

Anticipations, Preferences and Costs - A Cost-Benefit-Analysis comparing Consultant-Led Care and Midwife-Led Care in Germany

University of Applied Sciences Osnabrueck, Faculty of Business Management and Social Sciences

Network of Midwifery Research

Knape N, Haubrock M, Sayn-Wittgenstein F zu

(hebammenforschung@fh-osnabrueck.de)

www.german-network-midwifery-research.de

Funding Source: Federal Ministry of Education and Research (01 GT 0616)

Background

Germany has an increasing demand for economic evaluation on health care programmes. The legal framework stated in the German Social Code Book (SGB V) requires health economic studies.

Regarding maternal health, the c-section rate is increasing rapidly in Germany from 18% in 1995 to 30% in 2006 [10]. Apart from health effects for women and children, rising medical intervention rates cause increasing costs. In Germany, the majority of women (98%) give birth in a hospital. Results of international studies identify less medical interventions in midwife-led units as in consultant-led care units combined with a positive neonatal and maternal outcome [1,5]. Economic evaluations in Germany comparing models in maternity care are unique. Results of international studies, conducted in other countries (e.g. Canada or Scotland), are only restricted transferable to the German health system. The purpose of this study is to compare midwife-led care with consultant-led care for healthy women ("low-risk").

Purposes

- ◆ What about efficacy, comparing midwife-led care with consultant-led care in Germany?
- ◆ Are there any differences between costs and quality of these two care options?
- ◆ Will midwife-led care units lower costs and keep the same quality of care as consultant-led care units?
- ◆ What are women's preferences?
- ◆ Will there be decreasing costs because of increasing working experiences of midwives?
- ◆ Are there differences in efficacy, comparing women's views, the perspective of insurance companies and perspective of health care providers?

Which perspectives has to be taken?

- ◆ Women's view on different care option
- ◆ Perspective of the society
- ◆ Perspective of caregiver



Design

- ◆ Cost-benefit analysis
- ◆ Piggy-back designed to a prospective controlled multicenter study
- ◆ The study started in 2007 and will be finished in 2010
- ◆ Sample Size: 750 low-risk-women

Instruments:

- ◆ Closed-ended Willingness-to-pay questionnaire (WTP) is used in pregnancy (t1)
- ◆ Workload assessment for obtaining staffs working-time (t2)
- ◆ Documentation tool during birth (t2)
- ◆ Posted Questionnaires eight weeks (t3) and six months (t4) after birth.
Contents are: WTP, EQ-5D, SF-6D and the Edinburgh Postnatal Depression Scale (EPDS) et al.

Methods

Requirements in methodology of economic evaluations demand results in monetary units for costs and benefits [4].

Evaluating the costs:

Costs were derived from activity-based-costing in labour room. Time registration was designed to analyze the involvement of professionals in process of labour.

Birth documentation was developed to register intervention and outcome parameter and to evaluate the expenditures on material.

Evaluating the benefits:

Women's anticipations and preferences are obtained with a closed-ended willingness-to-pay questionnaire [3,8] during pregnancy. It was asked how much money women would pay for their preferred care model. The willingness-to-pay as well as the savings are defined as benefit. Thus, the individual benefit can be measured. The sum of individual benefits is defined as societal benefit for cost-benefit analyses.

Eight weeks and six months postpartum women are asked once more about potentially changing willingness-to-pay and about their health-related quality of life using SF-36 [2] and EQ-5D [11].

Cooperation partners and hospitals

Prof. Wolfgang Greiner, University of Bielefeld, Faculty of Health Sciences
Dr. Hermann Pohlabein, BIPS, University of Bremen
Asklepios Klinikum Barmbek (Hamburg)
Asklepios Klinikum Harburg (Hamburg)
Klinikum Bremerhaven-Reinkenheide
Klinikum Stuttgart

Discussion

This is the first economic evaluation in Germany on the scope of maternity care models.

The implementation of midwife-led care units may decrease costs and medical intervention rates. Results of the study can be applied for the decision-making of allocating resources and may be helpful for health care insurance, health care providers and consumers.

The results may also support the diversity in maternity care and expand the knowledge about women's perceptions.

To focus more on efficiency and health-related quality of life results contemporaneous research is conducted. The cost-benefit analysis is attended by a cost-effectiveness analysis as well as a cost-utility analysis.

Ethical Issues

The study strictly adheres to „Good Clinical Practice“ and the Declaration of Helsinki. Informed consent was given. Ethics approval was obtained.

Literature

- [1] BODNER-ADLER, B.; BODNER, K.; KIMBERGER K.; LOZANOY, P.; HUSSLEIN, P.; MAYERHOFER, K.: Influence of the birth attendant on maternal and neonatal outcomes during normal vaginal delivery: a comparison between midwife and physician management. In: Wiener Klinische Wochenschrift, 30, 2004, (116): 379-384.
- [2] BRAZIER, J.; USHERWOOD, T.; HARPER, R.; THOMAS, K.: Deriving a Preference-Based Single Index from the UK SF-36 Health Survey. Journal of clinical Epidemiology, vol. 51, no. 11, pp. 1115-1128, 1998.
- [3] DONALDSON, Cam; HUNDLEY, Vanora; MAPP, Tracy: Willingness to pay: A method for measuring Preferences for maternity care? In: BIRTH, 1998, H. 3, S. 32-39.
- [4] DRUMMOND, Michael F.; SCULPHER, Mark J.; TORRANCE, George W.: Methods for the Economic Evaluation of Health Care Programmes. Third Edition. New York (Oxford University Press) 2005. (= Oxford Medical Publications)
- [5] HATEM, Marie, SANDALL, Jane, DEVANE, Declan, SOLTANI, Hora, GATES, Simon: Midwife-led versus other models of care for childbearing women. Cochrane Review. In: The Cochrane Library, Issue 4, Chichester, UK: John Wiley & Sons, Ltd, 2008.
- [6] HENDERSON, J.; MCCANDLISH, R.; KUMIEGA, L.: Systematic review of economic aspects of alternative models of delivery. In: BJOG: an International Journal of Obstetrics and Gynaecology, 2001, H. 108, S. 149-157.
- [7] HUNDLEY, Vanora A.; DONALDSON, Cam; LANG, Gordon D.: Costs of intrapartum care in a midwife-managed delivery unit and a consultant-led labour ward. In: Midwifery, 1995, H. 11, S. 103-109.
- [8] RYAN, Mandy; RATCLIFFE, Julie; TUCKER, Janet: Using Willingness To Pay to value alternative models of antenatal care. In: Social Science Medical, 1997, H. 3, S. 371-380.
- [9] WHO TECHNICAL WORKING GROUP: Safe Motherhood. Care in normal birth: a practical guide. Geneva 1996.
- [10] www.destatis.de
- [11] www.euroqol.org