

# **The Unmet Obstetric Needs Network**

***Final Report***

***Part I. Synthesis***

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Dominique Dubourg  
Vincent De Brouwere  
Wim Van Lerberghe  
Fabienne Richard  
Vincent Litt  
Marc Derveeuw

Strengthening Essential Obstetric Care, basic and comprehensive, is the key strategy to obtain rapid improvements in safe motherhood. Essential Obstetric Care encompasses a wide range of interventions. These include a set of major surgical and technical interventions that may be required to treat a number of conditions that directly threaten the life of the mother during labour.

For a number of these interventions, the "major obstetric interventions for absolute maternal indications"<sup>1</sup> it is possible to map under-utilisation: the unmet need for this type of care.

In countries with high levels of maternal mortality policy makers and health care providers are often unaware of the extent of the unmet need for essential obstetric care - and of the often very real possibilities to improve things. Mapping unmet need for these "major obstetric interventions for absolute maternal indications" does not measure all the unmet need for basic or comprehensive essential obstetric care. It can however be useful to trigger the interest of a wide range of actors, lay and professional, in improving maternal health policies and services.

The UON network brings together ministries of health, development organisations, scientific institutions and practitioners who want to map unmet need for "major obstetric interventions for absolute maternal indications" as a starting point - not just to improve maternal health but also the overall functioning of their health care system. The UON-network provides technical support for national teams involved in this kind of work, as well as opportunities to learn from each other.

<sup>1</sup> Major Obstetric Interventions: caesarean section, laparotomy for uterine breach, internal version, symphysiotomy, craniotomy.

Absolute Maternal Indications: severe antepartum haemorrhage (placenta praevia and abruptio placentae), severe postpartum haemorrhage, foeto-pelvic dystocia, malpresentation (transverse lie and brow presentation).



UON Network – Unmet Need for Major Obstetric Interventions  
Co-ordination and Management Team  
<http://www.uonn.org> – e-mail : [UON@itg.be](mailto:UON@itg.be)

**The UON Network is supported by:**



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**Co-ordinated by :**



Institute of Tropical Medicine (ITM)  
Department of Public Health  
Nationalestraat 155  
2000 Antwerpen / Belgium

**In collaboration with:**

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## **ABBREVIATIONS**

AMI: Absolute Maternal Indication  
BADC: Belgian Co-operation (Administration Générale de la Coopération au Développement)  
CAM team: Co-ordination and Management team  
CERRHUD: Centre de Recherche en Reproduction Humaine et Démographie (Benin)  
DGA (AGM): Assistant General Manager  
DHS: Demographic and Health Survey  
DSF: Direction de la Santé Familiale  
EC DG-DEV: European Commission Development Directorate-General  
EU: European Union  
GTZ: Gesellschaft für Technische Zusammenarbeit (German Cooperation)  
HC: Health Centre  
HSA: Health Services Academy (Pakistan)  
ICHD: International Course in Health Development  
INAS: National Institute of Health Administration (Morocco)  
MDC: Master of science in Disease Control  
MMR: Maternal Mortality Ratio  
MOH: Ministry of Health  
MOI: Major Obstetric Intervention  
MUCHS: Muhimbili University College of Health Sciences (Tanzania)  
NGO: Non-Governmental Organisation  
PADS: Programme d'appui au Développement de la Santé (Benin)  
UN : United Nations  
UNFPA: United Nations Population Fund  
UNICEF: United Nations Children's Fund  
UON: Unmet Obstetric Need  
USAID: United States Agency for International Development  
WB: World Bank  
WHO: World Health Organisation

## 1. BACKGROUND

During the 1990s the international community has made a major effort to better document the magnitude of maternal health problems, and particularly maternal mortality. To measure the extent of this staggering human tragedy, and the failure of many health systems to meet the most basic needs for health care of the women in their constituencies, widespread use was made of maternal mortality ratios (MMR). Although this was pivotal in mobilising policy makers it was clearly not enough to understand what works, what works not and what should be done.<sup>1</sup>

The 'First Safe Motherhood Decade' also saw a number of initiatives that tried to go beyond documentation and advocacy. MotherCare focused on improving the quality of hospital obstetric care and referral systems.<sup>2</sup> The 'Prevention of Maternal Mortality Programme' of Columbia University<sup>3</sup> and their 'Averting Maternal Death and Disability Initiative' promoted the notion of Emergency Obstetric Care, the use of process indicators and the reliance on networks and human rights principles.<sup>4</sup> WHO marketed the concepts of *Basic and Comprehensive Essential Obstetric Care*.<sup>5</sup> The *Unmet Obstetric Needs Network*, the subject of this report, was part of this same movement: an attempt to go beyond the mere measurement of the extent of maternal health problems, and to find inroads to do something about it.

The starting point was a rather simplistic idea: if one could provide a cheap, reliable, and easily understandable picture of what health care systems *should* provide to deal with obstetric problems in a given population, of the care it *actually delivers*, and of the *gap* between both – the unmet need for care –, this could focus the attention of planners, donors, operators and other stakeholders on bridging the gap rather than on measuring the extent of the human disaster. A way to do this – inspired on previous work in the Congo and in Morocco<sup>6</sup> – was to map the difference, area per area, between the number of major interventions needed to avert maternal deaths, and the actual number performed.<sup>7</sup> The assumption was that failure to perform the needed interventions would result in avoidable deaths, disability and suffering. This information, coupled with information on the availability of resources, would increase awareness, pinpoint where the major problems are located, and kick-start a discussion among stakeholders on how to start improving things at local and at country level.

In 1997 the European Commission and a number of other agencies decided to launch a formal Unmet Obstetric Needs Network. This UON network brought together ministries of health, development organisations, scientific institutions and practitioners who wanted to map unmet need for "major obstetric interventions for absolute maternal indications" as a starting point - to improve maternal health care and the overall functioning of their health care system. The network had to develop and test the UON approach, provide technical support as well as opportunities to learn from each other for national teams involved in this kind of work, and help countries to improve the way their health care systems deal with maternal health.

<sup>1</sup> Graham W. J, Filippi V. G, and Ronsmans C. 1996. Demonstrating programme impact on maternal mortality. *Health Pol Plann*, 11 (1): 16-20.

<sup>2</sup> Koblinsky M. 1996. Improving obstetrical and neonatal management: lessons from Guatemala. *MotherCare Matters*, 4, 1-3.; Jessop S. M. 1999. Progress in Guatemala over the past decade. *MotherCare Matters*, 8 (4): 3-7.

<sup>3</sup> Maine D. 1997. Lessons for program design from the PMM projects. *Int. J Gynaecol. Obstet*, 59 (Suppl 2): S259-S265.

<sup>4</sup> Maine D and Rosenfield A. 2001. The AMDD program: history, focus and structure. *International Journal of Gynecology & Obstetrics*, 74: 99-103.

