, the more will be its ARV coverage. Besides, joint supportive supervision has direct or positive relationship with MNCH/PMTCT service quality and coverage such as ANC, C&T, L&D and ARV provision.

Moreover, JSS is so helpful in addressing gaps in quality of MNCH/PMTCT services through active participation of regional, sub-city, facility and community-level actors. Of course, such an effort is time-consuming and resource-intensive, and needs a structured approach – performance and quality improvement.

5.3 Recommendations

Current and future projects using supportive supervision to improve service quality and coverage should take the following into consideration.

Involving all stakeholders in conducting supportive supervision. One of the keys to the success of joint supportive supervision is its collaborative approach and its intent to promote government ownership. Therefore, other international organizations involved in health programs that would like to adopt this approach should involve all stakeholders (government at all levels, the health care workers, the community, CSOs/NGOs, and others) from the beginning to increase sustainability and effectiveness.

Establish feedback mechanism on joint supportive supervision. Feedback is crucial to program improvement and sustainability and the overall satisfaction of supervisors and supervisees (Marshall A, Fehringer J (2014)). Therefore, both supervisees and supervisors must have a session to provide feedback on supportive supervision. They should thoroughly discuss on areas for improvement and best or promising practices to be replicated elsewhere based on JSS findings.

Encourage facilities to conduct regular self-assessment. The FMOH has recently decided to adopt one single quality improvement system, the continuous quality improvement (CQI) approach. Similar to the PQI based Supportive Supervision approach used by the CPMTCT project, CQI incorporates regional and sub-city or woreda-level monitoring visits twice a year. In practice, however, it is sometimes difficult for those personnel to conduct the supervision visits as often as possible. Therefore, health managers should also be encouraged to regularly utilize the self-assessment tools at their disposal to identify problems and solutions, rather than waiting for external supervision visits.

Training of supervisors. Supervisors should be trained health care workers themselves, who are able to provide mentoring to health workers, modeling best practices, rather than just relying on observation and telling health workers how to improve their work.

Furthermore, projects should have a **regular schedule for visits and mobilize resources** to ensure that visits take place as planned. A dedicated budget for supportive supervision would increase the frequency and consistency of visits.

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ANNEXES

Annex 1. Interview Guide to Health Center’s Manager

The health center’s manager or the person most knowledgeable about the overall health center should provide this section.

IDENTIFICATION INFORMATION	
Region:	Addis Ababa
Sub-city:	
Woreda:	
Health Centre :	
Health Center Head name:	
Telephone:	
Date in G.C. (dd/mm/yyyy):	

1. Can you describe your experience with supportive supervision (Joint and follow-up)? **Prompt:** In your experience,
 - 1.1.What is the most helpful thing about supportive supervision?
 - 1.2.Your suggestion and/or comments on JSS/FSS to be improved.
2. How has joint supportive supervision & follow-up supportive supervision helped you in your work?
3. What kinds of issues did you identify during joint supportive supervision? **Prompt:** What issues did you identify as gaps during the last joint supportive supervision process?
4. What actions did you take to resolve the above mentioned gaps? **Prompt:** Could you please give me an example of an item in your action plan that you resolved that you are particularly proud of?
 - 4.1.Where do you keep your action plan?
 - 4.2.How often you refer to them?
5. Do you find the JSS checklist useful?
 - 5.1.Do you use all of the information collected on the JSS checklist here at the health center?
 - 5.2.If not, what aren’t you using?
 - 5.3.If you’re not using the information, do you think that it is important we collect that information?
 - 5.4.If you could change the joint supportive supervision checklist, how would you change it?

Annex 2: FY2014 Annual Service Delivery Data for CPMTCT Supported Sites in Addis

HCs	# JSS	#ANC	#PWWKS	#HIV+ PW	#ARV_ART	#Deliveries
Addis Hiwote	7	490	505	11	10	210
Alem Bank	15	2,968	2,744	55	44	1,463
Amoraw Metasebiya	5	1,172	1,187	26	15	509
Bole Bulbula	7	756	782	11	8	273
Dilfire	7	1,561	1,441	56	49	708
Efoyita	4	231	229	6	3	15
Entoto Fana	6	655	661	12	9	325
Entoto No 2	6	806	551	8	0	204
Feresmeda	5	309	305	8	6	67
Goro	5	1,592	1,351	20	17	644
Gotera Mesalcha	5	290	289	6	4	73
Hiwot Amba	5	353	351	10	7	19
Woreda 11-KK	5	1,607	1,497	15	11	727
Meri	12	851	859	15	6	372
Woreda 11-NL	7	2,868	1,978	40	29	1,109
Woreda 12-NL	7	1,268	1,286	34	28	543
Woreda 5-NL	8	595	599	14	9	163
Woreda 6-NL	6	728	735	24	16	280
Saris	6	1,280	1,307	73	55	703
Semit	6	886	856	19	15	248
Shegole	7	610	622	15	12	224
Woreda 7 Hidase	5	773	814	22	15	385

