



Integrating a gender perspective into health statistics

United Nations Statistics Division



Objectives

- What are the gender issues?
 - certain areas of concern where women and men may not enjoy the same opportunities or status
 - where women's and men's lives may be affected in different ways – life style
- Data sources
- Quality of data; avoid gender bias
- Understanding gender difference in health -
Biological vs social impact



Areas of health to focus on

- Health and nutrition of children
- Maternal health
- Mortality and causes of death
- HIV and AIDS

But you may explore further ...

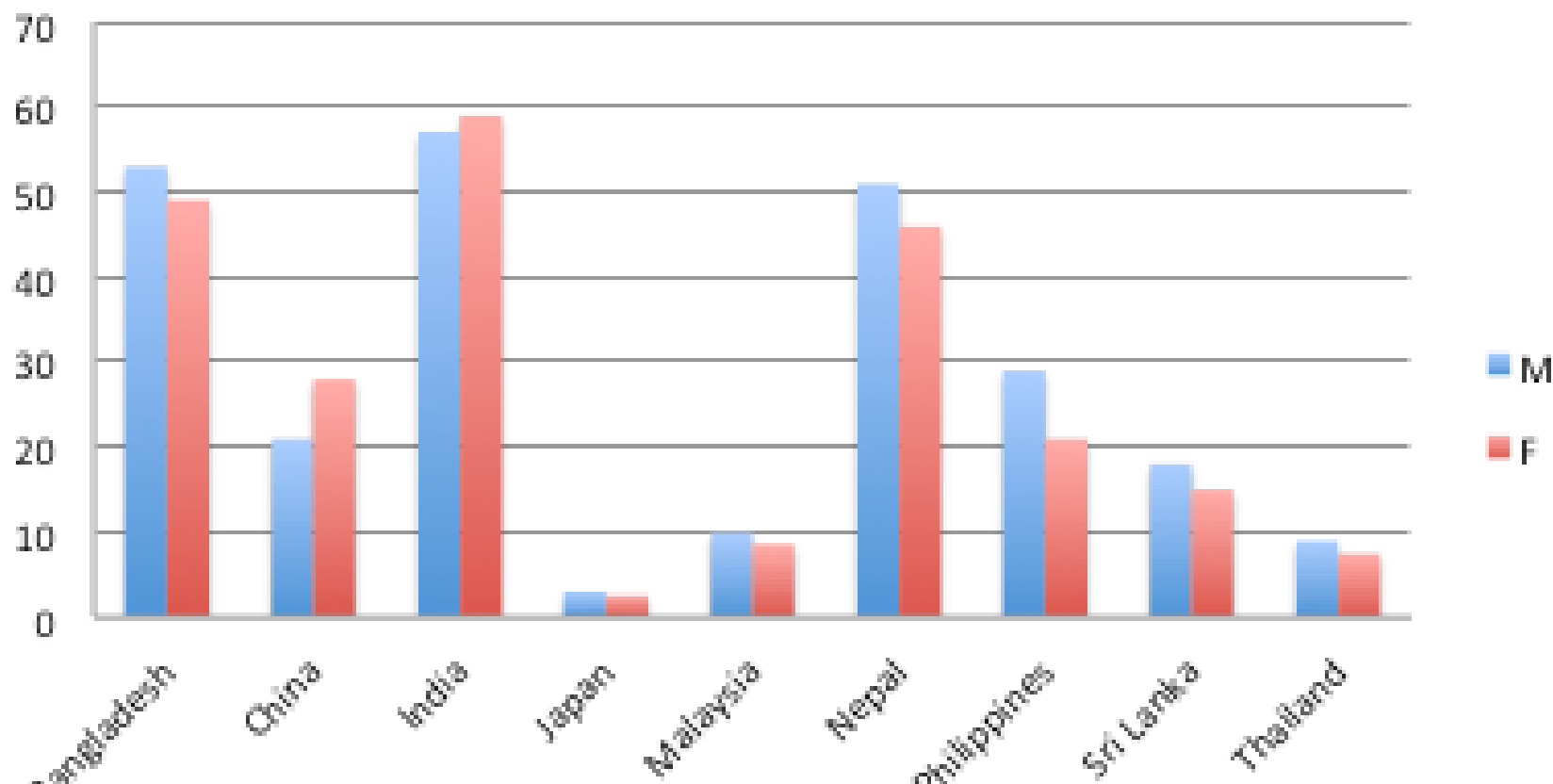


Gender issues in health: examples



Infant mortality rates, by sex

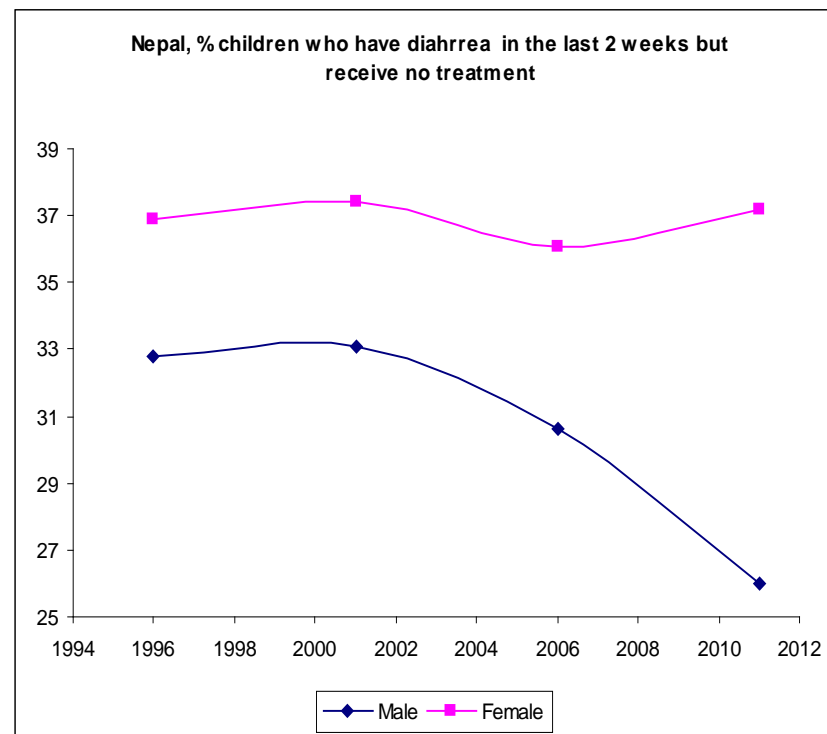
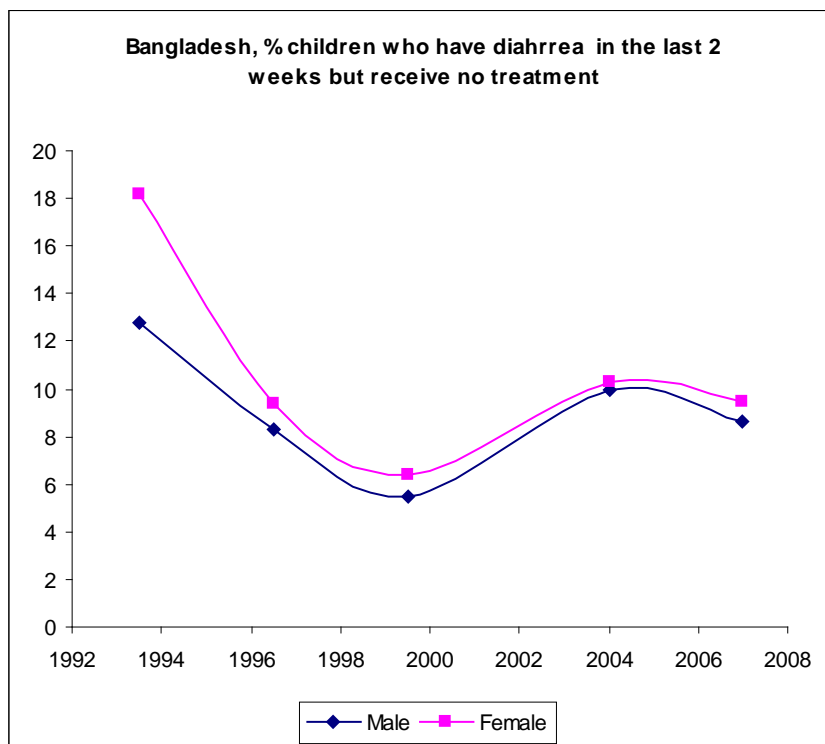
Infant mortality rate, 2000s