<sup>5</sup> WHO. 1991. Essential elements of obstetric care at first referral level, Geneva: WHO; Adeyi O. and Morrow R. H. J.. 1996. Concepts and methods for assessing the quality of essential obstetric care. *Int J Hlth Plan Man* 11, 119-134; Penny S. and Murray S. F.. 2000. Training initiatives for essential obstetric care in developing countries: a 'state of the art' review. *Health Policy Plan*. 15 (4): 386-393.

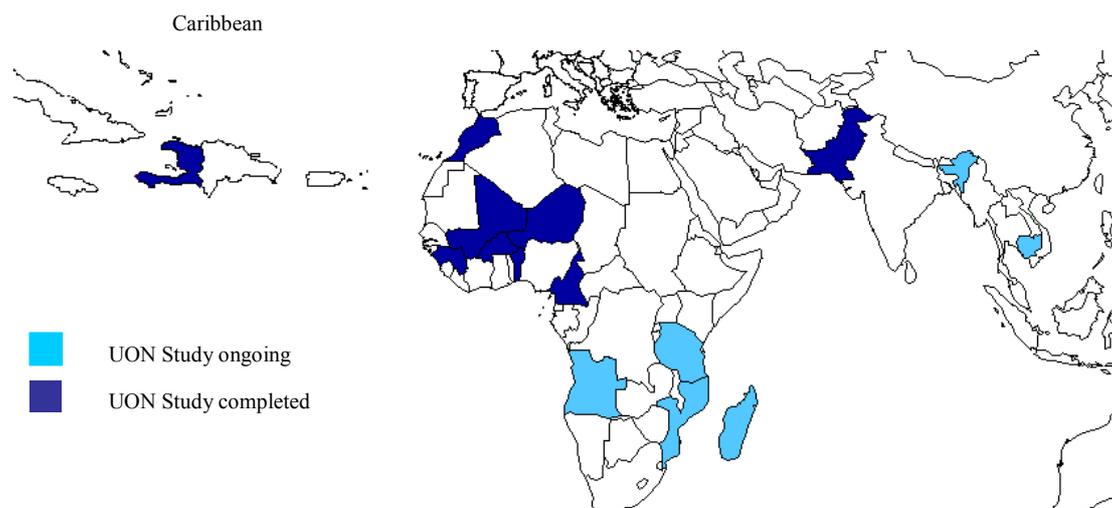
<sup>6</sup> Van Lerberghe, W, Pangu K. A, and Van den Broek N. 1988. Obstetrical interventions and health centre coverage: a spatial analysis of routine data for evaluation. *Health Pol.Plann*. 3: 308-314; Van den Broek N, Van Lerberghe W, and Pangu K. A. 1989. Cesarean sections for maternal indications in Kasongo (Zaire). *Int. J. Gynecol. Obstet*. 28: 337-342; INAS. 1992. *Approche de la mortalité et de la morbidité maternelles au Maroc*. INAS and Ministère de la Santé Publique du Royaume du Maroc eds. 130p. Casablanca: Ministère de la Santé du Maroc.

<sup>7</sup> Tackling Unmet Need for Major Obstetric Interventions. Module I. *Concepts, General Principles and International Network*. <http://www.uonn.org>.

The network became operational in 1999. Its remit was to create tools and guidelines, to get at least seven countries to voluntarily sign up for conducting a UON exercise, and to evaluate the usefulness of the approach and the national exercises. Additionally, these exercises were to give a better picture of the nature and extent of unmet need for obstetric care in poor countries. The core funding for this work came from an EC grant covering the period between September 1998 and November 2001.

Ministries of Health or Research Institutes of twelve countries initially showed interest in conducting a UON exercise at national or regional level.<sup>8</sup> Seven would eventually complete the exercise: Benin, Burkina-Faso, Haiti, Mali, Niger, Pakistan, and Tanzania.<sup>9</sup> The total population covered was of approximately 65 million inhabitants with some 2.8 million births per year.

FIGURE 1. COUNTRIES EXPOSED TO THE UON APPROACH



This report summarises the main findings and lessons learnt by conducting the UON Exercises in these seven countries (the report does not cover Bangladesh, Cambodia and Cameroon where the UON exercise started after the formal end of the project). After taking stock of the tools that were developed, it summarises what these exercises teach us about the extent of unmet obstetric need in poor countries; the benefits to the countries that participated in the network; the use of the results for advocacy purposes, on the national and international scene. It also discusses whether conducting such exercises is really as fast and cheap as thought – in other words, whether it is an efficient way to kick-start change.

## 2. NETWORK OUTPUTS

The guidelines for implementing UON exercises at national or regional level have been developed by the co-ordination team of the Network, based at the Institute of Tropical Medicine in Antwerp. By March 1999 three modules were available in French and English: General Principles, Data Collection Protocol, and Data Analysis.<sup>10</sup> A fourth module (Guidelines for Interviewing Stakeholders and Analysing the Evolution of the Maternal Health Policy: a tool to document maternal health policies, strategies and practices) became available in 2000, and a Portuguese version of the first three modules in 2001.

Seven countries completed the exercise and produced national reports. Methods and preliminary results were discussed at two interregional meetings, one in Islamabad and one in Abidjan (Final Report Part. IV). The co-ordination team produced an inter-country comparison and seven national case studies (Final Report Part II).

<sup>8</sup> Bangladesh, Benin, Cambodia, Cameroon, Guinea Conakry, Haiti, Mali, Mozambique, Niger, Pakistan, Tanzania, Uganda.

<sup>9</sup> All twelve countries were visited by the coordination team, but in five the inclusion criteria (annex 3) were not met.

<sup>10</sup> See annex 14: Tackling Unmet Need for Major Obstetric Interventions. Module I. Concepts, General Principles and International Network; Module II. Establishment of the Protocol on the Collection of Data; Module III. Analysis of the Data and Presentation of the Tables. The modules can be downloaded from <http://www.uonn.org>.

The co-ordination team also organised an international expert meeting on Mother's Health and Health Services in Brussels in November 2000. It reviewed the evidence on current Safe Motherhood strategies. Published in English and French in 2001,<sup>11</sup> the review resulted in a strategy paper for the EC on « *Safe Motherhood and the European Commission: A strategy for improving maternal and perinatal health through strengthening health systems and services* », issued in April 2001.

### 3. LESSONS LEARNT

#### ***The extent of unmet obstetric need in poor countries***

The country UON assessments have resulted in a more robust estimate of the *a priori* need for major obstetrical interventions for absolute maternal indications than was the case before the network started. We can now be reasonably confident that the figure of 1.4% (CI 1.27%-1.52%) is a sensible low-end estimate of the proportion of deliveries that require a major obstetric intervention to avoid a maternal death.

