

Swaziland Ministry of Health

## Quantification of Family Planning Commodities for January 2014 to December 2018



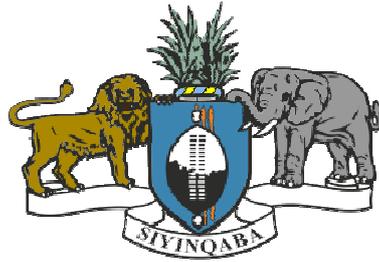
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Swaziland Ministry of Health

## Quantification of Family Planning Commodities for January 2014 to December 2018

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Swaziland

January 2014



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## **Key Words**

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## CONTENTS

Foreword.....	vii
Acknowledgments.....	ix
Acronyms and Abbreviations .....	xi
Executive Summary .....	xiii
Introduction.....	1
Socioeconomic Background .....	1
Cultural Background.....	1
Population .....	1
Family Planning .....	2
Supply Chain Management System for FP Commodities .....	3
Scope of the Quantification .....	6
Objectives .....	7
Quantification Processes and Methodology.....	9
Quantification Output .....	11
Demographic/Population/Morbidity Method .....	11
Contraceptive Prevalence Rate .....	13
Method Mix .....	13
Brand Mix .....	15
Assumptions for Forecasting Needs for Emergency Oral Contraceptives .....	17
Assumptions for Forecasting Needs for Male Condoms for Prevention of STIs, Including HIV and AIDS .....	17
Source Mix.....	18
Consumption Method .....	19
Additional Assumptions for Wastage and Supply Plans .....	21
Quantification Results.....	22
Demographic/Morbidity Method Results—Forecast.....	23
Demographic/Morbidity Method Results—Supply Plan.....	26
Consumption Method Results—Forecast .....	27
Consumption Method Results—Supply Plan .....	30
Quantification Analysis .....	31
Outcomes/Impacts Based on the Demographic Method.....	39
Emergency Orders .....	43
Challenges.....	45
Recommendations.....	47
References.....	49
Annex 1. Participants of the Consultative Quantification Workshop on November 21, 2013.....	51

## List of Tables

Table 1. Health Commodity Distribution Schedule from CMS to Facilities.....	4
Table 2. Population Figures—Total, Women and Men.....	12
Table 3. Population Figures—WRA, WRA with Access to FP Services, and MRA .....	12
Table 4. Total CPR and CPR by Group of Methods.....	13
Table 5. Annual Increase/Decrease in CPR by Method .....	14
Table 6. Method Mix in CPR Points for All Methods.....	14
Table 7. Method Mix for Modern Methods Only, by Percentage .....	15
Table 8. Brand Mix of Injectables (Percentage) .....	16
Table 9. Brand Mix of Oral Contraceptives (Percentage) .....	16
Table 10. Method Mix in CPR Points per Product Type.....	16
Table 11. Method-specific Discontinuation Rate and Commodities per User/CYP .....	17
Table 12. Assumptions for Calculation of Male Condoms for STI Prevention, 2013–2018.....	18
Table 13. Source Mix by Method (Percentage).....	19
Table 14. Summary of Major Assumptions for Consumption Method of Forecasting .....	20
Table 15. Minimum, Maximum, and Desired Stock Levels at CMS and Health Facilities .....	21
Table 16. Procurement Lead Times for CMS and UNFPA .....	22
Table 17. Total Number of Users—Demographic Method .....	23
Table 18. Number of New Acceptors—Demographic Method.....	23
Table 19. Total Forecast Requirements, Including Wastage by Quantity for the Country— Demographic Method .....	24
Table 20. Total Forecast Requirements, Including Wastage and Freight and Logistics Costs by Value (in USD) for the Country—Demographic Method .....	24
Table 21. Total Forecast Requirements by Quantity for the Public Sector Only— Demographic Method .....	25
Table 22. Total Forecast Requirements Including Wastage and Freight and Logistics Costs, by Value (in USD) for the Public Sector Only—Demographic Method .....	25
Table 23. Supply Plan/Procurement Requirements, by Quantity and Year for the Public Sector Only—Demographic Method.....	26
Table 24. Supply Plan/Procurement Requirements by Value (in USD) and Year for the Public Sector only—Demographic Method.....	27
Table 25. Total Forecast Requirements by Quantity for the Public Sector Only— Consumption Method.....	27
Table 26. Total Forecast Requirements Including Wastage and Freight and Logistics Costs by Value (in USD) for the Public Sector Only—Consumption Method .....	28
Table 27. Total Forecast Requirements by Quantity for the Country—Consumption Method .....	29
Table 28. Total Forecast Requirements Including Wastage and Freight and Logistics Costs by Value (in USD) for the Nation <sup>a</sup> —Consumption Method.....	29
Table 29. Supply Plan/Procurement Requirements by Quantity and Year for the Public Sector Only—Consumption Method .....	30
Table 30. Supply Plan/Procurement Requirements by Quantity and Value (in USD) for the Public Sector Only—Consumption Method .....	31

Table 31. Comparison of Forecast and Procurement Requirements by Value (in USD) for the Public Sector Only Using the Demographic Method .....	35
Table 32. Comparison of Forecast and Procurement Requirements by Value (in USD) for the Public Sector Only Using the Consumption Method .....	35
Table 33. Comparison of Forecast Requirements (in USD) Based on Demographic and Consumption Methods for the Public Sector Only .....	36
Table 34. Comparison of Procurement Requirements (in USD) Based on Demographic and Consumption Methods for the Public Sector Only .....	37
Table 35. Couple-Years Protection—Modern Methods .....	39
Table 36. Number of Unwanted Pregnancies Averted .....	40
Table 37. Number of Abortions Averted in the Procurement Period, by Method.....	41
Table 38. Number of Unwanted Births Averted .....	41
Table 39. Number of Maternal Deaths Averted.....	42
Table 40. Number of Infant Deaths Averted .....	42
Table 41. Number of Child Deaths Averted .....	43

### **List of Figures**

Figure 1. Movement of SRH commodities and data before supply chain revision .....	5
Figure 2. Movement of SRH commodities and data after supply chain revision .....	5
Figure 3. Total fertility rate trends in Swaziland .....	32
Figure 4. Population trends in Swaziland .....	32
Figure 5. CPR trends in Swaziland, by group of methods.....	33
Figure 6. Contraceptive prevalence rate trends in Swaziland by FP method .....	34
Figure 7. Change in FP method mix in Swaziland .....	34
Figure 8. Comparison of forecast and procurement requirements by value (in USD) for the public sector only using the demographic method.....	35
Figure 9. Comparison of forecast and procurement requirements by value (in USD) for the public sector only using the consumption method .....	36
Figure 10. Comparison of forecast requirements (in USD) based on demographic and consumption methods for the public sector only .....	37
Figure 11. Comparison of procurement requirements (in USD) based on demographic and consumption methods for the public sector only .....	37
Figure 12. Comparison of procurement requirements by method and value based on demographic method for the public sector.....	38
Figure 13. Comparison of procurement requirements by method and value, based on the consumption method, for the public sector.....	39



## FOREWORD

Family planning is one of the core interventions in MNCH that gives people the opportunity to manage their reproduction according to their individual plans and desires. It is an important tool for reducing poverty and increasing empowerment, particularly for women. It enables couples and individuals to decide when they want to have children, to delay conception, space their children, and limit the number of children to what suits them. To facilitate these choices, the Ministry is committed to providing a wide range of family planning methods, related commodities, and putting in place systems that increase access to this crucial service.

Quantification enables the country to determine future needs and plan resources accordingly. This informs processes implemented to avoid stock outs and enables the Ministry to reduce the unmet need for family planning.

The Ministry therefore is grateful for the support of partners in this important process and acknowledges UNFPA and USAID/SIAPS for technical and financial support. The Ministry also expresses gratitude for the support provided by USAID/SIAPS for leading the quantification process and compilation of the report.

Dr. Simon Zwane  
Principal Secretary



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## ACRONYMS AND ABBREVIATIONS

AHF	AIDS Healthcare Foundation
AIDS	acquired immunodeficiency syndrome
AMICAALL	Alliance of Mayors Initiative for Community Action on AIDS at the Local Level
CMS	Central Medical Stores
CPR	contraceptive prevalence rate
CSO	civil society organization; also Central Statistical Office in the references
CYP	couple-years protection
FP	family planning
Global Fund	Global Fund to Fight AIDS, Tuberculosis and Malaria
GOS	Government of Swaziland
HIV	human immunodeficiency virus
HMIS	Health Management Information System
IUCD	intrauterine contraceptive device
LA	long-acting
LMIS	Logistics Management Information Systems
MDG	Millennium Development Goal
MICS	multiple indicator cluster survey
MOH	Ministry of Health
MRA	men of reproductive age
MSH	Management Sciences for Health
NGO	nongovernmental organization
PM	permanent method
PSI	Population Service International
RHCS	reproductive health commodity security
RPM Plus	Rational Pharmaceutical Management Plus [Program]
SCHS	Swaziland community health survey
SDHS	Swaziland demographic and health survey
SIAPS	Systems for Improved Access to Pharmaceuticals and Services [Program]
SID	Strategic Information Department
SPS	Strengthening Pharmaceutical Systems [Program]
SRH	sexual and reproductive health
SRHU	Sexual and Reproductive Health Unit
STI	sexually transmitted infection
TFR	total fertility rate
UNFPA	United Nations Population Fund
USAID	US Agency for International Development
USD	US dollars
WHO	World Health Organization
WRA	women of reproductive age



## EXECUTIVE SUMMARY

Promotion of family planning (FP) and ensuring access to preferred contraceptive methods for women and couples is essential to securing the well-being and autonomy of women, as well as supporting the health and development of communities. These activities provide opportunities to prevent high-risk pregnancies that may contribute to maternal mortality and morbidity/disability. FP contributes to reduction of infant mortality by preventing closely spaced and ill-timed pregnancies. FP reduces the risk of unintended pregnancies among women living with HIV, resulting in fewer orphans and infected babies. Male and female condoms provide dual protection against unintended pregnancies and sexually transmitted infections (STIs), including HIV. In addition, FP has the long-term benefits of empowering people, enhancing education, and increasing productivity.

In Swaziland, the effort to increase access to rights-based voluntary FP is designed to strengthen and accelerate efforts to address the Millennium Development Goals (MDGs) and the goal of universal access to reproductive health to improve the population's quality of life. The Sexual and Reproductive Health Unit (SRHU) of the Ministry of Health (MOH), with support from a number of development partners (such as the United Nations Population Fund [UNFPA], Population Services International [PSI], the Family Life Association of Swaziland, USAID/SIAPS), is responsible for implementing the FP program in Swaziland. The total fertility rate (TFR) has been decreasing consistently, from 6.4 (CSO, 1986 Population and Housing Census) in 2006 to 3.5 in 2010 (MICS, 2010). The contraceptive prevalence rate (CPR) for any method has also shown an increase, from 40.1% in 2002 (MOH Community Health Survey, 2002) to 65.2% in 2010 (MICS, 2010). The contribution of modern methods only was 39.6% and 63%, respectively. However, there is still high unmet need for FP (24%) (SDHS, 2006/7), especially for women living with HIV (63.7%) (MOH Sentinel Sero-Surveillance Survey, 2010). Thus, to reduce the unmet need, it is necessary not only to maintain the achieved CPR but to increase it further.

The Government of Swaziland (GOS) through MOH is committed to ensuring reproductive health commodity security for all Swazis to be able to choose, obtain, and use quality contraceptives and other reproductive health commodities whenever and wherever they need them. One of the pillars of FP commodity security is need for continuous and optimal availability of FP commodities. Proper, regular, and evidence-based quantification of the commodities has critical role in ensuring commodity security because it ensures advanced planning and mobilization of required resources, and provides inputs for effective and efficient procurement and distribution of the commodities. Good quantification can also reduce costs and wastage of limited resources.

An FP quantification exercise was conducted with technical assistance from UNFPA and USAID/SIAPS and with participation of all major stakeholders with the objective of producing a forecast and supply plan for the period 2014–2018. The results of this quantification exercise will be used in planning, mobilizing, and securing financial resources for the quantification period and for establishing estimated procurement requirements in the short term. Two forecasting methods were employed for this exercise, with the demographic/morbidity method as the preferred and main method. The consumption method was used for comparison and validation purposes. Forecast requirements were established for the nation (public and private sector) for each of the methods. However, it is possible to

establish the procurement requirements for the public sector only. The quantification includes requirements for male condoms for the prevention of STIs, including HIV, in addition to FP.

Major outputs and outcomes from the quantification exercise (using the demographic method) for the period January 2014–December 2018 includes the following:

- The total CPR of women of reproductive age (15–49 years) is expected to rise from 49.3% in 2010 to 65.3% in 2018.
- Use of male condoms, female condoms, and implants is expected to increase during the quantification period, whereas the use of injections, pills, intrauterine contraceptive devices (IUCDs), female sterilization, and male sterilization is expected to decrease.
- The total commodity procurement requirements for the public sector only based on the demographic method was estimated to be **USD7, 387,531** (1 USD = 11 Swazi lilangeni [SZL]). The male condom procurement requirement includes FP and STI prevention.
- Male and female condoms account for almost half of the procurement requirements (49%), followed by oral contraceptives, including emergency contraceptive pills (25%), and injections (about 24%). Implants account for the lowest proportion of requirements (2%).

## INTRODUCTION

### Socioeconomic Background

Although classified as a middle-income country in terms of gross domestic product (GDP) per capita, Swaziland has a relatively high rate of poverty, at 63% of the population<sup>1</sup> and one of the highest rates of HIV and AIDS in the world (26% among men and women of reproductive age) (SDHS, 2006/7). Increasing mortality resulting from the HIV pandemic has had a negative impact on the country's life expectancy, which has declined from 60 years in 1997 to just 43 years in 2007 (CSO, Population and Housing Census).

Swaziland operates an open and free market economy, which is export oriented. The economy is largely driven by the services sector, followed by manufacturing and then agriculture. The country's economic performance has slowed over the years, with real GDP declining from 3.5% in 2007 to 2.4% in 2008 (CSO, Short Term Economic Indicators, 2008).

Literacy rates are high for both sexes (88% for women and 90% for men), placing Swaziland among the most literate societies. It is anticipated that the free primary education program, introduced in 2010, will further sustain and improve upon these impressive literacy levels.

In terms of economic participation, women have fewer opportunities than men; only 55.2% of women are economically active compared with 58.5% of men. Opportunities available to men tend to be greater than those for women—notably, men have better chances of being recruited for employment no matter the educational level; among men with only a primary school education, 45% are unemployed, compared with 48.5% among women with the same educational level. This is also true for men and women with a tertiary level education; only 9.1% of these men are unemployed, compared with 10.9% of women. Women tend to dominate low-paying jobs; the informal sector provides employment to 40.2% of women, compared with about 25.5% of men. Women also feature more prominently in self-employment (27.2%) than do men (15.3%) (CSO, Labour Force Survey, 2010).

### Cultural Background

Swaziland is a one-ethnic group nation with only one common language and culture, and with strong traditions. Cultural attitudes and practices influence marriage, family size, division of labor, access to productive resources, and gender roles and responsibilities.

### Population

Findings from the *2007 Population and Housing Census Estimate*<sup>2</sup> indicate that the population of Swaziland is 1,018,000, composed of 481,000 males and 537,000 females, with an average household size of 4.7 persons. The population of Swaziland is young, with 0–19-year-olds making up 52% of the population. The past three decades have seen a declining rate in the population growth, to less than 1% from 3.2% in the decade between 1976 and 1986. The population is predominately rural (78%). There is, however, high migration of the able-bodied, economically active members of the rural population to the urban areas.

## **Family Planning**

FP allows individuals and couples to anticipate and attain their desired number of children by spacing and timing of their births through the use of contraceptive methods. Promotion of FP and ensuring access to preferred contraceptive methods for women and couples are essential to securing the well-being and autonomy of women, as well as supporting the health and development of communities. These activities provide opportunities to prevent high-risk pregnancies, which may contribute to maternal mortality and morbidity/disability. According to the World Health Organization (WHO),<sup>3</sup> evidence suggests that women who have more than four children are at increased risk of maternal mortality. According to the *Swaziland Demographic and Health Survey (SDHS) 2006–07*,<sup>4</sup> the maternal mortality ratio is estimated at 589 maternal deaths per 100,000 live births, which is high. By reducing rates of unintended pregnancies, FP also reduces the need for unsafe abortion. FP contributes to reduction in infant mortality by preventing closely spaced and ill-timed pregnancies. Infants of mothers who die during labor also have a greater risk of death and poor health. FP reduces the risk of unintended pregnancies among women living with HIV, resulting in fewer orphans and infected babies. In addition, male and female condoms provide dual protection against unintended pregnancies and sexually transmitted infections (STIs,) including HIV. In addition, FP has the long-term benefits of empowering people, enhancing education, and increasing productivity.

