Lessons from the field

The potential of patient-held records in evaluating family planning provision

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Abstract

Problem

Cross-sectional estimates suggest there has been a marked increase in contraceptive use over the last twenty years in Malawi, but decreases in overall fertility have been minimal. Other than retrospectively reported contraceptive calendars, conventional assessments of contraceptive use are not designed to assess contraceptive switching or discontinuation, which may be important determinants of fertility.

Approach

An innovative tool was devised for collecting family planning (FP) data using patient-held records (an “FP card”) to build a one-year prospective longitudinal dataset, allowing exploration of continuity of use and method-switching. When issuing contraception, health providers recorded data on the recipient’s FP card.

Local setting

The data were linked to a demographic surveillance site (DSS) in northern rural Malawi. Contraceptive services in this area are provided at government clinics, private facilities, and on outreach through a network of community-based distributors.

Relevant changes

Prospective longitudinal data were collected for 4,678 (63.3%) women, and 87.3% of provider-client contacts were captured on a paper record, by the health care provider. Lower cadres of health care providers were more diligent at recording data on the FP cards than higher cadres.

Lessons learnt

Alternative methods of collecting contraceptive data such as this one can enable a better understanding of how women “shop around” for contraception services, and whether they maintain continuity of use. Involving district health office staff and health care providers was key to the success of this method to collect contraceptive data. Techniques such as refresher trainings and reminder SMS messages improve data completeness.

Keywords: Malawi, contraception, family planning, contraceptive switching & discontinuation, patient-held records, demographic methods, research methods.

Background

Access to voluntary contraceptive services is important, not only because of the direct impact on reproductive health outcomes, but also because contraceptive use may lead to indirect improvements in health and socio-economic outcomes [1-3]. Contraceptive use is one of the key proximate determinants of reduced fertility[4], which in turn is associated with economic development indicators. Despite a remarkable increase in contraceptive use in Malawi over the past two decades from 7% in 1992, to 42% of married women reporting in cross-sectional surveys in 2010 that they are currently using a modern method, paradoxically, fertility remains high. Women in Malawi bear on average 5.7 children, and many pregnancies are unintended or occur sooner than desired[5]. A reason for the paradox could be over-reporting in cross-sectional surveys: a woman might report herself to be a contraception user, even if in reality she has missed or delayed appointments and has essentially discontinued a short-term method. Contraceptive switching and discontinuation are key, because as desired family size declines and contraceptive use increases, effectiveness and duration of use become increasingly significant determinants of total fertility, unintended pregnancies and induced abortions[6].

Contraception data come from a variety of sources, including routine health facility data, cross-sectional surveys, or retrospective surveys. The Demographic and Health Survey (DHS) has developed a contraceptive calendar, which captures self-reported contraceptive status (and method), pregnancies, births, breastfeeding and terminations for every calendar month for the five years prior to interview. With the exception of the retrospective calendar, conventional assessments of contraception are not in a position to capture switching or discontinuation.

Evaluations of the calendar method suggest it is fairly robust and reliable[6]. It has been shown that the calendar method can reduce heaping of reports on integer years (which would result in a longer duration of use in the aggregate), compared to standard questionnaires [7, 8]. Calendar data do not suffer from problems of loss to follow-up, although there is selection bias as only women surviving to interview can report, and there are likely to be recall issues. A study from Bangladesh found poor consistency between reports from a baseline interview compared to reports in a follow-up survey where women were asked to retrospectively report on their contraceptive use for the same month as the baseline survey[9], especially for women with complex reproductive histories. This calls for an exploration of prospective methods for collecting data, which may more reliably capture contraceptive switching and discontinuation.

Context

In Malawi, there are a range of contraception methods provided through different mechanisms (public, private, clinic, outreach) and service providers (Clinical Officers, Nurses, Medical Assistants, Health Surveillance Assistants (HSA), and volunteer Community Based Distribution Agents (CBDA)). Women are expected to carry a "health passport" (patient held medical record) with them when they utilise health care services. Some health passports – but not all – contain a dedicated family planning (FP) page where the health care provider can record details of contraceptive services provided.

