



# “PRIORITIES OF HEALTH ECONOMICS IN AFRICA”

Inaugural Conference of the African Health Economics and Policy Association (AfHEA)  
10th – 12th March 2009 - Accra, Ghana

## Parallel session 1: Economic evaluation

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### PS 01/8

#### **Cost effectiveness analysis of the training of medical doctors in emergency surgery compared to alternative training strategies for improving access to emergency obstetric care in Burkina Faso**

Hounton Sennen<sup>1</sup>, Danielle Belemsaga<sup>2</sup>, Newlands David<sup>3</sup>, Meda Nicolas<sup>2,4</sup>, De Brouwere Vincent<sup>5</sup>

<sup>1</sup> University of Aberdeen, Scotland, UK & WHO Multi Disease Surveillance Centre (shounton.muraz@fasonet.bf)

<sup>2</sup> Centre MURAZ, Burkina Faso

<sup>3</sup> University of Aberdeen, Scotland, UK (d.newlands@abdn.ac.uk)

<sup>4</sup> University of Ouagadougou, Burkina Faso (nmeda.muraz@fasonet.bf)

<sup>5</sup> Institute of Tropical Medicine, Antwerp, Belgium and Institut de Recherche pour le Développement INAS, Rabat, Morocco (VDBrouwere@itg.be)

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#### **Objectives:**

The aim of this paper was to assess the cost effectiveness of a training strategy in emergency surgery for medical doctors at district level compared to alternatives.

#### **Methods:**

Case extraction forms were used to systematically record data on caesarean sections performed in 2004 and 2005 in district hospitals of 6 out of the 13 health regions of Burkina Faso. Effectiveness was assessed using post caesarean complications (haemorrhage, infections, and loosening surgical sutures) and case fatality rates of mothers and newborns. A macro approach was used for costing caesarean section, to derive costs estimates per selected outcomes from the health system's perspective, and incremental cost effectiveness ratios were computed per outcomes and providers. All costs were annualised using useful lifespan for type of providers and capital items, and 3% discount rate. The allocation of total costs to caesarean section and all other care was by appropriate proxies of the volume and time of caesarean section. Sensitivity analysis was conducted on major costs categories.

#### **Results:**

Overall, cases-mix per provider was comparable. Newborn CFR (per thousand) varied significantly among obstetricians, general practitioners and clinical officers and were 99, 125 and 198 respectively. The estimated average cost per averted one additional newborn death (x 1,000 live births) for obstetricians led teams compared to general

practitioners led teams and for general practitioners compared to clinical officers were \$11757 and \$200 international dollars respectively. Training of general practitioners appears therefore to be both effective and cost-effective in the short run. Clinical officers are associated with a high level of newborn CFR.

**Conclusion:**

Training substitutes is a viable option to increase access to life saving operations in district hospitals. Trained nurses' strategy requires an immediate attention to reduce the case fatality rates of newborns after caesarean sections. This high newborn CFR could be addressed by a refresher course and closer supervision. These findings may assist in addressing supply shortage of skilled health personnel towards safer delivery in Sub Saharan Africa.

Keywords: Human resources, emergency obstetric care, cost-effectiveness, Burkina Faso