In the countries that were surveyed only 1.1% of urban and 0.3% of rural mothers actually benefited from such an intervention. In other words, the deficit, the '*unmet need for major obstetrical interventions*', was of 25% in urban and 79% in rural areas (Table 1).

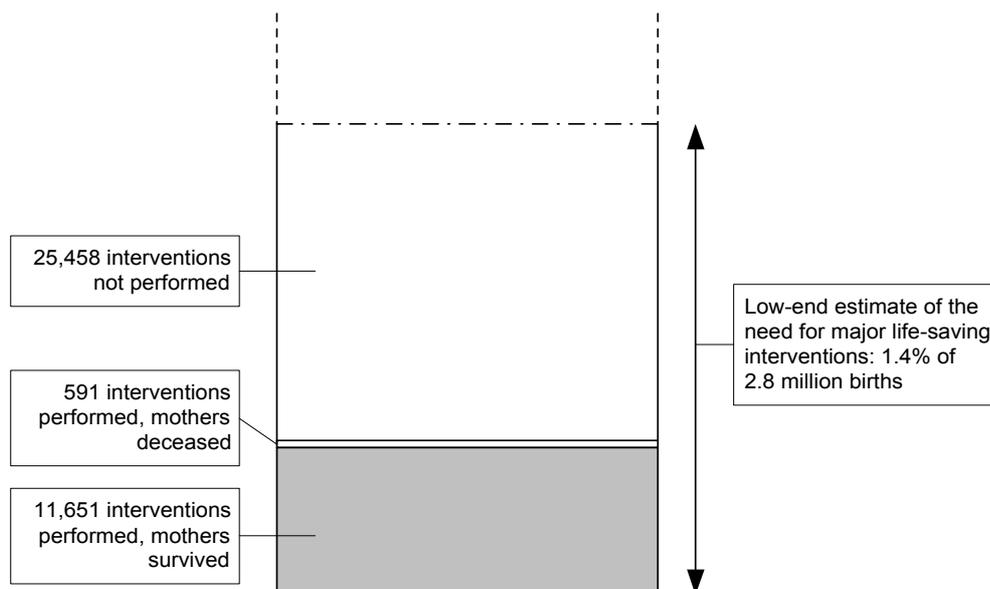
TABLE 1. DEFICITS IN MAJOR OBSTETRIC INTERVENTIONS  
FOR ABSOLUTE MATERNAL INDICATIONS IN THE SEVEN COUNTRIES AND IN MOROCCO

Urban population	MOI/AMI		Deficits			
	Expected	Observed	Number	(CI)	%	(CI)
Benin	454	448	6	(-36 ; +45)	1.4%	(-9% ; +9%)
Burkina-Faso	779	614	165	(+93 ; +232)	21.2%	(+13% ; +27%)
Haiti	171	244	-73	(-89 ; -58)	-42.7%	(-57% ; -31%)
Mali	1,898	1,617	281	(+105 ; +443)	14.8%	(+6% ; +22%)
Niger	934	511	423	(+336 ; +503)	45.3%	(+40% ; +50%)
Pakistan	334	324	10	(-21 ; +39)	3.1%	(-7% ; +11%)
Morocco	3,549	2,354	1,195	(865 ; 1,499)	33.7%	(27% ; 39%)
Total	8,119	6,112	2,007	(1,254 ; 2,704)	24.7%	(17% ; 31%)
Rural population	MOI/AMI		Deficits			
	Expected	Observed	Number	(CI)	%	(CI)
Benin	1,533	1,007	526	(384 ; 658)	34.3%	(28% ; 40%)
Burkina-Faso	6,518	948	5,570	(4,956 ; 6,118)	85.4%	(84% ; 87%)
Haiti	1,130	153	977	(872 ; 1,074)	86.5%	(85% ; 88%)
Mali	4,960	985	3,975	(3,414 ; 4,400)	80.1%	(78% ; 82%)
Niger	7,319	807	6,512	(5,832 ; 7,139)	89.0%	(88% ; 90%)
Pakistan	1,059	450	609	(511 ; 700)	57.5%	(53% ; 61%)
Morocco	7,095	1,780	5,315	(4,656 ; 5,923)	74.9%	(72% ; 77%)
Total	29,613	6,130	23,484	(20,633 ; 26,022)	79.3%	(77% ; 81%)

To appreciate the significance of these proportions of unmet need it is useful to translate them into absolute figures as well. The studies in the various countries covered an estimated 2.8 million births. Out of those, at least some 37,700 were in need of a major life-saving major intervention for the indications considered. Only 12,242 of these interventions were actually performed. Of the women who benefited from an intervention between 93.8% (Burkina Faso) and 99.5% (Pakistan) survived, as did between 59% (Benin) and 97% (Pakistan) of the newborns. Some 25,500 pregnant women did not get the intervention they needed: they most probably died or suffered major disability. The extent of the unmet need is clearly related to access to health care infrastructure; this also explains much of the often considerable variation from one place to the other.

<sup>11</sup> Safe Motherhood Strategies: a Review of the Evidence, De Brouwere V & Van Lerberghe W eds. Antwerpen: ITGPress, 2001. 450 p.n. Réduire les Risques de la Maternité : Stratégies et Evidence Scientifique. De Brouwere V & Van Lerberghe W eds. Antwerpen: ITGPress, 2001. 480 p.n.

FIGURE 2. MET AND UNMET NEED  
FOR MAJOR LIFE-SAVING OBSTETRIC INTERVENTIONS IN THE COMBINED STUDY POPULATION



### **On the usefulness to a country of doing a UON exercise**

Obviously, the network did not set out to convince countries to conduct a UON exercise merely to establish a benchmark for international comparison. For the countries the primary objective was to improve their way of dealing with maternal health. With hindsight one can identify a number of areas in which conducting UON-exercises has brought benefits to the countries that participated in the network: (i) by providing national baseline maps for planning purposes and for monitoring performance; (ii) by boosting national capacities to do so; and (iii) by contributing to shifts in national policies – not in the least by providing a political opportunity to address human resources issues and to put safe motherhood on the agenda.