Source: Based on 2010 Population Prospect



Treatment of diarrhoea

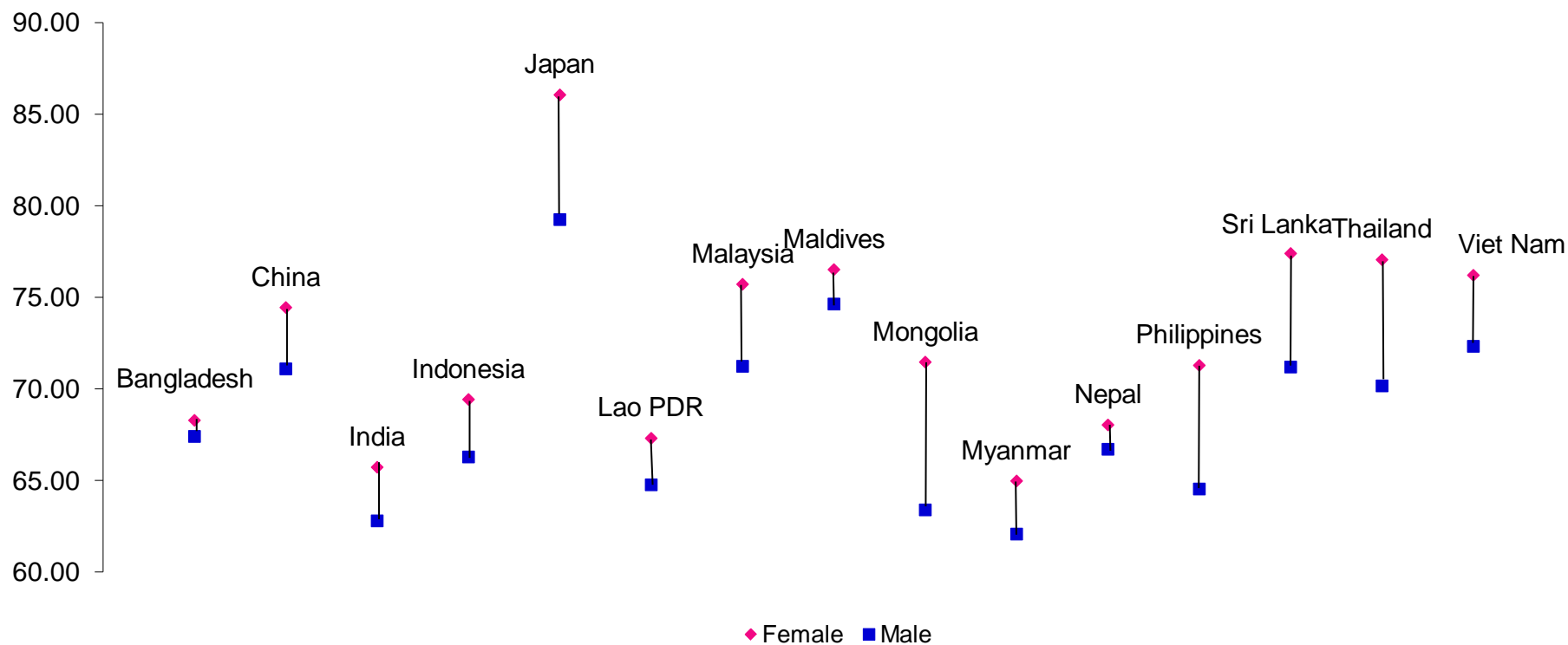


Source: Constructed based on DHS data



Gender differential in Life expectancy at birth

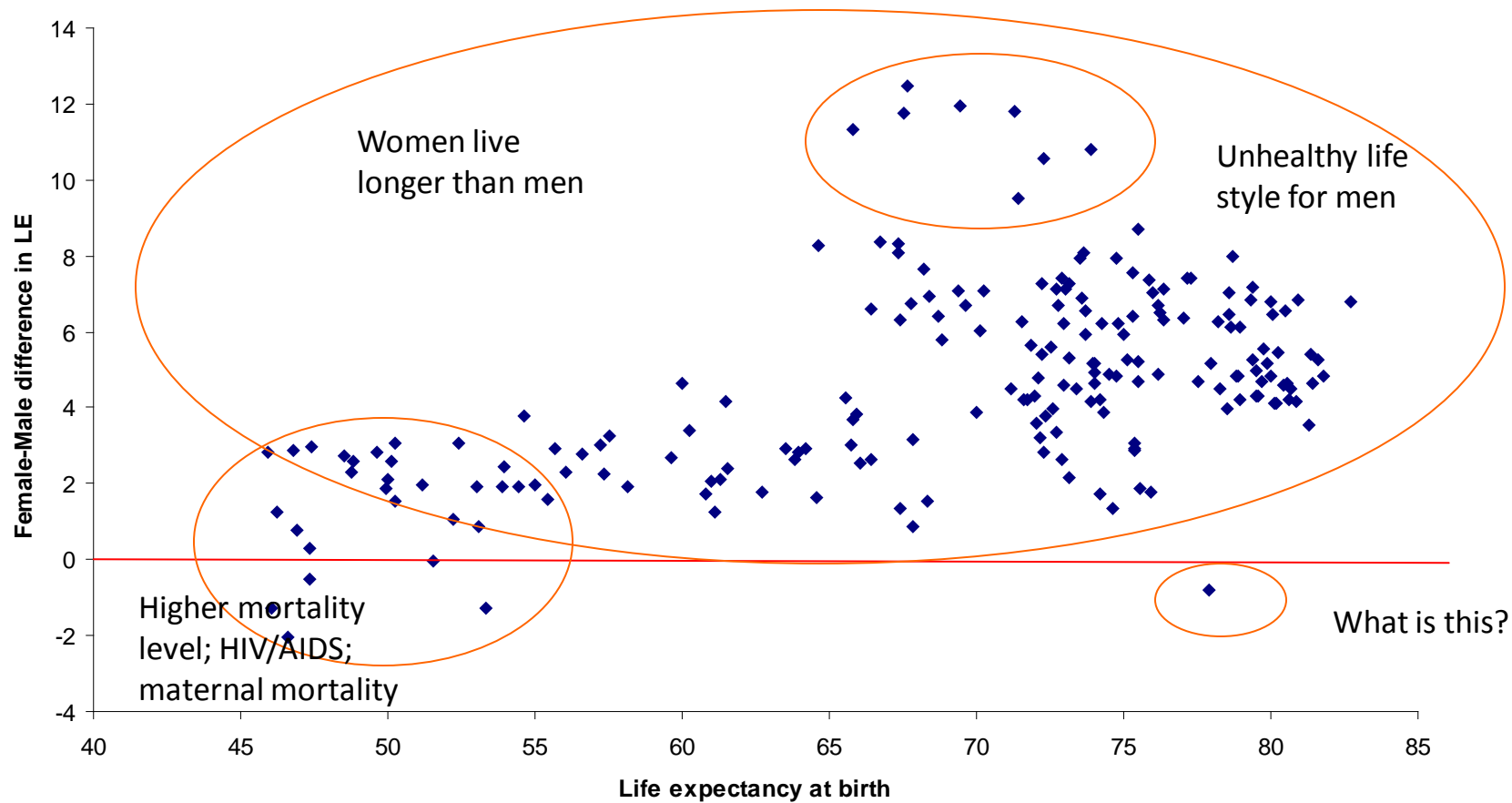
Life expectancy at birth, 2005-2010



Source: Based on 2010 Population Prospect



Life expectancy at birth



Source: Based on 2010 Population Prospect