The Karonga Prevention Study (KPS) operates a demographic surveillance site (DSS) in northern rural Malawi, with 35,730 individuals under observation at the end of 2011[10]. The organization of contraceptive services in the study area is managed by the District Family Planning Coordinator (author R. N.) of the District Health Office. The Karonga DSS is an ideal setting for a problem-solving approach to collecting contraception data, because of a) the close links the project has with the health facilities and providers of contraception, and the opportunity to collaborate with the district FP team, and b) the ability to link new contraception data to the DSS database.

Patient-held records have a potentially important role for monitoring continuity of use of health services [11, 12]. In this paper, we present our practical experiences of utilising an innovative method to capture provider data on patient-held records, and the processes undertaken to achieve the dataset. We evaluate the potential of patient-held records for collecting contraception data.

Approach

The project was run jointly by KPS and the District Health Office, represented by the District Family Planning Coordinator (author – R.N.). There are 278 Key Informants (KIs) who live in clusters throughout the DSS and have been trained to notify KPS of vital events and migrations[13]. There are 132 health care providers working in the area (Clinical officers, Nurses, Medical Assistants, HSAs and volunteer CBDAs). All consenting women aged 15-49 living in the Karonga DSS were offered a family planning card ("FP card") by KIs. When a woman accessed a FP service, the health provider recorded on her FP card the date, method received (or advice given), provider-type, and where the service was delivered. After one year, the FP cards were collected by KPS. Ethical approval was granted by: London School of Hygiene and Tropical Medicine, and the College of Medicine Malawi Research and Ethics Committees. A detailed description of the processes is presented in Box 1.

Box 1: Processes to collect contraception data

1. Community sensitization to address potential misconceptions among local community
    - Approval sought from: Traditional Authority, Village Headmen, Area Development Committee, to foster support from community leaders
    - 16 community sensitization activities combined local dance/song troupes (to attract audiences) and KPS staff, to explain project aims and methods, and answer questions
2. KPS train KIs to issue family planning cards, January-April 2012
    - 30 training sessions
    - KIs use listings of (approximately 25-40) women of reproductive age living in each cluster
    - KIs visit each woman, explain project, and attach FP card (with ID information) to health passport
    - KIs return updated list to KPS in second meeting, roughly 10 days after initial training
    - There was a range in skills, education and age of KIs. For KIs that struggled, KPS assisted with the task or matched him/her to another KI who demonstrated competency, so they could work together.
    - KIs paid
3. Health care providers record data
    - All health care providers trained in six sessions by district FP coordinator and KPS staff, to record information on FP cards whenever they provide contraception
    - District FP coordinator designated the task as part of their record-keeping duties
    - Three refresher trainings
    - Five motivational text-messages sent
    - Mobile phone air-time provided
    - Interim review at six months concluded field-work was progressing successfully
4. KPS staff collect FP cards at pre-arranged gathering places, February-May 2013
    - Migration information from DSS database used to locate women who had moved
    - KPS staff complete any missing contraception episodes on the FP card by a) checking woman's health passport to see if additional FP events were recorded here and b) asking the woman to report on FP encounters over previous year.
    - Identify women who already had a tubal ligation/implant/IUD prior to receiving FP card, as a reason for submitting a blank card
    - Women provide informed written consent for analysis of data. Consent not taken at start of study as KIs cannot administer informed consent procedure.
    - Women paid for time to attend meeting.
    - A smaller number of FP cards were collected after data-collection had officially finished, as part of an opportunistic "mop-up" operation.

