

ESTIMATING INDUCED ABORTION INCIDENCE IN DEVELOPING COUNTRIES

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OVERVIEW OF PRESENTATION

- Brief review of the large number of methodologies that allow estimation of abortion incidence
- Household surveys: DHS/CDC type – face-to-face; ACASI, secret envelope
- Indirect methodology based on hospitalizations for abortion complications.
 - An overview
 - An actual application

Some methodologies for estimating induced abortion

- 1) Cross-sectional Community Surveys
- 2) Community Prospective Surveys
- 3) Random-Response Technique
- 4) Self-Administered Questionnaires (SAQ)
- 5) Audio Computer-Assisted Self-Interview (ACASI)
- 6) Secret Ballot Approach/ Sealed Envelope Method

Some methodologies for estimating induced abortion (cont'd)

- 7) Abortion/Health Providers Survey
- 8) The Anonymous Third Party Reporting Method
- 9) Hospital Complications Method
- 10) Residual Method of the Proximate Determinants of Bongaarts
- 11) Other Methodologies

DESCRIPTION OF SOME METHODS

1. **Cross-sectional Community Surveys**

- Questions may be very different: pregnancy history, fetal loss, etc.
- Deficiencies: captures around 50-80% of the spontaneous abortions (of the biologically expected level in human populations).
- Induced abortion coverage: more deficient, but varied, depending on abortion environment.

2. **Community Prospective Surveys**

- Limitations: truncation to the left, underreporting of the terminal condition of the pregnancy, lost cases.

DESCRIPTION OF SOME METHODS (Cont'd)

3. Random-Response Technique

- Few studies have used this method
- Has produced a higher abortion rate than face-to-face interviews in one study.
- Limitations:
 - Produces a single prevalence estimate
 - Characteristics cannot be related to it

DESCRIPTION OF SOME METHODS (Cont'd)

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SUMMARY

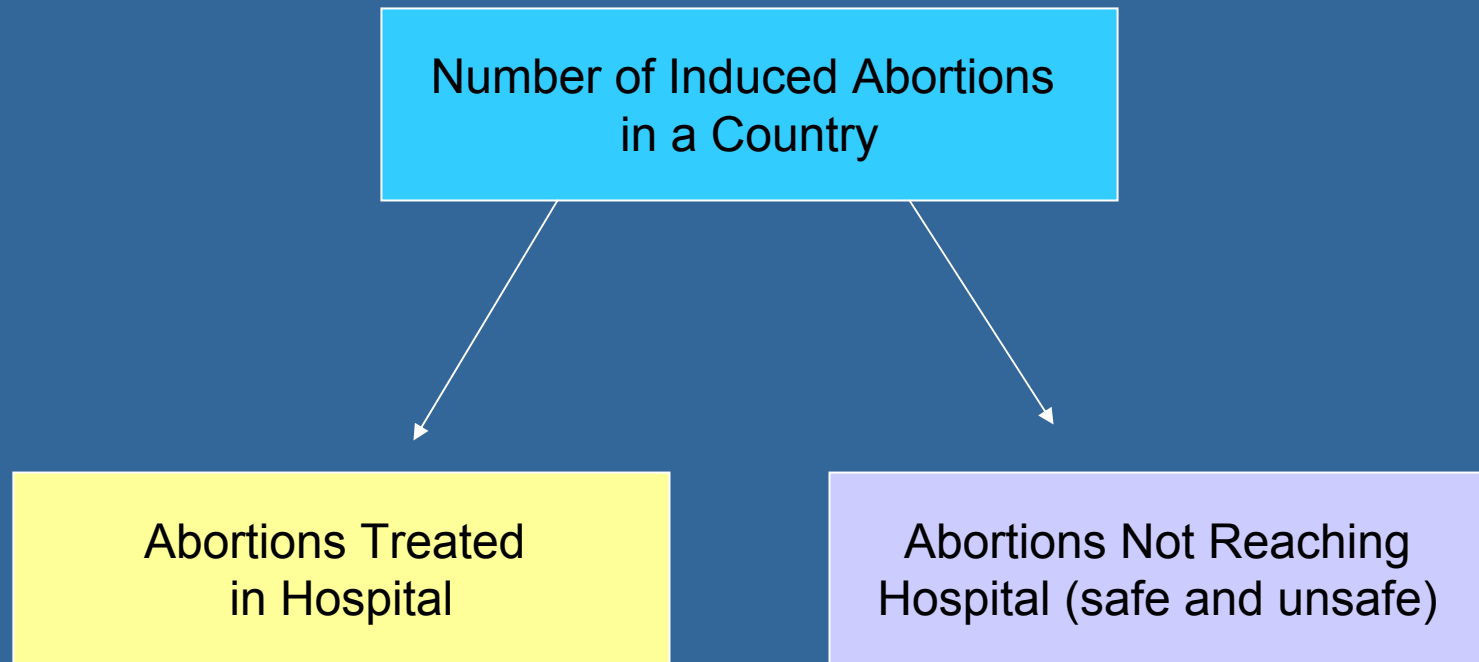
- **All methods to estimate induced abortion have limitations and problems of quality and coverage.**
- **It is important to triangulate with all other related data.**
- **Approaches are complementary, they provide a different angle of the induce abortion health problem.**
- **It is necessary to give attention to the development of better methodologies.**