In Swaziland, the FP program is a component of sexual and reproductive health (SRH). The GOS, through the Sexual and Reproductive Health Unit (SRHU) of MOH, has developed a National SRH Policy, prioritizing FP as a core element of the core SRH package.

There is a need to increase access to rights-based voluntary FP as part of strengthening and accelerating efforts to address the MDGs and move toward universal access to reproductive health to improve quality of life.

Data show that the country's fertility is still high, at 3.8 births per woman and even higher in the rural areas compared to the urban, with the total wanted fertility rate (2.1%) lower than the actual rate. According to the *Swaziland Multiple Indicator Cluster Survey*, in 2010 the contraceptive prevalence rate (CPR) among currently married women is 65.2% for any method, and 63% for modern methods.<sup>5</sup> There is still a high unmet need for FP (24%), especially for women living with HIV (63.7%). When women were asked about the last baby they had, 37% said they had not wanted any more children and 27% wanted children later. This means that, for 64% of women, their births were unplanned.<sup>4</sup> The CPR among sexually active unmarried women is 65%, which is mostly attributed to the use of the condom. The use of FP still varies according to method (the most common methods are injectables, pills, and male condoms) and age (use increases with age).

Through the GOS 5th Country Programme (2011–2015), in partnership with UNFPA, the country has been supported in strengthening reproductive health commodity security (RHCS), resulting in efforts to address the unmet need for FP in the country. This support has involved procurement of FP commodities on an annual basis in line with the national procurement plan, as well as systems development for supply chain management, demand creation for FP services uptake, and program monitoring and evaluation—all working toward the country's goal of making reproductive health commodities available to those who need

them, when they need them. The rationale for investing in RHCS is grounded in established linkages between FP and fertility decline, gender equality, and poverty reduction.

RHCS exists when people are able to reliably choose, obtain, and use the contraceptives, condoms, and other essential reproductive health supplies when they want them (USAID | DELIVER)<sup>6</sup>. Ensuring the ability to choose relies on providing clients with the necessary information to make an informed choice on the preferred method of FP. The ability of clients to obtain these products depends on the right product being available to clients in the right condition, in the right quantity, at the right place, at the right time, and at the right price. The reproductive health (RH) commodity supply chain underpins commodity security by ensuring that RH commodities are accessible to those who need them. A strong commodity supply chain's components include quantification and procurement, storage and distribution, management information systems, and use in the health sector. An effective supply chain system ensures that high-quality reproductive health commodities are available in sufficient quantities in order to ensure RHCS.

The GOS through MOH is committed to ensuring reproductive health commodity security for all Swazis to be able to choose, obtain, and use quality contraceptives and other reproductive health commodities whenever and wherever they need them.

### **Supply Chain Management System for FP Commodities**

Previously, the supply chain for FP commodities in Swaziland could be described as a vertical system. Commodities were procured through different mechanisms and funding sources, including the GOS, the UNFPA, the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund), and some civil society organizations (CSOs), such as PSI and the AIDS Healthcare Foundation (AHF). A central warehouse different from the Central Medical Stores (CMS) was responsible for receiving the commodities from donors and suppliers, providing storage before they were distributed to regional warehouses. This central warehouse was managed by the MOH's Sexual and Reproductive Health Unit. Below the national level, there were three regional warehouses that were responsible for storing and distributing FP commodities to health facilities in the four regions of the country. Under this previous system, the health facilities requested FP commodities in an ad hoc fashion. Overstocking, expiry, and stock-out of FP commodities were common in this vertical system. The system also lacked clearly defined mechanisms for distribution and logistics data flow back to the central level.

A great need existed to overhaul the supply chain system to avoid stock-outs, expiry, and unnecessary wastage of resources caused by vertical warehousing and distribution. MOH through the SRHU, in collaboration with UNFPA and the Strengthening Pharmaceutical Systems (SPS) Program, implemented by MSH, conducted an SRHC logistics system assessment to evaluate the situation, identify gaps, and create a strategy to design and implement a supply chain system for FP commodities that would be effective as well as resource-efficient.

The assessment report recommended that the FP supply chain system be integrated with the supply system for general essential medicines. It was suggested that the storage of FP commodities would therefore be centralized to CMS and, likewise, these commodities would be distributed directly to health facilities along with other essential medicines.

The FP supply chain system was redesigned in such a way that facilities would maintain a maximum stock of three months' supply and a minimum of two months' supply. Reporting and ordering would take place monthly. A Logistics Management Information System (LMIS) tool was designed and printed. A three-day training-of-trainers (TOT) course on how to train facility health workers in the newly designed LMIS was prepared and facilitated by USAID/SPS. To date, 462 health workers from 148 health facilities and CSOs have been trained in the LMIS for FP commodities.

In October 2012, the storage and distribution of FP commodities and condoms was migrated from the SRHU warehouse to CMS. Public, nongovernmental (NGO), faith-based, and private health facilities offering FP services now order these commodities directly from CMS. CSOs that distribute condoms in the community also order and receive condoms from CMS.

All facilities that order essential medicines from CMS synchronize the placing of orders for FP commodities with orders of essential medicines. The review period for FP commodities in health facilities is monthly, and reports and orders are received at CMS by the end of the first week of every month. The distribution of commodities to facilities is staggered through the month according to a set schedule for the four administrative regions of the country; this distribution schedule is shown in table 1.

**Table 1. Health Commodity Distribution Schedule from CMS to Facilities**

<b>Region</b>	<b>Orders received at CMS</b>	<b>Orders distributed to health facilities</b>
Shiselweni	First week of the month	First week of the month
Lubombo		Second week of the month
Hhohho		Third week of the month
Manzini		Last week of the month

The redesigned storage and distribution system for FP, which was introduced with a new LMIS tool, allows facilities to both order commodities and report on the movement of commodities in the facility during the month. The LMIS tool allows for the monthly collection of logistics data and its flow back to CMS. The flow of FP commodities and data before and after the revision is shown in figures 1 and 2, respectively.

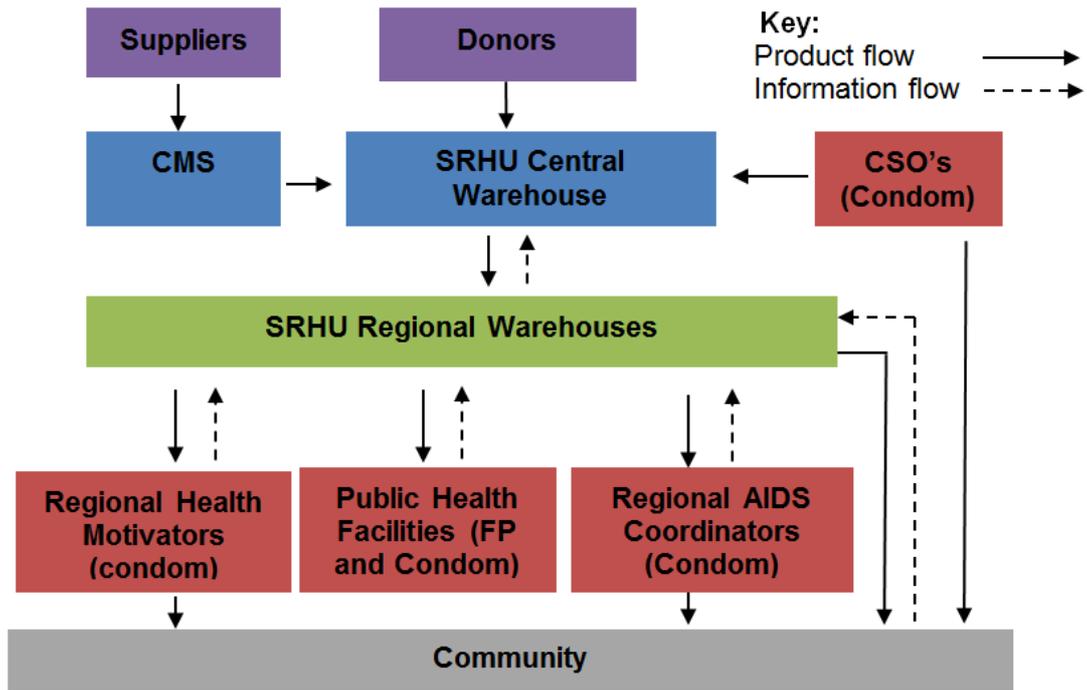


Figure 1. Movement of SRH commodities and data before supply chain revision

The flow of information in the previous supply chain system for FP commodities was erratic, as reporting on the movement of commodities within service delivery points was not emphasized.

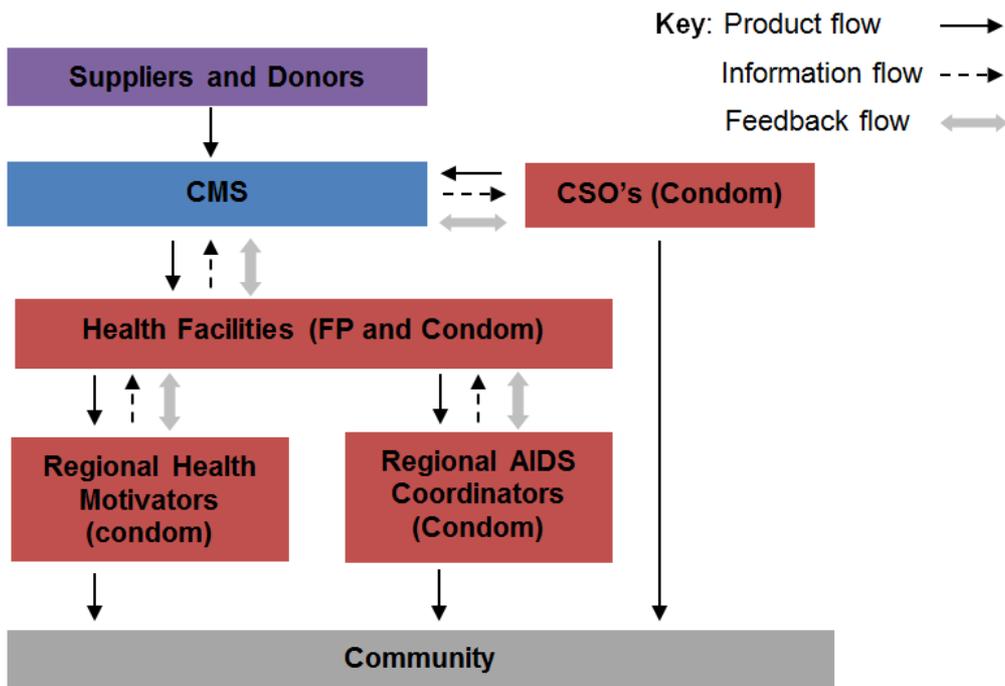


Figure 2. Movement of SRH commodities and data after supply chain revision

As shown in figure 2, the FP commodities LMIS report-order tool is sent from health facilities directly to CMS. Health facilities are divided into hospitals, health centers, and primary health facilities (clinics and public health units [PHUs]). Health centers, PHUs, and hospitals send their reports/orders to CMS every month. Clinics send their report-order forms to CMS through clinic supervisors based at the regional health offices. Clinic supervisors are members of the regional health management team (RHMT) responsible for supporting and supervising clinics. This mechanism is used by public, faith-based, and some private clinics.

Regional health motivators (RHMs) and regional AIDS coordinators (RACs) order their condom supplies from their respective health facilities; they distribute condoms in the community. CSOs, including PSI, the Alliance of Mayors Initiative on Community Action on AIDS at the Local Level (AMICAALL), and the Swaziland Business Coalition on HIV and AIDS (SWABCHA), order their condom supplies from CMS and distribute them to the community via community distributors called Peer Educators and other innovative mechanisms.

The revised supply chain system for FP commodities not only tracks the flow of commodities to health facilities and other distribution channels but also captures the flow of logistics data from the service delivery points back to the central level. This data is captured, aggregated, and analyzed for supply chain decision making such as immediate resupply to facilities, forecasting and supply planning at the central level, budgeting, and FP supply chain performance monitoring. Among the funding sources and donors that use the information for decision making, the major ones are the GOS, USAID, UNFPA, the Global Fund, AHF, and PSI.

The inventory control system for FP commodities in Swaziland is designed so that facilities maintain a maximum of three months of stock during receipt and at any point in time. They are also allowed to maintain a minimum of two months of stock. The maximum and minimum stock levels at the central level are seven months and four months, respectively. The inventory control system and LMIS are supported mainly by inventory control mechanisms—such as the stock card—at the facility level, and by a computer-based inventory and warehouse management system called RxSolution at the CMS and PSI warehouses. RxSolution is an SQL-based software developed by the USAID-funded program Rational Pharmaceutical Management (RPM) Plus, which was implemented by MSH. Currently, RxSolution implementation is supported the USAID/SIAPS Program.

## **Scope of the Quantification**

The quantification is national and includes requirements for both the public and private sectors. The quantification period covered is 2014–2018. The commodities quantified include male and female condoms; three kinds of injections—medroxyprogesterone acetate (Depo-Provera<sup>®</sup>), norethisterone enantate (Noristerat<sup>®</sup>), and progesterone and estrogen (Norigynon<sup>®</sup>); four kinds of oral contraceptives—ethinyl estradiol and norgestrel (Lofemenal<sup>®</sup>), ethinyl oestradiol and norgestrel (Ovral<sup>®</sup>), levonorgestrel (Microvral<sup>®</sup>), and high-dose levonorgestrel (Postinor-2<sup>®</sup>); the IUCD (Copper-T); and a levonorgestrel implant (Jadelle<sup>®</sup>). The requirements for male condoms include the prevention of STIs, including HIV/AIDS.

The five-year forecast includes requirements for clients as well as wastage, freight, and logistics costs, whereas the supply plan/procurement requirements were determined after

consideration of factors such as stock on hand, expiries, stock on order not delivered yet, buffer and minimum stock, and maximum stock levels, and lead times.

The forecast requirements are provided for both total national needs and for the public sector only, but supply plan/procurement requirements are given for the public sector only.

The supplies needed to administer injections and insert implants are quantified with the injections and implants as kits. Additional supplies required for insertion of long-acting methods and all supplies and medicines needed for the procedures of permanent methods are obtained through the essential medicines program and therefore are not considered in this quantification.

## **Objectives**

The first objective is to produce the forecast and supply plan for FP commodities indicated above for the period 2014–2018. The results of the quantification will be used in planning, mobilizing, and securing financial resources for the period of 2014–2018 and in establishing estimated requirements for procurement in the short term.



## QUANTIFICATION PROCESSES AND METHODOLOGY

Preparatory conference calls were held before the Technical Advisor arrived in-country to finalize the scope of technical assistance, planning, and preparations. A list of data points, documents, and data sources was shared with the in-country team in order to initiate data collection. A desk review of various documents was also partially undertaken.

In-country briefing meetings were held including the SHRU, UNFPA, USAID/SIAPS, and CMS staff members to review progress on preparations for the quantification exercise and agree on next steps. The available information and data for the quantification exercise were reviewed and compiled; additional data needs and sources were identified and appropriate partners were contacted to obtain the data and information. The documents, information, and data obtained were organized, analyzed, and made ready for discussion.

A number of major documents and data sources,<sup>1,2,5,7-19</sup> including HMIS and LMIS reports/data were collected and reviewed for the quantification of FP commodities.

In addition, discussions were held with various experts from UNFPA, SRHU, CMS, SIAPS, and the SID-HMIS Unit of MOH to obtain further data and clarify on some issues.

The reviewed available data and information were compiled, analyzed, and prepared for discussion at a consultative quantification workshop held November 21, 2013, in Ezulwini.

The objectives of the consultative quantification workshop were to:

- Review and validate the available data, assumptions, and methodologies
- Build additional assumptions
- Agree on input data, assumptions, and methodologies for the quantification
- Draw recommendations for future strengthening of the whole program and supply chain management, focusing specifically on quantification-related activities.

Attendants included key informants from almost all FP stakeholders and organizations active in Swaziland. Annex 1 shows details of the workshop participants. Follow-up discussions were held after the workshop, especially with the National Emergency Response Council on HIV and AIDS (NERCHA), to clarify some data related to male condom use for STI prevention. Data and assumptions were then further analyzed and organized for input into the forecasting tool.