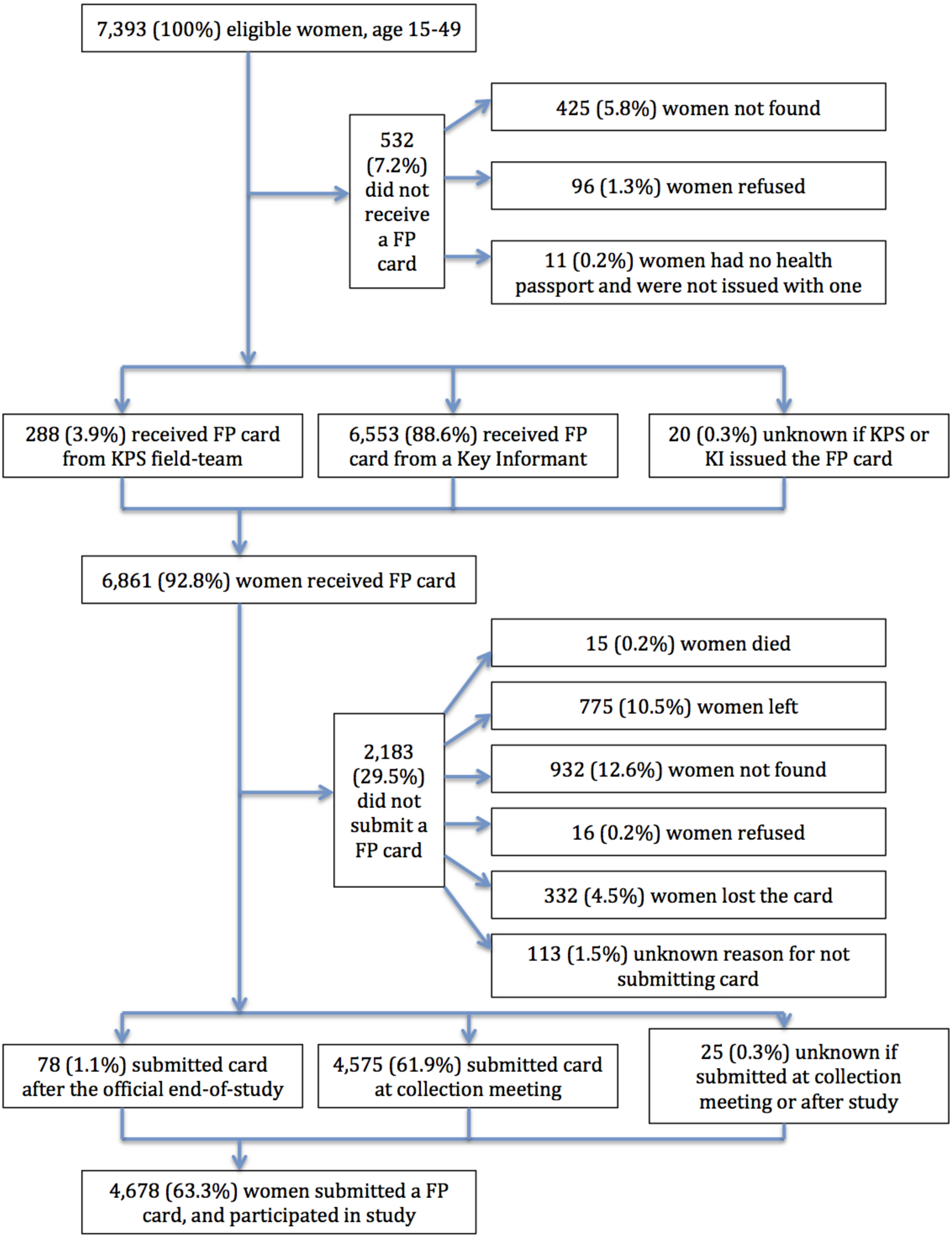
Results

Details of recruitment are presented in figure 1. Of 7,393 eligible women aged 15-49, 6,861 (92.8%) were issued with a FP card. Cards were predominantly issued by Key Informants (88.6%). The main reason for not issuing a card was the woman could not be found (5.8%), and actual refusals were low (1.3%). By the end of observation time, 2,183 (29.5%) FP cards were not collected. Inability to find the woman, or she had left during the study period were the most common reasons at 12.6% and 10.5% respectively. The majority of women submitted their card at the pre-arranged collection meetings (61.9%), but a handful of women were able to submit their cards to KPS staff at a later date. Overall, FP cards were collected from 4,678 women, meaning 63.3% of all eligible women participated in the study.