Annex 3: List of IntraHealth/CPMTCT Project Supported Health Centers in Addis

No.	Name of HC	Catchment Population	Sub-city	Woreda	Intervention Year	CPMTCT Service Started
1	Addis Hiwote	28,956	Gulele	Woreda 6	III	Nov-11
2	Alem Bank	145,241	Kolfe Keranyo	Woreda 4	I	Apr-10
3	Amoraw Metasebiya	65,858	Bole	Woreda 8	III	May-12
4	Bole Bulbula	24,081	Bole	Woreda 12	II	Jul-11
5	Dilfire	85,034	Bole	Woreda 14	II	Jul-11
6	Efoyita	28,300	Kirkos	Woreda 2	III	Jul-12
7	Entoto Fana	32,363	Gulele	Woreda 1	III	Oct-11
8	Entoto No 2	66,702	Yeka	Woreda 2	III	Mar-12
9	Feresmeda	23,704	Kirkos	Woreda 5	III	Jul-12
10	Goro	35,537	Bole	Woreda 9	III	Jun-12
11	Gotera Mesalcha	14,430	Kirkos	Woreda 3	III	Jul-12
12	Hiwot Amba	12,508	Kirkos	Woreda 6	III	Jul-12
13	Meri	10,000	Bole	Woreda 10	III	May-12
14	Saris	29,427	Akaki Kality	Woreda 6	I	Apr-10
15	Semit	10,000	Bole	Woreda 10	III	Jul-12
16	Shegole	26,081	Gulele	Woreda 10	III	Oct-11
17	Woreda 11-Kolfe Keranyo	102,243	Kolfe Keranyo	Woreda 11	II	Jul-11
18	Woreda 11-Nefas Silk Lafto	41,963	Nefas Silk Lafto	Woreda 11	II	Jul-11
19	Woreda 12-Nefas Silk Lafto	24,750	Nefas Silk Lafto	Woreda 12	II	Aug-11
20	Woreda 5-Nefas Silk Lafto	40,000	Nefas Silk Lafto	Woreda 5	III	Mar-12
21	Woreda 6-Nefas Silk Lafto	37,168	Nefas Silk Lafto	Woreda 6	II	Aug-11
22	Woreda 7 Hidase	45,065	Gulele	Woreda 7	III	Oct-11

Annex 4. Joint Supportive Supervision Checklist

[This was a tool that the project has been using in every joint supportive supervision visit to a health center]

I. IDENTIFICATION & BACKGROUND (Answer Yes=1 or No=0)

Name of Health Center		Name and signature of visitor(s):		
Implementation approach (option A) or (Option B+)		Name:	Organization	Signature
Woreda:		1. _____	_____	_____
Zone /sub city		2. _____	_____	_____
Region		3. _____	_____	_____
Date of current visit DD/MM/YYYY		4. _____	_____	_____
Last visited date DD/MM/YYYY		5. _____	_____	_____
Does the HC have a minimum of two updated trained health care providers? (1=yes 0=No)		6. _____	_____	_____
ART service Available (Yes=1or No=0)				
MSG service Available (Yes=1or No=0)				
Is it BEmONC Supported Site (Yes=1or No=0))				
DCCM Supported Site (Yes=1or No=0)				
IOCC Supported Site (Yes=1or No=0)				

II. ANC/PMTCT UNIT

Actions taken since previous visit to address those identified performance gap(s) in ANC/PMTCT unit (*Discuss with assigned person and consult previous SS checklist*)