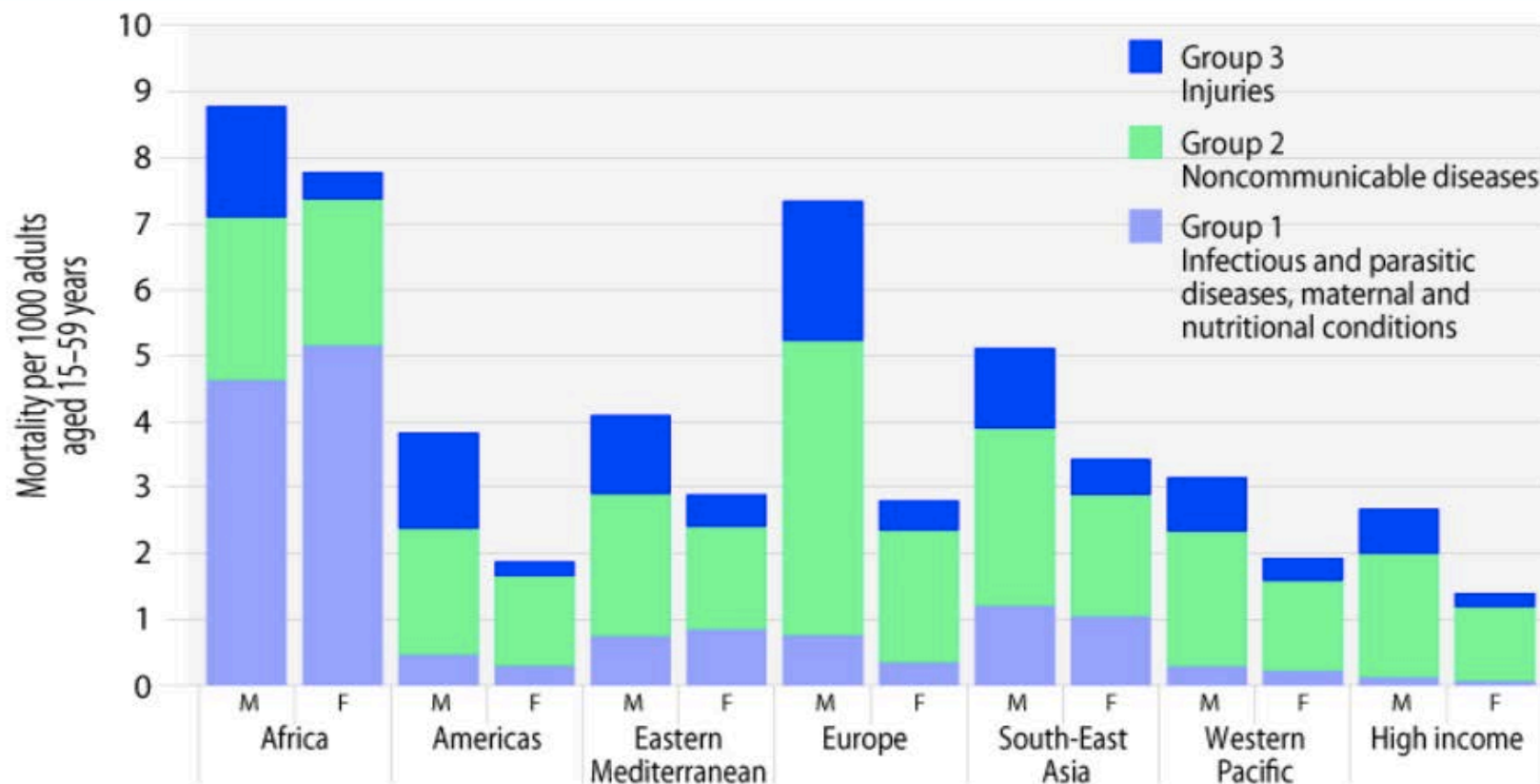


Cause of deaths



World Health Organization

Causes of death in men and women aged 15–59 years by region, 2008





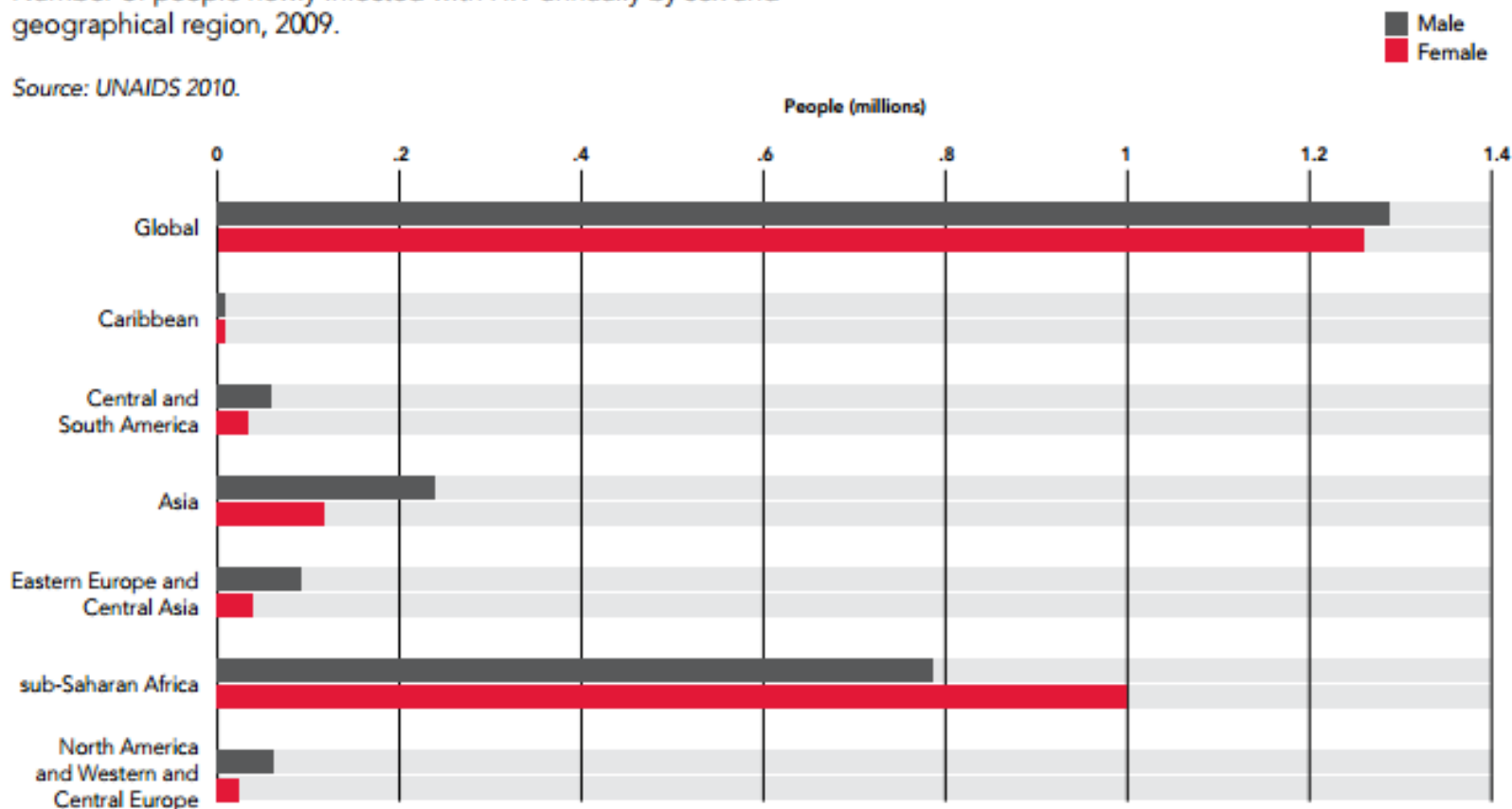
People with newly infected HIV

Figure 5.6

People newly infected with HIV, 2009

Number of people newly infected with HIV annually by sex and geographical region, 2009.

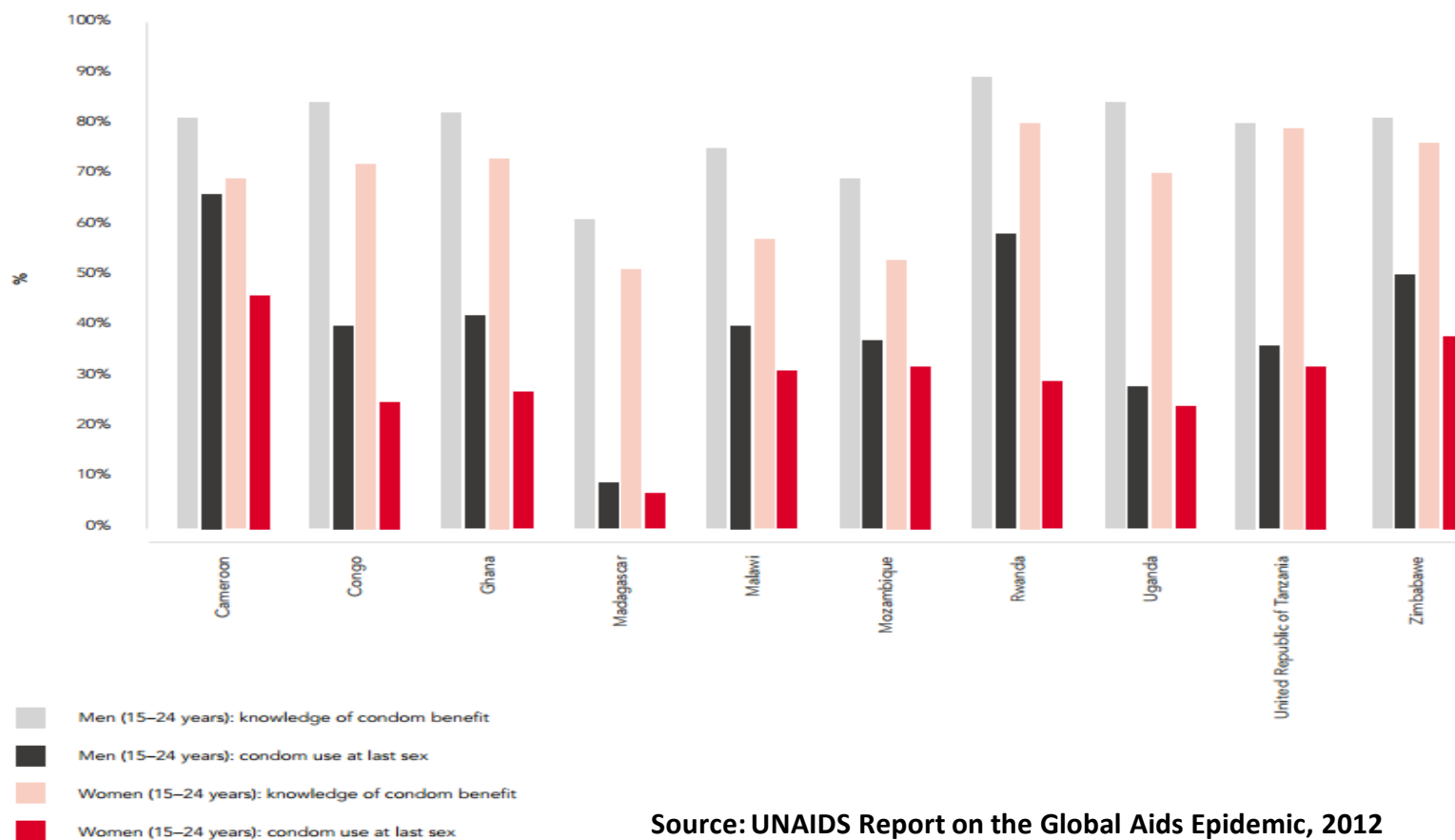
Source: UNAIDS 2010.



