Access to Contraceptive Implant Removals in Ghana

DATA DOCUMENTATION

1. INTRODUCTION

Contraceptive implants are increasingly becoming an integral part of the contraceptive method mix worldwide and many countries in sub-Saharan Africa, in particular, are rapidly scaling-up implant provision. While millions of implants are being inserted, often by newly trained providers, whether and to what extent these providers and institutions are prepared to handle the inevitable increase in demand for implant removal services is less clear. Ensuring access to quality implant removal services at term or at any other time of a woman's choosing is key for the long-term success of contraceptive implant programs and, even more importantly, compliance with informed choice in contraceptive adoption and use. Gains in modern contraceptive prevalence coupled with increased accessibility and popularity of implants make ensuring access to implant removal services a highly salient need in Ghana.

Description of Client Record Systems Study Sample is Drawn From

To capture dynamics surrounding access to implant removal services in different service delivery contexts while also ensuring some geographic and socio-cultural diversity, this study will be conducted in two regions with public sector service delivery through GHS facilities and two regions with MSIG mobile outreach services. Specific regions were selected due to the presence of strong partner support, leading to improved client record systems and making this study possible. They include:

- Eastern and Ashanti regions for public sector delivery through GHS (referred to as GHS regions); and
- Central and Western regions for mobile outreach services provided by MSIG in partnership with GHS facilities (referred to as MSIG regions).

The Population Council worked with GHS to develop the Reproductive Services Log (rsLog), a mobile and web-based system that electronically captures family planning and reproductive health data from clinic registers. The rsLog has been in use since January of 2015 and is currently operational in 95 GHS facilities in Ashanti and Eastern representing about 30% of the public sector facilities in the two regions. As of December 2016, just under 25,000 insertions were documented in the rsLog for these clinics.

MSIG has been providing implant insertions and removals at GHS facilities as part of their outreach program in the Central and Western regions since 2011, with one mobile team operating in each region. Since that time, approximately 25,000 clients in the Central region and 25,000 clients in the Western region have received implants from MSIG outreach services in Central and Western regions, respectively. In June 2014, MSIG implemented CLIC (Client Information Center), an electronic routine client-based information system. MSIG has also established a call center, which offers services such as information and counselling and follow up care.

2. STUDY OBJECTIVES

The goal of this research was to generate evidence on the state of access to removal services for women receiving implants through the public sector and through mobile outreach services in Ghana. Specific objectives were:

1. To measure knowledge of the possibility of early removal and of where removal services (early or at term) could be obtained among implant acceptors in the public sector and through mobile outreach;

2. To estimate the proportion of women ever wanting an early removal who were able to get their implant removed at first attempt among implant acceptors in the public sector and through mobile outreach;
3. To describe reasons for seeking early removals; and
4. To document barriers to removals, with focus on information provision, service quality, geographic and economic access, and other psychosocial factors.

For the purposes of this study, obtaining a removal at first attempt means that the implant was successfully removed the first time the woman traveled to the first service delivery point from which she attempted to obtain removal services.

3. STUDY DESIGN

The study was conducted in two regions (Ashanti and Eastern) with public-sector delivery through Ghana Health Services (GHS) facilities and two regions (Central and Western) with mobile outreach services by Marie Stopes International Ghana (MSIG). It used a mixed-methods design including:

- A cross-sectional phone survey with implant acceptors in GHS and MSIG regions [The primary outcome for the study is the proportion of women ever wanting an early removal who were able to get their implant removed at first attempt. It is based on the subset of surveyed women who have ever wanted an early removal];
- An in-person exit survey with women getting implant removal services from mobile teams in MSIG regions;
- In-depth interviews (IDIs) with a subset of implant acceptors in GHS and MSIG regions; and
- IDIs with family planning providers in GHS and MSIG regions.

This document includes only information related to the quantitative data.

Study Populations

Implant acceptor population (cross-sectional phone survey):

The primary study population consists of implant acceptors who can be reached by phone. Eligible women for the phone survey are women who: 1) had an implant inserted between 1 January 2015 and 31 December 2016 at a GHS facility using the rsLog (electronic record system) in GHS regions or through MSIG mobile outreach teams in MSIG regions, 2) were between 18 and 49 years of age at the time of insertion; and 3) have phone information available in their clinic records.