S/N	Indicators	Answer Yes=1 No = 0	S/N	Indicators	Answer Yes=1 No = 0
1. Personnel, supplies and drugs or amenities.					
1.1	On the date of SS, did the health care providers who are working in ANC unit received updated PMTCT training				
1.2	In the last 3 months, don't you have any days ANC and C & T services interruption?				
1.3	KHB		1.12	Ferrous sulfate Folic Acid (NA if not applicable)	
1.4	Stat pack availability		1.13	Sharp box	
1.5	NVP tablets(NA if not applicable)		1.14	Posted birth preparedness Poster	
1.6	AZT tablet (NA if not applicable)		1.15	Posted FANC Poster	
1.7	3TC tablet		1.16	Posted Danger Signs in pregnancy and delivery poster	
1.8	Tenofovir (TDF) (NA if not applicable)		1.17	MNCH/PMTCT Manual and Guidelines	
1.9	Efavirenze (EFZ) (NA if not applicable)		1.18	Posted and updated PMTCT Monthly Monitoring Chart	

1.10	Triple ARV (TDF/3TC/ EFV) NA if not applicable		1.19	Posted and updated HIV-Positive pregnant Women and HEI Tracking Wall Chart	
1.11	Fixed dose combination/FDC (AZT/3TC/NVP)		1.20	<i>Functional BP apparatus and fete scope</i>	
			1.21	Internal and external referral slips	

2. Service delivery (skill and knowledge assessment)

Take and review a sample of one HIV positive and one HIV negative most recent new ANC cards (if not positive use negative client cards) to ensure PW received the following services during her first visit. Use Cp for positive client and Cn for negative client.

S/N	Indicators	Cp	Cn	S/N	Indicators	C1	C2
2.1	Assessed obstetric history, current pregnancy and general medical history [Check 1 st page of integrated client care card]			2.6	Mother's BP and Weight scale have been measured		
2.2	Mother counseled on danger signs in pregnancy and delivery			2.7	Based on uterine height/LMP gestational age has been estimated		
2.3	Mother counseled birth preparedness			2.8	Hemoglobin /Hematocrit		
				2.9	Blood group/BG and Rh		
2.4	Counseled on infant feeding			2.10	Rapid syphilis test (RPR or VDRL)		
				2.11	Provided iron/folic acid for 3 months		
2.5	Mother received post test counseling			2.12	ARV treatment (NA if not applicable)		
2.13	What are the services that the pregnant mother should receive in her first visit? (Refer PMTCT/MNCH reference manual page-110).						
2.14	What are the minimum messages that ANC mothers supposed to receive during pretest session? (Refer PMTCT/MNCH reference manual, December/2011 page-50) my advice here is that to put key specific answers and guide them to refer for more details mentioned so that we rate it.						
2.15	What are the services that HIV + mothers supposed to receive/counsel before delivery? (Refer PMTCT/MNCH reference manual, December/2011 page 122-130)						

3. Key performance indicators outcome/output and data quality for the last three months

(Summary report collected date DD/MM/YY HC from _____ to _____ Answer Yes=1 No= 0

Indicators	HC annual Target	HC quarter performance	Did the HC achieve?	HC quarter report	Quarter data in register	Is there any data discrepancy?
3.1	# of New ANC clients					
3.2	# of PWC&T					
3.3	# of HIV+PW					
3.4	# of HIV+ received ARV for PMTCT					
3.5	HIV+ screened for TB					
3.6	HIV+ Assessed for Eligibility (WHO/CD4)					
3.7	# male partners tested for HIV					

% of ANC/PMTCT unit QOC result _____ (# of 'Yeses' _____ # of 'Nos' _____)

III. LABOR & DELIVERY and PNC UNIT

Actions taken since previous visit to address those identified performance gap(s) in L&D and PNC unit