Source: UNAIDS Report on the Global Aids Epidemic, 2010



Knowledge about condoms and reported condom use at last sex among young men and women with more than one sexual partner in the past 12 months – selected countries in sub-Saharan Africa, latest available data



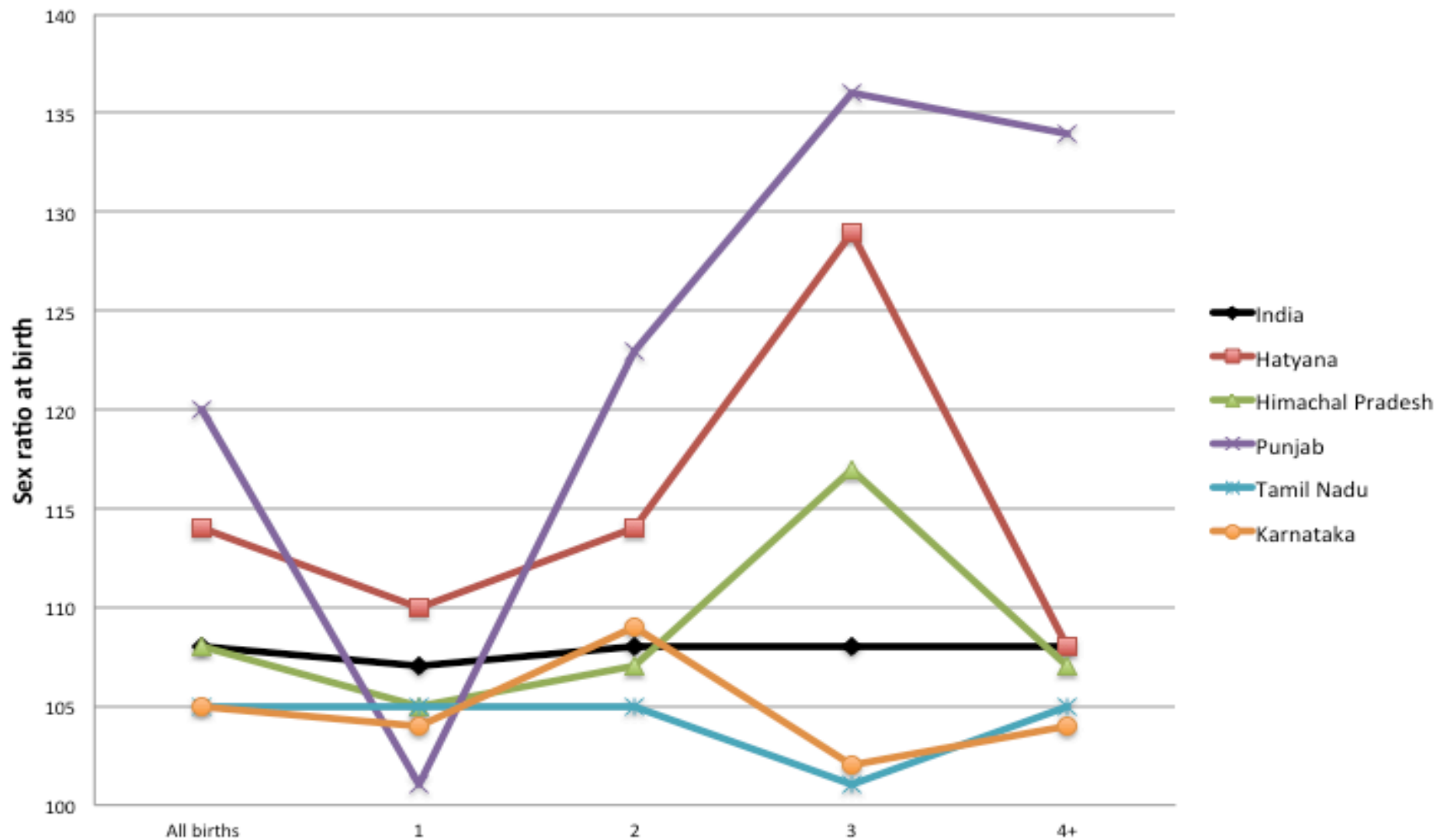
Source: UNAIDS Report on the Global Aids Epidemic, 2012



**Sometimes it looks fine in one
dimension...**

But if we dig deeper

Sex ratio at birth, by birth order, for India and selected States



Reconstructed based on data from Sekher and Hatti, *Discrimination of Female Children in India: from Conception through Childhood*



**We have gender issues
and
where are the data?**



Sources of gender statistics in health

- *Civil registration systems (complete coverage)*: preferred source of data on deaths and cause of deaths
- *Household surveys* – complementary source
 - DHS and MICS: retrospective data on births, deaths, anthropometrics, immunization, and health care of women and children
 - LSMS: health expenditure
- *Population censuses*: child/adult mortality, by various characteristics
- *Health administrative sources and immunization coverage surveys*: data on vaccinations.

Sources of gender statistics in health (2)



- Demographic surveillance systems
 - usually maintained by research institutions
 - provide information on births and deaths by cause of death in small populations of selected areas, such as a community, or a district. Where death certificates are not available, a cause of death is assigned based on interviews with family members (a method called “verbal autopsy”).
 - useful, but expensive and time-consuming to conduct, usually not representative
- Reproductive-age mortality studies (RAMOS)
 - Involve identification of causes of all deaths of women of reproductive age (and to classify those deaths as maternal or otherwise) in a selected population by using multiple sources of data for a defined area or population.
 - Sources used: civil records; health facility records; burial records; interviews with traditional birth attendants; and interviews with family members.

Sources of gender statistics in health (3)



- *Sentinel surveillance* may collect data on HIV status and sexual behaviour for populations with high risk behaviours such as sex workers, injecting drug users and men who have sex with men.
- *Population-based surveys with HIV testing* such as Demographic and Health Surveys and AIDS Indicators Surveys provide data on HIV prevalence. These surveys as well as MICS and reproductive health surveys also provide other HIV-related data, such as: knowledge of HIV transmission and prevention, multiple sex partners, use of condom during sexual intercourse with a non-marital, non-cohabiting sexual partner in the last 12 months, and access to antiretroviral therapy.
- *Integrated Biological and Behavioural Surveillance (IBBS) Surveys* can provide data on key populations at higher risk of HIV infection, such as men who have sex with men, sex workers, and people who inject drugs.
- *Reports from health facilities*, including antenatal clinics attended by pregnant women, may provide information on results from HIV-tested blood from sample of patients, and information on access to antiretroviral therapy.
- *Time use surveys* can provide data on time spent caring for household members who are HIV infected.



Data quality

- Why is it an issue?
 - Impact on identifying gender gaps
 - Is it a real gender issue? Or data error?
 - Every data source comes with limitations
 - Communication with users/policy makers: gives more credibility to your analysis

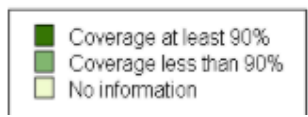
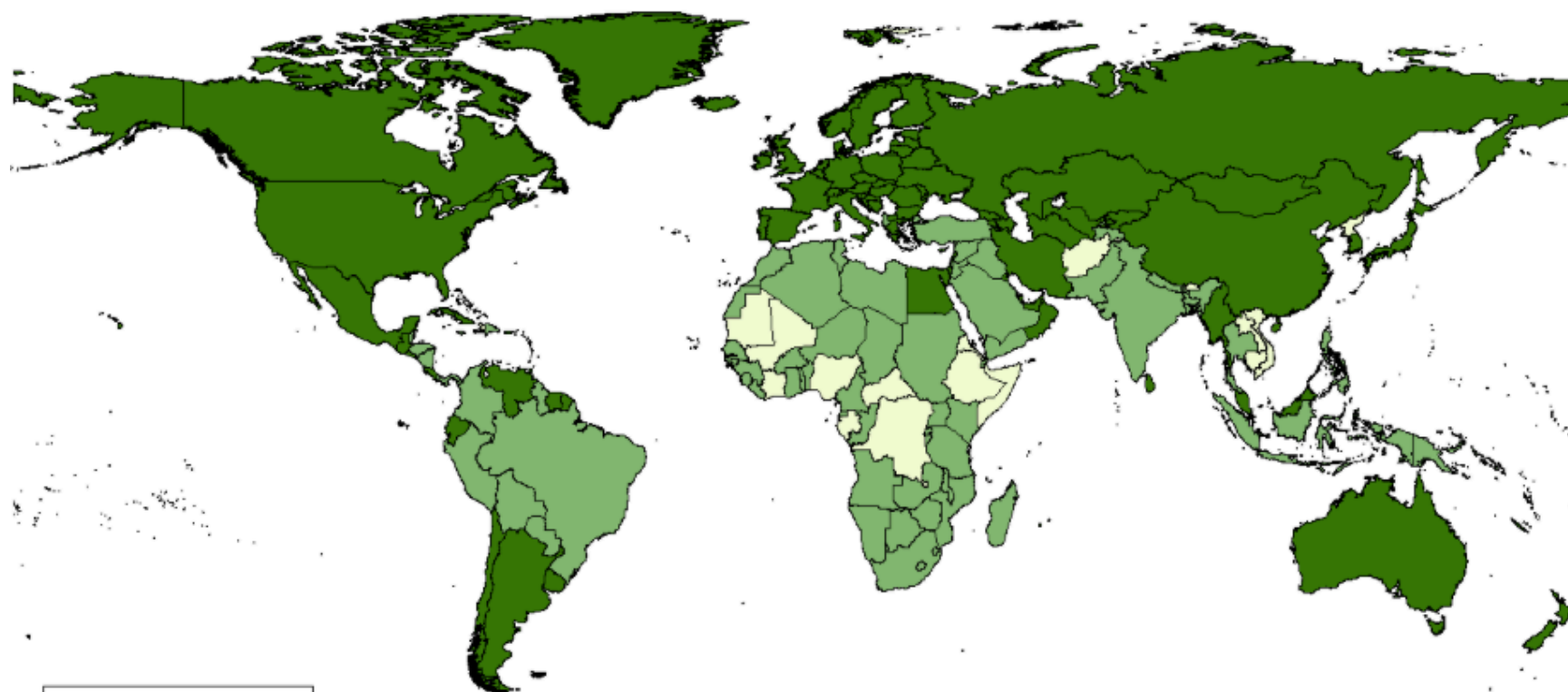


What are the data quality issues?

