Development of an Ethnographic Decision Tree Model for Women's Choice of Birth Attendance in Matlab, Bangladesh

APHA 135th Annual Meeting

Joyce Edmonds, RN, MPH, Emory University

Moni Paul, MSS, ICDDR,B

Lynn Sibley, PhD, Emory University

Learning Objectives

· Recognize the link between use of skilled birth attendants and maternal mortality.

· Describe the process for developing and testing an ethnographic decision tree model.

· Evaluate the decision criteria used by women making a choice about birth attendance during routine childbirth in

Maternal Mortality

- United Nations Millennium Development Goal (MDG-5) reduce maternal mortality by 75% by the year 2015.

- Worldwide 529,999 women die each year from pregnancy and childbirth complications.

- Mostly (99%) in developing countries during labor, birth and within 24 hour of birth.

- Half of births are attended by unskilled attendants including women, family caregivers and TBAs.
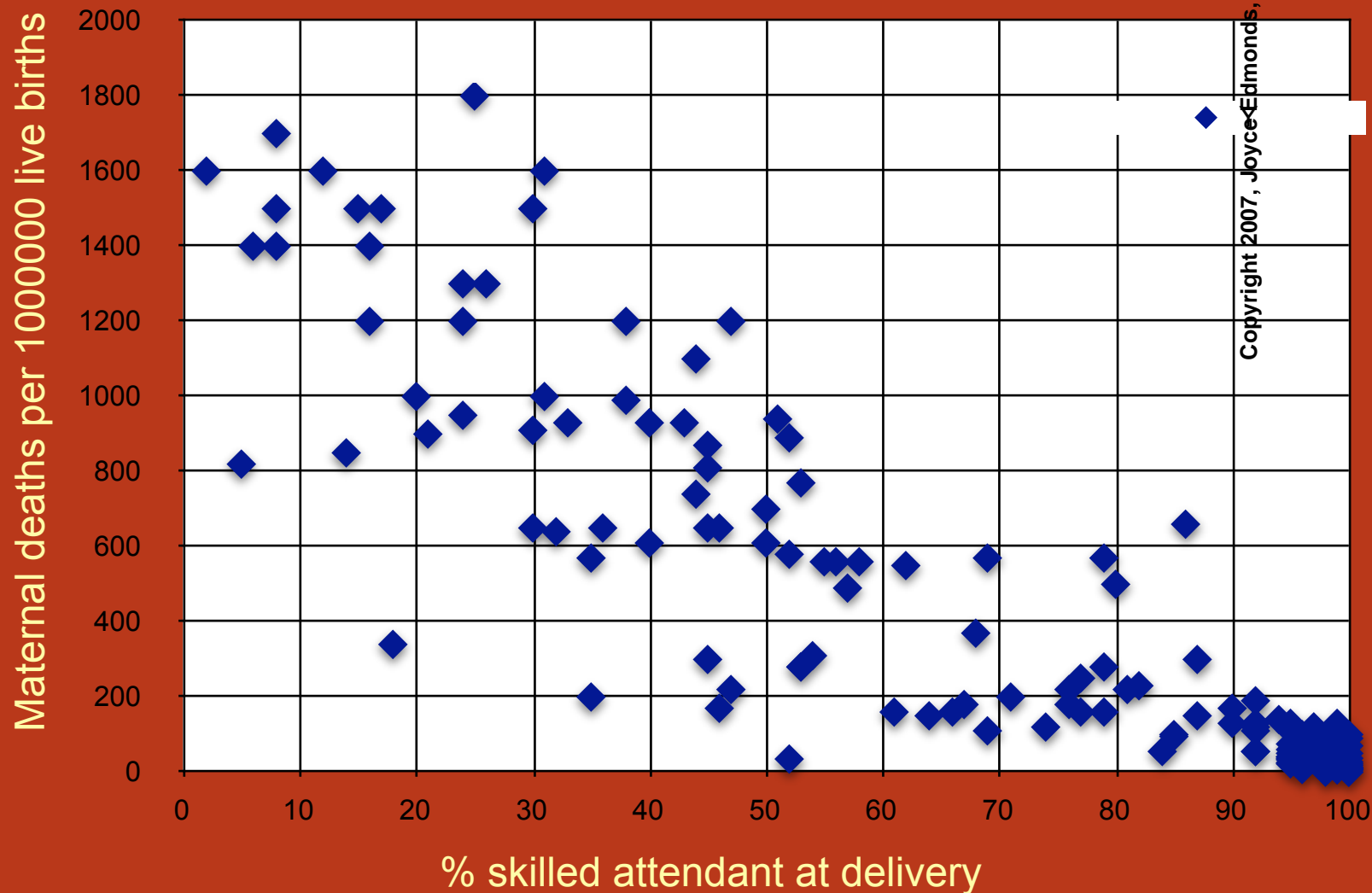
Maternal Mortality in 2000