Based on feedback given during the workshop and further discussion with relevant partners, the demographic/morbidity method of forecasting was chosen as the main forecasting method; however, the consumption method was also applied to forecast the same commodities for the same quantification period, for comparison purposes. The demographic/morbidity method was selected as the main method for the following reasons:

- The data for the demographic method is relatively more reliable, as it is drawn mostly from surveys.

- The program is in a scale-up mode, with general objectives of decreasing fertility and unmet need and increasing the CPR and the use of FP methods by the population in need.
- Complete and quality data on consumption/ dispensed to clients and stock-out periods were not available, given that the LMIS for FP commodities is still in its start-up phase.

A modified version of the Reality  $\sqrt{\text{®}}$  tool was used to forecast based on the demographic method, whereas a simple Excel spreadsheet was used to forecast based on the consumption method. Supply plans were developed using the tool called PipeLine. The key assumptions and results are included in the corresponding subsections under “Quantification Output” below.

## QUANTIFICATION OUTPUT

### Key Assumptions

#### Demographic/Population/Morbidity Method

Data contained in the *Swaziland Population Projections 2007–2030*<sup>12</sup> were used as a basis for calculating the number of women of reproductive age (WRA) and men of reproductive age (MRA) (15–49 years). For the current quantification using the demographic method of forecasting, it was assumed and agreed during the consultative quantification workshop that all WRA are sexually active and should be included. However, it was also agreed that not all women in this age group have access to health services in general and FP services in particular. Therefore, based on information from the MOH Swaziland *Service Availability Mapping Report* (2010)<sup>20</sup> and expert opinion, 85% of WRA were assumed to have access to FP services. The figures related to the male population were applied for estimation of need for male condoms for the prevention of STIs, including HIV/AIDS, and the assumption of 85% access to services was made to calculate the population to be served. Tables 2 and 3 show the total population by year, total female and male populations, population of the WRA group, population of the WRA group with access to FP services, and population of the MRA group.

**Table 2. Population Figures—Total, Women and Men**

	2007	2010	2011	2012	2013	2014	2015	2016	2017	2018	2022
Total population	1,020,102	1,055,506	1,067,773	1,080,337	1,093,158	1,106,189	1,119,375	1,132,657	1,145,973	1,159,25	1,210,939
Female population	537,893	555,436	561,587	567,905	574,370	580,957	587,638	594,383	601,159	607,933	634,456
% Female population	52.7	52.6	52.6	52.6	52.5	52.5	52.5	52.5	52.5	52.4	52.4
Male population	482,209	500,070	506,186	512,432	518,788	525,232	531,737	538,274	544,814	551,317	576,483
% Male population	47.27	47.38	47.41	47.43	47.46	47.48	47.50	47.52	47.54	47.56	47.61

**Table 3. Population Figures—WRA, WRA with Access to FP Services, and MRA**

Group		2007	2010	2011	2012	2013	2014	2015	2016	2017	2018	2022
WRA (15–49 years)	%	51.40	53.00	53.50	53.90	54.30	54.60	54.80	55.00	55.20	55.30	54.90
	No.	276,477	294,381	300,449	306,101	311,883	317,203	322,026	326,911	331,840	336,187	348,316
WRA (15–49) with access to FP services	85%	235,005	250,224	255,382	260,186	265,100	269,622	273,722	277,874	282,064	285,759	296,069
MRA (15–59 years)	%	54.91	55.28	57.92	55.52	55.62	55.71	55.78	55.86	55.95	56.06	56.88
	No.	264,763	276,423	293,181	284,496	288,554	292,585	296,599	300,653	304,800	309,049	327,923
MRA with access to condoms	85%	225,049	234,960	249,204	241,822	245,271	248,697	252,109	255,555	259,080	262,692	278,735

## Contraceptive Prevalence Rate

The CPR was derived from the *Swaziland Community Health Survey (SCHS) 2002*,<sup>21</sup> *SDHS 2006–07*,<sup>4</sup> and *MICS 2010*.<sup>5</sup> The CPR trend (increase or decrease) was determined and applied to calculate the total CPR for the quantification period of 2014–2018.

In summary, use of different data sources provides different increase rates in the total CPR (including traditional methods of contraception). Using only data from *SDHS 2006–07*<sup>4</sup> and *MICS 2010*<sup>5</sup> results in a total CPR growth rate of 3.77 points per year; using only *SCHS 2002*<sup>21</sup> and *MICS 2010*<sup>5</sup> results in a total CPR growth rate of only 1.03 points per year; and using *SCHS 2002*,<sup>21</sup> *SDHS 2006–07*,<sup>4</sup> and *MICS 2010*<sup>5</sup> results in a total CPR growth rate of only 0.86 points per year. Because of this variation and based on the historical achievements of other similar countries, it was agreed to take an average of 2.0 points total CPR growth per year for the quantification period. Considering the CPR of 49.3 points based on *MICS 2010*<sup>5</sup> for the year 2010 and assuming 2.0 points growth per year, the CPR for any method by end of 2018 was calculated to be 65.30. The CPR for 2022 was calculated to be 73.30. It was noted that the CPR trend for IUCDs was decreasing, and applying the trend resulted in a CPR of 0 in 2016. It was, however, decided to adjust and keep the CPR for IUCDs at 0.1 point starting in 2016. The CPR points added to make the IUCD CPR 0.1 were deducted from male condoms in each year to keep the increase in CPR for male condoms at 2.0 per year. Table 4 provides the details for the total CPR as well as CPR by group of methods.

**Table 4. Total CPR and CPR by Group of Methods**

FP method	MICS 2010 <sup>5</sup>	Avg. annual increase or decrease in CPR	2011	2012	2013	2014	2015	2016	2017	2018	2022
Any method	49.30	2.00	51.30	53.30	55.30	57.30	59.30	61.30	63.30	65.30	73.30
Any modern method	48.00	2.05	50.05	52.10	54.15	56.21	58.26	60.31	62.36	64.41	72.62

## Method Mix

The mix of FP methods was estimated based on the data from *SCHS 2002*,<sup>21</sup> *SDHS 2006–07*,<sup>4</sup> and *MICS 2010*<sup>5</sup> and calculated trends.

As in the case of total CPR, different method-mix trends are obtained depending on the data sources considered. Consideration of only *SDHS 2006–07*<sup>4</sup> and *MICS 2010*<sup>5</sup> results in higher annual increase in CPR points in general, and with increases in CPR for all methods except four; the CPRs for the IUCD, female sterilization, and traditional methods decrease while that of male sterilization remains the same. Consideration of only *SCHS 2002*<sup>21</sup> and *MICS 2010*<sup>5</sup> results in a lower annual increase of CPR points in general, with increases in CPR for all methods except three; the CPRs of IUCDs and traditional methods decrease while the CPR of male sterilization remains the same. Consideration of *SCHS 2002*,<sup>21</sup> *SDHS 2006–07*,<sup>4</sup> and *MICS 2010*<sup>5</sup> together results in the lowest annual increase of CPR points overall, with increases in CPR for all methods except three; the CPRs of IUCDs and traditional methods decrease while the CPR of male sterilization remains the same.

In addition to the specific FP methods included in this quantification, data were collected on the use of other modern methods, from the same sources used for data on CPR and method mix. The CPR points for the other modern FP methods were allocated to the IUCD to compensate for the discrepancy between the relatively lower reporting in the above sources on the use of this method compared to service statistics data obtained through HMIS.

*MICS 2010*<sup>5</sup> data were used as a baseline for the calculation of CPR by method and method mix. In line with the total CPR, a total increase of 2 CPR percentage points per year was assumed for all methods; this was obtained by using the average of the annual increase/decrease from the three different sets of data sources (“scenarios”), as defined above. Table 5 shows the annual CPR increase or decrease of each method for each scenario, and the average and the final annual increase/decrease rate after proportionating the average to the total of 2 CPR increase per year.

**Table 5. Annual Increase/Decrease in CPR by Method**

FP method	SCHS 2002 <sup>21</sup> and MICS 2010 <sup>5</sup>	SDHS 2006–07 <sup>4</sup> and MICS 2010 <sup>5</sup>	SCHS 2002, <sup>21</sup> SDHS 2006–07 <sup>4</sup> and MICS 2010 <sup>21</sup>	Average	Proportionated annual increase/decrease
Male condom	0.66	2.63	0.54	1.28	1.36
Injection	0.20	1.03	0.15	0.46	0.49
Pills	0.13	0.23	0.12	0.16	0.17
Female condom	0.03	0.10	0.02	0.05	0.05
Implant, Jadelle	0.14	0.37	0.12	0.21	0.22
IUCD, Copper-T	-0.14	-0.37	-0.12	-0.21	-0.22
Female sterilization	0.04	-0.13	0.05	-0.02	-0.02
Male sterilization	0.00	0.00	0.00	0.00	0.00
Traditional methods	-0.03	-0.10	-0.02	-0.05	-0.05
<b>Total</b>	<b>1.03</b>	<b>3.77</b>	<b>0.86</b>	<b>1.88</b>	<b>2.00</b>

Tables 6 and 7 below provide details on the method mix for all methods and for modern methods, respectively.

**Table 6. Method Mix in CPR Points for All Methods**

Method	2010	2014	2015	2016	2017	2018	2022
Male condoms	21.50	26.55	27.68	28.82	29.96	31.09	35.64
Injectables	15.10	17.06	17.55	18.04	18.53	19.02	20.97
Oral contraceptives	6.60	7.28	7.44	7.61	7.78	7.95	8.63
Female condom	0.40	0.61	0.66	0.71	0.76	0.81	1.02
Implant	1.20	2.09	2.31	2.53	2.76	2.98	3.87
IUCD <sup>a</sup>	0.60	0.10	0.10	0.10	0.10	0.10	0.10
Female sterilization	2.50	2.43	2.42	2.40	2.38	2.36	2.30
Male sterilization	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Traditional methods	1.30	1.09	1.04	0.99	0.94	0.89	0.68

Method	2010	2014	2015	2016	2017	2018	2022
<b>Any method</b>	<b>49.30</b>	<b>57.30</b>	<b>59.30</b>	<b>61.30</b>	<b>63.30</b>	<b>65.30</b>	<b>73.30</b>
<b>Any modern method</b>	<b>48.00</b>	<b>56.21</b>	<b>58.26</b>	<b>60.31</b>	<b>62.36</b>	<b>64.41</b>	<b>72.62</b>

<sup>a</sup>Even if the CPR for the IUCD decreases to 0 points by 2016, it was adjusted to remain at 0.1 CPR points starting in 2016 and CPR points were deducted from male condoms in each year to keep the increase at 2.0 per year.

**Table 7. Method Mix for Modern Methods Only, by Percentage**

Method	2010	2011	2012	2013	2014	2015	2016	2017	2018	2022
Male condom	44.8	45.7	46.5	46.9	47.2	47.5	47.8	48.0	48.3	49.1
Injectables	31.5	31.1	30.9	30.6	30.3	30.1	29.9	29.7	29.5	28.9
Oral contraceptives	13.8	13.5	13.3	13.1	12.9	12.8	12.6	12.5	12.3	11.9
Female condom	0.8	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.3	1.4
Implant	2.5	2.8	3.2	3.4	3.7	4.0	4.2	4.4	4.6	5.3
IUCD	1.3	0.8	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1
Female sterilization	5.2	5.0	4.7	4.5	4.3	4.1	4.0	3.8	3.7	3.2
Male sterilization	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
<b>Total</b>	<b>100.0</b>									

## Brand Mix

Data from HMIS were applied to calculate the proportions/brand mix of different formulations of oral contraceptives and injectables. However, some adjustments were made based on expected trends and issue data from CMS from recent months. There is inconsistency among data sources in terms of the proportions of the formulations for both oral contraceptives and injectables.

The general points of agreement during the quantification consultative workshop and the guidance from the SHRU included the following:

- The use of depot medroxyprogesterone acetate (Depo-Provera) injection should increase gradually since one dose of the product is effective for three consecutive months, which is assumed to be accepted by more clients as offering greater convenience. On the contrary, the use of Norigynon (injected once a month) injection is expected to decrease. The proportion of Depo-Provera was assumed to increase by 50% each year up to a maximum of 66% (based on HMIS data for December 2012–August 2013 and adjustments). The assumed increase in the use of Depo-Provera results in a proportional decrease in the use of Noristerat (injected once every two months). The proportion of Norigynon was assumed to be decreased from the current average of 5.3% and maintained at 3%, based on the HMIS service statistics data.
- The proportion of Microvral was expected to decrease from the current level of about 6% to 5%, and the proportion of Ovral was expected to increase by the same amount. According to the data from HMIS for the period January–July 2013, 58% and 36% of clients on oral contraceptives were taking Lofemenal and Ovral, respectively. Tables

8 and 9 show the details on the proportions of the injectable and oral contraceptive formulations/brands for the quantification period, respectively.

**Table 8. Brand Mix of Injectables (Percentage)**

<b>Product</b>	<b>2011–2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Depo-Provera (once every 3 months)	13.0	19.6	29.3	44.0	66.0	66.0
Noristerat (once every 2 months)	81.7	77.4	67.7	53.0	31.0	31.0
Norigynon (once a month)	5.3	3.0	3.0	3.0	3.0	3.0

**Table 9. Brand Mix of Oral Contraceptives (Percentage)**

	<b>2011–2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Lofemenal	58.0	58.0	58.0	58.0	58.0	58.0
Ovral	36.0	37.0	37.0	37.0	37.0	37.0
Microvral	6.0	5.0	5.0	5.0	5.0	5.0

Table 10 shows the method mix in CPR points for each of the products after application of the above assumptions on brand mix for the quantification period.

**Table 1. Method Mix in CPR Points per Product Type**

<b>Method</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Male condom	25.41	26.55	27.68	28.82	29.96	31.09
Injectable, 3-month (Depo-Provera)	2.16	3.34	5.15	7.94	12.23	12.55
Injectable, 2-month (Noristerat)	13.53	13.21	11.87	9.56	5.74	5.89
Injectable, 1-month (Norigynon)	0.88	0.51	0.53	0.54	0.56	0.57
Oral contraceptive, Lofemenal	4.12	4.22	4.32	4.42	4.51	4.61
Oral contraceptive, Ovral	2.56	2.69	2.75	2.82	2.88	2.94
Oral contraceptive, Microvral	0.43	0.36	0.37	0.38	0.39	0.40
Female condom	0.55	0.61	0.66	0.71	0.76	0.81
Implant, Jadelle	1.87	2.09	2.31	2.53	2.76	2.98
IUCD, Copper-T	0.10	0.10	0.10	0.10	0.10	0.10
Female sterilization	2.45	2.43	2.42	2.40	2.38	2.36
Male sterilization	0.10	0.10	0.10	0.10	0.10	0.10
Any traditional method	1.15	1.09	1.04	0.99	0.94	0.89
<b>Any method</b>	<b>55.30</b>	<b>57.30</b>	<b>59.30</b>	<b>61.30</b>	<b>63.30</b>	<b>65.30</b>
<b>Any modern method</b>	<b>54.15</b>	<b>56.21</b>	<b>58.26</b>	<b>60.31</b>	<b>62.36</b>	<b>64.41</b>
<b>All long-acting/permanent methods</b>	<b>4.52</b>	<b>4.72</b>	<b>4.93</b>	<b>5.13</b>	<b>5.34</b>	<b>5.54</b>

Table 11 shows the method specific discontinuation rate for each of the products after application of the above assumptions on brand mix for the quantification period.

**Table 2. Method-specific Discontinuation Rate and Commodities per User/CYP**

<b>Method</b>	<b>Discontinuation rate (%)</b>	<b>CYP</b>
Male condom	47	156 per year
Injectable,3-month (Depo-Provera)	28	4 per year
Injectable, 2-month (Noristerat)	28	6 per year
Injectable, 1-month (Norigynon)	28	12 per year
Oral contraceptive, Lofemenal	40	13 per year
Oral contraceptive, Ovral	40	13 per year
Oral contraceptive, Microvral	40	13 per year
Female condom	50	156 per year
Implant, Jadelle	60	2 years
IUCD, Copper-T	28	4.6 years
Female sterilization	10	11 years
Male sterilization	10	12 years

### **Assumptions for Forecasting Needs for Emergency Oral Contraceptives**

- It was agreed that emergency oral contraceptives should not be quantified as a regular method of FP. Therefore, they were not considered in the calculation of the forecast requirements using the population, CPR, and method mix.
- The current trends of consumption/issue and service statistics data were consulted and used to forecast the requirements for oral emergency contraceptives.
- The average monthly consumption data from the LMIS for the period April–July 2013 was calculated to be 588 packs of two tablets each, and thus the annual consumption for 2013 was estimated to be 7,056 packs. An annual increase of 10% was assumed to estimate the requirement for each of the forecast years. These assumptions were used for both the demographic and consumption methods of forecasting.