- Coverage and accuracy of data from the civil registration system
- Sex-biases in reporting: are girls more omitted than boys?
- Censuses and surveys: recall-bias, errors (sampling and non-sampling), under-reporting, estimates rely heavily on assumptions and modeling



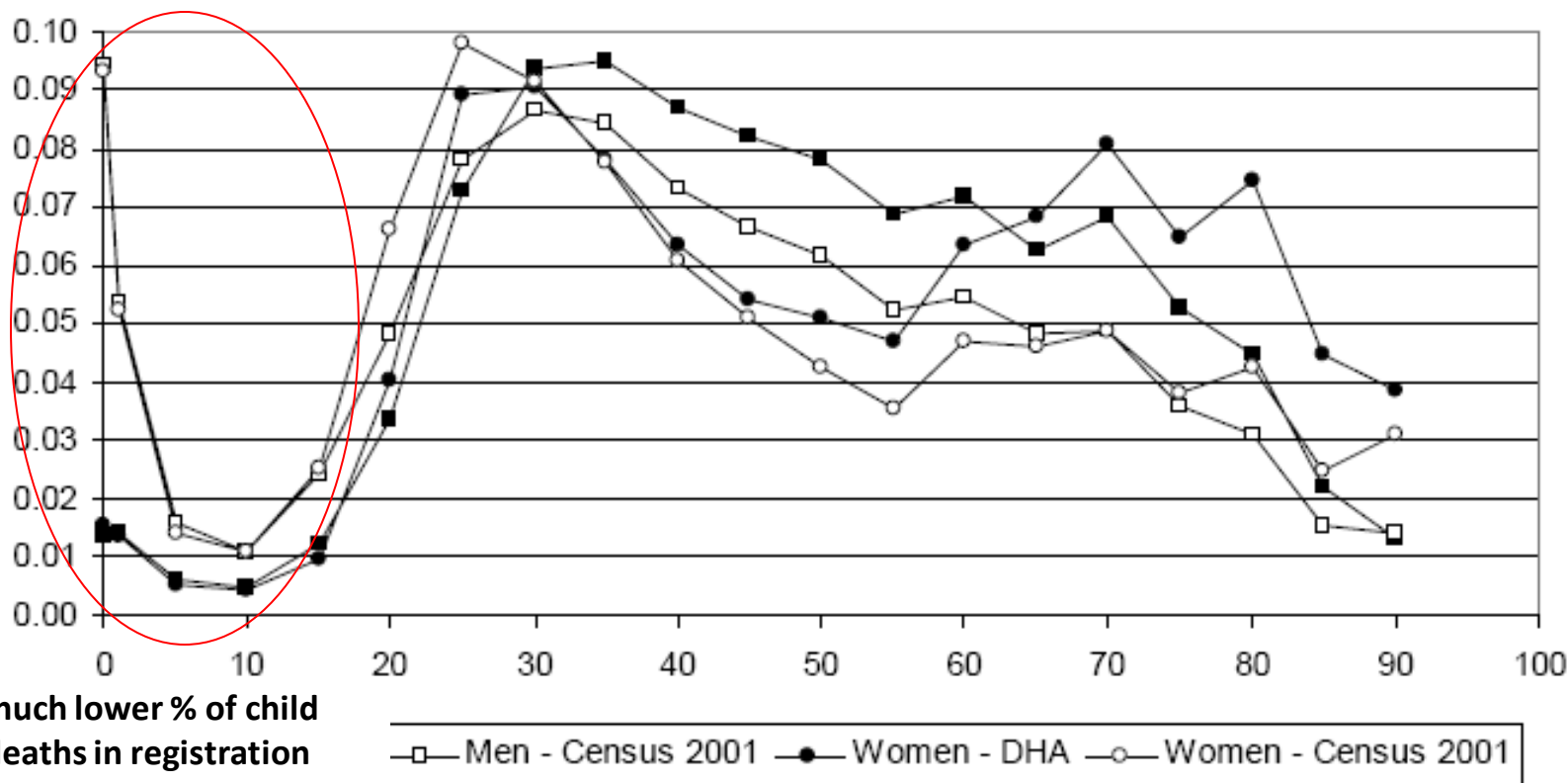
Coverage of death registration





Death registration: under-reporting of children

Figure 2.5 Distribution of deaths by age, Census 2001 and Home Affairs deaths for 2001



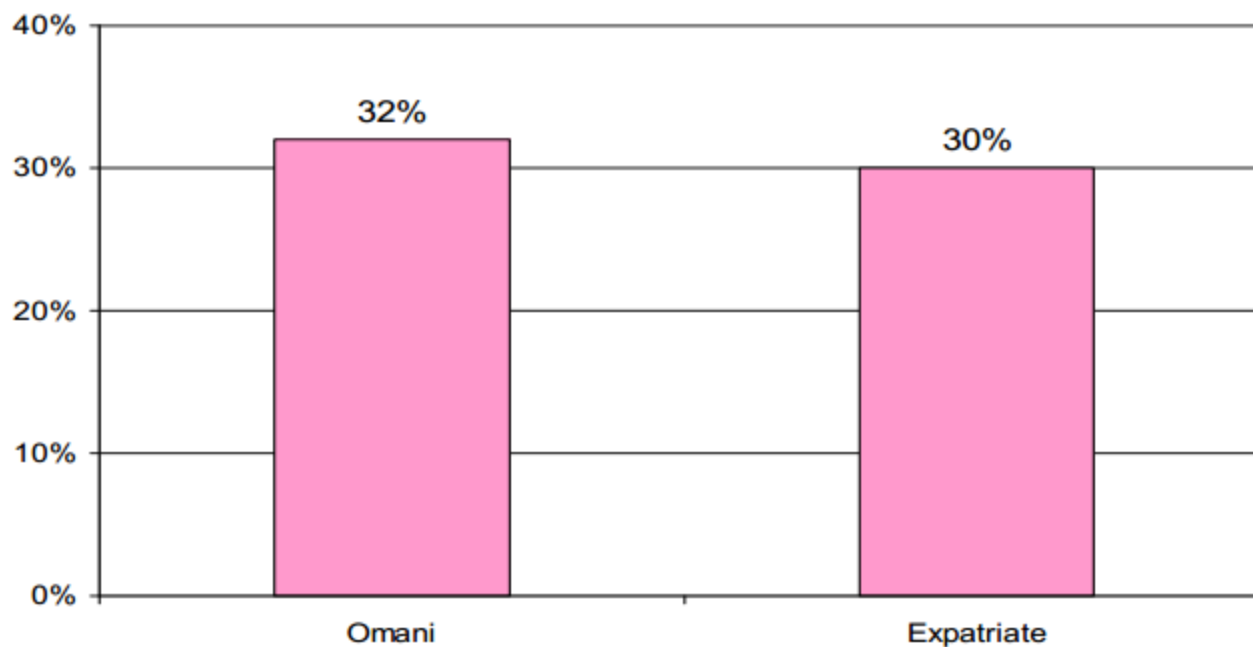
much lower % of child deaths in registration than in census

Source: Estimation of mortality using the South African Census 2001 data, Dorrington and Moultrie, 2004

Death registration: missing value on sex??



Sex unknown for 30% of notified deaths



Decemembr 3-6, 2007

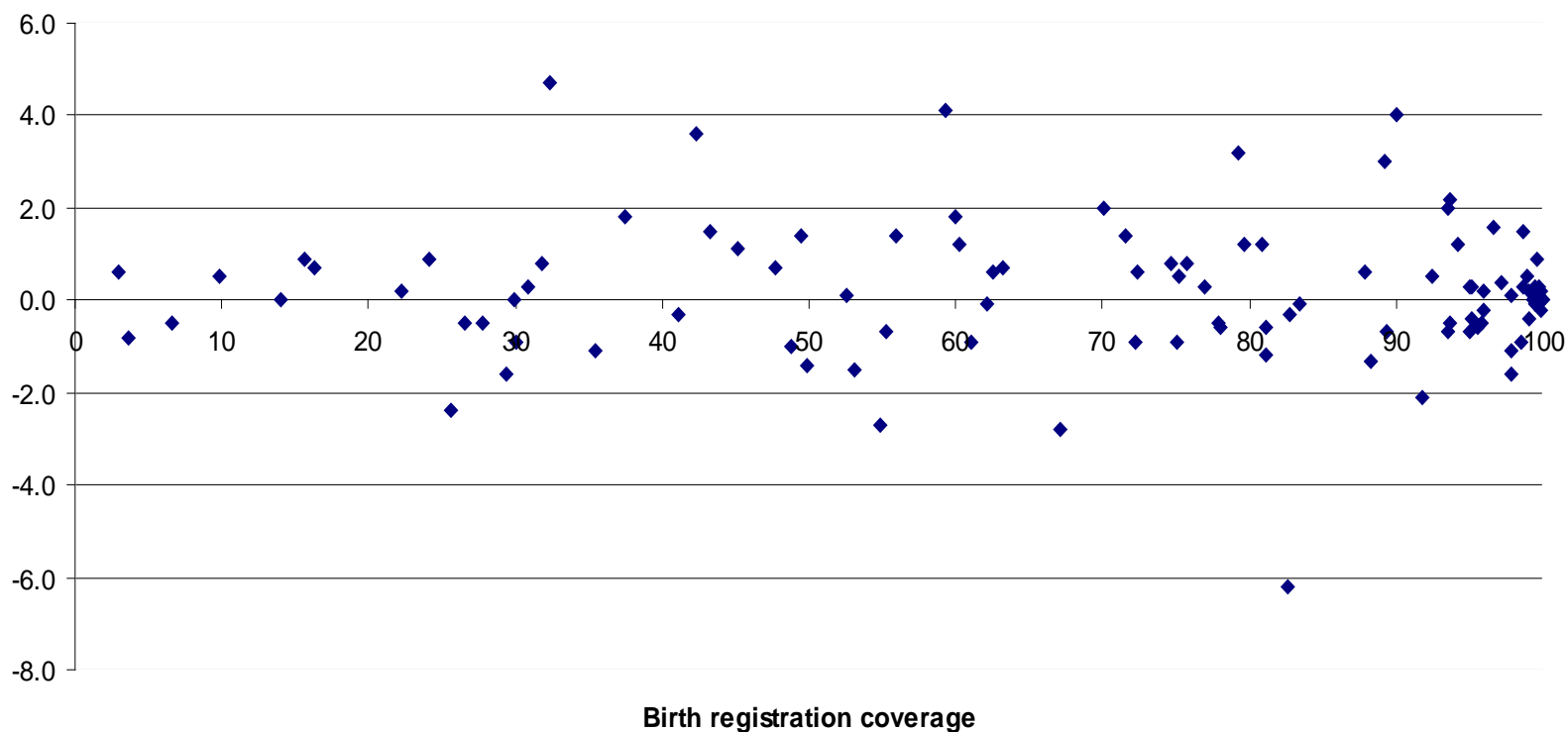
Civil Registeration & Vital Statistics

Source: United Nations Workshop on Civil Registration and Vital Statistics in the ESCWA Region, 2007



Are girls less likely to be registered?

