



**DOCTORS
WITH AFRICA**
CUAMM



HEALTH AND DEVELOPMENT

quarterly magazine
of international cooperation
and health politic
February 2013 — No. **66**

MOTHER

AFRICA



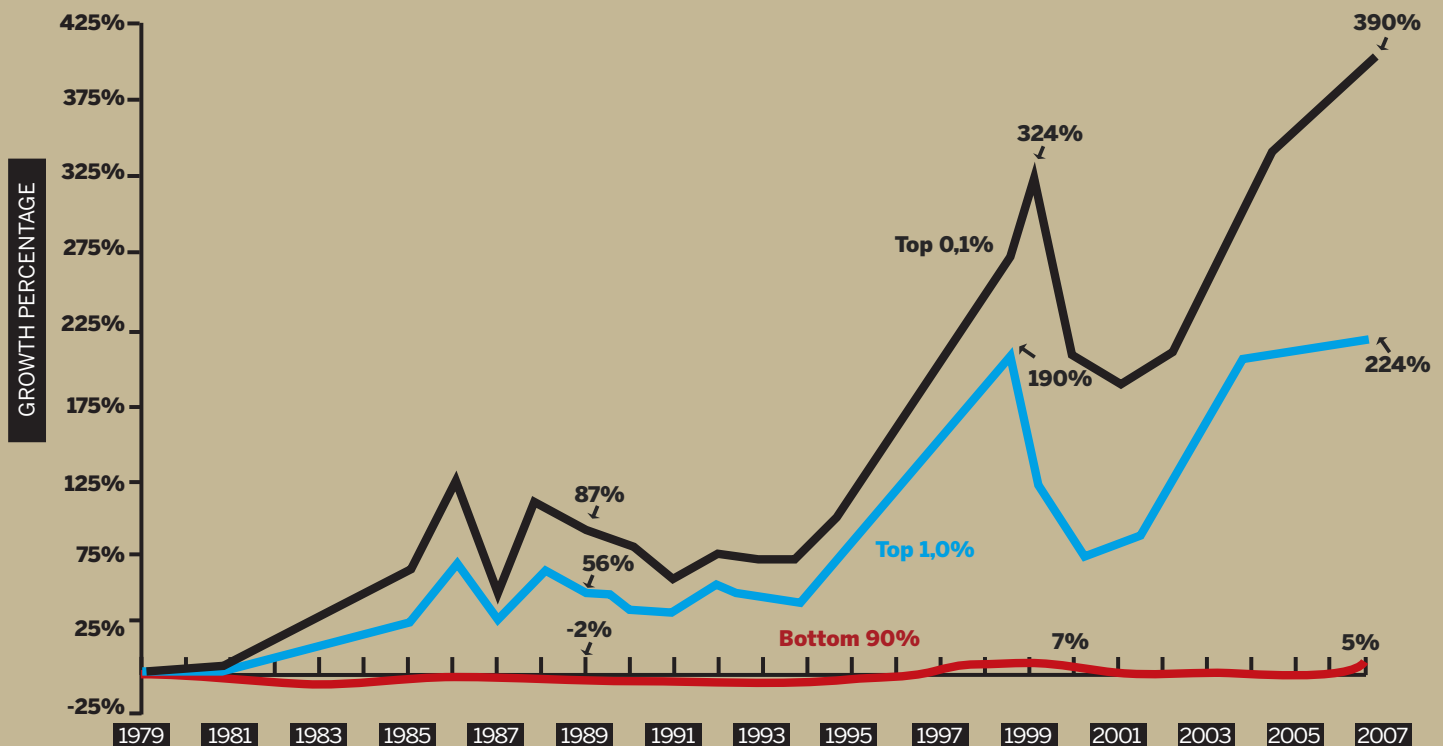
NEWS

We are the 99%

“We are the 99%”: the slogan accompanying the Occupy Wall Street protests eloquently expresses the dramatic growth in social inequalities produced by the absence of a state regulatory role in the market economy. Ninety-nine percent refers to the vast majority of the population affected by the current economic crisis, characterised by falling salaries and, in many cases, loss of employment, health insurance and even housing. The picture contrasts sharply with the remaining 1%, who are currently experiencing an entirely opposite trend towards enhancing wealth and personal wellbeing.

Taken from the book by Joseph E. Stiglitz, Nobel laureate in Economics, *The price of inequality*, 2012.