### **Assumptions for Forecasting Needs for Male Condoms for Prevention of STIs, Including HIV and AIDS**

Table 12 shows the major assumptions made for the calculation of male condom needs for prevention of STIs.

**Table 3. Assumptions for Calculation of Male Condoms for STI Prevention, 2013–2018**

Assumption	2013	2014	2015	2016	2017	2018
Total population (population projections 2007–2030)	1,093,158	1,106,189	1,119,375	1,132,657	1,145,973	1,159,250
Percentage of males	47.5	47.48	47.50	47.52	47.54	47.56
Number of males	518,788	525,232	531,737	538,274	544,814	551,317
Percentage of males aged 15–59	<b>55.6</b>	<b>55.7</b>	<b>55.8</b>	<b>55.9</b>	<b>55.9</b>	<b>56.1</b>
Number of males aged 15–59	288,554	292,585	296,599	300,653	304,800	309,049
Access to services (85%)	245,271	248,697	252,109	255,555	259,080	262,692
Percentage of males engaged in higher-risk sex <sup>a</sup> (SDHS 2006–07)	<b>58.2</b>	<b>58.2</b>	<b>58.2</b>	<b>58.2</b>	<b>58.2</b>	<b>58.2</b>
Number of males engaged in higher-risk sex	142,748	144,742	146,728	148,733	150,785	152,887
Percentage who used a condom during risky sex (SDHS 2006–07 <sup>4</sup> )	<b>68</b>	<b>68</b>	<b>68</b>	<b>68</b>	<b>68</b>	<b>68</b>
Number who used a condom during risky sex	97,068	98,424	99,775	101,138	102,534	103,963
Number of risky sex episodes per man per year	<b>54</b>	<b>54</b>	<b>54</b>	<b>54</b>	<b>54</b>	<b>54</b>

<sup>a</sup>High-risk sex is a sexual intercourse with a nonmarital and noncohabiting partner (SDHS 2006–07).<sup>4</sup>

## Source Mix

The *Total Market Approach*, *PSI/UNFPA Joint Studies on the Total Market for Male Condoms in Six African Countries*,<sup>19</sup> which is based on *SDHS 2006–07*<sup>4</sup> data, was used as the main basis for estimating the source mix of commodities quantified. In addition, recent data on sources of male condoms for Swaziland<sup>19</sup> were used to estimate the source mix of male condoms.

Only retail outlets were considered to be truly private sources of the commodities, whereas public, private, and NGO outlets were assumed to obtain commodities from the public sector. In general, the data show that the public sector is the main source of FP commodities, ranging from 100% of IUCDs and female sterilization to 76% of male condoms. The source mix for female condoms, implants, and male sterilization was not available from documents, but they were assumed to be 100% sourced from the public sector. Table 13 provides the details on the source mix assumptions used for each contraceptive method.

**Table 4. Source Mix by Method (Percentage)**

Source	Oral pills	Injections	Male condom	Female condoms	IUCDs	Female sterilization	Male sterilization
Public	66.40	78.60		100.00	26.70	79.70	100.00
Private	13.60	9.40	76.00	0.00	13.30	20.30	0.00
NGO	12.00	10.00		0.00	60.00	0.00	0.00
Retail	8.00	2.00	24.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Public total	<b>92.00</b>	<b>98.00</b>	<b>76.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>
Retail total	<b>8.00</b>	<b>2.00</b>	<b>24.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

### Consumption Method

The consumption method of forecasting was used as an alternative to the demographic method and for comparison purposes, although the consumption/issue data are incomplete and inconsistent across different sources of consumption/distribution data. The following assumptions and considerations are made for this method:

- Data used for this method were from the public sector only and the same assumptions of source mix as in the demographic method of forecasting were applied to calculate the requirements for the nation.
- The HMIS consumption report, issue data from CMS, and consumption data from LMIS reports were reviewed and compared to estimate requirements based on consumption. It was agreed to take the higher of the LMIS or HMIS consumption figures as a base for all FP commodities except condoms.
- For condoms—male and female—it was not possible to base the assumption on the LMIS or HMIS data because the LMIS is not yet implemented at the outreach sites and the reporting rate from outreach sites for the HMIS data was considered unreliable. Instead, it was agreed to take the total distribution of condoms from 2008 to 2012 as a basis for the forecast.
- The annual average increase or decrease in consumption of each product over the forecast period was assumed based on the trend shown in the 2001–2012 HMIS service statistics data for all products except condoms. Since the data from the service statistics for injections and oral contraceptives were not disaggregated by formulation/brand, the same assumptions made on brand mix for the demographic method were applied to calculate the consumption quantities of each brand/formulation.
- The trend from distribution reports from CMS and the SRHU for the period 2007–2012 was used to calculate the average annual increase or decrease for condoms.

Table 14 summarizes the major assumptions for the consumption method of forecasting product by product.

**Table 5. Summary of Major Assumptions for Consumption Method of Forecasting**

No.	Product	Major assumptions
1	Injectable, 3-month (Depo-Provera)	<ul style="list-style-type: none"> <li>Based on LMIS data for the period April–July 2013.</li> <li>The average annual increase in consumption for injectables was calculated from the service statistics data for the period 2007–2012 and was found to be about 15% for all three injections; the same assumption on the proportions of the different brands of injectables as in the demographic method of forecasting was applied for the forecast years of 2014–2018. Accordingly, the proportion of Depo-Provera was assumed to increase from 13.5% in 2014 to 54.3% in 2018; for 2013, it was calculated to be 8.6%.</li> </ul>
2	Injectable, 2-month (Noristerat)	<ul style="list-style-type: none"> <li>Based on LMIS data for the period April–July 2013.</li> <li>The average annual increase in consumption for injectables was calculated from the service statistics data for the period 2007–2012 and was found to be about 15% for all three injections; then the same assumption on the proportions of the different brands of injectables as in the demographic method of forecasting was applied for the forecast years of 2014–2018. Accordingly, the proportion of Noristerat was assumed to decrease from 80.3% in 2014 to 38.3% in 2018; for 2013, it was calculated to be 80.9%.</li> </ul>
3	Injectable, 1-month (Norignynon)	<ul style="list-style-type: none"> <li>Based on LMIS data for the period April–July 2013.</li> <li>The average annual increase in consumption for injectables was calculated from the service statistics data for the period 2007–2012 and was found to be about 15% for all three injections; then the same assumption on the proportions of the different brands of injectables as in the demographic method of forecasting was applied for the forecast years of 2014–2018. Accordingly, the proportion of Norignynon was assumed to increase from 6.2% in 2014 to 7.4% in 2018; for 2013, it was calculated to be 10.5%.</li> </ul>
4	Oral contraceptive, Lofemenal	<ul style="list-style-type: none"> <li>Based on LMIS data for the period April–July 2013.</li> <li>The average annual increase in consumption was calculated from the service statistics data for 2007–2012 and was found to be about 10%; then the same assumption on the proportions of the different brands of oral contraceptives as in the demographic method of forecasting was applied for the forecast years 2014–2018. Accordingly, the proportion of Lofemenal was assumed to be 58% from 2014 to 2018; for 2013, it was calculated to be 51.9%.</li> </ul>
5	Oral contraceptive, Ovral	<ul style="list-style-type: none"> <li>Based on LMIS data for the period April–July 2013.</li> <li>The average annual increase in consumption was calculated from the service statistics data for 2007–2012 and was found to be about 10%; then the same assumption on the proportions of the different brands of oral contraceptives as in the demographic method of forecasting was applied for the forecast years of 2014–2018. Accordingly, the proportion of Ovral was assumed to be 37% from 2014 to 2018; for 2013, it was calculated to be 32.2%.</li> </ul>
6	Oral contraceptive, Microvral	<ul style="list-style-type: none"> <li>Based on LMIS data for the period April to July 2013.</li> <li>The average annual increase in consumption was calculated from the service statistics data for the period 2007–2012 and was found to be about 10%; then the same assumption on the proportions of the different brands of oral contraceptives as in the demographic method of forecasting was applied for the forecast years of 2014–2018. Accordingly, the proportion of Microvral was assumed to be 5% from 2014 to 2018; for 2013, it was calculated to be 15.9%.</li> </ul>
7	Oral emergency contraceptive, Postinor-2	<ul style="list-style-type: none"> <li>Based on LMIS data for the period April–July 2013.</li> <li>The average annual increase in consumption was calculated from the service statistics data for 2007–2012 and was found to be about 10%.</li> </ul>

No.	Product	Major assumptions
8	Implant, Jadelle	<ul style="list-style-type: none"> <li>• Based on LMIS data for the period April–July 2013.</li> <li>• The average annual increase in consumption was calculated from the service statistics data for 2001 to 2012 and was assumed to be about 5%, with adjustments based on knowledge of experts about the use of method.</li> </ul>
9	IUCD, Copper-T	<ul style="list-style-type: none"> <li>• Based on LMIS data for the period April–July 2013.</li> <li>• The average annual increase in consumption was calculated from the service statistics data for the period 2001–2012 and was found to be 2%.</li> </ul>
10	Male condom	<ul style="list-style-type: none"> <li>• Based on total distribution of condoms from CMS and PSI for the public sector.</li> <li>• The average annual increase in consumption was calculated from the total distribution for the years 2008–2012 and was found to be about 20%.</li> </ul>
11	Female condom	<ul style="list-style-type: none"> <li>• Based on total distribution of condoms from CMS and condom distributing partners for the public sector.</li> <li>• The average annual increase/decrease in consumption was calculated from two sources: (a) service statistics data for the years 2009–2011 and (b) total distribution data from CMS and condom distributing partners. From the service statistics data it was found to be about 15%; however, data from the total distribution show an average negative growth/decrease of 28% over the same period; thus it was adjusted downward to 5%.</li> </ul>

## **Additional Assumptions for Wastage and Supply Plans**

### ***Wastage Rate***

Wastage rates were assumed to be 5% for implants, oral contraceptives, injectables, and IUCDs, 12% for female condoms, and 10% for male condoms.

### ***Supply Plan Assumptions***

Table 15 shows the minimum, maximum, and desired months' stock at the health facility and CMS levels.

**Table 6. Minimum, Maximum, and Desired Stock Levels at CMS and Health Facilities**

Health system level	Minimum stock (months)	Maximum stock (months)
CMS	4	7
Facilities	2	3
National (CMS and facilities)	6	10
Shipment interval to CMS	3 months	
Desired	10 months	

Table 16 shows the estimated lead times for different phases of quantification and procurement processes needed to ensure that products are available in-country. The lead times are divided into three based on important milestones. The milestones are as follows:

- **Planning:** Finalizing the forecast and supply plan of all commodities to be procured and having the required approvals

- Ordering: Placing the orders for commodities with specific quantities and dates of delivery based on the supply plan
- Shipping: Sending of the commodities from the source/vendor to the recipient/ CMS
- Receiving: Getting the commodities to the CMS and ready for distribution and use

**Table 7. Procurement Lead Times for CMS and UNFPA**

<b>Lead time</b>	<b>CMS</b>	<b>UNFPA</b>
Planning to ordering	2 months	3 months
Ordering to shipping		4 months
Shipping to receiving	1 month	

**Prices of commodities:** The current prices of each of the quantified commodities were assumed to remain constant. The prices were obtained from CMS and UNFPA depending on what they are currently procuring. The prices from CMS are DDP (delivered duty paid); prices include freight and logistics costs up to the delivery of the commodities to the CMS. The prices from UNFPA do not include freight and logistics costs; therefore additional costs were added to calculate total cost requirements.

**Freight and logistics costs:** For UNFPA-procured commodities, since the price of the commodities does not include freight and logistics costs, it was necessary to assume an additional 12% of the commodity costs based on review of historical procurements and calculations of average freight and logistics costs for shipments.

## **Quantification Results**

### ***Demographic/Morbidity Method Results: Number of Users***

The number of users of each method was calculated from the CPR method mix and WRA group with access to services. Table 17 provides the estimated number of total users by method for each year. Table 18 shows method-specific discontinuation rates, with the number of new acceptors for each year. Note that the emergency contraceptive pill was not included in these estimates because it is not considered as regular method of FP.

**Table 8. Total Number of Users—Demographic Method**

Method	2014	2015	2016	2017	2018	Total
Injectable, 3-month (Depo-Provera)	8,993	14,087	22,050	34,488	35,863	115,481
Injectable, 2-month (Noristerat)	35,619	32,502	26,566	16,199	16,845	127,730
Injectable, 1-month (Norigynon)	1,380	1,441	1,504	1,568	1,630	7,522
Oral contraceptive, Lofemenal	11,377	11,818	12,269	12,730	13,177	61,371
Oral contraceptive, Ovral	7,258	7,539	7,827	8,121	8,406	39,150
Oral contraceptive, Microvral	981	1,019	1,058	1,097	1,136	5,291
Male condom	71,574	75,774	80,081	84,494	88,849	400,772
Female condom	1,634	1,799	1,970	2,145	2,320	9,868
Implant, Jadelle	5,632	6,326	7,039	7,772	8,509	35,279
IUCD, Copper-T	270	274	278	282	286	1,389
Female sterilization	6,558	6,611	6,664	6,717	6,756	33,306
Male sterilization	270	274	278	282	286	1,389
Any traditional method	2,950	2,854	2,754	2,650	2,538	13,746
<b>Grand total</b>	<b>154,493</b>	<b>162,317</b>	<b>170,337</b>	<b>178,546</b>	<b>186,601</b>	<b>852,294</b>

**Table 9. Number of New Acceptors—Demographic Method**

Method	Discontinuation rate	2014	2015	2016	2017	2018	Total
Injectable, 3-month (Depo-Provera)	0.28	4,870	7,612	11,907	18,612	11,032	<b>54,034</b>
Injectable, 2-month (Noristerat)	0.28	9,792	6,857	3,164	0	5,181	<b>24,995</b>
Injectable, 1-month (Norigynon)	0.28	0	447	466	485	501	<b>1,900</b>
Oral contraceptive, Lofemenal	0.40	4,821	4,992	5,178	5,369	5,539	<b>25,898</b>
Oral contraceptive, Ovral	0.40	3,188	3,184	3,303	3,425	3,533	<b>16,634</b>
Oral contraceptive, Microvral	0.40	303	430	446	463	477	<b>2,120</b>
Male condom	0.47	35,873	37,839	39,921	42,051	44,067	<b>199,752</b>
Female condom	0.50	899	983	1,070	1,160	1,248	<b>5,359</b>
Implant, Jadelle	0.60	4,179	4,615	5,060	5,520	5,979	<b>25,352</b>
IUCD	0.28	275	117	78	80	80	<b>630</b>
Female sterilization	0.10	714	709	714	719	711	<b>3,568</b>
Male sterilization	0.10	31	31	32	32	32	<b>157</b>
Any traditional method	0.50	1,431	1,379	1,327	1,273	1,213	<b>6,623</b>
<b>Grand total</b>		<b>66,377</b>	<b>69,196</b>	<b>72,668</b>	<b>79,189</b>	<b>79,593</b>	<b>367,023</b>

### Demographic/Morbidity Method Results—Forecast

Based on the forecast assumptions above and using the modified version of Reality<sup>v</sup> (a forecasting tool), the following quantities and costs of each of the forecasted commodities were calculated. The forecast requirements include the requirements for the clients, wastages, and freight and logistics costs only; the calculations do not include stock on hand, stock on order, or other supply plan parameters. Tables 19 and 20 show the total forecast requirements by quantity and value for the nation, and Tables 21 and 22 show the same for the public sector only.