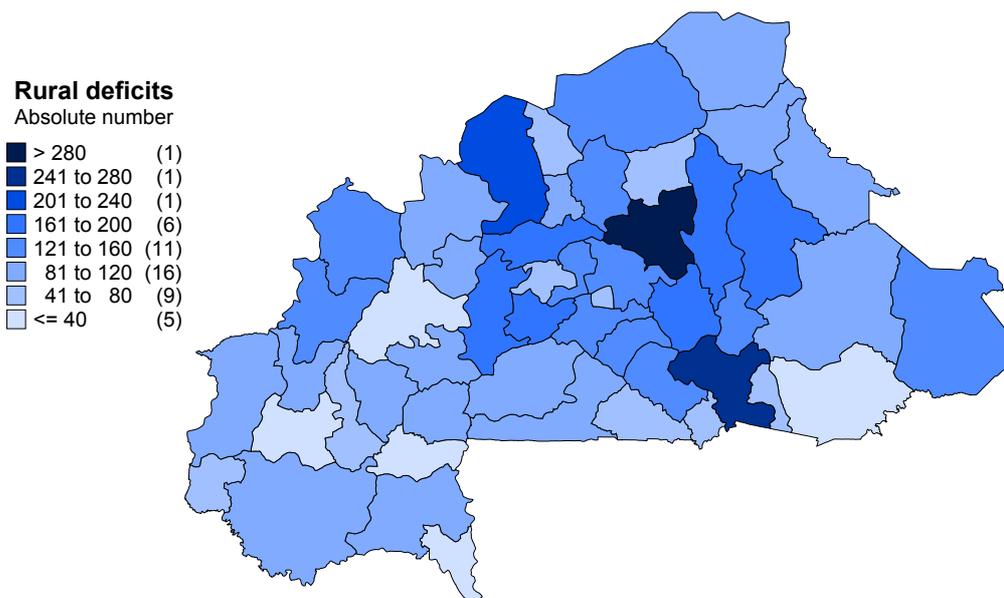
### **Baseline maps for planning and monitoring performance**

The most directly visible country level output is the mapping of unmet need, in the format showed in the example of Figure 3 for Burkina Faso. Such maps now exist at country level in Burkina Faso, Mali, Morocco, Niger, and at regional level in the others. Data collected during the survey can be used as a base line against which to measure progress in the coverage of the need for major obstetric interventions. Several countries (Tanzania, Mali and Burkina Faso) are presently doing so.

Such maps of the unmet need for major obstetric interventions are obvious tools for planners. They do not, however, merely locate where problems are biggest. The detailed analysis also gives an idea of the quality of care in the hospitals: the causes of the maternal deaths among those who underwent an obstetric intervention, early neonatal mortality, staffing and equipment, etc. With exhaustive information of this kind on every facility where interventions are performed, Ministries of Health have reliable information not only on the situation of referral level obstetric care, but indirectly on the overall performance of each unit in the health system.<sup>12</sup>

<sup>12</sup> Ronsmans C. 2001. How can we monitor progress towards improved maternal health? *Studies in Health Services Organisation & Policy*, 17: 317-342.

FIGURE 3. DISTRIBUTION OF UNMET OBSTETRIC NEED IN RURAL AREAS OF BURKINA FASO, DEFICITS IN ABSOLUTE NUMBER – UON 1998



This is not just snapshot information: the UON indicator has been used for assessing the repercussions of a refugee assistance programme on the host population in Guinea,<sup>13</sup> the development of the health services coverage in Cambodia,<sup>14</sup> the safe motherhood programme in Cameroon,<sup>15</sup> or the capacity of a health district to cope with crisis and disasters in Democratic Republic of Congo.<sup>16</sup> It is being tested for prospective monitoring of program performances in a number of countries.

### Capacity building

Each of the country-studies brought its share of experience and each constituted a learning experience for the research teams, the health district teams and sometimes also for the MOH's Maternal Health Division. Except in Pakistan (where a research institution led the collection of data and the analysis), all country teams were new to this mix of research, planning and management. Apparently a UON exercise is possible even in countries where research capacities seem almost non-existent at the outset. It is also important to note that data have been collected in countries where information systems, hospital files and other records are generally considered weak. The data turned to be surprisingly reliable: most likely the direct involvement of the actual care providers in the research motivated them to make full use of their local expertise – yielding more reliable and relevant information than would have been obtained by 'external researchers' alone.

The national teams have taken the time to discuss the UON concept with all the stakeholders (gynaecologists, District Medical Officers, researchers, Family/Maternal Health staff in MOH: the composition of various committees is presented in Annex 7) during the preparation for the actual work. This phase took between 7 and 14 months but was crucial for the taking over of the approach and eventually for the adaptation of the protocols to the specificity of the country. Country teams produced their own documents and reports; in Benin and Niger medical students made UON study or used previous UON data for their thesis work (Annex 1).

<sup>13</sup> Van Damme W, De Brouwere V, Boelaert M, and Van Lerberghe W. 1998. The host population can benefit from a refugee assistance programme. A spatial analysis of major obstetrical interventions in Guéckédou, Guinea (1988-96). *Lancet* **351**:1609-1613.

<sup>14</sup> Von Schreeb S. 2000. A survey of essential obstetrical needs, Siem Reap Province, Cambodia.

<sup>15</sup> Goyaux N. 2000. Les besoins obstétricaux dans la province de l'Adamaoua (Cameroun) en 1999. Département de la Vîna et du Faro Déo. 52p.

<sup>16</sup> Porignon D, Soron'Gane E. M, Lokombe T. E, Isu D. K, Hennart P, and Van Lerberghe W. 1998. How robust are district health systems? Coping with crisis and disasters in Rutshuru, Democratic Republic of Congo. *Trop Med Int Health* **3** (7): 559-565.

## Policy shifts

From the initiation to the final feedback, the study process took on average two years. As had been the case in Morocco ten years ago, the magnitude of deficits contributed to the awareness of the crucial role of hospitals in the reduction of maternal mortality. This encouraged programme managers to intensify or start the development of emergency transport systems (Burkina Faso, Mali). Safe Motherhood remained on the policy agenda throughout, as district teams waited for the results of other districts, policy makers asked for the magnitude of the deficits and decision makers set up new plans to decrease deficits. This helped countries shift from an ineffective 'risk approach' towards better management of obstetric problems.

The UON approach was not such a success in every country. Our interpretation is that a number of conditions have to be met if one wants to use of results to improve health services: first, the involvement of MOH and its leadership in the implementation of the approach (Annex 3); second, the close collaboration of the field teams in every phase of the study; third, a well organised feedback of the national results to the periphery. When one or several of these conditions were not met (e.g. in Pakistan), the study failed to impact on policies and services. Where all were met, as in Mali and in Haiti, they generated a dynamics of participative thinking and action both at central and at peripheral level.

## Using UON for advocacy

The feedback from the UON exercises at the national level has targeted the technocrats more than the public at large. With this restriction, however, it provided an excellent tool for advocacy, including for resource mobilisation. Local offices of international organisations (UNFPA, UNICEF, WHO) were quick to understand its interest for safe motherhood advocacy and programme design. They used the information on unmet need as much as the national officers to 'accelerate' the investment in maternal health programmes and, in a number of cases, to re-direct investments to emergency obstetric care. To provide actual evidence on the policy influence of the UON exercises, 66 stakeholders in five countries were interviewed. These interviews have not all been systematically analysed yet.

On the international scene, the UON concept was disseminated through four main channels: the web site, meetings, publications and lectures.

