

International Seminar on Incidence and Safety of Abortion: New Evidence and Improvements in Measurement

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Organizing Committee: IUSSP Scientific Panel on Abortion Research

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Seminar Report

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Documenting abortion incidence and safety are essential for a broad array of reasons: From a demographic perspective, abortion is a key component of fertility control that is inextricably tied to unintended pregnancy; from the perspective of gender imbalance, abortion may influence sex ratios if sex-selective abortion is commonly practiced; from a service-provision perspective, abortion is an indicator of unmet need for contraception and for improved contraceptive services; and from the rights perspective, governments need to ensure access to safe, legal services at a minimum within countries' laws and guidelines.

The goal of the seminar was to advance research on the estimation of abortion incidence and morbidity. On the topic of abortion incidence, researchers are currently developing and testing new methods; in addition, work is ongoing to adapt existing methods and assess their performance; comparison across methodologies is also part of the on-going work. In the area of abortion morbidity, work is also in process to understand how women access and use misoprostol clandestinely, the impact of widespread use of medication abortion on severity of complications, development of new frameworks for measuring morbidity and exploration of additional sources of data to understand abortion-related morbidity. The seminar offered a forum for researchers to learn about others' work, to raise questions and in so doing to advance innovation in methodologies for research on abortion incidence and morbidity.

Participants of the seminar had different backgrounds, they included demographers, sociologists, anthropologists, clinicians and public health researchers. Papers covered a range of countries from different world regions: Latin America, Asia, Sub-Saharan Africa, North America and Europe. Participants included researchers from Finland, India, Italy, Kenya, Mexico, Nigeria, Peru, Switzerland, USA and UK.

Eleven of the 15 papers focused on measurement of abortion incidence.

These papers presented included explanations of new methodological approaches, presentation of results from testing these models, discussions of how well they are working in particular country contexts and comparisons of different methodologies for measuring incidence.

A paper by Sedgh et al. discussed three approaches for estimating abortion incidence in clandestine settings: the List Experiment, the Confidante Approach, and a modification of the Abortion Incidence Complications Method (AICM). The methods are being tested in three countries, Ghana, Ethiopia and Uganda. A contribution of this paper is the discussion of the assumptions, strengths and weaknesses of each approach, and the proposition of strategies to assess the validity of the findings in the absence of a gold standard.

A paper by Sully and Giorgio discussed the Network Scale-Up Method (NSUM) and presented preliminary results of abortion incidence using this method. This is considered to be the first application of the NSUM for the measuring abortion incidence and is a promising new indirect method that can be used in population-based surveys of women of reproductive age to estimate the incidence of abortion in restrictive settings. The NSUM estimates the proportion of the respondent's social networks that are members of a hidden population, such as women who have had abortions. Preliminary estimates of abortion incidence were presented for Ethiopia and Uganda, and authors compare their findings with estimates of abortion incidence from the confidante and AICM methodologies for the two countries.

The **third paper (Bell et al.)**, estimated the rate of abortion incidence in Nigeria, Rajasthan, India, and Cote d'Ivoire, using a modified version of an existing social network methodology. In this study, respondents report on their two closest confidantes' experience with pregnancy removal and period regulation in a population-based survey. Findings suggest that the confidante approach, paired with asking about both pregnancy removal and period regulation, may present an opportunity to address some abortion related data deficiencies in low- and middle-income countries.

The **fourth paper (Moseson et al.)** tested the List Experiment method with the goal of reducing underreporting of abortion, and presented results from Malawi and Senegal. The list experiment is a method designed to increase the reporting of sensitive or stigmatized behaviors but has been applied to the measurement of abortion only a handful of times.

The **fifth paper (Gerdtts et al.)** assessed the use of Respondent Driven Sampling (RDS) to measure the incidence and prevalence of informal sector abortion in Soweto, South Africa. Respondent Driven Sampling (RDS) is a sampling methodology that has been successfully used to estimate the prevalence of sensitive and illegal behaviours among hidden populations. This paper explores the feasibility of applying this methodology to estimate the incidence and lifetime prevalence of informal sector abortion. Authors presented finding for Soweto South Africa.

The **sixth paper** also uses a modified version of the RDS methodology to study abortion safety in restrictive contexts (**Rossier et al.**). Although the analysis is still in progress, preliminary findings are encouraging. One assumption of the RDS is that there is a direct social connection between people sharing a stigmatized practice: because this may not necessarily be the case, this modified version of the RDS approach used referrals across a number of different types of networks to develop a sample of abortion seekers.