**Hospital Complications
Method:
Indirect Estimation**

Countries in which the method has been applied

- Brazil (1994)
- Chile (1994)
- Colombia (1994)
- Dominican Republic (1994)
- Mexico (1994)
- Peru (1994 & 2000)
- Bangladesh (1997)
- Philippines (1997)
- Nigeria (1998)
- Uganda (2005)
- Philippines (2005)
- Guatemala (2006)
- Mexico (2006-initiating)

Estimating Induced abortions



Data: Num. women treated for hosp comp due to abort
Source: Hospital Data

Data: 1/ Prop. of women having an abort. who are hospitalized
Source: Health Professional Survey

Number of women treated for hospital complications due to induced abortion

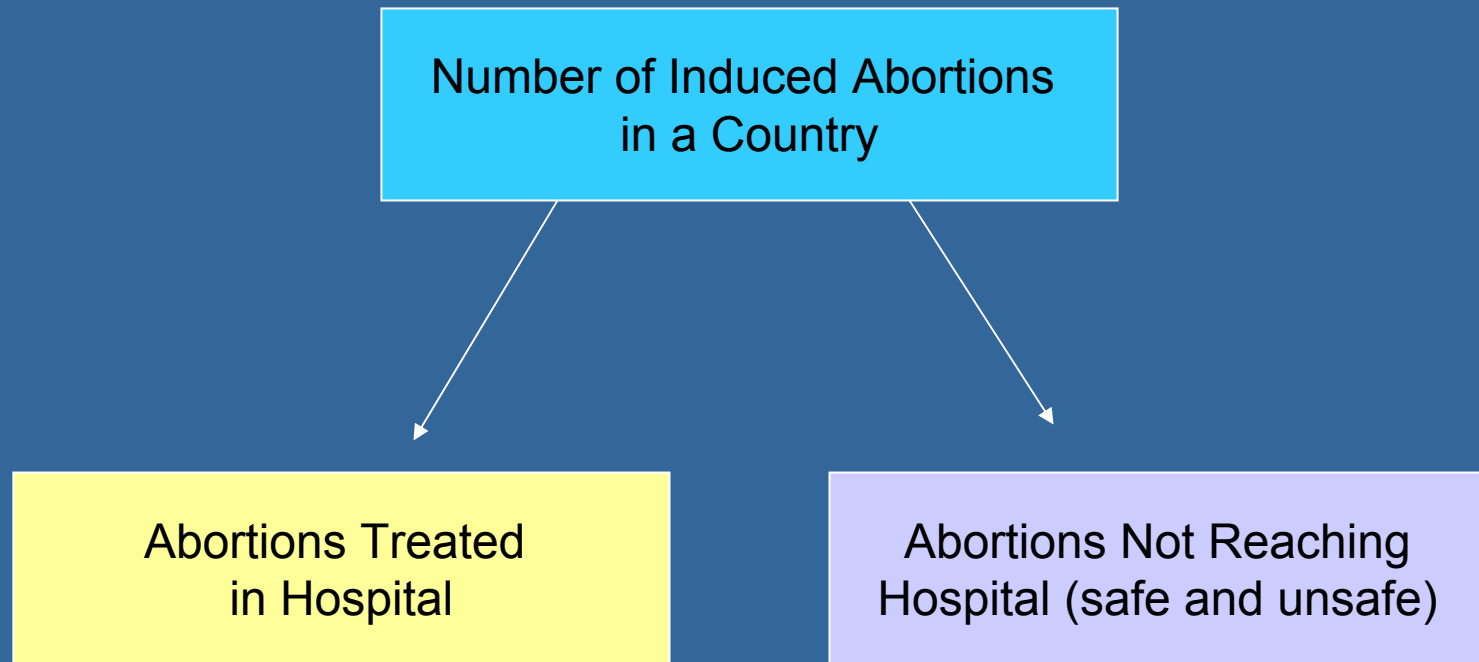
Data available varies by country

- Good hospital records, data available.
E.g. Mexico
- Hospital records available but need to be collected. E.g. Philippines
- Hospital records not available or largely incomplete E.g. Uganda
 - A “Health Facility Survey” is required.

Calculation: Estimate number hospitalized for induced and spontaneous abortion

- Hospital records does not accurately distinguish between induced and spontaneous abortion (miscarriage)
 - Clinical studies have estimated the pattern of pregnancy loss (13-22 weeks)
 - The probability of women who have a spontaneous being treated in a hospital is estimated based on the prob. of a women delivering in a hospital.

Estimating Induced abortions



The Health Professional Survey: Proportion of women hospitalized

- Not all women who have abortions experience complications, or receive treatment
 - Have safe, uncomplicated abortions
 - Experience complications, but receive no care
 - Obtain care from private doctor
 - Die before obtaining care
- To capture the proportion of women having an abortion who did not obtain care in hospital for whatever reason, can be obtained through the information of a “Health Professional Survey”.

Steps in the calculation

Hospital records show the number of women who seek treatment for complications.

Directly measurable