The web site (<http://www.uonn.org>) provides access to the methods modules and the case study results. Meetings comprised scientific gatherings as well as seminars on the UON approach at UNICEF (New York, 1997), at the World Bank (Washington, 1997, 2000), at MotherCare and Measure (1998 and 1999), and at WHO headquarters Geneva (2000).

Considerable institutional pressure notwithstanding, the coordination of the UON Network has maintained a policy of privileging national ownership and control over the use of the results of the work for publication in the academic circuit. The resulting delay in 'academic' diffusion is well compensated by smoother uptake among national decision makers of a label-free approach that is co-owned by the national and international collaborators, academic and not. Still, the UON approach was presented in a number of scientific meetings and gave rise to about fifteen papers in the academic circuit (Annex 1 and Annex 2). The UON approach is currently taught in the ITM Master's courses (ICHD and MDC) and the Summer Course in Reproductive Health at the Institut de Démographie of the UCL, it has been discussed in a number of seminars at the Free University of Brussels. More than 300 health professionals (medical doctors, midwives, programme managers, demographers) from more than 25 different countries have been exposed to information on the UON concept and methodology through such seminars and courses. Finally, the UON concept was disseminated through the member agencies of the Advisory Board: the EC DG DEV, GTZ, UNFPA, UNICEF, WHO and the World Bank (Annex 3).

#### 4. A FAST AND LOW-COST APPROACH?

The cost of these studies varied from 10,000 € to 64,000 € per country including visits from the CAM team and the regional meetings.<sup>17</sup> This compares well to the cost of the monitoring of UN process indicators (112,000€ for 22 hospitals covering 5 million inhabitants, during three years in Malawi<sup>18</sup>) or to Demographic and Health Surveys (around 500,000 US\$ per country). The cost of data collection per health facility varied from 341 to 1,409 € (compared to around 1,700€/hospital/year in Malawi for monitoring UN process indicators). Once the methodological investment is made, cost for routine data collection becomes marginal. In Mali five regional directors use the UON indicator to monitor progress since 1999 without extra budgetary provisions.

As a whole, from decision to embark in the UON exercise to the feedback of results to peripheral teams, the process lasted between 24 months and 32 months (Annex 5). This is a long period of time. This pace was slow indeed, but it permitted to not perturb the routine functioning of the system and teach every district team how to proceed. Those teams who collected data without the involvement of the local teams went fast but with little lasting effect in the field. All the same, the exercise itself was pretty fast indeed: adapting the protocols to the national context took between 15 days to 3 months and the data collection itself an average of around 4 months per country.

#### 5. WHAT NEXT?

For three years the UON project has thus brought together international organisations, research centres, ministries of health and health care providers in a common endeavour. Methods and results have been disseminated for an audience that included students, professionals, academics and civil society. It would be presumptuous to say that this has had a significant and immediate influence on mother's health throughout the world. Since Cairo and Colombo we know that only the combination of a multitude of different global and local initiatives, among professionals as well as among civil society, stands any chance of really improving the situation.

Still, there is evidence of change at local, and in a number of cases at national level as well, even after such a short time. Much of that has been made possible by the fact that the UON approach necessarily, by its very methodological specification, requires the direct involvement of the field operators. All too often one forgets that these front-line providers determine what is done locally to improve obstetric care. The best policies can have only a limited effect if the technicians are not on board: winning the hospital battle is decisive for mitigating the inherent risks of childbirth.<sup>19</sup>

One of the tenets of this network was that the inter-country exchanges would benefit each participant in terms of capacity building and motivation. Countries did indeed learn from each other, and belonging to the international network brought much appreciated standing and status. This resulted less from using the website or e-mail than from the inter-country meetings and visits and the formal and informal support and guidance.

There is a good chance that the initiative will end here – at least as a formal operation. For the time being the Belgian Directorate General for International Co-operation continues to provide some support to the network. This will help to start – but not to assist – similar exercises in Bangladesh, Madagascar and Angola. A number of other country teams such as Cambodia or Burkina Faso master the approach well enough to continue on their own – they concentrate on using the UON indicator for monitoring progress. The next few years will show whether or not the network can survive informally, without institutionalisation or support, and continue to contribute its part to making motherhood safer, in the poorest countries too.

<sup>17</sup> XVI FIGO World Congress of Gynecology and Obstetrics. Washington, D.C. September 3-8, 2000.

<sup>18</sup> Hussein J, Goodburn E. A, Damisoni H, Lema V, and Graham W. 2001. Monitoring obstetric services: putting the 'UN Guidelines' into practice in Malawi: 3 years on. *Int.J.Gynaecol.Obstet.* **75** (1): 63-73; Goodburn E, Hussein J, Lema V, Damisoniu H, and Graham W. 2001. Monitoring obstetric services: putting the UN guidelines into practice in Malawi. I: developing the system. *International Journal of Gynecology & Obstetrics* **74** (2):105-117.

<sup>19</sup> Van Lerberghe & De Brouwere. 2001. Of blind alleys and things that have worked: history's lessons on reducing maternal mortality. *Studies in Health Services Organisation & Policy*, **17**: 7-34.

**Publications by the network coordination**

- De Brouwere V, Dubourg D, Richard F, Van Lerberghe W. 2002. Need for caesarean sections in west Africa. [Letter] *Lancet*, **359** (16): 974-975.
- De Brouwere V & Van Lerberghe W. 2001. Safe Motherhood Strategies: a Review of the Evidence. *Studies in Health Services Organisation & Policy*, n°18, ITGPress: Antwerp.
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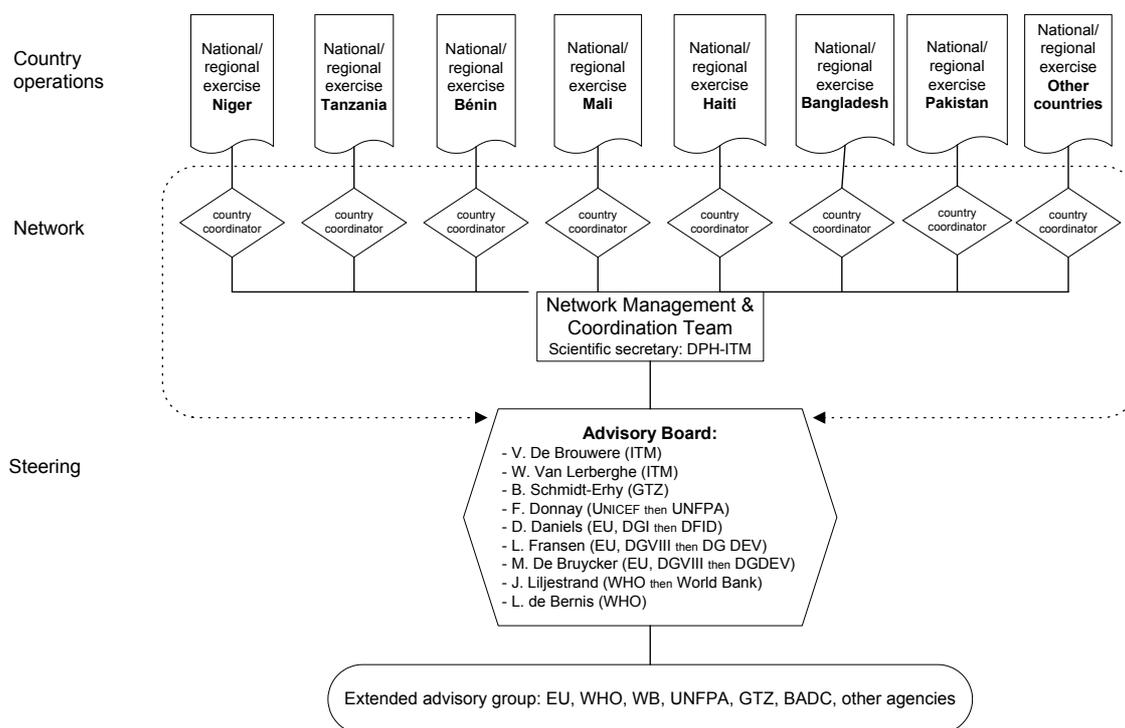
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### ANNEX 3. STRUCTURE OF THE UNMET OBSTETRIC NEED NETWORK