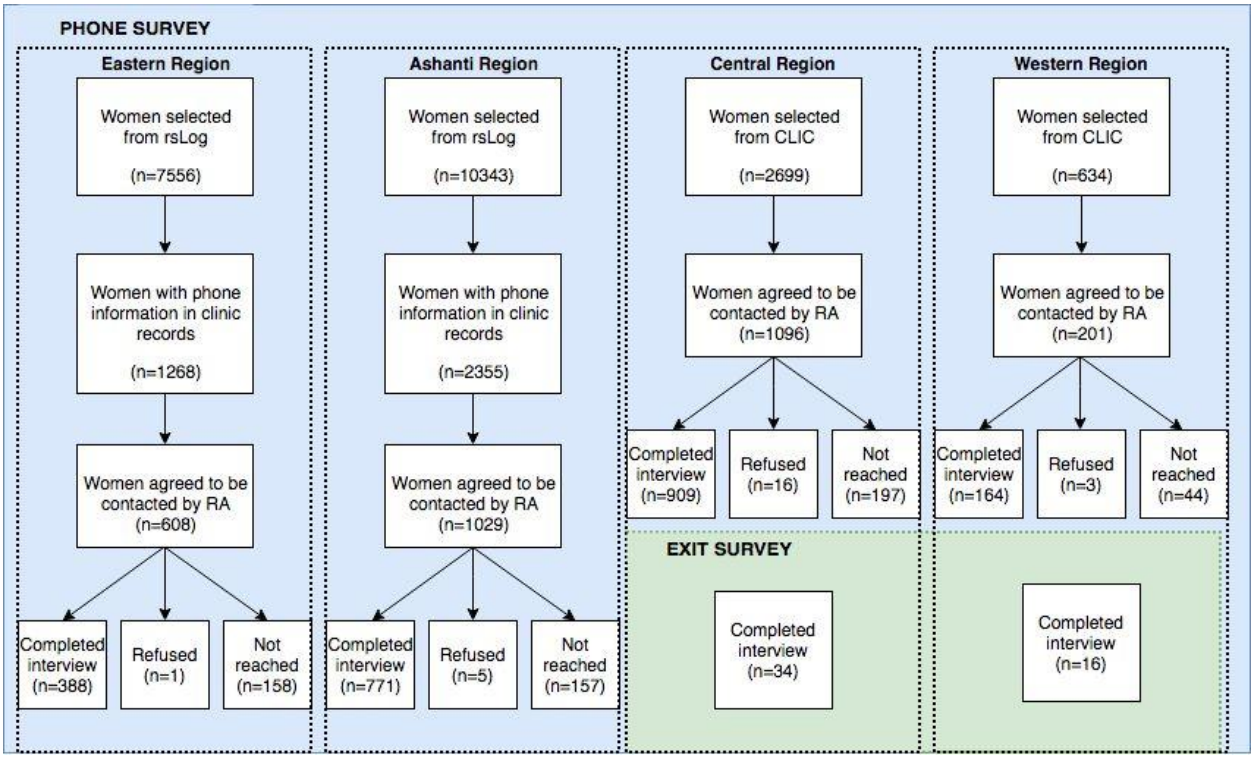
Implant removal population (exit survey):

This component is descriptive only. Eligible women are women who are aged 18-49 and obtain an implant removal through MSIG mobile outreach teams during selected outings in MSIG regions.

Sampling & Recruitment

In GHS regions, a stratified random sample of women was recruited from the rsLog for the phone survey, with the strata being health facilities. In MSIG regions, all eligible women were recruited from CLIC for the phone survey and when exiting the facility after receiving an implant removal for the exit interview.

Sample Size



4. DATA COLLECTION

Data were collected from October 12, 2017-Jan 12, 2018. Data were collected by trained research assistants during telephone interviews. Data were entered at the time of the interview onto tablets in Open Data Kit (ODK).

5. DATA MANAGEMENT

Research assistants collected and entered data in the field using tablets to both make the phone calls and enter the data. Research assistants that conducted the exit interviews did so in-person and entered the data into tablets. Data were transferred to a secure server called Ona when a wireless connection was available.

Data were cleaned in Stata version 13. The study data was separated into three datasets for analysis:

- Phone survey, GHS regions
- Phone survey, MSIG regions
- Exit interview

Variable Naming Conventions

Variables had consistent names across the three datasets. Variables were named for the question number (ex. Question 101 is variable q101). Created variables were named the same in all three datasets.

6. DEFINITION OF VARIABLES

UNIQUE IDENTIFIERS

uid (continuous) uid is the participant identification number.