S/N	Indicators	Answer Yes=1 No = 0	S/N	Indicators	Answer Yes=1 No = 0
1	Personnel, supplies and drugs (please check listed items are not expired or should be most recent/updated or not out of use and ensure the availability and adequacy for at least one week)				
1.1	On the date of this SS, is the health care provider who is working in the unit trained updated PMTCT training?				
1.2	In the last quarter, were there L & D services 24/7 Hrs in all days? [Ask L&D unit provider]				
1.3	Is the Labor and Delivery Room conducive for laboring mother? (Clean and hygienic coach, functional light bulb, walls and floors free of blood and dirt, waste in the proper container etc.).				
Are the following drugs, kits, equipments available and did not expire? NA if not applicable					
1.4	HIV Screening Test Kit (KHB)		1.20	IV fluids (either R/L or N/S)	
	Confirmatory Test Kit (Stat Pack)		1.21	new born ambu-bags, mask size 1 and 2, suction, towels and baby hat, heater and lamp (all should be avail)	
1.5	Nevirapine tablet		1.22	Three containers for disinfecting instruments	
1.6	Nevirapine syruyp				
1.7	AZT (Zidovudine) tablet		1.23	Container for waste disposal and sharp boxes	
1.8	AZT syrup		1.24	Gloves and aprons	
1.9	3 TC tablet (Lamuvudine)		1.25	At least two Sterile delivery sets which contain 2 cord clamp, 1 sponge forceps, 1 cord scissor and cord tie in each sets	
1.10	Tenofovir (TDF)				
1.11	Efavirenze (EFZ)		1.26	At least two free sterile towel	
1.12	Triple ARV (TDF+ 3TC + EFV)		1.27	At least one episiotomy set with 1 cut gut, scissor, tissue forceps, 2 Alice forceps, needle holder, sterile tampon, gauze, towel	
1.13	Fixed dose combination (AZT/3TC/NVP)				
1.14	Oxytocin		1.28	At least one functional vacuum apparatus with different size sterile cups	
1.15	IV antibiotics (at least Ampicilin and Gentamycin)		1.29	Availability of TTC eye ointment for at least 5 clients	
1.16	Parenteral anticonvulsants(MGSo4 or Diazepam)		1.30	Availability of vitamin K for at least 5 clients	
1.17	Anti hypertensive drug (Hydralazine...		1.31	Functional BP apparatus and fete scope	
1.18	Reagent for disinfection(Bleach)		1.32	Functional Infant weight scale	

1.19	ARV Prophylaxis Dosing Chart is posted		1.33	Referral slips (both internal and external)	
2	Service delivery (skill and knowledge assessment)				
Take and review a sample of one HIV positive and one HIV negative most recent delivered mother cards (if not positive use negative client cards) to ensure mother received the following services . Use Cp for positive client and Cn for negative client. (Review last page of integrated ANC, LD, newborn and Postnatal care card)					
S/N	Indicators	Answer Yes=1 No = 0		Indicators	Answer Yes=1 No = 0
2.1	Did they receive oxytocin			2.6	Partograph done correctly (at least FHR, cervical dilation, pulse and BP)
2.2	ARV treatment for M & B (NA if not applicable)			2.7	Neonatal care (polio 0, Vitamin K, and TTC.)
2.3	Counseled on Exclusive Breast feeding			2.8	Baby wt has been measured
2.4	Received FP counseling in the first visit			2.9	Mother BP has been measured in the 1 st visit
2.5	Counseled danger signs in the 1 st visit			2.10	Assistance name and Signature has indicated
2.11	What are those cares or services that we should provide for any laboring mothers? [(Answer = refer PMTCT/MNCH reference manual, December/2011 page 133-158)				
2.12	How do you practice AMTSL? [CCT, Uterine massage, parenteral oxytocin...]				
2.13	How do you practice instrumental processing in LD unit?[refer PMTCT/MNCH reference manual, December/2011 page 140-145)				
3	Key performance indicators outcome/output and data quality for the last three months (Summary report collected date DD/MM/YY from _____ to _____) Answer Yes=1 No = 0				
S/N	Indicators	<i>Planned/target</i>	<i>Actual in summery</i>	<i>Actual in register</i>	Is there any data discrepancy? <i>Did the HC achieve the expected plan/targets?</i>
3.1	# of women who delivered				
3.2	# of HIV-positive women who delivered in the HC				
3.3	# HEI who received ARV prophylaxis				
% of LD and PNC QOC result _____ (# of 'Yeses' _____ # of 'Nos' _____)					

IV. Under five services or ART clinic to assess HEI.

Actions taken since previous visit to address those identified performance gap(s) in Under-5 unit (*Discuss with assigned person and consult previous SS checklist*)

S/N	Indicators	Answer Yes=1 No = 0	S/N	Indicators	Answer Yes=1 No = 0
1	Personnel, supplies and drugs				
1.1	On the date of SS, did the health care providers who are working in Under-5 unit received updated PMTCT training				