### DEGREE OF INVOLVEMENT OF THE MOH IN THE DIFFERENT COUNTRIES

Country	MOH involvement		Leadership	
	National level	Peripheral level	Institution(s)	Number of persons
Benin	±	+++	CERRHUD-PADS	4
Burkina-Faso	+++	-	MSP-DSF-Muraz	3
Haiti	+++	+++	DGA	4
Mali	+++	+++	MSP-DSFC	2
Niger	+	±	GTZ-MSP-DSF	2
Pakistan	-	-	HSA-GTZ	2
Tanzania	-	+++	MUCHS	3

#### ANNEX 4. CRITERIA FOR THE SELECTION OF COUNTRIES

##### **Political context and willingness to invest in maternal health**

- 1) The Ministry of Health (or the regional health authorities) show interest and is ready to guarantee the use of the results as a political lever for change and for the allocation of resources.

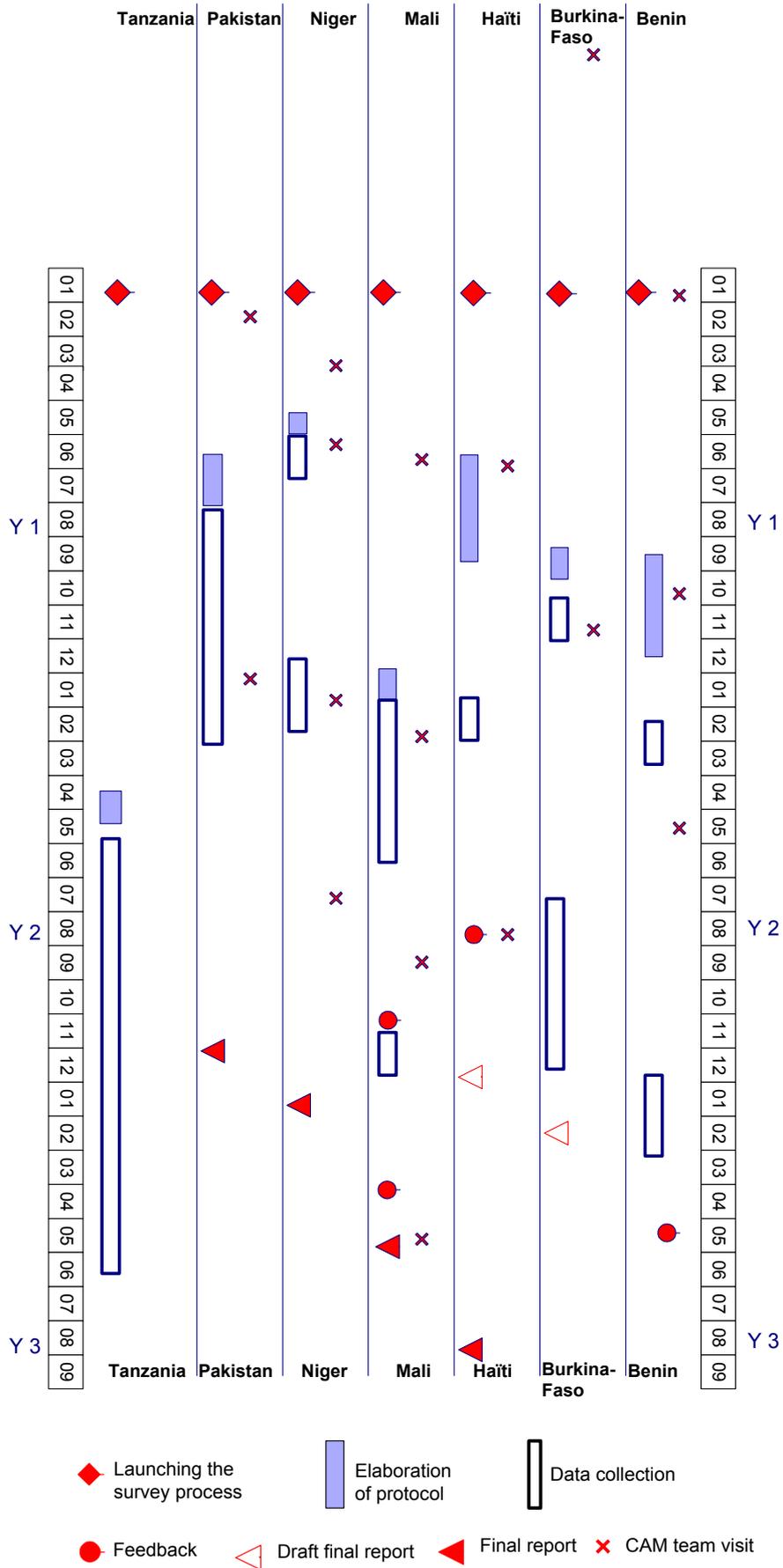
##### **Monitoring**

- 2) One person is clearly identified as overall in charge of the national team.
- 3) One person, known to the Advisory Board, guarantees the quality of the work of the national team

##### **Characteristics of the study area**

- 4) It comprises more than one district
- 5) Its population is higher than one million of inhabitants
- 6) It is possible to collect data in all health facilities (public and private)
- 7) The denominator (expected births) is known with a fair level of reliability.
- 8) Information on the numerator (type of intervention, type of indication, origin of the mother) can be collected with a reasonable degree of accuracy and reliability