Birth coverage, male over female

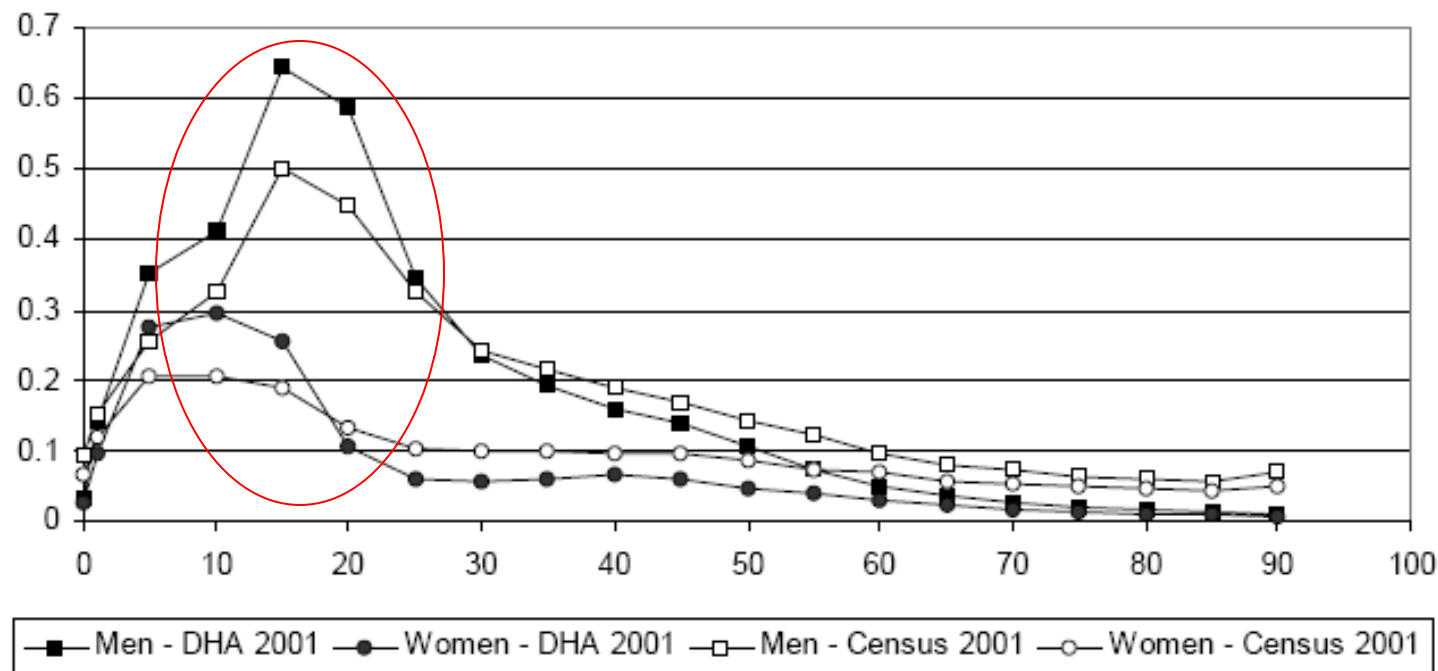


Source: UNICEF



Census data: under-reporting

Figure 2.7 Proportion of deaths due to accidental causes, Census 2001 (edited data) and 2001 Home Affairs data



Source: Estimation of mortality using the South African Census 2001 data, Dorrington and Moultrie, 2004



Census data: content error

Table 2.2 Proportion of women whose fertility data were not subjected to logical imputation or hotdecking by education level and population group, Census 2001

<i>Education level</i>	<i>Black African</i>	<i>Coloured</i>	<i>Indian or Asian</i>	<i>White</i>	<i>Total</i>
No schooling	50.5	51.0	43.4	36.1	50.4
Some primary	46.0	48.0	38.3	24.1	45.7
Primary	47.7	50.1	39.5	25.6	47.2
Some secondary	49.9	52.2	47.3	43.8	49.7
Matric/Std. 10	51.9	50.8	47.5	53.5	51.9
Higher	57.1	56.2	48.6	56.1	56.3
Total	49.6	51.0	46.5	49.3	49.6

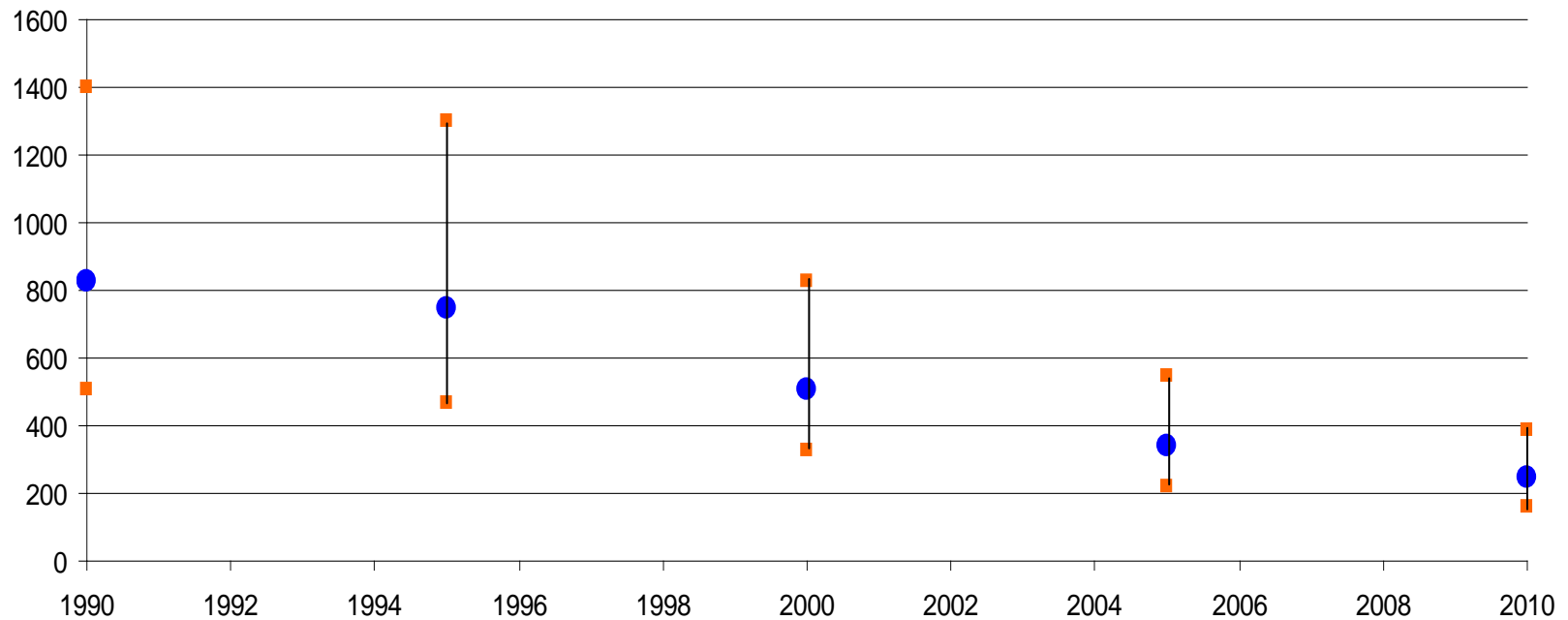
Source: Estimation of fertility using the South African Census 2001 data, Dorrington and Moultrie, 2004

Fertility data for 50% of the records need to be edited

Estimates that come with confidence intervals



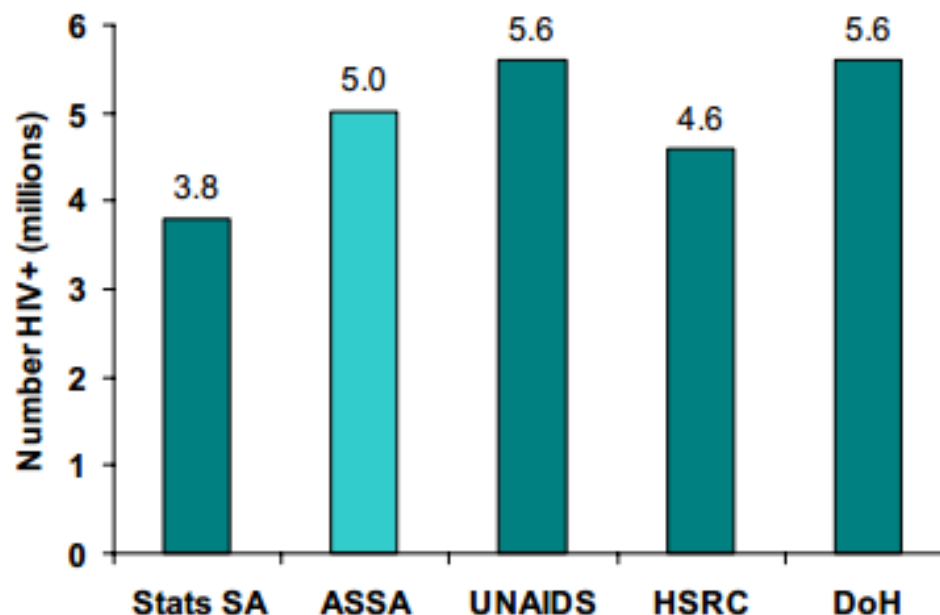
Maternal mortality ratio, Cambodia



Source: United Nations MDG database



Estimates from different sources South Africa



Notes: The Stats SA published this number as the total number infected it is actually their estimate of the number infected aged 15-49. The DoH estimate is for 2003.
Sources: StatsSA¹⁶, UNAIDS¹⁷, HSRC¹⁸, DoH¹⁹