SAMPLING WEIGHTS

weight (continuous) The weights pertain to the sample of eligible women for the phone survey in GHS regions only. Sampling weights were calculated as the inverse of the probability of selection at the facility level. The sampling target document includes the number of insertions (I) among women of eligible age during the study eligibility period at each facility as per the rsLog. Women who received an insertion and have valid phone information are eligible for interview. The master log documents the number of completed surveys (S) per facility and the number of women with valid phone information among the women called. Under these assumptions, the probability of selection is S/I, and the sampling weight is I/S.

WEALTH INDEX

wealth (ordinal) The survey includes a subset of variables from the USAID Poverty Assessment Tool (PAT) for Ghana: household size (q501), number of rooms in household (q502), disposal of refuse (q503), toilet type (q504), floor material (q505), and ownership of items (q506). Because all variables from the PAT were not included in the survey, it is not possible to use this information to categorize respondents as either below or above the poverty line in Ghana, as is the intent of the PAT. Rather, we used Principal Components Analysis (PCA) to create score (1-5) representing a relative measure of wealth within the sample where 1 is the poorest and 5 is the wealthiest.

OUTCOMES

This section explains how we created the main outcome variable for this study. The datasets available on Dataverse and the Development Data Library includes this variable.

outcome (nominal) This is a categorical variable with 6 levels, each representing a different outcome of attempt/or non-attempt of implant removal. This variable applies to the phone survey only. The variable was created as follows:

CODE	DEFINITION	HOW CREATED
1	successful removal on first attempt	q227=0 & q307=1 & q308=0
2	successful removal on second or subsequent attempt	q227=0 & q307>1 OR q227=0 & q307=1 & q308=1
3	attempted removal, did not obtain removal	q227=1 & q313=1
4	wanted removal, did not attempt removal	q227=1 & q313=0 OR q227=1 & q313=99
5	successful removal, unsure when	q221=0 & q402=0
6	did not want removal, still have implant	q221=0 & q402=1

NON-OUTCOME VARIABLES OF INTEREST

This section explains how we created other variables used in our analysis. The datasets available on Dataverse and the Development Data Library do not include these variables, unless specifically noted.

context (nominal)	Context is categorical variable with two levels, created by grouping participants into GHS Regions (Eastern and Ashanti) and MSI Regions (Western and Central) - 1=GHS; 2=MSI. This variable does not pertain to the exit interview dataset as all interviews were conducted in MSI Regions. This variable is included in the datasets on Dataverse and the Development Data Library.

num_attempt_remove_tot (continuous)	This continuous variable is the number of times a survey participant attempted to get their implant removed, of women who tried removal.
	
	For the <u>phone survey</u>, the variable is created by the following:
	• *outcome*=1, one attempt total
	• If *outcome*=2 (successful removal on second or subsequent attempt), number attempts calculated as follows:
	  o Removed at same place inserted, only attempted removal at this place=q307 if the respondent only tried at this place (q308=0)
	  o Removed at either same place or different place, respondent attempted removal at more than one place.

	▪ Number of attempts=q307 if q305=1 (implant removed at same place) & q317=1 (first place tried was same place) ▪ Number of attempts=q307+q321+total attempts in q324 if q305=1 & q317=2 (first place tried was different place) ▪ Number of attempts=q307+q321+total attempts in q324 if q305=2 (implant removed at different place) • If *outcome*=3 (attempted removal, did not obtain removal), number of attempts calculated as follows: o Attempted removal only at same place (q317=1) or only at different place (q317=2) or don't know (q317=99), number of attempts=q321 o Attempted removal at multiple places (q323=1), number of attempts=total attempts in q324 For the <u>exit survey</u>, the variable is created by the following: • If the participant had not tried a previous removal attempt (q226=0), then number of attempts=1 • If the participant had tried a previous removal attempt (q226=1), then the number of attempts=1+the number of attempts reported in q313b.
num_places_remove (continuous)	This variable describes the total number of distinct places a women tried to remove their implant for women who had their implant removed either on the first or on a subsequent attempt. This variable is created by adding the number of places mentioned in q305, q308, q323, and q324. This variable applies to the <u>phone survey only</u>.
rodname (nominal)	This variable is created to categorize the type of implant a woman had based on the agreement between how they reported the number of rods (phone: q205; exit: q204) and the name of the implant (phone: q206; exit: q205). 1= Implanon, 1 rod 2= Jadelle, 2 rods 3= Sino Implant, 2 rods 0= not properly matched
roddur (nominal)	This variable is created to categorize the type of implant a woman had based on the agreement between how they reported the number of rods (phone: q205; exit: q204) and the duration of protection (phone: q209; exit: q403) 1= Implanon, 3 years 2= Jadelle, 5 years 3= Sino Implant, 4 years 0= not properly matched