ANNEX 5. CHRONOGRAMME OF THE UON CASE STUDIES



## ANNEX 6. SYNTHESIS PER COUNTRY

### Benin

Type of study	Retrospective
Study area and population size	Department of Zou (1 million) and Borgou (1 million)
Study year	1998
Involvement of the MOH at central level	Weak support from central level of MOH, weak involvement of Family Health Department.
Involvement of the MOH at peripheral level	Strong commitment from the health department directors
Participation of providers of care at peripheral level	Trained for data collection
Collaboration with a research institution	CERRHUD Professor Alihonou
Principal partner	PADS (Swiss co-operation)
Main donor for field operations	PADS (Swiss co-operation)
Number of persons trained (research skills)	Two medical doctors at MOH Two students in medicine (data collection and analysis)
Feedback at national level	No
Feedback at regional level	Yes
Official report released	No
Initiatives taken following the first study	Extension of the study area to two other departments

### Burkina Faso

Type of study	Retrospective
Study area and population size	Four regions (3 millions inhabitants)
Study year	1998
Involvement of the MOH at central level	Strong commitment through the Family Health Direction
Involvement of the MOH at peripheral level	Weak involvement: some regional directors have not been informed about the study
Participation of providers of care at peripheral level	Weak participation
Collaboration with a research institution	Centre Muraz, Bobo-Dioulasso
Principal partner	Centre Muraz, Bobo-Dioulasso
Main donor for field operations	Centre Muraz, Bobo-Dioulasso
Number of persons trained (research skills)	Two medical doctors from the MOH One medical student for data collection
Feedback at national level	No
Feedback at regional level	No
Official report released	Draft: figures without real analysis
Initiatives taken following the first study	Extension of the study to the entire country

### Haiti

Type of study	Retrospective
Study area and population size	Three departments (2,3 million inhabitants)
Study year	1998
Involvement of the MOH at central level	Strong commitment through the Deputy General Director
Involvement of the MOH at peripheral level	Strong participation of health department directors who participated in data collection
Participation of providers of care at peripheral level	Responsible of gynaecology hospital departments carried out data collection
Collaboration with a research institution	No
Principal partner	Ministry of Health
Main donor for field operations	UNICEF
Number of persons trained (research skills)	One medical doctor from the central MOH
Feedback at national level	Feedback through a national workshop with national and regional MOH directors and with field actors having participated in the study.
Feedback at regional level	No
Official report released	Technical report, descriptive and analytical. The analysis involved a reflection on the causes of deficits and operational proposals to improve the management of obstetrical emergencies.
Initiatives taken following the first study	UON indicator as a process indicator in the new national reproductive health policy

<b>Mali</b>	
Type of study	Retrospective
Study area and population size	Nation wide (except Kidal region) 9,8 million inhabitants
Study year	1998
Involvement of the MOH at central level	Strong involvement of the Family Health Division
Involvement of the MOH at peripheral level	Strong participation of health regional directors who participated in data collection
Participation of providers of care at peripheral level	Local teams have been trained for data collection. A first preliminary analysis of results was realised with the local teams just after data collection.
Collaboration with a research institution	No
Principal partner	DSF
Main donor for field operations	Belgian Co-operation
Number of persons trained (research skills)	One medical doctor recruited by the FHD especially for the study. and one medical student for data collection
Feedback at national level	Workshop organised along with a seminar on referral/evacuation system.
Feedback at regional level	In 4 regions, involving regional health managers, hospital staff, health district teams and social action staff.
Official report released	Technical report, descriptive but no in-depth analysis.
Initiatives taken following the first study	In five regions, UON indicator is used as a routine indicator for monitoring progress in obstetric care coverage.

<b>Niger</b>	
Type of study	Retrospective
Study area and population size	Nation wide (10,3 million inhabitants)
Study year	1998
Involvement of the MOH at central level	Strong commitment at the beginning of the process but weak in the follow-up of the study
Involvement of the MOH at peripheral level	Administrative participation of regional health directors for the organisation of data collection.
Participation of providers of care at peripheral level	Weak participation of providers of care: data collection carried out by gynaecologists from the departmental level.
Collaboration with a research institution	Alafia/GTZ
Principal partner	Alafia/GTZ
Main donor for field operations	Alafia/GTZ – UNICEF - OMS
Number of persons trained (research skills)	Three medical student (analysis)
Feedback at national level	Yes
Feedback at regional level	No
Official report released	Technical report, descriptive and analytical.
Initiatives taken following the first study	Use as monitoring indicator in one district

<b>Pakistan</b>	
Type of study	Retrospective
Study area and population size	Two Tehsils (sub-region) 2,2 million inhabitants
Study year	1998/99 (18 months)
Involvement of the MOH at central level	None
Involvement of the MOH at peripheral level	None
Participation of providers of care at peripheral level	Participation limited to the definition of interventions and indications to take into account
Collaboration with a research institution	GTZ
Principal partner	Health Services Academy. The whole study was carried out by this research and teaching institution. HSA is supported by GTZ
Main donor for field operations	GTZ
Number of persons trained (research skills)	None
Feedback at national level	No
Feedback at regional level	No
Official report released	Technical report, descriptive.
Initiatives taken following the first study	No initiative

## Tanzania

Type of study	Retrospective for a pilot district and prospective for two districts (2000 –2002)
Study area and population size	Two districts (2,2 million inhabitants)
Study year	200-2002
Involvement of the MOH at central level	Weak, participation at the preparatory workshop
Involvement of the MOH at peripheral level	Two regional co-ordinators are members of the research team.
Participation of providers of care at peripheral level	Active participation active of practitioners, data are routinely collected in health facilities
Collaboration with a research institution	GTZ
Principal partner	Chief of Obstetric & Gynecology Department of Medical Centre Muhimbili
Main donor for field operations	GTZ
Number of persons trained (research skills)	Unknown
Feedback at national level	Two workshops planned in 2001 and one in 2002, at the end of the study (no information about the actual organisation of these meetings)
Feedback at regional level	Unknown
Official report released	Quarterly and annual reports plus a final report are expected. None of them has been sent to the CAM team Antwerp.
Initiatives taken following the first study	UON indicator is used for maternal health activities in the district under study. The Tanzanian team envisages validating the indicator by a maternal mortality enquiry in the study area.