Study participants (those who submitted a FP card) and non-study participants were compared, to see if there was bias in recruitment. Study participants were more likely to be slightly older, currently married, want no more children, already have 5 or more children, and have achieved lower levels of education.

In order to evaluate the study approach, the source of data for each provider-woman contact (for tubal ligations, implants, IUD, injectables and oral contraceptive pills (OCPs)) was examined. The vast majority of data come from information recorded by the health care provider either on the FP card (78.3%) or the health passport (9.0%) (table 1). Nevertheless, 12.7% of provider-client contacts were not recorded on any paper health record but were reported retrospectively by the woman in the supplemental verbal interview. HSAs and CBDAs were most diligent at recording information on the cards (80.2% and 81.0% respectively), with clinical officers least likely to record on either the FP card (58.3%) or health passport (9.0%), a phenomenon observed elsewhere as well[14, 15].

Figure 1: Details of recruitment to the study: women eligible & participating



As further evidence of consistency between data sources, it was found that 100% of women who had reported in previous KPS cross-sectional surveys that they had undergone a tubal ligation, were correctly identified as such using the new data collection method.

Table 1: Provider-client contacts, by source of data and type of health care provider, for tubal ligation, implant, IUD, injectables, and OCPs

Provider cadre	Family Planning Card (%)	Health Passport (%)	Verbally reported (%)	Total (%)
Clinical Officer	91 (58.3)	14 (9.0)	51 (32.7)	156 (100)
Medical Assistant	31 (72.0)	7 (16.3)	5 (11.6)	43 (100)
Nurse	386 (75.0)	78 (15.1)	51 (9.9)	515 (100)
Health Surveillance Assistant (HSA)	1,653 (80.2)	177 (8.6)	230 (11.2)	2,060 (100)
Community based distribution agent (CBDA)	277 (81.0)	5 (1.5)	60 (17.5)	342 (100)
Youth CBDA	6 (100)	0 (0)	0 (0)	6 (100)
Total	**2,444 (78.3)**	**281 (9.0)**	**397 (12.7)**	**3,122 (100)**

Discussion

Contraception data typically do not track women over time, or link services received from different facilities or providers. There are currently no published reports of systems for linking data on contraception across facilities using reliable ID numbers, for women living in Karonga or other DSS areas. The method described here is a new approach to collecting quantitative contraception data, using patient-held records. Our experiences may be useful for others wishing to conduct similar prospective research, particularly in the context of an existing DSS which can provide rich and reliable data on the personal and family characteristics of potential FP users. Findings from this study method – particularly on how women "shop around" for services, whether they maintain continuity of use, and a more accurate estimate of contraceptive use – will be presented in research articles in the future.

This study method facilitated relatively quick and economical collection of prospective contraceptive data from a very large number of women, which will allow us to address key questions that cannot be answered using conventional methods. However, there was unavoidable attrition during the year resulting in some selection bias, which has implications for the way the contraception data can be interpreted.

Most of the data (87%) were collected in a prospective format, using the health care provider written reports, even though they are busy and not research trained. Gaps in data were filled in using the retrospective reported method (from the woman), achieving a more complete and accurate dataset than is possible using conventional methods. The fact that some data were not recorded at the time of service on any paper record has general implications for the credibility of routine health data and presents an additional challenge for health care providers to provide a consistent service. It potentially rules out using existing patient held records alone as a source of data on contraceptive continuation, in the absence of systems to strengthen routine data collection.

Box 2: Summary of main lessons learnt

1. Patient-held records are a feasible way to collect contraception data, and provide a quick, low-cost & more informative alternative to conventional data-collection methods in low-income countries where electronic records are not widely used.
2. The close working relationship between the KPS and the district health office facilitated a good rapport between the research study team at KPS and the health providers who were responsible for the data collection. Involving health care professionals at the very start of the project, and facilitating dialogue between the health care providers and research staff was crucial in building respect and maintaining engagement.
3. Quality issues around data completeness could be partially overcome by techniques such as refresher trainings and reminder SMS text-messages, which served to motivate and engage the health care providers.

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