FIGURE / GROWTH IN THE INCOME OF THE TOP 1% AND TOP 0.1% WEALTHIEST MEMBERS OF THE POPULATION, COMPARED TO THE BOTTOM 90%. USA 1979-2007



Source: Economic Policy Institute analysis of data from Piketty and Saez (2010).

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REGISTRATION AND AUTHORIZATION

c.o. the Law Courts of Padova n. 1129
on 5.6.1989 and on 11.9.1999

DISPATCH

in abb. post. D.L. 353/2003 (conv. in L. 27/02/2004 n° 46) art. 1
comma 2 - DCB Padova

TRANSLATION

Joanne Fleming

COVER ILLUSTRATION

Continue to take care of mothers and children in Africa, accompanying them on the journey of pregnancy, childbirth, birth.
It is the choice that Doctors with Africa CUAMM made time ago and confirmed in 2012 thorough the programme "Mothers and children first", whose first results are featured in this special issue of the magazine.

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MOTHERS AND CHILDREN FIRST: FIRST STEPS

Results, research and innovation: these are the three keywords of the first steps taken by the programme that focused on mothers and children health.

On December 2012 in Rome, at the Auditorium of the Catholic University, we presented the work done so far and announced the next goals.

TEXT BY / DON DANTE CARRARO / DIRECTOR OF DOCTORS WITH AFRICA CUAMM

There were 500 of us in Rome, flocking from all parts of Italy. Students and trainee physicians, volunteers and repatriating doctors, public and church institutions, universities and foundations. A silent, unified army of people gathering to endorse their commitment to guaranteeing free access to safe child delivery and neonatal care. "Mothers and children first," is the name of the programme and the watchword of an intervention involving 4 hospitals and 22 peripheral health centres in Chiulo in Angola, Wolisso in Ethiopia, Aber in Uganda and Tosamaganga in Tanzania, addressing a population of 1,300,000. The strategy is oriented around intrapartum care, specifically emergency obstetric and neonatal care, considered to be (proxy) indicators of healthcare system functioning.

The British call the acknowledgement and assumption of responsibility for own actions "accountability". In Italy we are more used to agreeing to empty promises than monitoring real accomplishments. Which is why we have chosen to publicly report our ongoing achievements: to demonstrate that we deserve the trust and help we receive. During the first year of the programme, our objective was to assist in at least 16,000 deliveries. We have instead assisted in over 20,000, providing 1,544 caesarean sections and 46,073 antenatal visits.

Moreover, we have:

- drawn up agreements with the public and private health authorities with which we collaborate;
- lowered financial and geographical barriers to health facility access. Fees charged to women have now been eliminated for obstetric emergencies requiring caesarean section and to organize a free ambulance transport service from primary healthcare centres to hospital, in the case of complicated deliveries;
- set up various collaborations with national and international partners in order to evaluate interventions through operational research.

To clearly establish the baseline scenario, performance surveys were conducted at the district health system level. We started from the field, with an assessment of what is being done and the introduction of innovative analysis and study methods and tools. We specifically addressed the challenge at three main levels: coverage, quality and equity, as described in detail in the articles published in this issue. By coverage we mean the system's ability to provide emergency maternal and neonatal services, according to availability, geographic accessibility and use of existing services. Quality of care was explored in terms of quality perceived by patients and health providers, in addition to technical, professional and organizational quality. Equity was measured by the socioeconomic profile of the women using hospital and local maternal services. Effective results can only be achieved by improving these three areas of intervention.

What is the best way to exploit findings in order to improve professional practice and health policies in terms of coverage, quality and equity of maternal and neonatal services? How should current data collection and research tools, which tend to be complex and costly, be adapted to primary care in African districts where simplicity, poor resources and sustainability are daily challenges? We discussed all this on 15th December with institutional and healthcare representatives. These included the Ugandan Minister of Health, Dr. Christine Ondo, a woman, a doctor and a paediatrician who has worked for several years alongside our volunteers at the regional hospital of Arua (West Nile). Her message and presence have consolidated Uganda's political desire to put accessibility to and equity of maternal, neonatal and child care at the top of the agenda.

