Inequalities in cesarean section delivery in Vietnam: a population-based perspective

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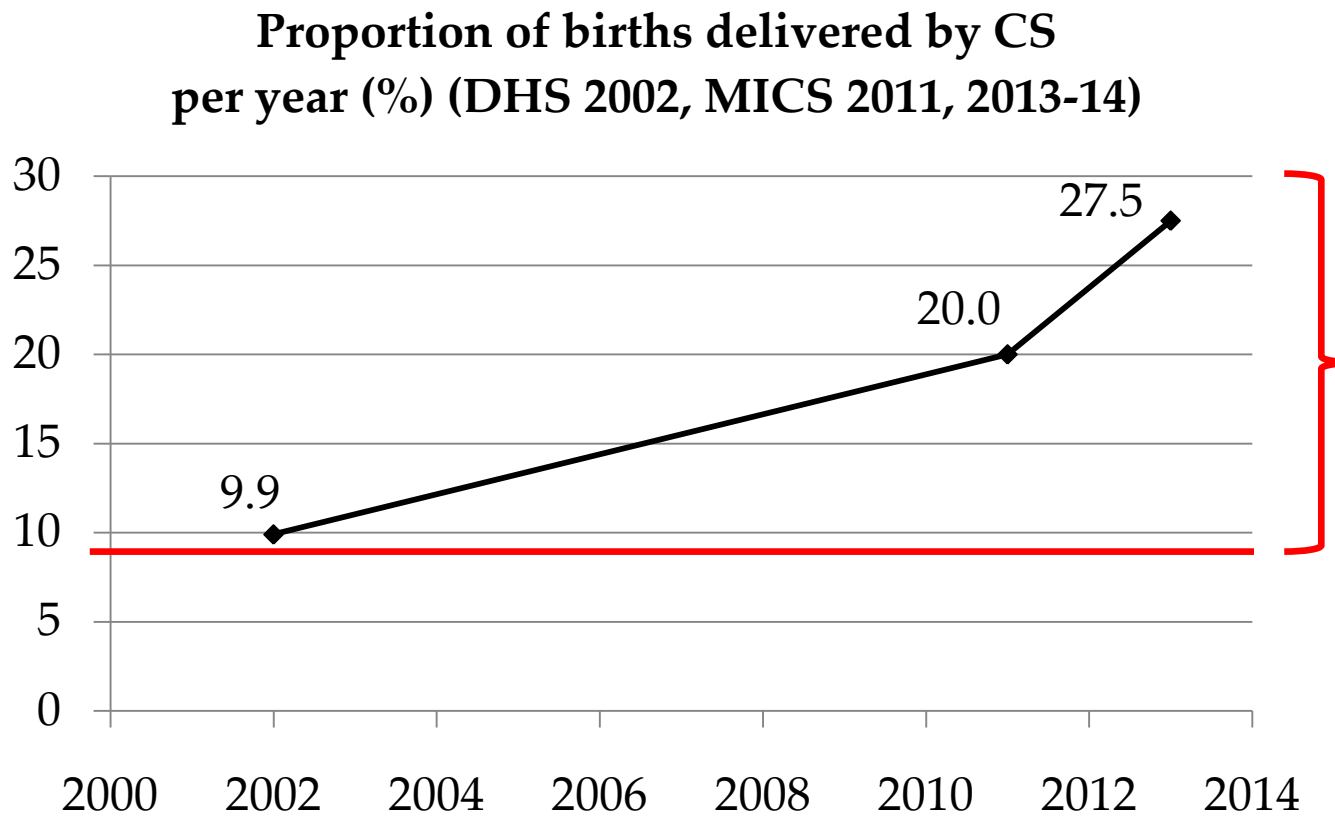
Overview

- A public health concern
- Objectives
- What do we know about inequalities in caesarean section (CS)?
- Analysis of data from national survey (MICS 2013-14)

- Geographic profile
- Main correlates of caesarean section
- Discussion: inequality, health and CS

- Conclusion and perspectives

A public health concern



- No reduction in marternal and newborn mortality rates
- Potential negative consequences for maternal and infant health
- Risks for future pregnancies
- Costly

(WHO 2014, Lumbiganon et al. 2010)