Figure 7. Number of people infected with HIV in 2004



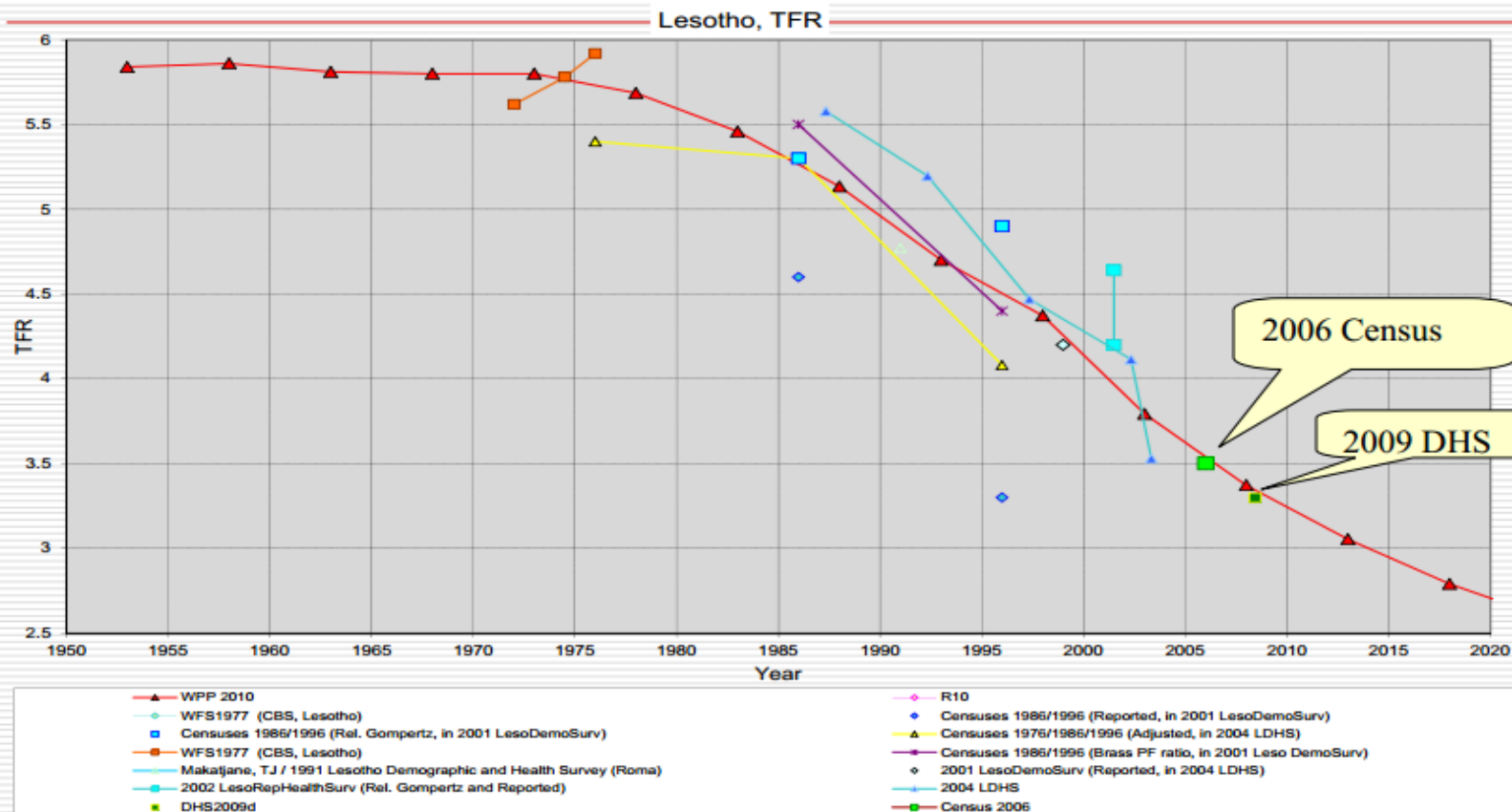
Data quality issues, what to do?

- Understanding the quality issues:
 - Poorly phrased questions? Proxy respondent? Qualification of interviewer?
Data coding/entry/editing mistakes?
 - Improving future data collection activities
- Adjusting estimates
- Using multiple data sources
- Using different methods
- Communicating with users



Fertility estimates

Lesotho, fertility estimates from different sources



Source: United Nations Workshop on Census Data Evaluation for English-speaking African Countries, 2012



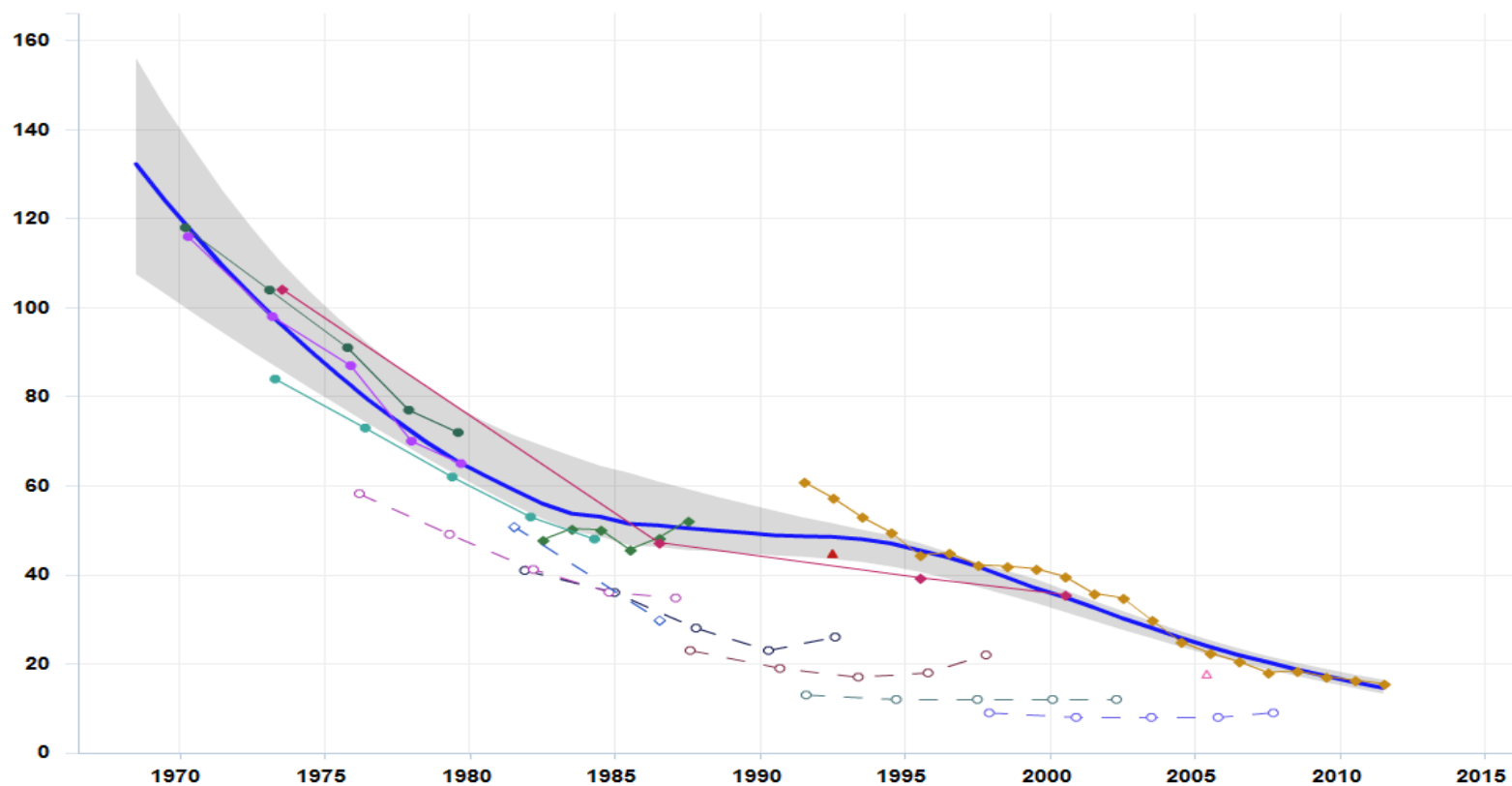
Child mortality estimates

China

*CHN_Loess_Under-five mortality rate_DEFAULT_NEW_2012.5

Under-Five Mortality Rate ▼

View | Series | Data | Estimates | Export | Notes | 🔍 ↻



Source: UNICEF



Understanding gender difference in health: biological vs social factors

Equal outcome \neq Equality
Why?



Biological factors

- Girls: biological advantage in mortality
- Not very clear on the entangled biological vs social factors for adult mortality
 - Cardiovascular diseases etc: is it biological or behavioral?
- Sex-differentiated biological risk for some diseases such as HIV/AIDS
- Some causes of death are specific to women or men.