**Table 19. Total Forecast Requirements, Including Wastage by Quantity for the Country—Demographic Method**

Method	Unit	2014	2015	2016	2017	2018	Total
Injectable, 3-month (Depo-Provera)	Each	37,770	59,166	92,609	144,851	150,625	<b>485,020</b>
Injectable, 2-month (Noristerat)	Each	224,398	204,763	167,363	102,054	106,122	<b>804,700</b>
Injectable, 1-month (Norigynon)	Each	17,385	18,155	18,945	19,752	20,540	<b>94,777</b>
Oral contraceptive, Lofemenal	Cycle	143,349	148,905	154,591	160,401	166,027	<b>773,272</b>
Oral contraceptive, Ovral	Cycle	91,447	94,991	98,618	102,325	105,914	<b>493,294</b>
Oral contraceptive, Microvral	Cycle	12,358	12,837	13,327	13,828	14,313	<b>66,661</b>
Emergency oral contraceptive, Postinor-2	2 tabs	8,851	9,736	10,709	11,780	12,958	<b>54,035</b>
Male condom	Each	12,282,144	13,002,734	13,741,917	14,499,223	15,246,480	<b>68,772,499</b>
Female condom	Each	285,444	314,406	344,170	374,732	405,345	<b>1,724,097</b>
Implant, Jadelle	Each	4,388	4,845	5,313	5,796	6,278	<b>26,620</b>
IUCD, Copper-T	Each	288	123	82	84	84	<b>662</b>

**Table 10. Total Forecast Requirements, Including Wastage and Freight and Logistics Costs by Value (in USD) for the Country—Demographic Method**

Method	Unit	Unit price	2014	2015	2016	2017	2018	Total
Injectable, 3-month (Depo-Provera)	Each	1.00	37,770	59,166	92,609	144,851	150,625	<b>485,020</b>
Injectable, 2-month (Noristerat)	Each	1.30	291,717	266,192	217,572	132,670	137,959	<b>1,046,110</b>
Injectable, 1-month (Norigynon)	Each	0.85	14,777	15,432	16,103	16,790	17,459	<b>80,561</b>
Oral contraceptive, Lofemenal	Cycle	0.62	88,313	91,736	95,239	98,818	102,284	<b>476,391</b>
Oral contraceptive, Ovral	Cycle	0.54	48,989	50,888	52,831	54,817	56,739	<b>264,265</b>
Oral contraceptive, Microvral	Cycle	4.33	53,513	55,587	57,710	59,879	61,979	<b>288,668</b>
Emergency oral contraceptive, Postinor-2	2 tabs	1.59	14,066	15,473	17,020	18,722	20,595	<b>85,877</b>

*Quantification Output*

Method	Unit	Unit price	2014	2015	2016	2017	2018	Total
Male condom	Each	0.03	368,464	390,082	412,258	434,977	457,394	<b>2,063,175</b>
Female condom	Each	0.57	162,703	179,211	196,177	213,597	231,047	<b>982,735</b>
Implant, Jadelle	Each	8.50	37,300	41,185	45,161	49,262	53,361	<b>226,268</b>
IUCD, Copper-T	Each	0.37	107	46	30	31	31	<b>245</b>
<b>Total</b>			<b>1,117,720</b>	<b>1,164,998</b>	<b>1,202,710</b>	<b>1,224,413</b>	<b>1,289,473</b>	<b>5,999,314</b>
<b>Grand total, including freight and logistics costs (12%)</b>			<b>1,251,846</b>	<b>1,304,798</b>	<b>1,347,035</b>	<b>1,371,343</b>	<b>1,444,210</b>	<b>6,719,232</b>

**Table 11. Total Forecast Requirements by Quantity for the Public Sector Only—Demographic Method**

Method	Unit	2014	2015	2016	2017	2018	Total
Injectable, 3-month (Depo-Provera)	Each	37,014	57,983	90,757	141,954	147,613	<b>475,320</b>
Injectable, 2-month (Noristerat)	Each	219,910	200,668	164,016	100,013	104,000	<b>788,606</b>
Injectable, 1-month (Norigynon)	Each	17,037	17,792	18,566	19,357	20,129	<b>92,882</b>
Oral contraceptive, Lofemenal	Cycle	131,881	136,992	142,224	147,569	152,745	<b>711,410</b>
Oral contraceptive, Ovral	Cycle	84,131	87,392	90,729	94,139	97,441	<b>453,831</b>
Oral contraceptive, Microvral	Cycle	11,369	11,810	12,261	12,721	13,168	<b>61,328</b>
Emergency oral contraceptive, Postinor-2	2 tabs	8,143	8,957	9,853	10,838	11,922	<b>49,712</b>
Male condom	Each	9,334,430	9,882,078	10,443,857	11,019,410	11,587,325	<b>52,267,099</b>
Female condom	Each	285,444	314,406	344,170	374,732	405,345	<b>1,724,097</b>
Implant, Jadelle	Each	4,388	4,845	5,313	5,796	6,278	<b>26,620</b>
IUCD, Copper-T	Each	288	123	82	84	84	<b>662</b>

**Table 12. Total Forecast Requirements Including Wastage and Freight and Logistics Costs, by Value (in USD) for the Public Sector Only—Demographic Method**

Method	Unit	Unit Price	2014	2015	2016	2017	2018	Total
Injectable, 3-month (Depo-Provera)	Each	1.00	37,014	57,983	90,757	141,954	147,613	<b>475,320</b>
Injectable, 2-month (Noristerat)	Each	1.30	285,883	260,868	213,220	130,017	135,200	<b>1,025,188</b>
Injectable, 1-month (Norigynon)	Each	0.85	14,481	15,123	15,781	16,454	17,110	<b>78,949</b>
Oral contraceptive, Lofemenal	Cycle	0.62	81,248	84,397	87,620	90,913	94,102	<b>438,279</b>

Method	Unit	Unit Price	2014	2015	2016	2017	2018	Total
Oral contraceptive, Ovral	Cycle	0.54	45,070	46,817	48,605	50,431	52,200	<b>243,124</b>
Oral contraceptive, Microvral	Cycle	4.33	49,232	51,140	53,093	55,088	57,021	<b>265,574</b>
Emergency Oral contraceptive, Postinor-2	2 tabs	1.59	12,941	14,235	15,659	17,225	18,947	<b>79,007</b>
Male condom	Each	0.03	280,033	296,462	313,316	330,582	347,620	<b>1,568,013</b>
Female condom	Each	0.57	162,703	179,211	196,177	213,597	231,047	<b>982,735</b>
Implant, Jadelle	Each	8.50	37,300	41,185	45,161	49,262	53,361	<b>226,268</b>
IUCD, Copper-T	Each	0.37	107	46	30	31	31	<b>245</b>
<b>Total</b>			<b>1,006,013</b>	<b>1,047,468</b>	<b>1,079,418</b>	<b>1,095,553</b>	<b>1,154,250</b>	<b>5,382,702</b>
<b>Grand total including freight and logistics costs (12%)</b>			<b>1,126,734</b>	<b>1,173,164</b>	<b>1,208,948</b>	<b>1,227,020</b>	<b>1,292,760</b>	<b>6,028,626</b>

### Demographic/Morbidity Method Results—Supply Plan

Tables 23 and 24 below show the details of commodity procurement requirements by quantity and value, respectively, for each year and in the public sector only. The male condom procurement requirement includes FP and STI/HIV prevention requirements. In summary, the total commodity procurement requirements for the public sector only based on the demographic method, for the quantification period of January 2014–December 2018 was estimated to be **USD 7,387,531**. No procurement requirement is estimated for IUCDs in the forecast period, as there are already more than enough in stock.

**Table 13. Supply Plan/Procurement Requirements, by Quantity and Year for the Public Sector Only—Demographic Method**

Product	Unit	2014	2015	2016	2017	2018	Total
Injectable, 3-month (Depo-Provera)	Each	37,550	59,408	109,592	94,640	187,817	<b>489,007</b>
Injectable, 2-month (Noristerat)	Each	318,821	181,115	129,215	70,779	105,989	<b>805,919</b>
Injectable, 1-month (Norigynon)	Each	4,009	18,234	19,004	19,824	25,659	<b>86,730</b>
Oral contraceptive, Lofemenal	Cycle	229,637	140,857	146,178	152,627	153,664	<b>822,963</b>
Oral contraceptive, Ovral	Cycle	109,143	90,025	93,469	96,768	98,830	<b>488,235</b>
Oral contraceptive, Microvral	Cycle	5,000	7,313	12,574	13,093	13,388	<b>51,368</b>

*Quantification Output*

Product	Unit	2014	2015	2016	2017	2018	Total
Emergency oral contraceptive, Postinor-2	2 tabs	14,670	8,730	10,542	11,605	12,409	<b>57,956</b>
Male condom	Each	9,708,874	14,741,325	15,373,262	16,020,661	16,649,558	<b>72,493,680</b>
Female condom	Each	385,191	223,284	364,168	402,015	419,803	<b>1,794,461</b>
Implant, Jadelle	Each	0	0	3,097	6,121	6,554	<b>15,772</b>
IUCD, Copper-T	Each	0	0	0	0	0	0

**Table 14. Supply Plan/Procurement Requirements by Value (in USD) and Year for the Public Sector only—Demographic Method**

Product	2014	2015	2016	2017	2018	Total
Injectable, 3-month (Depo-Provera)	42,056	66,537	122,743	105,997	210,355	547,688
Injectable, 2-month (Noristerat)	464,203	263,703	188,137	103,054	154,320	1,173,418
Injectable, 1-month (Norigynon)	3,817	17,359	18,092	18,872	24,427	82,567
Oral contraceptive, Lofemenal	525,413	97,811	101,506	105,984	106,704	937,418
Oral contraceptive, Ovral	66,010	54,447	56,530	58,525	59,772	295,285
Oral contraceptive, Microvral	245,000	35,465	60,979	63,496	64,926	469,866
Emergency oral contraceptive, – Postinor-2	72,684	15,546	18,773	20,666	22,098	149,768
Male condom	326,218	495,309	516,542	538,294	559,425	2,435,788
Female condom	245,906	142,545	232,485	256,646	268,002	1,145,584
Implant, Jadelle	0	0	29,483	58,272	62,394	150,149
IUCD, Copper-T	0	0	0	0	0	0
<b>Grand total</b>	<b>1,991,306<sup>a</sup></b>	<b>1,188,722</b>	<b>1,345,270</b>	<b>1,329,807</b>	<b>1,532,425</b>	<b>7,387,531</b>

<sup>a</sup>Of the total USD 1,991,306 required for procurement for the year 2014, commodities for a total value of USD 1,442,607 (about 72%) have already been ordered by MOH and UNFPA and will be delivered in the same year. Thus, less the already-ordered value, the additional requirement is for the year by value is USD 548,699.

### Consumption Method Results—Forecast

Based on the forecast assumptions above and using a simple Excel tool, the following quantities and costs of each of the forecasted commodities were calculated. The forecast requirements include the requirements for clients, wastages, and freight and logistics costs only; the calculations do not include stock on hand, stock on order, or other supply plan parameters. Tables 25 and 26 show the total forecast requirements by quantity and value, respectively, for the public sector only based on the consumption method of forecasting, and Tables 27 and 28 show the national forecast requirements for the public sector by quantity and value, respectively.

**Table 15. Total Forecast Requirements by Quantity for the Public Sector Only—Consumption Method**

Method	Unit	2014	2015	2016	2017	2018	Total
Injectable, 3-month (Depo-Provera)	Each	31,041	53,008	92,303	166,112	182,723	<b>525,187</b>
Injectable, 2-	Each	184,421	183,451	166,811	117,033	128,737	<b>780,453</b>

*Quantification of Family Planning Commodities for January 2014–December 2018*

<b>Method</b>	<b>Unit</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>Total</b>
month (Noristerat)							
Injectable, 1-month (Norigynon)	Each	14,288	16,266	18,882	22,652	24,917	<b>97,005</b>
Oral contraceptive, Lofemenal	Cycle	125,439	137,983	151,781	166,959	183,655	<b>765,817</b>
Oral contraceptive, Ovral	Cycle	80,021	88,024	96,826	106,509	117,159	<b>488,539</b>
Oral contraceptive, Microvral	Cycle	10,814	11,895	13,085	14,393	15,832	<b>66,019</b>
Emergency oral contraceptive, P ostinor-2	2 tabs	8,143	8,957	9,853	10,838	11,922	<b>49,713</b>
Male condom	Each	14,716,977	17,660,373	21,192,447	25,430,937	30,517,124	<b>109,517,858</b>
Female condom	Each	147,266	154,630	162,361	170,479	179,003	<b>813,739</b>
Implant, Jadelle	Each	3,747	4,122	4,534	4,988	5,487	<b>22,878</b>
IUCD, Copper-T	Each	1,488	1,636	1,800	1,980	2,178	<b>9,082</b>

**Table 16. Total Forecast Requirements Including Wastage and Freight and Logistics Costs by Value (in USD) for the Public Sector Only—Consumption Method**

<b>Method</b>	<b>Unit</b>	<b>Unit Price</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>Total</b>
Injectable, 3-month (Depo-Provera)	Each	1.00	31,041	53,008	92,303	166,112	182,723	525,187
Injectable, 2-month (Noristerat)	Each	1.30	239,747	238,486	216,854	152,143	167,358	1,014,588
Injectable, 1-month (Norigynon)	Each	0.85	12,144	13,826	16,050	19,254	21,179	82,453
Oral contraceptive, Lofemenal	Cycle	0.62	77,279	85,007	93,508	102,859	113,145	471,798
Oral contraceptive, Ovral	Cycle	0.54	42,869	47,156	51,871	57,058	62,764	261,718
Oral contraceptive, Microvral	Cycle	4.33	46,827	51,510	56,661	62,327	\$68,560	285,885
Emergency oral contraceptive, – Postinor-2	2 tabs	1.59	12,941	14,235	15,659	17,225	18,947	79,007
Male condom	Each	0.03	441,509	529,811	635,773	762,928	915,514	3,285,535
Female condom	Each	0.57	83,942	88,139	92,546	97,173	102,032	463,832
Implant, Jadelle	Each	8.50	31,853	35,038	38,542	42,396	46,636	194,465
IUCD, Copper-T	Each	0.37	550	605	666	733	806	3,360
<b>Total</b>			<b>1,020,702</b>	<b>1,156,821</b>	<b>1,310,433</b>	<b>1,480,208</b>	<b>1,699,664</b>	<b>6,667,828</b>

*Quantification Output*

Method	Unit	Unit Price	2014	2015	2016	2017	2018	Total
<b>Grand total including freight and logistics costs (12%)</b>			<b>1,143,186</b>	<b>1,295,640</b>	<b>1,467,685</b>	<b>1,657,833</b>	<b>1,903,624</b>	<b>7,467,967</b>

**Table 27. Total Forecast Requirements by Quantity for the Country—Consumption Method**

Method	Unit	2014	2015	2016	2017	2018	Total
Injectable, 3-month (Depo-Provera)	Each	31,674	54,090	94,187	169,502	186,452	535,905
Injectable, 2-month (Noristerat)	Each	188,185	187,195	170,215	119,422	131,364	796,380
Injectable, 1-month (Norigynon)	Each	14,579	16,598	19,268	23,114	25,425	98,984
Oral contraceptive, Lofemenal	Cycle	136,347	149,981	164,980	181,478	199,625	832,411
Oral contraceptive, Ovral	Cycle	86,980	95,678	105,246	115,770	127,347	531,021
Oral contraceptive, Microvral	Cycle	11,754	12,929	14,222	15,645	17,209	71,760
Emergency oral contraceptive,, Postinor 2	2 tabs	8,851	9,736	10,709	11,780	12,958	54,035
Male condom	Each	19,364,444	23,237,333	27,884,799	33,461,759	40,154,111	144,102,445
Female condom	Each	147,266	154,630	162,361	170,479	179,003	813,739
Implant, Jadelle	Each	3,747	4,122	4,534	4,988	5,487	22,878
IUCD, Copper-T	Each	1,488	1,636	1,800	1,980	2,178	9,082

**Table 17. Total Forecast Requirements Including Wastage and Freight and Logistics Costs by Value (in USD) for the Nation<sup>a</sup>—Consumption Method**

Method	Unit	Unit price	2014	2015	2016	2017	2018	Total
Injectable, 3-month (Depo-Provera)	Each	1.00	31,674	54,090	94,187	169,502	186,452	535,905
Injectable, 2-month (Noristerat)	Each	1.30	244,640	243,353	221,280	155,248	170,773	1,035,295
Injectable, 1-month (Norigynon)	Each	0.85	12,392	14,108	16,378	19,647	21,611	84,136
Oral contraceptive, Lofemenal	Cycle	0.62	83,999	92,399	101,639	111,803	122,983	512,825
Oral contraceptive, Ovral	Cycle	0.54	46,596	51,256	56,382	62,020	68,222	284,475

Method	Unit	Unit price	2014	2015	2016	2017	2018	Total
Oral contraceptive, Microvral	Cycle	4.33	50,899	55,989	61,588	67,747	74,521	310,745
Emergency oral contraceptive, Postinor-2	2 tabs	1.59	14,066	15,473	17,020	18,722	20,595	85,877
Male condom	Each	0.03	580,933	697,120	836,544	1,003,853	1,204,623	4,323,073
Female condom	Each	0.57	83,942	88,139	92,546	97,173	102,032	463,831
Implant, Jadelle	Each	8.50	31,853	35,038	38,542	42,396	46,636	194,465
IUCD, Copper-T	Each	0.37	550	605	666	733	806	3,360
<b>Total</b>			<b>1,181,547</b>	<b>1,347,571</b>	<b>1,536,772</b>	<b>1,748,844</b>	<b>2,019,255</b>	<b>7,833,988</b>
<b>Grand total including freight and logistics costs (12%)</b>			<b>1,323,332</b>	<b>1,509,279</b>	<b>1,721,184</b>	<b>1,958,705</b>	<b>2,261,565</b>	<b>8,774,066</b>

<sup>a</sup>Data used for this method were from the public sector only and the same assumptions of source mixes as in the demographic method of forecasting were applied to calculate the national requirements for all sectors.