› Rapid increase, high level
› 94.3% deliveries in medical infrastructures
› At home: 8.4% deliveries with skilled medical assistance
› 89.4% ANC with assistance of doctor

CePeD
Centre Population & Développement

Objectives

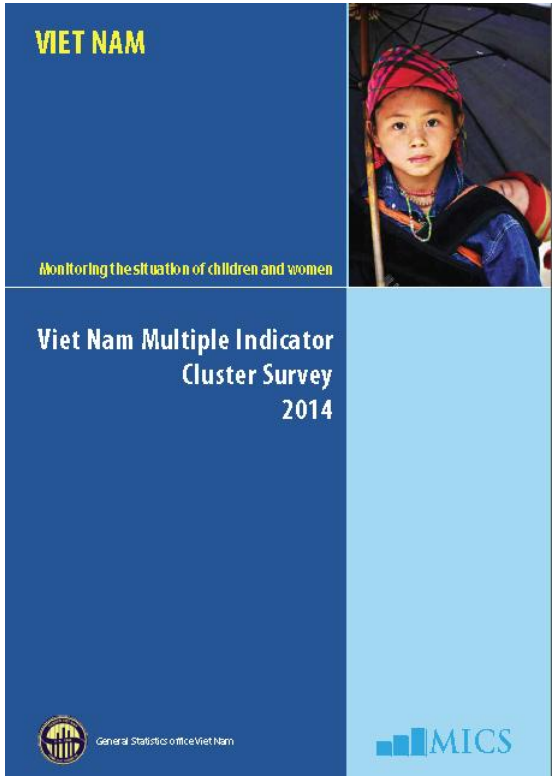
To what extent do
sociocultural and economic **inequalities**
contribute to discrepancies
in **caesarean section** delivery rates?

Potential sources of inequalities

Clinical but also institutional, sociocultural, demographic, economic and community factors

- **Access** to antenatal services (Irani, 2015; Kottwitz, 2014) in Vietnam (Leone et al., 2008)
- Higher **economic** background in Southern Asia, SS Africa (Cavallaro et al. 2013) and Vietnam (Leone et al., 2008)
- **Urban** in Southern Asia and SS Africa (Cavallaro et al. 2013)
- **Organization** of health infrastructure (Brugeilles 2014)
- **Gender** and **body** norms (Brugeilles, 2014)
- Benefits from **social protection** system (Lo 2003)
- **Auspicious days** in the Chinese lunar calendar (Lo, 2003), **lucky hour** birth in Vietnam (Baravilala UN cited by Thanh Nien, 2013)
- Less **interactions** with friends and family (Leone et al., 2008)
- **Son preference** cf. Quang Ninh province (Dinh et al., 2012) (Guilmoto, 2012)

Analysis of national survey data



Population

- Representative sample for country, areas and regions
- 1464 women aged 15-49, at least one live birth in last 2 years
- 1477 (last) births from these women