Some women experience no complications or do not obtain hospital treatment.

Estimate A

Some of these complications are due to induced abortions.

Estimate B

Estimated total number of induced abortions

INDUCED ABORTION: INDIRECT ESTIMATION

LEARNING THE METHOD WITH AN EXAMPLE UGANDA 2006

Characteristics of sample by type of facility and ownership, Health Facilities Survey, Uganda 2003

Type of facility	Total Number of Health Facilities				Sampling Fractions (%)			
	Gov't	NGOs	Private	Total	Gov't	NGOs	Private	Total
Hospital	53	38	5	96	100	100	100	100
Health Center IV	148	12	3	163	42	25	33	40
Health Center III	623	143	21	787	16	16	24	17
Private Midwives	-	-	536	536	-	-	13	13
Total	824	193	565	1582	26	33	14	23

National Estimates for Uganda: Calculations

Number of complications treated in hospitals, HFS (Average of past year and average year estimates)	109,926
Number of live births (women 15-49 * ASFRs)	1,254,812
Number of spontaneous miscarriages (all births) (3.41% * No. of live births) (3.41% * 1,254,812) (clinical trial information: 3.41%)	42,789
Number of spontaneous miscarriages treated in hospitals (Assumption: % births deliver at hospital = % miscarriages at hospital) (42,789 * 58.8%)	25,168
Number of induced abortion complications treated in hospitals (Num hosp compl - Num of spontaneous miscarriages) (109,026 - 25,168 = 84,758)	84,758

HEALTH PROFESSIONAL SURVEY

- **List of health professionals who were recognized to be knowledgeable about abortion provision and post-abortion care.**
- **Respondents were asked estimates of**
 - the distrib. of all women seeking abortion according to type of abortion provider,**
 - the prob. that women would experience complications requiring medical care according to type of provider,**
 - and the prob. that women who need medical care would receive it from a health facility.**
- **With this information we obtained is the prop. of all women having abortions who would be hospitalized for treatment of medical complications.**