Developed Countries
.5%

Latin America/ Caribbean 4%

Asia 47.5%

Africa 48%
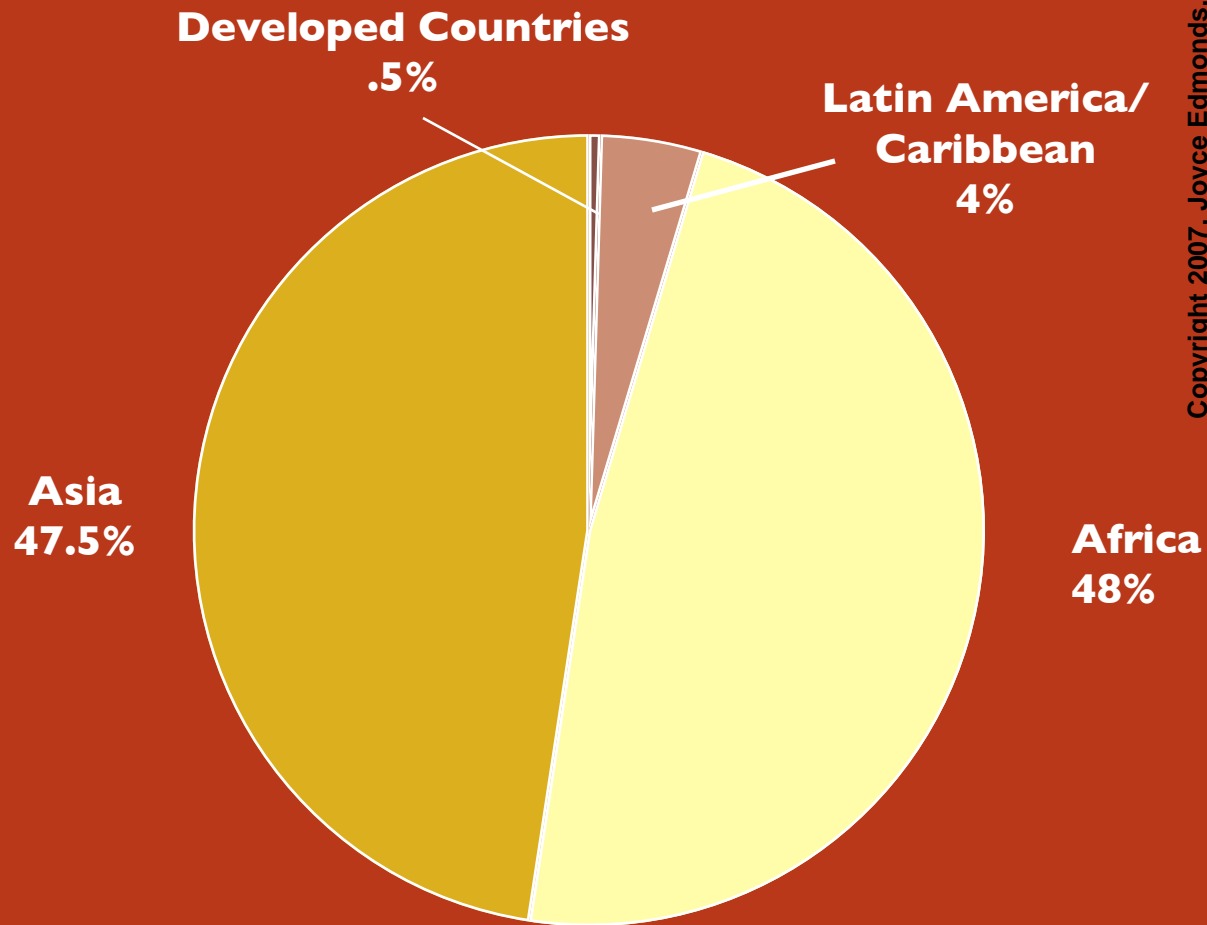
Total estimated deaths in 2000 = 529,000