place (nominal)	This variable indicates the place that a woman was told that their implant can be removed. It is created from q213 and q214 for the phone survey and q407 and q408 for the exit interview. 1= same place as insertion only 2= different place than insertion only 3= both same place as insertion and a different place 4= not told a place or don't know
succ_1wk (nominal)	This variable shows the distribution of removal outcomes of women who attempted a removal 1= success within 1 week of first attempt (including on first try) 2= success at >1 week from first attempt 3= attempted removal but not yet achieved
outcome_attempt (nominal)	This variable shows the distribution of outcomes of women who reported wanting a removal 1= removal at first attempt 2= removal at second attempt 3= removal at 3rd or subsequent attempt 4= attempted removal at least once, still have implant, intend to remove early 5= attempted removal at least once, still have implant, intend to keep for duration 6= never attempted removal, want removal
counsel_bleed (binary)	This variable shows whether a woman was counseled on bleeding side effects. If a woman reported being counseled on side effects (phone: q207; exit: q401) and replied yes to being counseled on at least one bleeding side effect (phone: q208a-q208d, q208q; exit: q402a-q402d, q402q), then they are coded as 1 "counseled". All others who reported being counselled on side effects, but not on any bleeding side effects are coded as 0 "not counseled".
counsel_oth (binary)	This variable shows whether a woman was counseled on side effects other than bleeding. If a woman reported being counseled on side effects (phone: q207; exit: q401) and replied yes to being counseled on at least one other side effect (phone: q208e-q208p; exit: q402e-q402p), then they are coded as 1 "counseled". All others who reported being counselled on side effects, but not on any other side effects are coded as 0 "not counseled".
q343tot (continuous) / q220tot (continuous)	This variable shows the cost reported for removal services not related to travel. The total cost reported is the sum of the three components of cost (phone: q343a-q343c; exit: q220a-q220c). If the respondent did not know the cost of the components, but knew the total cost paid, then the research assistant was instructed to record the total in q343d (exit:

	q220d). In cases where the cost is listed both in q343a-q343c (exit: q220a-q220c) and q343d (exit: q220d), the total cost is calculated as such (phone: q343; exit: q220): • if the sum of q343a-q343c = q343d, then assume total is q343d • if the sum of q343a-q343c < q343d, then assume total is q343d • if the sum of q343a-q343c > q343d, then assume total is sum of q343a-q343c
cost_tot (continuous)	This variable shows the total cost reported for removal services including the transportation costs. It is created by adding the transport cost (phone: q341; exit: q222) to q343tot/q220tot.

7. LIMITATIONS

First, while the fact that participants in the implant acceptor survey will have had their implant inserted within three years of the survey allows a reasonable likelihood of making contact, it is possible that some women cannot be located and/or some addresses or phone numbers are no longer valid. The phone survey brings particular challenges that may affect non-response rates, such as phones being turned off, running out of battery, poor reception, numbers changing frequently, or people not answering calls if they do not recognize the number. Initial calls by providers or MSIG call center operators and repeated attempts to reach women at varying days/times are intended to mitigate these challenges.

Second, the eligibility criterion that women have phone information available in their record carries some risk of selection bias and may, in particular, exclude poorest women. As a result, the experiences of some women who may be likely to experience particular challenges accessing removal services may be missed or under-represented. Additionally, the sampling weight applied to the GHS regions under represents the facilities with a higher proportion of women with phones and over represents the facilities with a lower proportion of women with phones.

Third, the study is not designed to support comparisons between GHS and MSIG regions due to differences in selection and recruitment procedures and because of possible underlying differences between regions.

Fourth, most of the women interviewed in the exit survey are likely to be women returning at the end of the labeled duration of their implant. Moreover, MSIG outreach services are not available all the time, and women may only return to an MSIG mobile outreach session when there are no other available facilities for them to use or they are not willing to use them. While data obtained from this sample will therefore not necessarily be representative of implant users generally, it will provide some insights into removal access for longer durations of use.

Finally, as regards both the implant acceptor and exit surveys, there is a possibility of recall bias whereby women may report inaccurately based on their memory of past events.