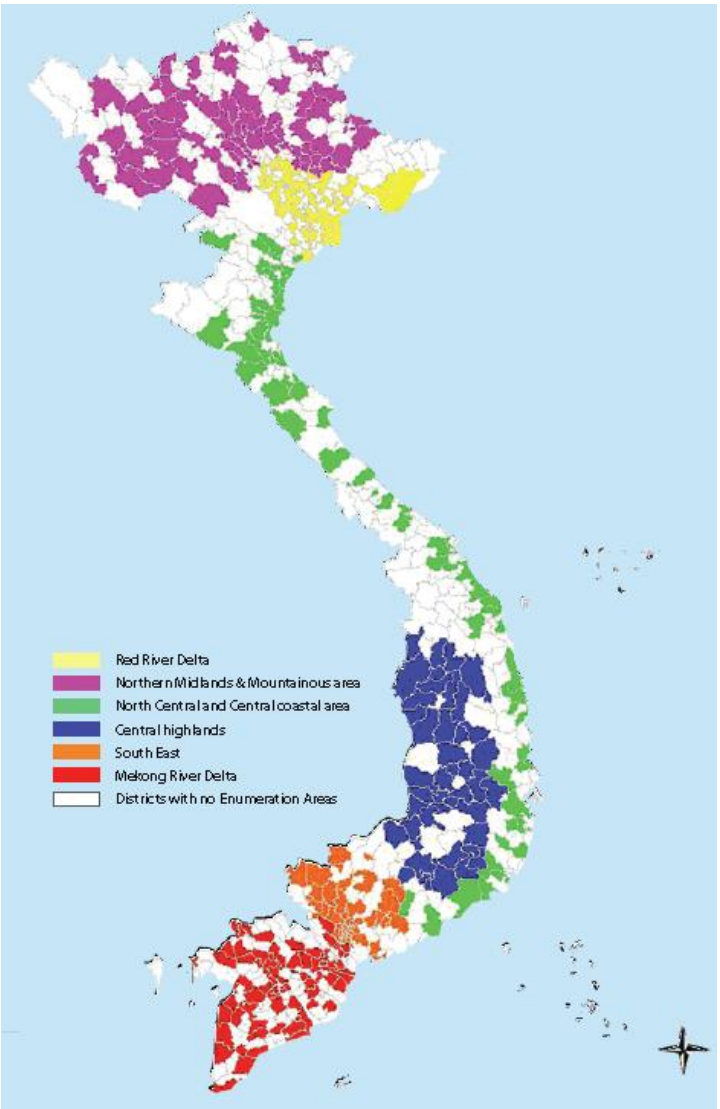
Variables

- Type of health facility: private, public, home
- Antenatal care: visits, assistance
- Newborn: sex, twinship
- Women: age, education, parity
- Household: wealth, education, ethnicity, relationship
- Geography: area, region

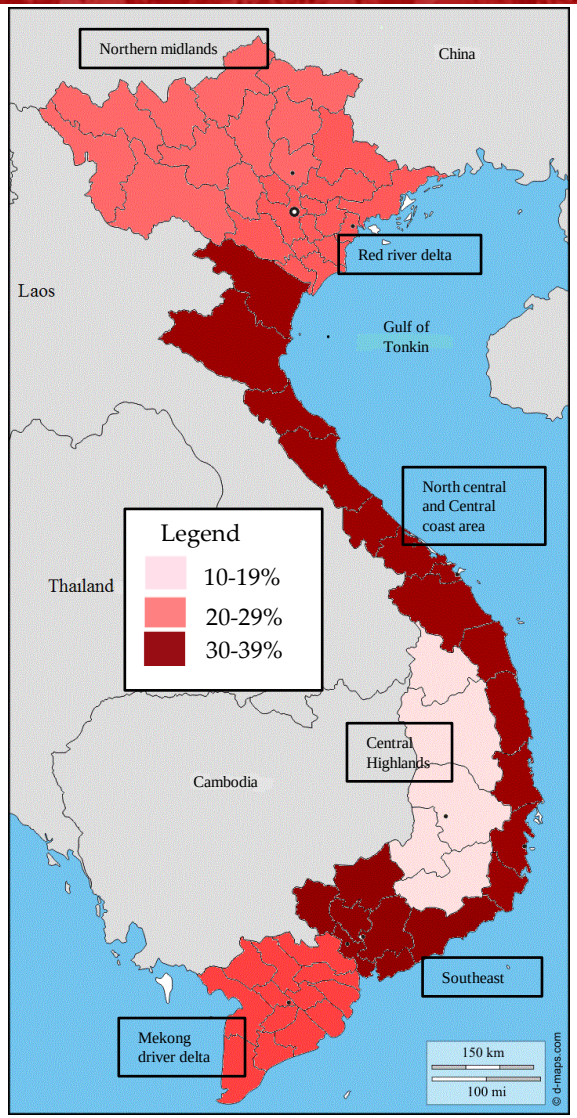
Analyses

- 2 rates: CS and CS decided BOL
- Identify relevant characteristics
- Include them in logistic regression model (Odds ratios)
- Usual level of risk ($p < 0.05$)