Social factors: disadvantages for men

- Life threatening jobs



- Higher-risk lifestyle





Social factors: disadvantages for women

- Less access to health care
- More exposure to indoor pollution
- Difficult in negotiating use of condoms → risk of HIV/AIDS ↑
- Sexual behavior at younger age → STD





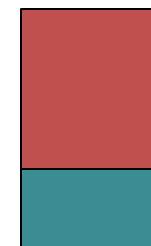
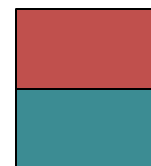
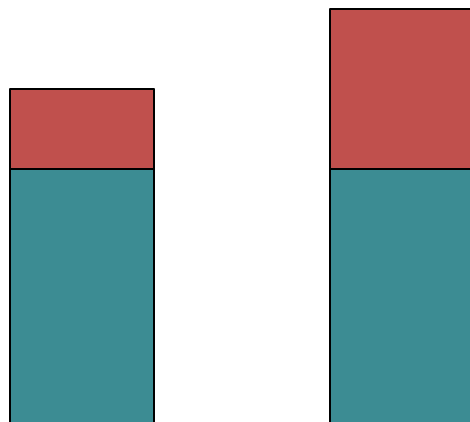
Infant mortality: biological factors

High mortality

Low mortality

Perinatal

Infections



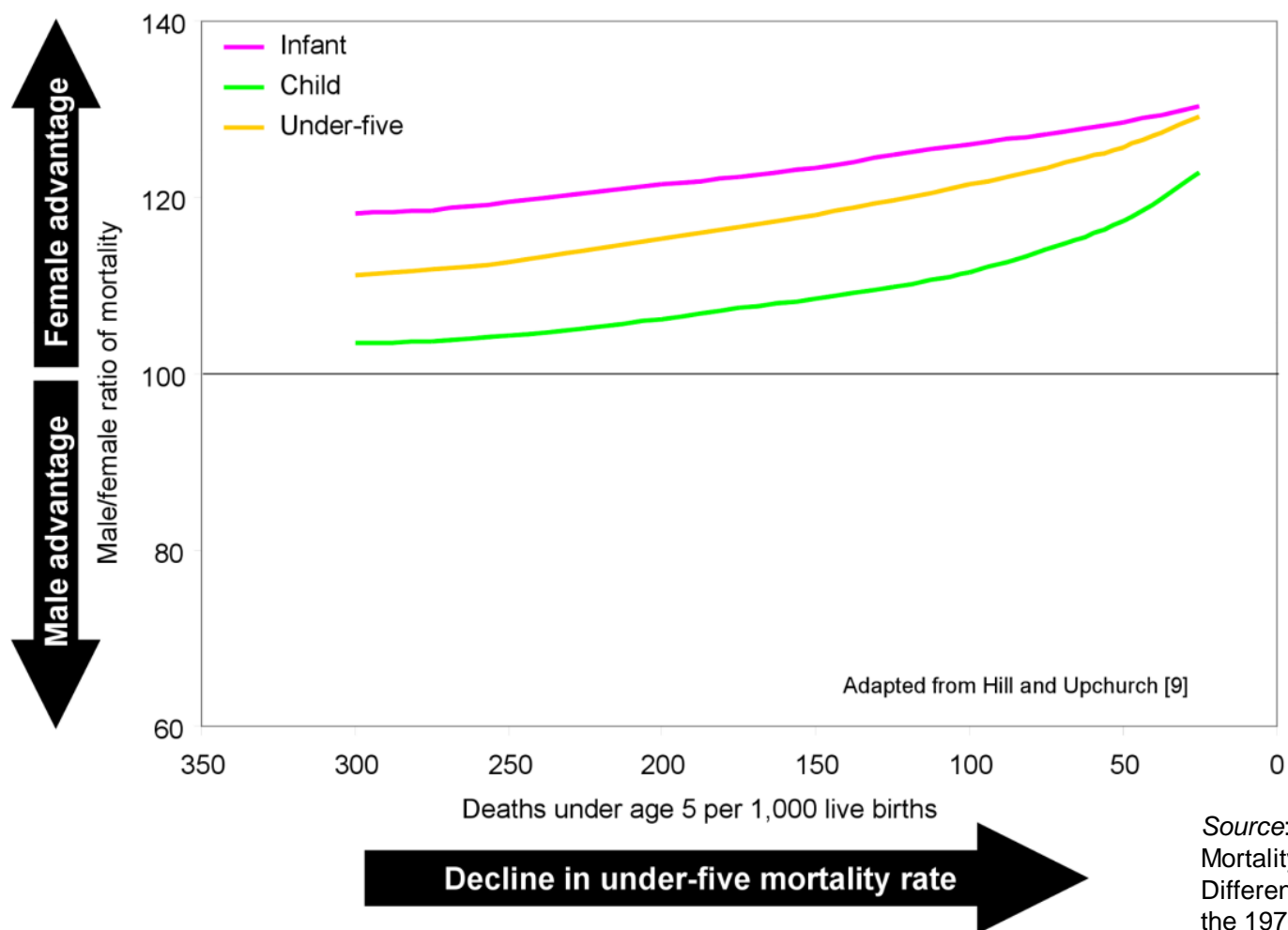


How to identify the “real” gender gap?

- Using appropriate measures/indicators:
 - Child mortality (between ages 1 & 5) preferred: more likely to highlight the potential disadvantage of girls, compared to IMR and U5MR
 - Sex differentials in nutrition: better if disaggregated by age: biological factors less relevant after age 2
- Benchmarking!



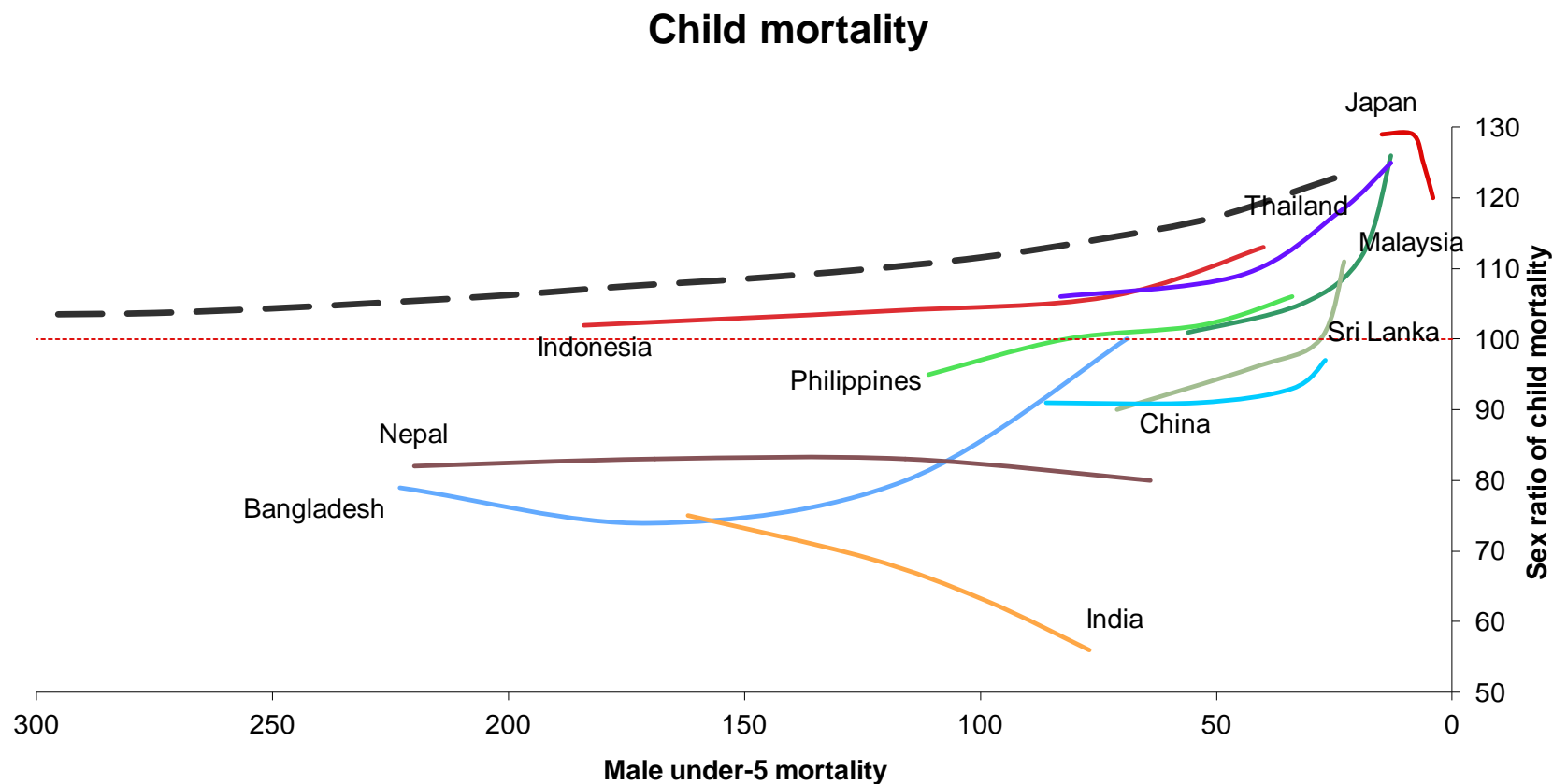
Historical change in the male-to-female ratio of mortality as under-five mortality declined in selected developed countries



Source: Sawyer, C.C. 2012. "Child Mortality Estimation: Estimating Sex Differences in Childhood Mortality since the 1970s." *PLoS Med* 9(8):e1001287.



How to identify the “real” gender gap?



Source: Constructed based on data from United Nations Population Division



Key messages

- Gender issues, not limited to basic ones
- Available data and limitations
- Quality of data and reflection on future data collection
- Analysis: biological vs social



Group exercises

Prepare a table on gender issues, data needed and sources of data for the topic health risk factors (life style related)



Example of gender issues	Data needed	Data source
Are young women or young men more likely current drinkers?	Number of current drinkers by sex and age	Household surveys such as World Health Surveys School-based surveys such as Global School-based Student Health Survey (GSHS)