### Consumption Method Results—Supply Plan

Tables 29 and 30 show the details of commodity procurement requirements by quantity and value, respectively, for each year and for the public sector only. In summary, the total FP procurement requirements for the public sector only, based on the consumption method, for the quantification period of January 2014–December 2018 was estimated to be **USD 8,404,233**. No procurement requirement is estimated for IUCDs in the forecast period, as there are already more than enough in stock.

**Table 29. Supply Plan/Procurement Requirements by Quantity and Year for the Public Sector Only—Consumption Method**

Product	Unit	2014	2015	2016	2017	2018	Total
Injectable, 3-month (Depo-Provera)	Each	37,550	65,816	131,353	205,574	190,576	630,869
Injectable, 2-month (Noristerat)	Each	289,000	133,497	145,134	96,773	134,278	798,682
Injectable, 1-month (Norigynon)	Each	0	18,713	21,164	25,056	26,020	90,953
Oral contraceptive, Lofemenal	Cycle	217,945	147,715	162,532	178,766	191,521	898,479
Oral contraceptive, Ovral	Cycle	99,652	94,248	103,658	114,043	122,206	533,807
Oral contraceptive, Microvral	Cycle	5,000	11,677	14,014	15,414	16,513	62,618
Emergency oral contraceptive, Postinor-2	2 tabs	14,670	8,730	10,542	11,605	12,409	57,956

*Quantification Output*

Male condom	Each	14,240,775	20,031,440	24,037,742	28,845,265	32,918,927	120,074,149
Female condom	Each	372,000	0	64,760	176,668	183,039	796,467
Implant, Jadelle	Each	0	0	0	5,255	5,749	11,004
IUCD, Copper-T	Each	0	0	0	0	0	0

**Table 18. Supply Plan/Procurement Requirements by Quantity and Value (in USD) for the Public Sector Only—Consumption Method**

Product	2014	2015	2016	2017	2018	Total
Injectable, 3-month (Depo-Provera)	42,056	73,714	147,115	230,243	213,445	706,573
Injectable, 2-month (Noristerat)	420,784	194,372	211,315	140,901	195,509	1,162,881
Injectable, 1-month (Norigynon)	0	17,815	20,148	23,853	24,771	86,587
Oral contraceptive, Lofemenal	330,877	102,573	112,862	124,135	132,992	803,440
Oral contraceptive, Ovral	60,270	57,001	62,692	68,973	73,910	322,846
Oral contraceptive, Microvral	245,000	56,629	67,962	74,752	80,081	524,424
Emergency oral contraceptive, Postinor-2	72,684	15,546	18,773	20,666	22,098	149,768
Male condom	478,490	673,056	807,668	969,201	1,106,076	4,034,491
Female condom	237,485	0	41,343	112,785	116,852	508,465
Implant, Jadelle	0	0	0	50,028	54,730	104,758
IUCD, Copper-T	0	0	0	0	0	0
<b>Grand total</b>	<b>1,887,645<sup>a</sup></b>	<b>1,190,706</b>	<b>1,489,880</b>	<b>1,815,537</b>	<b>2,020,465</b>	<b>8,404,233</b>

<sup>a</sup>Of the total USD 1,887,645 required for procurement for the year 2014, commodities for a total value of USD 1,442,607 (about 76%) have already been ordered by MOH and UNFPA and will be delivered in the same year. Thus, less the already-ordered value, the additional requirement for the year by value is USD 445,038.

## Quantification Analysis

### *Fertility Rate and Population:*

The total fertility rate (TFR) has decreased significantly and is consistently decreasing in Swaziland. It is estimated that it will decrease from 3.9 in 2007<sup>4</sup> to 3.3 in 2018 and 3.1 in 2022. This is in line with the decrease observed in previous years; the TFR was 6.4 in 1986 and 4.5 in 1997. The population of Swaziland is expected to grow slightly, from 1.02 million in 2007 to 1.21 million in 2018. Figures 3 and 4 provide details on the TFR and the population.

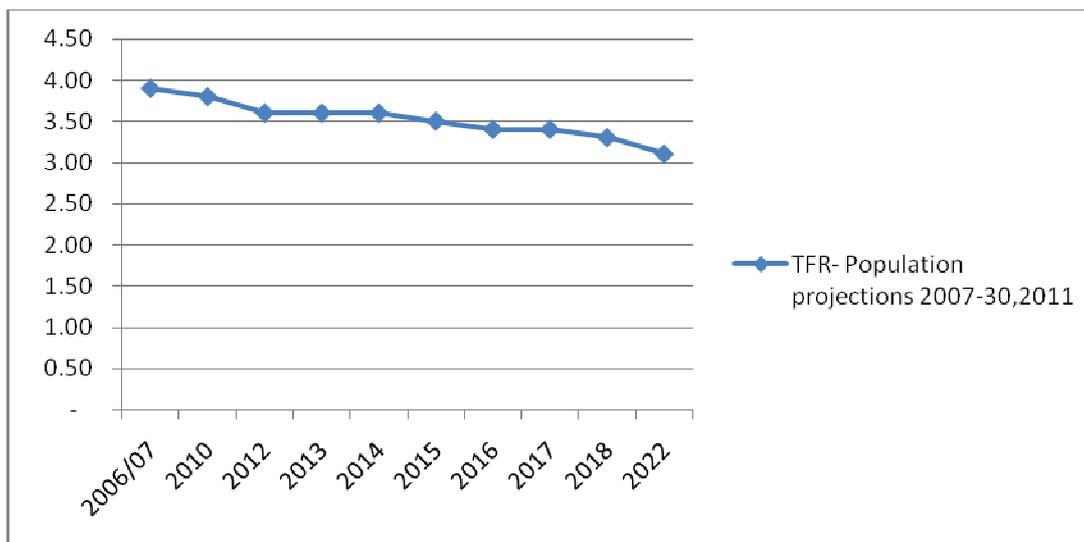


Figure 3. Total fertility rate trends in Swaziland

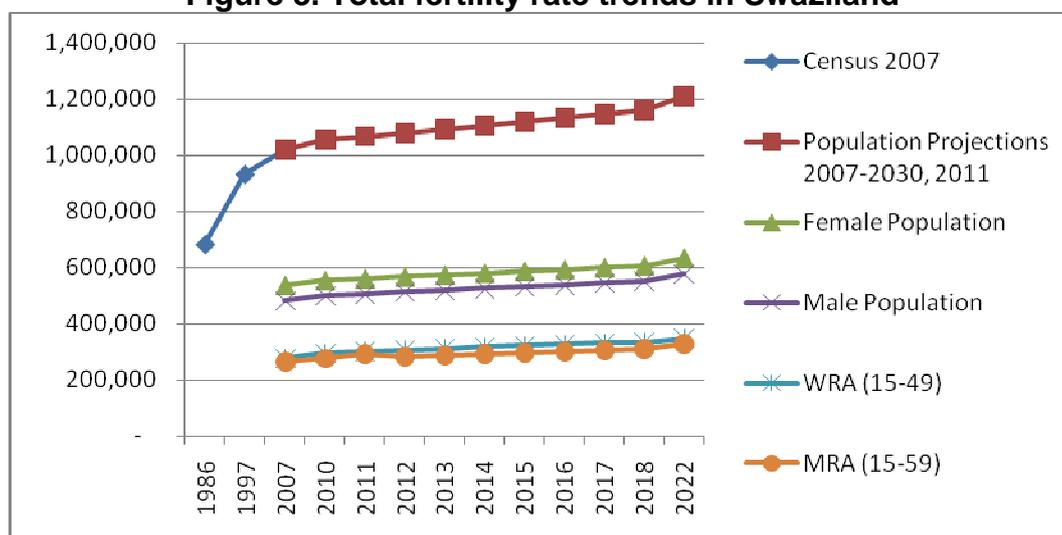


Figure 4. Population trends in Swaziland

### CPR Trends

In general, the total CPR has been increasing in Swaziland. The CPR for any method increased from 40.1 in 2002 to 49.3 in 2010. However, there was a dip in the total CPR for any method in 2007, to 38.0. Based on the data from *SCHS 2002*,<sup>21</sup> *SDHS 2006–07*,<sup>4</sup> and *MICS 2010*,<sup>5</sup> an average annual increase in CPR of 2.00 percentage points was considered reasonable over the forecast period. Thus, the total CPR for any method would increase to 65.3 by 2018.

CPR for modern FP methods is estimated to increase from 48.0 in 2010 to 64.41 in 2018—a total of 16.41 percentage points, averaging an increase of 2.05 points per year. Compared to historical achievements by other countries, the agreed-upon targets may be ambitious but it was hoped that the continuous and high rate of use of male condoms would drive the increase. Continuous monitoring and evaluation of data on CPR and use of the commodities with corresponding adjustment of the CPR targets was recommended.

The use of long-acting and permanent FP methods was estimated to decrease slightly every year based on the historical trend. However, adjustments were made to maintain a minimum of 0.1% CPR for IUCDs, and that resulted in a slight increase in the total CPR for these methods (figure 5). The use of traditional methods was estimated to decrease slightly, by a factor of 0.05 CPR per year, every year.

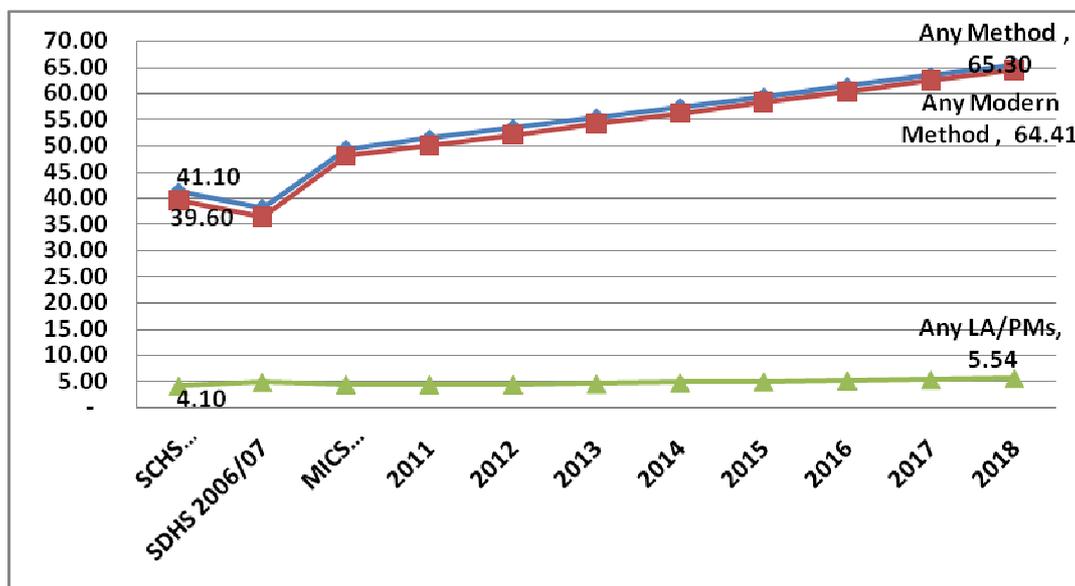


Figure 5. CPR trends in Swaziland, by group of methods

### Method Mix of the Modern FP Methods

Data from *SCHS 2002*,<sup>21</sup> *SDHS 2006–07*,<sup>4</sup> and *MICS 2010*<sup>5</sup> and the forecast based on the trend show that male condoms are the most-used FP method, followed by injectables and oral contraceptives. Male sterilization is the least used of all modern FP methods. The proportions of use of male condoms, female condoms, and implants are expected to increase during the quantification period, whereas those of injectables, oral contraceptives, IUCDs, female sterilization, and male sterilization are expected to decrease. Figures 6 and 7 show the details on the method mix trends for modern FP methods.