Safe Motherhood

- All pregnant women are at risk of developing life threatening complications;

- Most complications can be neither predicted or prevented;

- Once a women develops a life threatening complication she needs prompt access to emergency obstetric care services if death and disability are to be prevented.

Maternal Mortality and Skilled Birth Attendance

Three Delay Model

**Factors Affecting
Service Use & Outcome**

'Delays'

Socioeconomic / Cultural Factors

Accessibility of Facilities

Quality of (EmOC)

Delay 1
Deciding to Seek Care

Delay 2
Reaching Care

Delay 3
Receiving Quality EmOC

Death
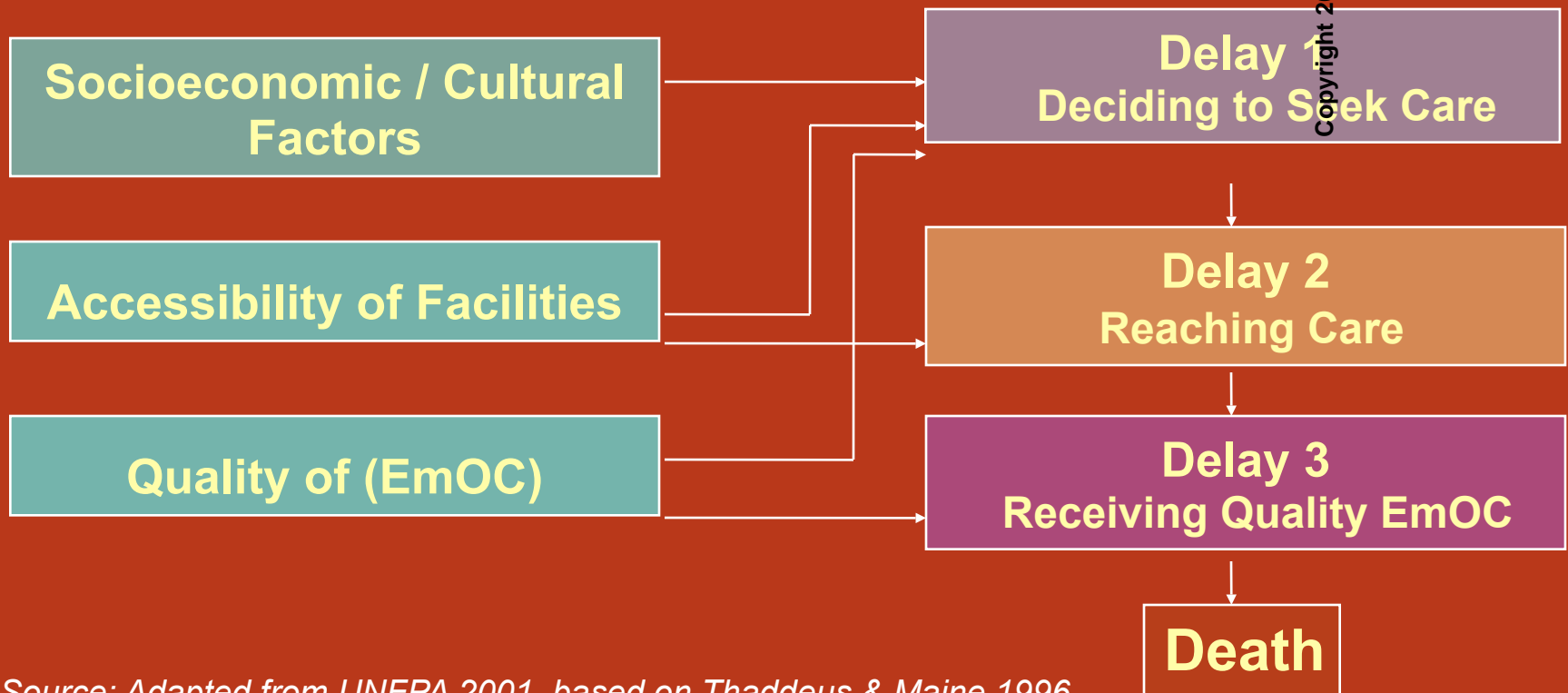
Source: Adapted from UNFPA 2001, based on Thaddeus & Maine 1996.