2	Service delivery (skill and knowledge assessment)					
	Please take two samples among the most recent HEI. Review these cards for completeness in receiving the below mentioned services					
2.1	Start OI prophylaxis Rx			2.3	Start GMP and EPI	
2.2	Referred for DBS (check copy of it)			2.4	Mother received feeding counseling	
3	Key performance indicators outcome/output and data quality for the last three months (Summary report collected date DD/MM/YY from _____ to _____) Answer Yes=1 No = 0					
S/N	Indicators	HC Plan/target	Actual in summary	Actual in register	Is there any data discrepancy ?	Did the HC achieve the expected plan/targets?
3.1	# of HEIs started CTX prophylaxis					
3.2	# of HEIs tested with DBS					
3.3	# of HEIs received confirmatory test					
% of Under-5 QOC result _____ (# of 'Yeses' _____ # of 'Nos' _____)						

V. Family planning services

Actions taken since previous visit to address those identified performance gap(s) in FP unit (Discuss with assigned person and consult previous SS checklist)

S/N	Indicators	Answer Yes=1 No = 0
1	Personnel, supplies and drugs	
1.1	On the date of SS, did the care provider who is working in the unit receive updated PMTCT training (based on HC PMTCT implementation type (A option or B+ option)	
1.2	Availability of at least one Penile Model for Condom Demonstration	
1.3	Availability of range of FP methods (at least condom, Pills, Depo Provera, Implanon or Jadelle...)	
% of FP QOC result _____ (# of 'Yeses' _____ # of 'Nos' _____)		

VI. LABORATORY

Actions taken since previous visit to address those identified performance gap(s) in the unit (discuss with assigned person and consult previous SS checklist)

S/N	Indicators	Answer Yes=1 No = 0 NA = not applicable	
1.1	Do you have a minimum of two providers working in the unit		
1.2	In the last quarter were there any days in which laboratory services were not interrupted?		
On the date of SS, did you find the following unexpired kits or reagents to do ordered tests?			
1.3	KHB screening test kit	1.8	Reagent for Urinalysis test
1.4	Stat Pack test kit	1.9	Urine test for protein
1.5	Unigold test kit	1.10	Blood group and Rh test

1.6	DBS Kits		1.11	Hemoglobin/hematocrit test	
1.7	VDRL/Rapid Syphilis test		1.12	Laboratory Referral Slips	
TOTAL # of 'Yeses' _____ # of 'Nos' _____ % _____					

VII. HEALTH CENTER PHARMACY

Actions taken since previous visit to address those identified performance gap(s) in the unit (Discuss with assigned person and consult previous SS checklist)

1. Do you have the following unexpired drugs for at least the next two months? (compare with average client load)					
1.1	NVP tablets for mothers		1.8	OI prophylaxis (Cotrimoxazole)	
1.2	Nevirapine syrup for infants (in syringes)		1.9	Oxytocin	
1.3	AZT tablet		1.10	Ferrous Sulfate Folic Acid	
1.4	AZT Syrup		1.11	Tenofovir (TDF)	
1.5	3TC tablet		1.12	Efavirenze (EFZ)	
1.6	Fixed dose combination (AZT/3TC/NVP)		1.13	Triple ARV (TDF+ 3TC + EFV)	
1.7	Combivir (AZT/3TC)		1.14	IV antibiotics (refer LD unit)	
TOTAL = # of 'Yeses' _____ # of 'Nos' _____ % _____					

VIII. MNCH/PMTCT MANAGEMENT AND BEST PRACTICES

S/N	Indicators	Answer Yes=1 No = 0
1	Within the last 3 months, Does this HC Conducted self assessment? (Verified by documented completed check list, discussion points minute and prepared action plan)	
2	Since last supervision, did you have any MNCH/PMTCT related promising practices (ask and review HC documentation)	
TOTAL # of 'Yeses' _____ # of 'Nos' _____ % _____		

Grand total JSS QOC result of supervised HC (cumulative of each unit (II-VI) in %= Total yeses/ Total yeses+ Total Nos *100

Action Plan from this Visit (Consult checklist on preceding pages before developing. Be specific, realistic...)

Areas for Improvement	Main route cause/s	Agreed Measures for Action	By When	By Whom	Status

DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Shoa Jemal (Asst. Professor). All sources of material used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institutions for the purpose of earning any degree.

Name

Signature

St. Mary's University, Addis Ababa. June, 2015

ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate studies for examination with my approval as a university advisor.

Advisor

Signature

St. Mary's University, Addis Ababa. June, 2015