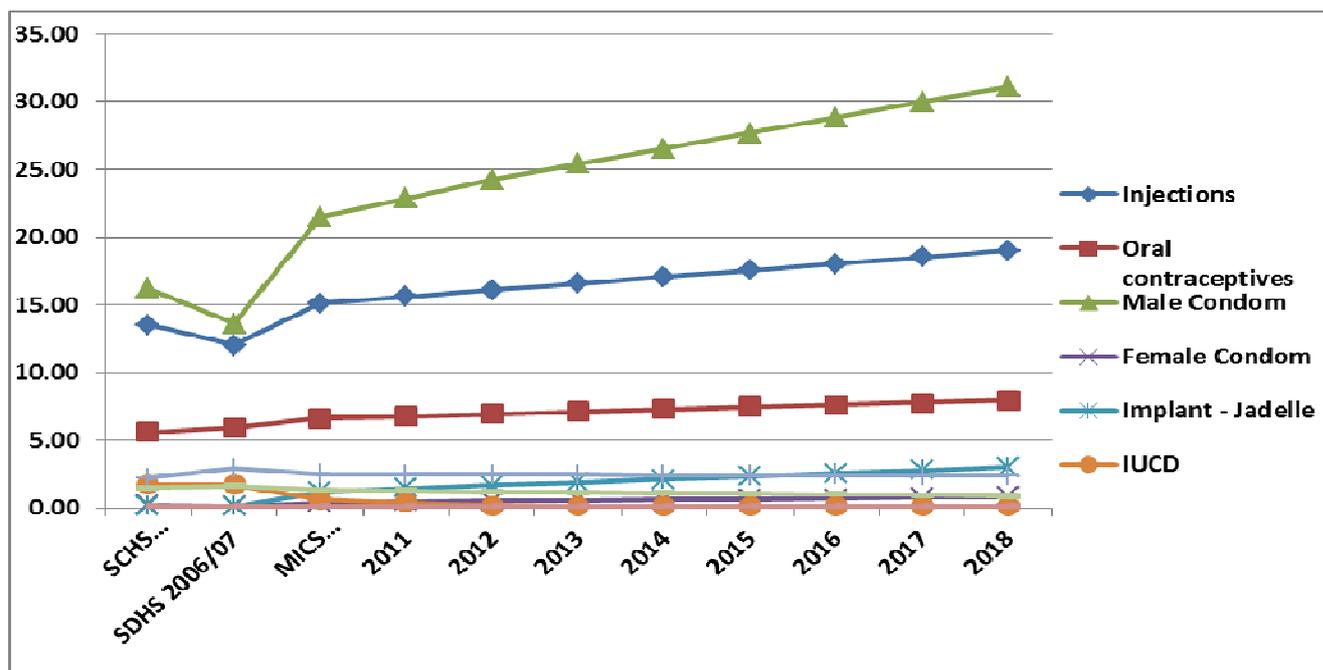


Figure 6. Contraceptive prevalence rate trends in Swaziland by FP method

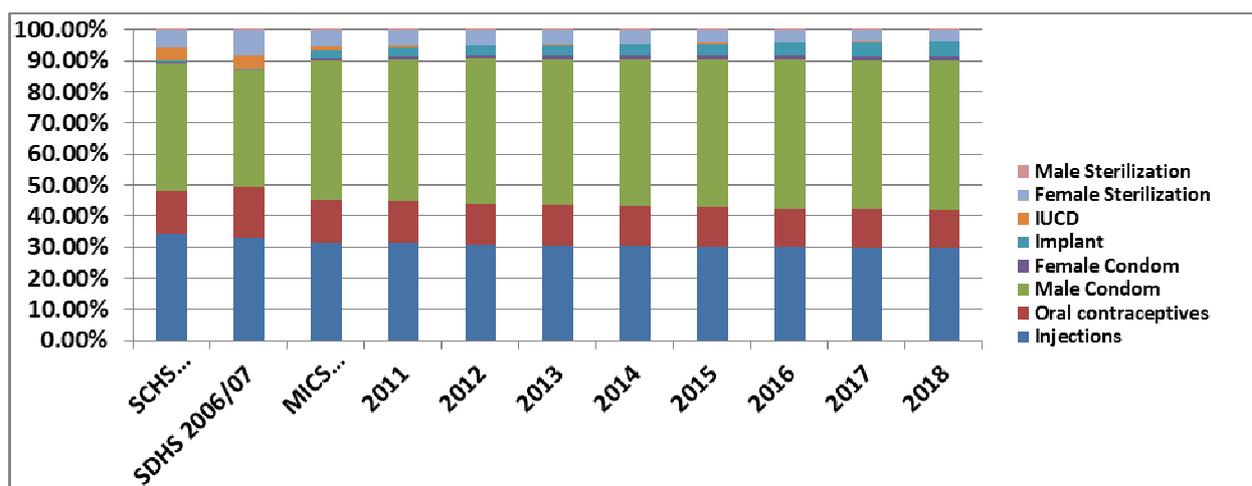


Figure 7. Change in FP method mix in Swaziland

### Comparison of Forecast and Procurement Costs

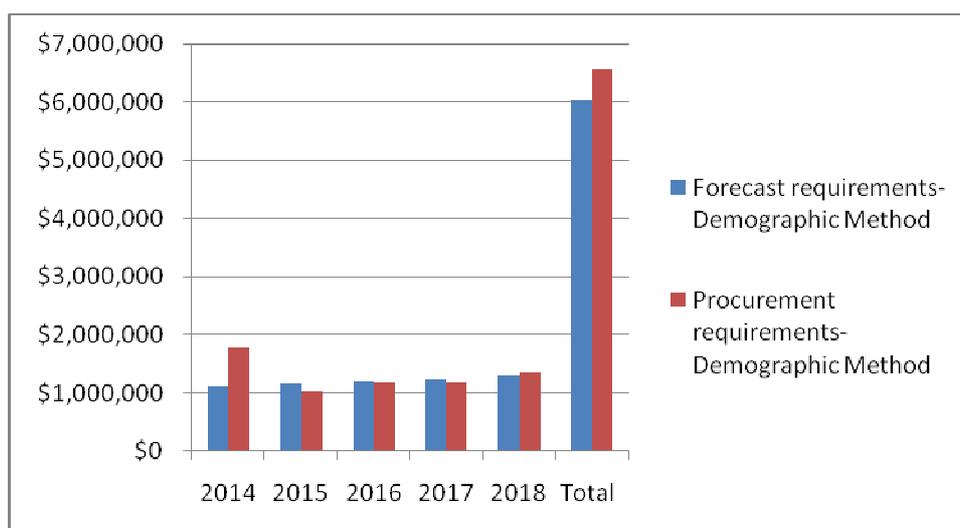
The demographic method shows that the total procurement requirement by value for the quantification period of 2014–2018 is greater than the forecast requirement by **USD 528,813** (table 31). For the first year of the quantification, 2014, the procurement requirement is significantly greater than the forecast requirement because some products—such as Noristerat, Norigynon, Depo-Provera, and female condoms—have already been ordered in large quantities for delivery in 2014 or were already received in 2013. However, for the year 2015 the procurement requirement is lower than the forecast requirement, for the same reasons.

Note that there is no need for procurement of IUCDs during the quantification period, for either the demographic-or consumption-based method, as the available quantity in stock is

more than enough for the period. Thus the contribution of IUCDs toward the procurement is zero.

**Table 19. Comparison of Forecast and Procurement Requirements by Value (in USD) for the Public Sector Only Using the Demographic Method**

	2014	2015	2016	2017	2018	Total
Forecast	1,126,734	1,173,164	1,208,948	1,227,020	1,292,760	<b>6,028,626</b>
Procurement	1,778,958	1,037,438	1,192,721	1,178,895	1,369,426	<b>6,557,439</b>

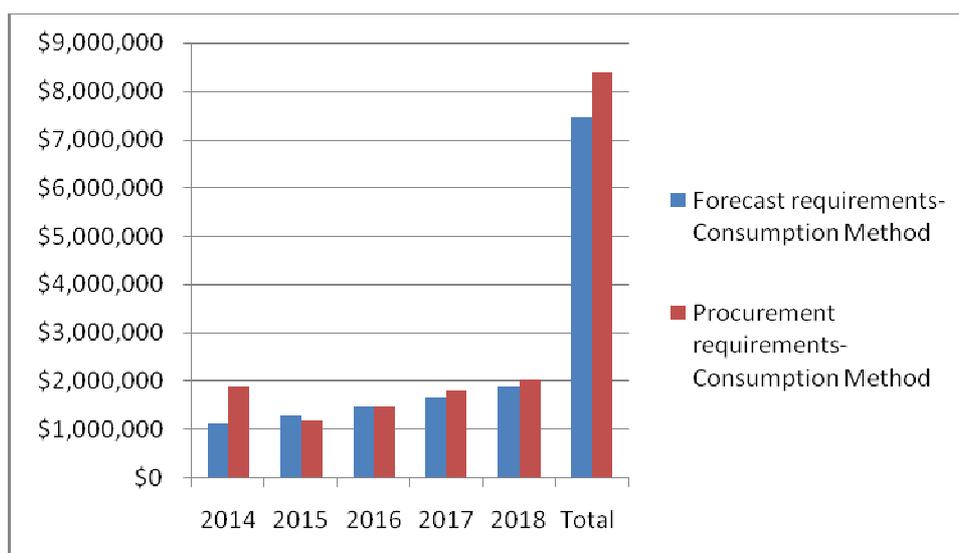


**Figure 8. Comparison of forecast and procurement requirements by value (in USD) for the public sector only using the demographic method**

Similar analysis of the forecast and procurement requirements based on the consumption method of forecasting shows that the total procurement requirement by value for the quantification period of 2014–2018 is greater than the forecast requirement by USD 936,264 (table 32). For the first year of the quantification, 2014, the procurement requirement is significantly greater than the forecast requirement because some products—such as Noristerat, Norigynon, Depo-Provera, and female condoms—have already been ordered in large quantities for delivery in 2014 or were already received in 2013. However, for the year 2015 the procurement requirement is lower than the forecast requirement, for the same reasons.

**Table 20. Comparison of Forecast and Procurement Requirements by Value (in USD) for the Public Sector Only Using the Consumption Method**

	2014	2015	2016	2017	2018	Total
Forecast	1,143,188	1,295,640	1,467,686	1,657,833	1,903,622	<b>7,467,969</b>
Procurement	1,887,645	1,190,706	1,489,880	1,815,537	2,020,465	<b>8,404,233</b>



**Figure 9. Comparison of forecast and procurement requirements by value (in USD) for the public sector only using the consumption method**

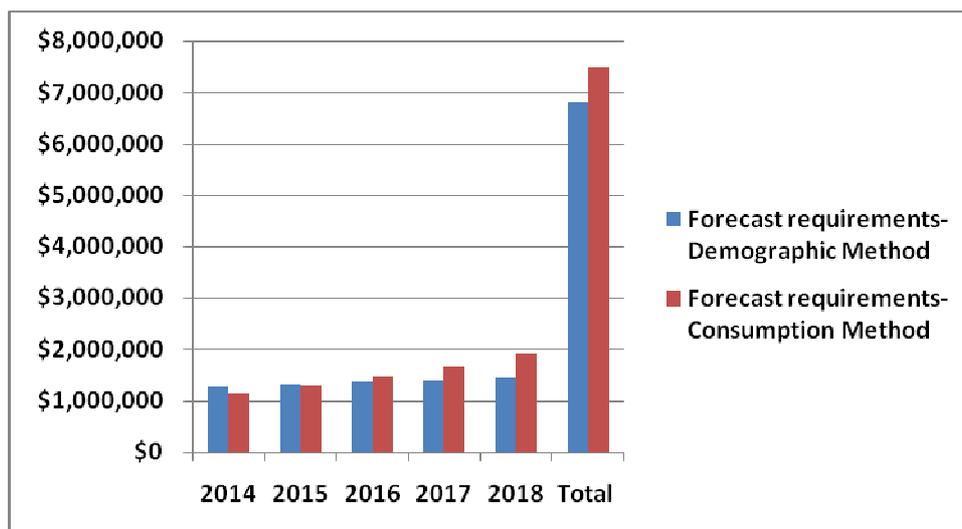
Comparison of the forecast requirements based on the demographic and consumption method of forecasting indicates that requirements for the demographic method are lower than those of the consumption method by **USD 672,074** (table 33). In general, the difference in the two forecasts by value grows more as the forecast period progresses. Factors that contribute to this difference include the following:

- The LMIS and HMIS data on consumption of the commodities were inherently of very low quality since the systems are not yet fully in place. Reporting rates are low, especially for the LMIS data, and adjustment was made for underreporting, assuming all facilities to be equal.
- The higher data—from either from LMIS or HMIS—were taken to calculate the requirements for the consumption method.
- For male and female condoms, the issue data from CMS were taken as a proxy for consumption.

The same factors contribute toward the difference in the procurement requirements by **USD 755,699** of the two methods (table 34).

**Table 21. Comparison of Forecast Requirements (in USD) Based on Demographic and Consumption Methods for the Public Sector Only**

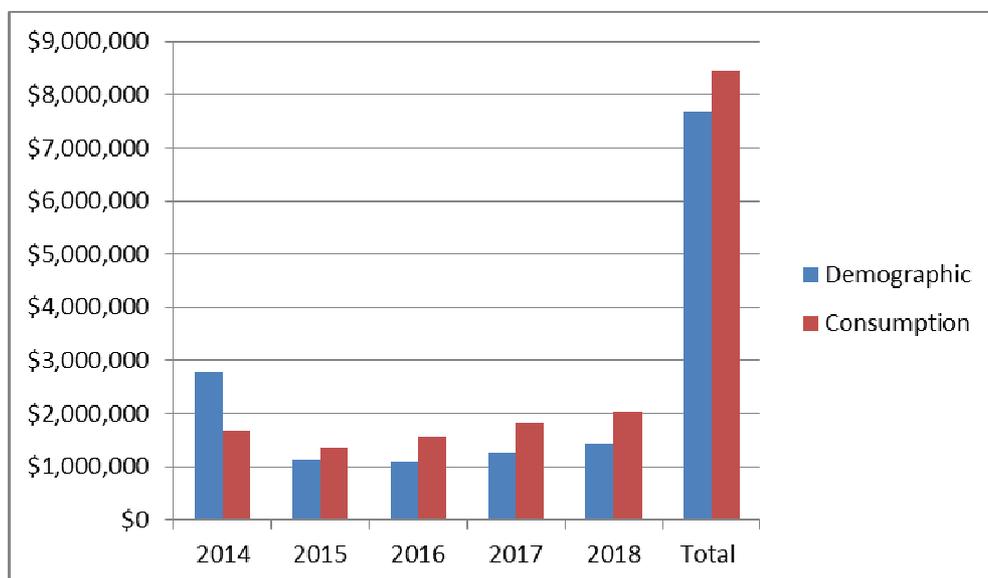
Method	2014	2015	2016	2017	2018	Total
Demographic	1,276,028	1,324,506	1,362,359	1,382,547	1,450,455	<b>6,795,895</b>
Consumption	1,143,188	1,295,640	1,467,686	1,657,833	1,903,622	<b>7,467,969</b>



**Figure 1. Comparison of forecast requirements (in USD) based on demographic and consumption methods for the public sector only**

**Table 22. Comparison of Procurement Requirements (in USD) Based on Demographic and Consumption Methods for the Public Sector Only**

Method	2014	2015	2016	2017	2018	Total
Demographic	2,770,716	1,125,934	1,093,148	1,272,540	1,428,341	<b>7,690,679</b>
Consumption	1,678,090	1,371,478	1,555,678	1,815,192	2,025,939	<b>8,446,378</b>



**Figure 2. Comparison of procurement requirements (in USD) based on demographic and consumption methods for the public sector only**

**Demographic Method**

- Male condom procurement requirements account for one-third of the total, followed by female condoms and Noristerat which account for 16% each.

- Analysis of procurement requirements by group of commodities shows that condoms account for the total of almost half of procurement requirements, with 49%, followed by oral contraceptives (including emergency oral contraceptives), which account for 25% of requirements, and injections, at about 24% (figure 12). The least requirement is taken by implants (2%), represented by Jadelle only.

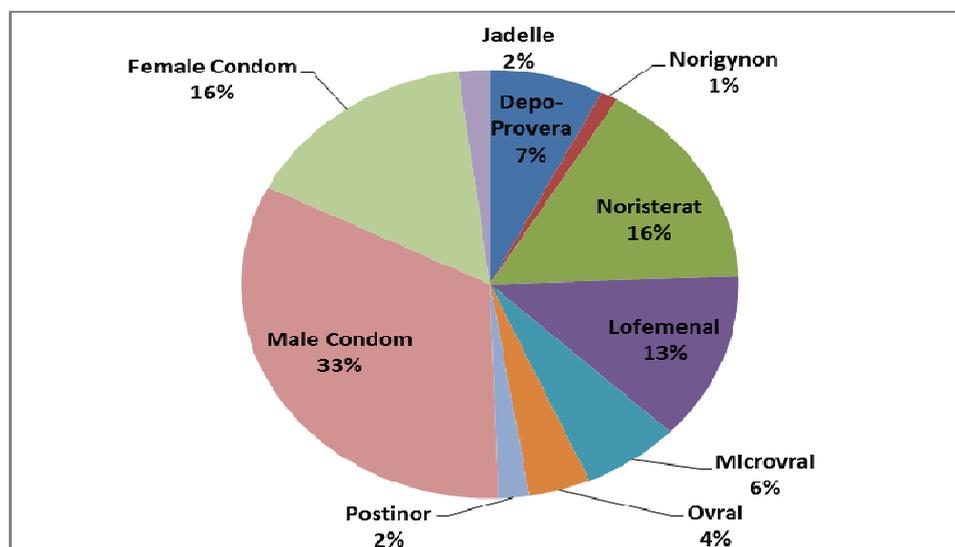


Figure 3. Comparison of procurement requirements by method and value based on demographic method for the public sector

### Consumption Method

- Male condom procurement requirements account for almost half (48%) of the total procurement requirements, followed by Noristerat (14%), and Lofemenal (10%). The requirement for male condoms with the consumption method is higher than with the demographic method, but the requirement for female condoms is lower.
- Analysis of the procurement requirements by group of commodities (figure 13) shows that condoms account for more than half of total procurement requirements (54%), followed by injectables (23%), and oral contraceptives, including emergency oral contraceptives (22%). The lowest requirement is for implants (1%), represented by Jadelle only. With the consumption method, condoms take up the largest share of the procurement requirements, followed by the injectables, but not the oral contraceptives as was the case with the demographic method.

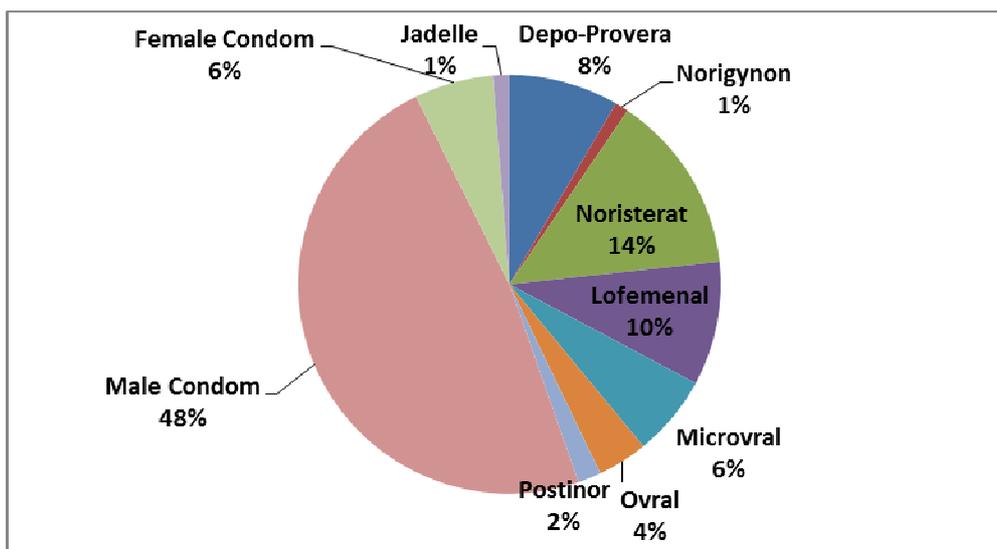


Figure 4. Comparison of procurement requirements by method and value, based on the consumption method, for the public sector

### Outcomes/Impacts Based on the Demographic Method

If procured, imported, and properly used by clients as planned in this exercise, the amount of commodities quantified and thus the cost incurred to acquire and distribute them to clients will result in various positive outcomes. The following outcomes were calculated for the quantification period:

- CYP:** CYP is estimated protection provided by FP services during a one-year period. It is calculated by multiplying the CYP factors by total number of users (for products used in multiple numbers per year) or by dividing the total number of users by CYP factors (for products/methods used for multiple years). In total, **853,788** couples are estimated to be protected from unwanted pregnancy during the five-year period. Only modern methods, including male and female sterilization, were considered in the calculation of CYP. Table 35 shows CYP factors by method and forecasted CYP from unwanted pregnancies.