## Benin

### *Scientific Committee*

Professeur Eusèbe Alihonou, chef de service de gynécologie - obstétrique au CNHU de Cotonou, chef du département santé publique mère et enfant à la faculté des Sciences de la Santé

Dr Jacob Houéto, Gynéco-obstétricien, chef du service de santé familiale à la direction départementale du Zou

Mme Amadou Sylvie, Sage femme, service de santé familiale à la direction départementale du Borgou

M. Benjamin Dady, Statisticien, chef du service de statistiques, études, planification et documentation à la direction départementale du Borgou

Dr Léon Legba, Médecin de santé publique, chef du service de statistiques, études, planification et documentation à la direction départementale du Zou

Docteur Félix Ahouandogbo, Epidémiologiste, chef du service de statistiques, documentation et recherche opérationnelle au ministère de la santé

M. Fatchéoun Tchobo, Statisticien au service de statistiques, documentation et recherche opérationnelle du ministère de la santé

Dr Esther Traoré, Pédiatre, chef du service de la santé maternelle et infantile à la direction de la santé familiale du ministère de la santé

### *Task force*

Dr Esther Traoré, membre du comité de pilotage et point focal du ministère de la santé,

Le directeur départemental du Zou

Le directeur départemental du Borgou

Le coordonateur du programme bénino-suisse

Le coordonateur du programme bénino-allemand (PBA/SSP)

Le responsable du programme santé de l'UNICEF en charge du Zou et du Borgou

Le responsable du programme PROSAF (USAID) en charge du Zou et du Borgou

### *Research team*

Cadres des zones sanitaires dans lesquelles l'étude est réalisée

Médecins coordonnateurs de zones

Gynécologues et/ou chirurgiens, sages-femmes responsables des maternités

Une Etudiante en médecine

## Burkina Faso

### *Scientific Committee*

Pr. Bibiane Koné, Gynécologue, Faculté des Sciences de la santé

Pr. Blaise Sondo, Médecin de santé Publique, Faculté des Sciences de la santé

Pr. François Tall, Pédiatre, Directeur de la santé de la famille, Ministère de ma Santé

Dr. Azara Bamba, Médecin de Santé Publique, Bureau OMS Ouagadougou

Dr. Flavia, Médecin de santé Publique, UNICEF Ouagadougou

Madame Thérèse Zeba, Sociologue, FNUAP Ouagadougou

Dr. Yacouba Zina, Médecin de Santé Publique, Ouagadougou

Madame Pascaline Sebgo, sage-femme, Ambassade des Pays-bas

Dr. Philippe Van De Perre, Médecin de santé Publique, Directeur du Centre Muraz, Bobo Dioulasso

Dr. Sosthène D. Zombre, Médecin de santé Publique, Direction Régionale de la Santé de Ouahigouya

Dr. Daniel Kara, Médecin de santé Publique, Direction régionale de la santé de Fada N'Gourma.

### *Research team*

Pr. François Tall, Directeur de la Santé de la Famille, Coordonnateur général de l'étude

Dr. Laurent Ouédraogo, Médecin de santé Publique, Université de Ouagadougou, Chercheur principal

Dr. Zénabou Derme, Médecin, Point focal de l'étude à la DSF

Dr. Germain Traoré, Gynéco-obstétricien à la DSF,

Dr. Blandine Thieba, Gynéco-obstétricienne, Université de Ouagadougou,

Dr. Jule Bazie, Gynéco-obstétricien, hôpital de Bobo-Dioulasso,

Dr. Kaboré, Gynéco-obstétricien à l'hôpital de Ouahigouya,

Dr. Josianne Diall, Médecin, maternité de l'hôpital de Fada N'Gourma,

Mme Jeanne Nougbara, Personnel de la DSF,

Mr. Emmanuel Sawadogo, Interne en médecine, Enquêteur

## **Haïti**

### *Scientific Committee*

Deux représentants de l'équipe de recherche  
Des spécialistes de la discipline (gynéco-obstétrique)  
Un représentant de la faculté de médecine  
Un représentant de la Société Haïtienne d'Obstétrique et de Gynécologie  
Un représentant du service d'obstétrique et de gynécologie de l'Hôpital de l'Université d'Etat d'Haïti  
Un représentant de la Maternité Isaïe Jeanty de Port au Prince.

### *Task force*

Service de la Santé de la Reproduction.

OPS/OMS

FNUAP

UNICEF

### *Research team*

Les directeurs départementaux.  
Epidémiologiste départemental  
Directeurs des hôpitaux impliqués dans l'étude  
Responsables (nursing et/ou médecin) des services d'obstétrique / gynécologie des hôpitaux

## **Mali**

### *Scientific Committee*

Le directeur National de la Santé Publique  
Le chef de la division Santé Familiale et Communautaire (DSFC)  
La chargée du Programme de Périnatalité DSFC  
La chargé de Planification Familiale DSCF  
L'assistant de recherche à la cellule périnatalité  
Le chef du service de gynéco obstétrique de l'hôpital du Point G  
L'assistant chef de clinique de gynéco obstétrique de l'hôpital du Point G  
La sage-femme maîtresse de gynéco obstétrique  
L'infectiologue du service de médecine de l'hôpital du Point G  
Le médecin chef (gynécologue) du centre de santé de référence de la Commune V de Bamako  
L'adjoint au médecin chef du centre de santé de référence de la Commune V de Bamako  
La sage-femme chargée de la consultation gynécologique externe du centre de santé de référence de la Commune V de Bamako

### *Research team*

Le chef de la Division Santé Familiale et Communautaire ( DSFC)  
Un médecin spécialement engagé pour cette recherche  
L'assistant de recherche à la cellule périnatalité DSFC  
La chargée de la planification familiale DSFC  
Un étudiant en médecine  
Les gynécologues ou les chirurgiens des hôpitaux régionaux  
Les sages-femmes des directions régionales  
Les médecins chefs des hôpitaux  
Les sages femmes maîtresses des hôpitaux  
Le chargé du Système d'Information Sanitaire

## **Niger**

### *Scientific Committee*

Trois représentants de la Direction de la Santé de la Reproduction (DSR)

Deux représentants du Système National d'Information Sanitaire (SNIS)

Un représentant de l'école nationale de santé publique

Trois représentants de la Faculté des sciences de la santé

Un représentant du projet Alafia GTZ

La présidente du comité chargé de l'élaboration du programme national de SR

### *Research team*

Trois membres de la DSR

Un représentant du SNIS

Un Médecin de la maternité Gazoby

Un membre du projet Alafia GTZ

Les gynéco-obstétriciens et/ou médecins des hôpitaux concernés

Les sages-femmes des hôpitaux concernés

## **Pakistan**

### *Scientific Committee*

Seven obstetricians from both districts and all sectors.

### *Research team*

Prof. Aimé De Muynck GTZ/HSA technical advisor

Dr. Saleha Abdur Rahman HSA researcher

Dr. Tausif Janjua HSA researcher

Dr. Tassadaq Farooq HSA researcher

Dr Zaidi .HSA researcher

## **Tanzania**

### *Scientific Committee*

Dr SN Massawe UNO national co-ordinator

Dr A Thomas assistant co-ordinator

Dr Fred Mtatifikolo representative Tanga region

Ms H Kitundu representative Mtwara region

Dr Kuellker Rainer GTZ Tanga

### *Research team*

Dr Mtatifikolo co-ordinator Tanga site

Dr Kivo co-ordinator Mtwara site

Dr Bischof co-ordinator Masasi site

Midwives and doctors working in the maternity unit ward and theatre

Hospitals administrators and planners