A group of four papers assessed reporting of abortion experience in large scale surveys, in both developed and developing countries, and examined a range of methodological issues that arise from this type of data source. With regard abortion in developed countries where abortion is legal, the topic remains a highly sensitive, stigmatized and thus difficult-to measure behavior with significant underreporting that compromises the study of abortion and fertility in these countries. **Two papers** focus on this issue. One paper (**Kost et al.**) uses three large-scale surveys conducted in the United States— National Survey of Family Growth, National Longitudinal Survey of Youth 1997 and National Longitudinal Study of Adolescent to Adult Health—and examined the level of differences in abortion underreporting across these surveys. The paper also adjusted estimates by age and period using Monte Carlo simulations. Another paper (**Rachel Scott et al.**) explored the ways in which survey methodology and cultural context might influence reporting of abortion in large-scale surveys in two countries using three surveys: two National Surveys of Sexual Attitudes and Lifestyles, conducted in 2000 and 2010 (Natsal-2 and Natsal-3) in Britain, and the Fertility, Contraception and Sexual Dysfunction survey (FECOND) conducted in 2010 in France. The paper compared survey-based abortion rates with rates based on comprehensive abortion statistics obtained through routine systems of abortion data collection.

Two papers discussed measurement of abortion incidence with population-based surveys in less developed countries where abortion is highly restricted by law: underreporting on surveys that use face-to-face interviewing will likely be even greater, given the high level of stigma in these legally restrictive contexts. One of the papers (**Leone et al.**) explores the interviewer effect on abortion reporting in Malawi DHS. Little is known about interviewer effects on responses to questions about abortion in household surveys in low- and middle-income countries. Using surveys for seven sub-Saharan African countries and applying a cross-classified random intercept at the level of the sampling cluster and the level of the interviewer, the study assessed the size of the interviewer effect and variation in this effect across countries. A paper from Latin America (**Mosqueira**) uses Demographic and Health Survey data for Colombia and Peru, countries with restrictive abortion laws, to determine the cumulative probability of terminated pregnancies for cohorts of women of reproductive age over the period 2005 to 2015.

There is a lack of international comparisons of abortion levels and age-specific abortion rates and its underestimation. A paper by **Väisänen** applied two methods of indirect estimation of abortion incidence by age group using Demographic and Health Survey data for Burkina Faso, Ethiopia, Nigeria and Rwanda. The study used the revised residual method that re-orders Bongaarts' proximate determinants of fertility equation (2015) and the 'Classification Method' that groups unclassified pregnancy terminations into induced

or spontaneous abortions using WHO's (1996) protocol. This study concluded that methods of indirect measurement of abortion need to be context-specific: While some methods work well in some contexts, they may be unsuitable in others.

Four of the papers addressed measurement of abortion morbidity and the safety of misoprostol use, with an emphasis on methodology.

The first of these **papers (Onikepe Owolabi et al.)** explores the safety of misoprostol self-management in selected areas of Colombia, Indonesia and Nigeria. The focus is to describe women's access to and experience using misoprostol-containing medications, and to assess drug seller's knowledge of the method and their dispensing practices, as well as women's actual experiences obtaining and using this medication and their self-reported health outcomes. Results were presented from the component that used the approach of 'mystery clients' attempting to buy medication abortion from drug sellers. Findings show that access to MA through drug sellers varies substantially by country, with access being most widespread in Nigeria, followed by Colombia and very limited in Indonesia.

The **second paper (Singh et al.)** focuses on treatment in health facilities for women admitted for complications related to abortion, using representative surveys of health facilities conducted in 2015 in six states of India. Although abortion is broadly legal, most women use MA from drug sellers and other vendors in the informal market, who provide little or inaccurate information to users. This paper presented results on the number and rate of women treated for complications resulting from induced abortion and type of complication. It also discussed the proportion of women receiving postabortion care who were estimated by facility respondents to have incomplete abortion resulting from the use of MA. It is likely that for the majority of these women, the abortion was in progress and would have completed without additional intervention. These findings highlight the existing large need for providing women with accurate information on how to use the method.

The **third paper (Nandagiri et al.)** is a qualitative study conducted in two rural districts in Karnataka, India in 2016-2017, using in-depth interviews (n=31). The authors investigate women's trajectories to obtaining abortion care, management of abortion, abortion outcomes, and experience of morbidity. The study found that women's experiences of navigating abortion access and care do not align with current classifications of abortion safety, and challenges notions of who constitutes a safe provider and what 'minimum standards' are for safe environments; disrupting current conceptualizations of unsafe/safe abortion.

There is a need for improving the accuracy of measuring the rate and severity of abortion complications. The **fourth paper (Jayaweera et al.)** provides a new framework for measuring abortion complications in and out of clinic settings with the goals of: documenting gaps in access to safe abortion; developing targeted and effective programs, policies, and interventions to increase access to safe abortion; and evaluating innovative out-of-clinic models of abortion provision. Currently, estimates of abortion-related

morbidity rely on facility-based studies, and in a few countries, national health statistics; these data sources may be affected by systematic errors, such as misclassification and selection bias. Reliance on facility-based estimates excludes women who have complications but never seek care; for out of clinic models of abortion provision, the lack of a standardized framework and definition of abortion complications makes it impossible to differentiate self-reported symptoms from complications. Authors focus on developing a standardized definition and framework for measuring abortion complications.

This seminar was very enriching and stimulating, helping participants advance their work on measurement of abortion incidence and morbidity. New innovative work was presented and there was active participation and discussion by all participants.