Table 23. Couple-Years Protection—Modern Methods

Method	CYP	2014	2015	2016	2017	2018	Total
Injectable, 3-month (Depo-Provera)	4	8,993	14,087	22,050	34,488	35,863	115,481
Injectable, 2-month (Noristerat)	6	35,619	32,502	26,566	16,199	16,845	127,730
Injectable, 1-month (Norigynon)	12	1,380	1,441	1,504	1,568	1,630	7,522
Oral contraceptive, Lofemenal	13	10,502	10,909	11,325	11,751	12,163	56,650
Oral contraceptive, Ovral	13	6,699	6,959	7,225	7,496	7,759	36,139
Oral contraceptive, Microvral	13	905	940	976	1,013	1,049	4,884
Male condom	156	71,574	75,774	80,081	84,494	88,849	400,772

Method	CYP	2014	2015	2016	2017	2018	Total
Female condom	156	1,634	1,799	1,970	2,145	2,320	9,868
Implant, Jadelle	2	8,358	9,229	10,120	11,039	11,958	50,704
IUCD, Copper-T	4.6	1,263	540	361	367	370	2,900
Female sterilization	11	7,857	7,800	7,857	7,910	7,824	39,248
Male sterilization	12	372	373	378	384	383	1,890
<b>Grand total</b>		<b>155,157</b>	<b>162,353</b>	<b>170,412</b>	<b>178,854</b>	<b>187,012</b>	<b>853,788</b>

**Number of unwanted pregnancies averted:** Calculated based on an annual pregnancy rate (APR) of 850<sup>22</sup> and the method-specific annual failure rate<sup>23</sup> of each method according to the following equation. Table 36 shows the details per year and by type of method/product.

$$\text{No. of unwanted pregnancies averted} = (\text{no. of users} \times \text{APR}) - (\text{no. of users} \times \text{failure rate})$$

**Table 24. Number of Unwanted Pregnancies Averted**

Method	Failure rate w/ normal use	2014	2015	2016	2017	2018	Total
Injectable, 3-month (Depo-Provera)		7,374	11,552	18,081	28,280	29,408	94,694
Injectable, 2-month (Noristerat)	3.0%	29,207	26,652	21,784	13,283	13,813	104,739
Injectable, 1-month (Norigynon)		1,131	1,182	1,233	1,285	1,337	6,168
Oral contraceptive, Lofemenal		8,760	9,100	9,447	9,802	10,146	47,256
Oral contraceptive, Ovral	8.0%	5,588	5,805	6,027	6,253	6,473	30,146
Oral contraceptive, Microvral		755	784	814	845	875	4,074
Male condom	15.0%	50,102	53,041	56,057	59,146	62,194	280,540
Female condom	21.0%	1,046	1,152	1,261	1,373	1,485	6,315
Implant, Jadelle	0.1%	4,784	5,374	5,980	6,603	7,229	29,970
IUCD, Copper-T	0.8%	227	230	234	237	241	1,170
Female sterilization	0.5%	5,541	5,586	5,631	5,676	5,709	28,144
Male sterilization	0.2%	229	232	236	239	242	1,179
Any traditional method	50.0%	1,032	999	964	928	888	4,811
<b>Grand total</b>		<b>115,778</b>	<b>121,689</b>	<b>127,748</b>	<b>133,951</b>	<b>140,039</b>	<b>639,205</b>

**Number of abortions averted:** Calculated by multiplying the number of unwanted pregnancies averted by the abortion ratio according to the following equation. The abortion ratio was assumed to be 17 per 100 pregnancies in the southern part of Africa.<sup>24</sup> A total of

**108,665** abortions can be averted during the quantification period. Table 37 shows the details per year and by type of method/product.

$$\text{No. of abortions averted} = \text{no. of unwanted pregnancies averted} \times \text{abortion ratio}/100$$

**Table 25. Number of Abortions Averted in the Procurement Period, by Method**

<b>Method</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>Total</b>
Injectable, 3-month (Depo-Provera)	1,254	1,964	3,074	4,808	4,999	<b>16,098</b>
Injectable, 2-month (Noristerat)	4,965	4,531	3,703	2,258	2,348	<b>17,806</b>
Injectable, 1-month (Norigynon)	192	201	210	219	227	<b>1,049</b>
Oral contraceptive, Lofemenal	1,489	1,547	1,606	1,666	1,725	<b>8,033</b>
Oral contraceptive, Ovral	950	987	1,025	1,063	1,100	<b>5,125</b>
Oral contraceptive, Microvral	128	133	138	144	149	<b>693</b>
Male condom	8,517	9,017	9,530	10,055	10,573	<b>47,692</b>
Female condom	178	196	214	233	252	<b>1,074</b>
Implant, Jadelle	813	914	1,017	1,122	1,229	<b>5,095</b>
IUCD, Copper-T	39	39	40	40	41	<b>199</b>
Female sterilization	942	950	957	965	971	<b>4,784</b>
Male sterilization	39	39	40	41	41	<b>200</b>
Any traditional method	176	170	164	158	151	<b>107,847</b>
<b>Grand total</b>	<b>19,682</b>	<b>20,687</b>	<b>21,717</b>	<b>22,772</b>	<b>23,807</b>	<b>108,665</b>

**Number of unwanted births averted:** Calculated based on an assumed spontaneous abortion rate/still birth of 12.5 per 100<sup>25</sup> pregnancies according to the following equation. A total of **450,639** unwanted births can be averted during the quantification period. Table 38 shows the details per year and by type of method/product.

*No. of unwanted births*

$$= \text{no. of unwanted pregnancies} - \text{no. of abortions averted} \\ - (\text{no. of unwanted pregnancies} \times \text{spontaneous abortion rate}/100)$$

**Table 26. Number of Unwanted Births Averted**

<b>Method</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>Total</b>
Injectable, 3-month (Depo-Provera)	5,199	8,144	12,747	19,938	20,732	<b>66,760</b>
Injectable, 2-month (Noristerat)	20,591	18,789	15,358	9,365	9,738	<b>73,841</b>
Injectable, 1-month (Norigynon)	798	833	869	906	942	<b>4,348</b>
Oral contraceptive, Lofemenal	6,176	6,415	6,660	6,911	7,153	<b>33,315</b>
Oral contraceptive, Ovral	3,940	4,093	4,249	4,408	4,563	<b>21,253</b>
Oral contraceptive, Microvral	532	553	574	596	617	<b>2,872</b>
Male condom	35,322	37,394	39,520	41,698	43,847	<b>197,781</b>
Female condom	737	812	889	968	1,047	<b>4,452</b>
Implant, Jadelle	3,373	3,789	4,216	4,655	5,096	<b>21,129</b>
IUCD, Copper-T	160	162	165	167	170	<b>825</b>
Female sterilization	3,907	3,938	3,970	4,001	4,025	<b>19,841</b>

Method	2014	2015	2016	2017	2018	Total
Male sterilization	161	164	166	169	171	831
Any traditional method	728	704	680	654	626	3,392
<b>Grand total</b>	<b>81,624</b>	<b>85,791</b>	<b>90,062</b>	<b>94,435</b>	<b>98,727</b>	<b>450,639</b>

**Number of maternal deaths averted:** Calculated based on a maternal mortality ratio of 589 per 100,000 births<sup>4</sup> according to the following equation. A total of **2,654** maternal deaths can be averted during the quantification period. Table 39 shows the details per year and by type of method/product.

*No. of maternal deaths averted*

$$= \text{no. of unwanted births averted} \times \text{maternal mortality ratio}/100,000$$

**Table 39. Number of Maternal Deaths Averted**

Method	2014	2015	2016	2017	2018	Total
Injectable, 3-month (Depo-Provera)	31	48	75	117	122	393
Injectable, 2-month (Noristerat)	121	111	90	55	57	435
Injectable, 1-month (Norigynon)	5	5	5	5	6	26
Oral contraceptive, Lofemenal	36	38	39	41	42	196
Oral contraceptive, Ovral	23	24	25	26	27	125
Oral contraceptive, Microvral	3	3	3	4	4	17
Male condom	208	220	233	246	258	1,165
Female condom	4	5	5	6	6	26
Implant, Jadelle	20	22	25	27	30	124
IUCD, Copper-T	1	1	1	1	1	5
Female sterilization	23	23	23	24	24	117
Male sterilization	1	1	1	1	1	5
Any traditional method	4	4	4	4	4	20
<b>Grand total</b>	<b>481</b>	<b>505</b>	<b>530</b>	<b>556</b>	<b>582</b>	<b>2,654</b>

**Number of infant deaths averted:** Calculated based on an infant mortality rate of 79 per 1,000 births<sup>5</sup> according to the following equation. A total of **35,601** infant deaths can be averted during the quantification period. Table 40 shows the details per year and by type of method/product.

$$\text{No. of infant deaths averted} = \text{no. of unwanted births averted} \times \text{infant mortality rate}/1,000$$

**Table 27. Number of Infant Deaths Averted**

Method	2014	2015	2016	2017	2018	Total
Injectable, 3-month (Depo-Provera)	411	643	1,007	1,575	1,638	5,274
Injectable, 2-month (Noristerat)	1,627	1,484	1,213	740	769	5,833
Injectable, 1-month (Norigynon)	63	66	69	72	74	344
Oral contraceptive, Lofemenal	488	507	526	546	565	2,632
Oral contraceptive, Ovral	311	323	336	348	360	1,679
Oral contraceptive, Microvral	42	44	45	47	49	227

Male condom	2,790	2,954	3,122	3,294	3,464	<b>15,625</b>
Female condom	58	64	70	76	83	<b>352</b>
Implant, Jadelle	266	299	333	368	403	<b>1,669</b>
IUCD, Copper-T	13	13	13	13	13	<b>65</b>
Female sterilization	309	311	314	316	318	<b>1,567</b>
Male sterilization	13	13	13	13	14	<b>66</b>
Any traditional method	58	56	54	52	49	<b>268</b>
<b>Grand total</b>	<b>6,448</b>	<b>6,777</b>	<b>7,115</b>	<b>7,460</b>	<b>7,799</b>	<b>35,601</b>

**Number of child deaths averted:** Calculated based on a child mortality rate of 104 per 1,000 births<sup>5</sup> according to the following equation. A total of **46,866** child deaths can be averted during the quantification period. Table 41 shows the details per year and by type of method/product.

$$\text{No. of child deaths averted} = \text{no. of unwanted births averted} \times \text{child mortality rate}/1,000$$

**Table 28. Number of Child Deaths Averted**

Method	2014	2015	2016	2017	2018	Total
Injectable, 3-month (Depo-Provera)	541	847	1,326	2,074	2,156	<b>6,943</b>
Injectable, 2-month (Noristerat)	2,141	1,954	1,597	974	1,013	<b>7,679</b>
Injectable, 1-month (Norigynon)	83	87	90	94	98	<b>452</b>
Oral contraceptive, Lofemenal	642	667	693	719	744	<b>3,465</b>
Oral contraceptive, Ovral	410	426	442	458	475	<b>2,210</b>
Oral contraceptive, Microvral	55	58	60	62	64	<b>299</b>
Male condom	3,673	3,889	4,110	4,337	4,560	<b>20,569</b>
Female condom	77	84	92	101	109	<b>463</b>
Implant, Jadelle	351	394	438	484	530	<b>2,197</b>
IUCD, Copper-T	17	17	17	17	18	<b>86</b>
Female sterilization	406	410	413	416	419	<b>2,064</b>
Male sterilization	17	17	17	18	18	<b>86</b>
Any traditional method	76	73	71	68	65	<b>353</b>
<b>Grand total</b>	<b>8,489</b>	<b>8,922</b>	<b>9,366</b>	<b>9,821</b>	<b>10,268</b>	<b>46,866</b>

## Emergency Orders

Because the procurement lead time from planning to receiving goods in-country is at least five months (five months for CMS and six months for UNFPA), it is important that planned commodity shipments be procured and delivered in-country by May 30, 2014, be ordered as urgently as possible. The total value of commodity shipments that need to be delivered before the end of May 2014 according to the demographic method is USD 246,599 (male condoms, Ovral oral contraceptives, and Lofemenal oral contraceptives); according to the consumption method, it is USD 137,629 (male condoms and Lofemenal oral contraceptives).



## CHALLENGES

Although the supply chain of FP commodities has much improved, challenges remain related to various aspects of supply chain functions. The following are some of the major challenges:

1. Remaining gaps in LMIS reporting rate from facilities, with a reporting rate only up to only 70% at the end of 2013—which may affect the commodity supply chain. The problem is caused especially by the lack of full information on the number and names of all facilities in the country providing FP services.
2. Late submission of reports and orders by health facilities and CSOs. This negatively affects the ability to deliver FP commodities with other essential health products, resulting in wasted resources, as a delivery vehicle must travel to the same facility twice.
3. Inconsistent and incomplete reporting by some health facilities and CSOs.
4. Lack of a mechanism for informing CMS that a particular site has been approved as a service delivery point for FP service. This gap results in some service delivery points falling in and out of the system.
5. Lack of a system for proper supportive supervision, mentorship, and follow-up at the facility level caused by a lack of capacity/knowledge of supply chain issues at the regional health administration level and insufficient human resources at the central level.
6. Lack of an established information system at the central level for collecting, aggregating, and analyzing LMIS data coming from facilities and CSOs.
7. Long procurement lead time, starting from allocations of funds, approval, and awarding of tenders from the government.
8. Poor inventory management practices at the facility level.
9. Overstock of some FP commodities at the facility level, and a low consumption rate, causing huge discrepancies between actual consumption and issue data.
10. Previous forecasts were done based on consumption based on data from both HMIS and LMIS as well as issue data at CMS, which couldn't clearly estimate future demand.
11. Lack of a robust system for tracking commodities across all in-country supply chain systems and analyzing supply chain data
12. Inability of the FP program to provide clear targets and plans so as to assist with quantification.
13. Limited partner participation in joint planning and implementation for FP, including condoms.
14. Lack of proper monitoring and evaluation of interventions to inform future plans and new strategies.
15. High discontinuation rate of Jadelle (60% per year) because of adverse effects.



## RECOMMENDATIONS

1. Strengthen the continuous supportive supervision, mentorship, and follow-up system at the facility level so that accurate and complete reports and orders will be submitted in a timely manner to CMS.
2. Establish an accreditation and communication system between SRHU, facilities, and partners regarding FP service delivery points.
3. Establish mapping of all service delivery points currently providing FP services; this will enable CMS to know which and how many service delivery point reports and orders should be expected, in order to facilitate distribution of FP commodities.
4. Perform continuous, shared updates on the newly developed FP action plan among stakeholders.
5. Establish innovative new ways of involving partners on reproductive health.
6. Capture the data points not available from DHS now in the future (e.g., discontinuation rate of different contraceptive methods).
7. Establish a tracking system for FP commodities that can track commodity data from the facilities to the central level and is capable of aggregating and analyzing data and producing reports for decision making.
8. Establish clear targets and strategies to meet FP targets in the country.
9. Design and implement a performance monitoring system to monitor and evaluate implementation of FP initiatives, including the supply chain.
10. Strengthen the inventory management and stock reporting system at the facility level through supportive supervision and mentorship.
11. Conduct advocacy work to shorten procurement lead time through communication with Ministry of Finance and senior MOH officials, and use the forecasting and supply planning results as a mechanism for advocacy.
12. Place emergency orders after updating the supply plan with the latest available information.
13. Look for an alternative implant with fewer adverse effects than Jadelle to reduce the high discontinuation rate associated with this method.



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**ANNEX 1. PARTICIPANTS OF THE CONSULTATIVE QUANTIFICATION  
WORKSHOP ON NOVEMBER 21, 2013**

Family Planning Quantification Training and Consultative Workshop, Sibane Hotel,  
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