Bangladesh

Matlab, Bangladesh

- Matlab Health Services Area

- Health and Demographic Surveillance System (HDSS)

- Maternal and Child Health and Family Planning Program (MCH-FP)

Overall Purpose

- To investigate women's decisions to use or not use facilities during childbirth in an area where professional childbirth facilities are available.

- To reduce maternal and neonatal mortality in vulnerable populations.

Background

- Decision-making during the obstetric period can be routine or a reaction to a problem.
  - Deciding to access routine preventive care
  - Deciding to seek care as a result of a problem

- Three Phases of Health Care Utilization Decision Making.
  - I have a need to seek care
  - I feel I can seek care
  - I will seek care

Methodology

- <u>Design</u> Retrospective cross-sectional design using face-to-face interviews.

- <u>Sample</u> Purposive sample of women 18-49 years of age who had an uncomplicated live birth within 3 months of interview date. Sample from HDSS and active household recruitment strategy.

- <u>Data</u> Semi-structured interview guide, community based and hospital records.

- <u>Human Subjects</u> Approval obtained from Emory Institutional Review Board and ICDDR,B Ethical Review Board.

Demographics

Age	Total Births	Education	Religion	Marital Status
25.7 (SD 6.6)	2.40 (SD 1.4)	20% Never attended 20% 1-5 yrs 56% 6-10 yrs 4% 11-12 yrs	92% Muslim 8% Hindu	100% married

Ethnographic Decision Tree Modeling

- Elicit individual emic decision criteria and rules from one sample.

- Build model by combining individual decision criteria into a composite model which is hierarchical or treelike in nature (yes/no, if/then).

- Test model in a different sample.

Decision & Alternative

- Where to give birth or deliver?
  - Home
  - Facility

- Use Facility; Don't Use Facility

Organizing Principles

- Reduce monetary costs.

- Reduce ambiguity, uncertainty and/or fear.

- Meet needs for "cultural comfort".

- Secure kinship support during labor and after birth.

- Maximize odds of effective outcome.

Decision-Making

- Perceived Complications

- Transportation

- Cost

- History/Experience

- Fear/Anxiety

- Risk Perception

- Religious Norms/Expectations

- Quantity and Quality of Kin Presence for Caretaking and Household Maintenance

Decision-Making

- Timing of labor
- Progress of labor
- Place during labor
- Household composition
- CHRW influence
- Family influence
- Agreement/Disagreement

Given a women is pregnant

{Use facility; Do not use facility}

▼

Did you have a preference or plan to deliver in a facility?

Yes ◄———————————————————————► N o

D i d   you have rapid progress of lab o r ?   D i d   you perceive complicat o n s ?

Y e s ◄——▲ N o   Y e s ◄——▲ N o

▼   ▼

D i d   you have enough? | NO USE | **W as cost of home delivery higher than facility?**

time   to   get   to   the facility?

Y e s ▲——▲ N o   Y e s ▲——▲ No

▼ | NO USE | | NO USE |

W as adequate transportation?
available?

Y e s ▲——▲ N o

▼ | NO USE |

W   as family support to accompany
and attend at facility available?

Y e s ▲——▲ N o

▼ | NO USE |

| USE |

Copyright 2008 Joyce Edmonds, jkedmon@emory.edu

Limitations

- Recall Issues

- Temporal Dimension of Decision Process

- Distributed Decision Making Process

Next Steps

- Formulate a questionnaire with dichotomous answers, based on the model.

- Conduct face to face interviews on a new sample.

- Find the degree of concordance with the model.

- Calculate the error rate.

- Devise an alternative model if needed based on errors.

Conclusions

- Decision-making about place of birth presents challenges to women and their caregivers and requires a balance of risks and benefits according to individual circumstances which are shaped by social and culture patterns.