HEALTH PROFESSIONAL SURVEY:

Questions for deriving the multiplier

- **Q 213. What percent of all induced abortions in urban areas do you think are being performed by each type of provider for poor women? Give an approximate percentage (all providers sum to 100%).**
- **Q 302. Think about poor women in urban areas: out of ten poor urban women who have an abortion performed by each type of provider that I will mention, how many would experience a medical complication that should receive medical treatment?**
- **Q 303. Think about poor women in urban areas: out of 10 poor urban women who experience a medical complication due to an induced abortion, how many do you think would be treated by a trained person in a health facility?**

Estimation of Multiplier

	% of all women who had abortwith comp. (by type prov) (1)	% who will get hospital care (2)	% of all women who had abort & get hospital care (3)=(1)x(2)	% women 15-49 (4)	Weighted % of women hospitalized (5)=(3)x(4)
Urban poor	46	62	29	6	2
Urban Non-poor	30	83	25	10	3
Rural Poor	56	51	28	65	18
Rural Non-poor	42	70	30	18	5

$$\Sigma 28\% = 1/28 = 3.5$$

Calculation of abortion indicators

Expansion Factor (Multiplier)	
Multiplier from HPS (medium 3.5)	3.5
Number of Induced Abortion Complication cases treated in hospital	85,000
Total number of induced abortions (Multiplier * Num of induced abortions=3.5 * 85,000)	300,000
Measurements	
Abortion Rate per 1000 women 15-49 (Total num induced abortions/Num women 15-49 yrs=300,000 / 5,497,200)	54.0
Abortion Ratio per 100 pregnancies ((Total num induced abortions/Num of live births+ Num of abortions)*100=(300,000 / 1,254,812+ 300,000) * 100))	19.0
Abortion Ratio per 100 live birth ((Total num induced abortions/Num of live births)*100=(300,000 / 1,254,812) * 100))	23.0

Abortion Incidence: Uganda Key Findings

Findings

Estimated abortions in Uganda

110,000 women hospitalized for post-abortion complications in 2003

Some women experience no complications or do not obtain hospital treatment

Subtract an estimated 25,000 miscarriages

85,000 cases of complications were due to induced abortions

Multiply by 3.5

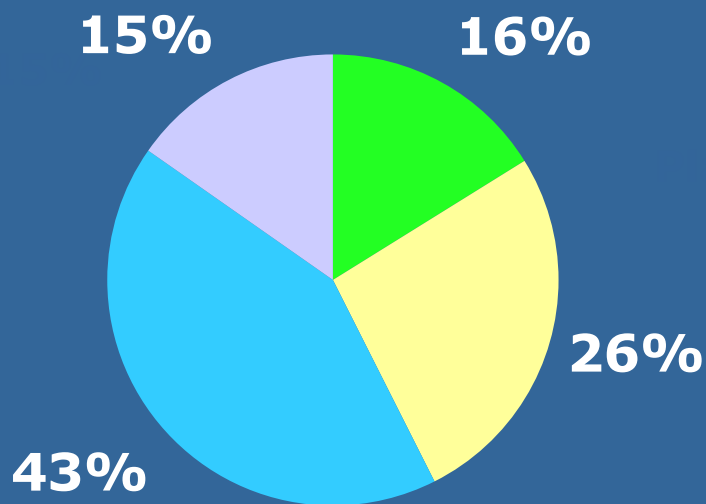
An estimated 300,000 induced abortions

National Estimates: Abortion and Treated Complications

Measures	Uganda
Estimate of total number of abortions	300,000
Abortion rate per 1,000 women 15-49	54.0
Abortion ratio per 100 pregnancies	19.0
Number of women treated for complications of induced abortion	85,000
Rate of hospital complications per 1,000 women 15-49 per year due to abortion	15.4

When spontaneous abortions are included, about 4 in 10 pregnancies end in an unintended pregnancy

1.84 Million pregnancies in 2003



■ abortions

■ unplanned births

■ wanted births

■ miscarriages

THANK YOU.