Geographic profile

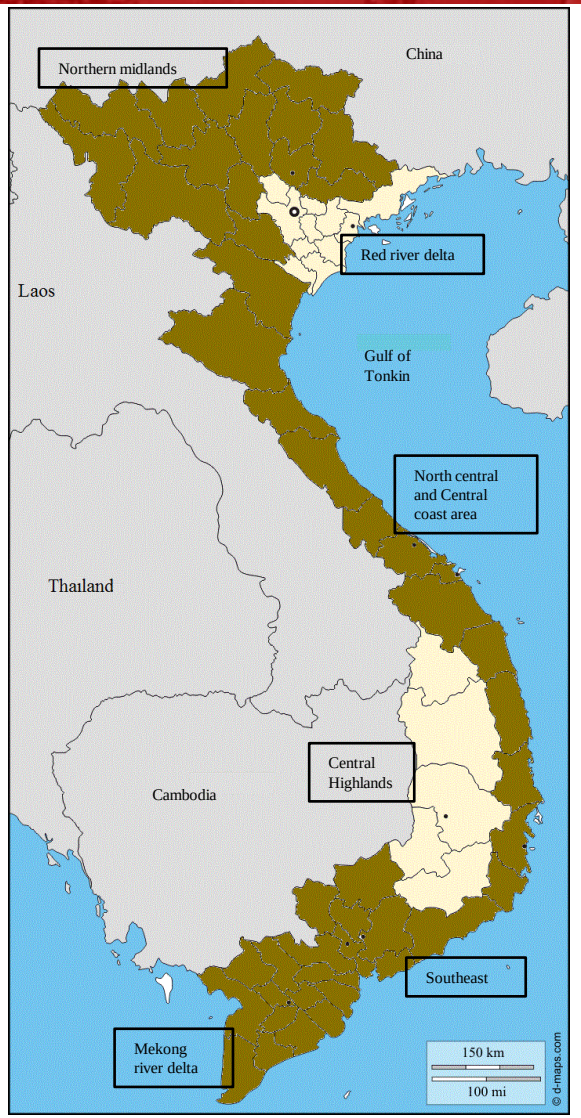


Sample



CS rates

Overall: 27.5%



Adjusted odds ratios

Main correlates of caesarean section

Higher CS rate for:	Odds ratios
Delivery in the **private** sector / public	-
Antenatal care with **doctor** assistance / no dr.	-
Nulliparous / multiparous	1.3
Aged **over 35** / 20-34	2.3
Education **upper 2ry, 3ry** / 1ry or less	1.7, 1.6
Urban area / rural	2.0
Red River D., Centr. Highl. / **North Centr. & South**	0.6, 0.5
Richest household / middle	-
Minority ethnic group / **Kinh**	0.6

- Overall: **27.5%**
- Nulliparous women: 30.6%
- No difference linked to sex of newborn
- Little number of twins (0.8%)

Main correlates of deciding CS before onset of labour

Higher rate for:	Odds ratios
Nulliparous / **multiparous**	0.2
Urban area / rural	-
Rich household / middle	2.3
Education of **HHH 3ry, upper 2ry**/ 1ry or less	-

Overall: **51.5%** of CS deliveries

NB CD decided BOL include elective and emergency medically indicated CS

Discussion: inequalities, health and CS delivery

High improvements but **rising inequalities** in health

- Especially antenatal care and skilled birth attendance (Axelson et al. 2012)
- Social determinants of health: influence of gender relations (Bui et al. 2012)

Access to CS : all rates >= 10%

- CS performed only in district and tertiary hospitals (Dinh et al., 2012), disparity in ANC adequacy in **rural** and urban areas (Tran et al. 2012), heterogeneity of costs
- Similar to structural determinants of ANC and skilled birth attendance in MICS 2006 although **ethnicity** over and above wealth and education (Goland et al. 2012)
- Ethnicity partly explained by ANC attendance and delivery at home (Malqvist et al. 2011)

2 contrasted **target populations**:

- CS: Nulliparous urban women
- CS BOL: Multiparous women in rich households

Conclusion and perspectives

Preliminary results

› Influence of socioeconomic situation confirmed

Study to be complemented with:

› **Clinical-obstetric** characteristics and birth history (Robson classification) (Triunfo 2015)

› **Access** to health infrastructures

› **Attitudes** and beliefs: influence of auspicious time, preference for son, gender norms

› Public health **policy**: hospital autonomization (London 2013)

› Influence of the **family** (Craig 2002)

Comparisons with:

› Southeast asian countries: Cambodia (DHS)

› Europe: France

Thank you for your attention