And that is not all. We signed a mutual agreement with the Italian Conference of University Chancellors to encourage students and young resident doctors to take an interest in Africa. Professional training increasingly requires conscientiousness and dedication combined with open-mindedness in a world which, like health, has become globalized. Doctors with Africa CUAMM takes its place on the front line. The programme has only just started and further efforts will be needed to ensure service quality, improvements in infrastructure and local staff skills, in addition to cost support to ensure services continue to be provided free of charge. To do this we need the human and professional contribution of everyone.



DIALOGUE

UNIVERSAL HEALTH COVERAGE

The United Nations General Assembly is relaunching the objective of Alma Ata: health for all. According to the *Lancet*, approval of the Assembly resolution marks the start of a new phase in which UHC has become a key objective of global health. Governments must rise to the challenge and move towards universal coverage, particularly in low-income countries.

TEXT BY / GAVINO MACIOCCO / DEPARTMENT OF PUBLIC HEALTH, UNIVERSITY OF FLORENCE

The issue of universal health coverage (UHC) has returned to the centre of the international political debate and has recently been the subject of a United Nations General Assembly session. Below are several excerpts from the final document on this important event, approved on 6th December, 2012¹. The General Assembly recognizes:

- the importance of UHC in national health systems, particularly through primary healthcare and social protection mechanisms, in providing access to healthcare services for all, particularly for the poorest segments of the population; (...)
- that UHC implies that all people have access, without discrimination, to nationally determined sets of the needed preventive, curative and rehabilitative health services, and to essential, safe, affordable, effective and quality medicines, while ensuring that the use of these services does not expose patients to financial hardship, particularly the poorest, most vulnerable groups; (...) Member States must therefore ensure that health financing systems evolve so as to avoid significant direct payments by patients and include a method for prepayment of financial contributions for healthcare and services. This should be accompanied by a mechanism to pool risks among the population in order to avoid catastrophic healthcare expenditure and impoverishment of families as a result of seeking the care needed; (...)
- the need to continue to promote, establish or support and strengthen multisectoral national policies and plans to prevent and control non-communicable diseases and to take steps to implement such policies and plans.

Not surprisingly, the US representative, Joan Prince, fully consented to this resolution, maintaining that, “the expansion of healthcare coverage has been at the forefront of the (American) domestic agenda and a landmark issue of President Obama’s Administration, because it is fundamentally important that all people have equal access to care. Accordingly, the ‘Affordable Care Act’ includes numerous provisions to guarantee health care to thirty million people currently living without coverage. National governments must rise to the challenge and move towards more inclusive access. This is particularly relevant as the economies of many low-income countries will become middle-income countries by 2030”².

According to the *Lancet*, the approval of the United Nations General Assembly resolution is the start of a new phase in which UHC will become the key objective of global health. “Worldwide – states the editorial – about 150 million people a year face catastrophic health-care costs because of direct payments such as user fees, while 100 million are driven below the poverty line. To the extent that people are covered by a risk-pooling mechanism, their out-of-pocket expenditure will not cause financial hardship. A system level approach working towards UHC could have a transformative effect in the battle against poverty, hunger, and disease”³.

The *Lancet* had already dedicated a series of editorials and papers to UHC in September 2012. One of them stressed the importance of UHC in improving population health, particularly mother-child health⁴. One study, for instance, reported a 7.9% reduction in under-five mortality in response to a 10% rise in public health expenditure per capita, whereas no effect was observed as a result of an increase in private health spending⁵.

“Universal health coverage sits at the intersection of social and economic policy,” wrote Julio Frenk, former Mexican Minister of Health. “The introduction of reforms that promote universal coverage is not only the right thing to do on ethical grounds, it is also the smart thing to do to achieve economic prosperity. The paradox of health care is that it is one of the most powerful ways of fighting poverty. Universal health coverage therefore holds great promise: the focus on increased access to high-quality health services with financial protection integrates social and economic policy in a way that, if done well, can benefit societies the world over”⁶.

NOTES

¹ United Nations. General Assembly, *Global health and foreign policy*, A/67/L.36, 6 December 2012.

² United Nations. General Assembly, *Adopting Consensus Text, General Assembly Encourages Member States to Plan, Pursue Transition of National Health Care Systems towards Universal Coverage*, 12 December 2012.

³ Vega J., *Universal health coverage: the post-2015 development agenda*,

Lancet 2013; 381:179-80.

⁴ Moreno-Serra R., Smith P.C., *Does progress towards universal health coverage improve population health?* *Lancet* 2012; 380:917-23.

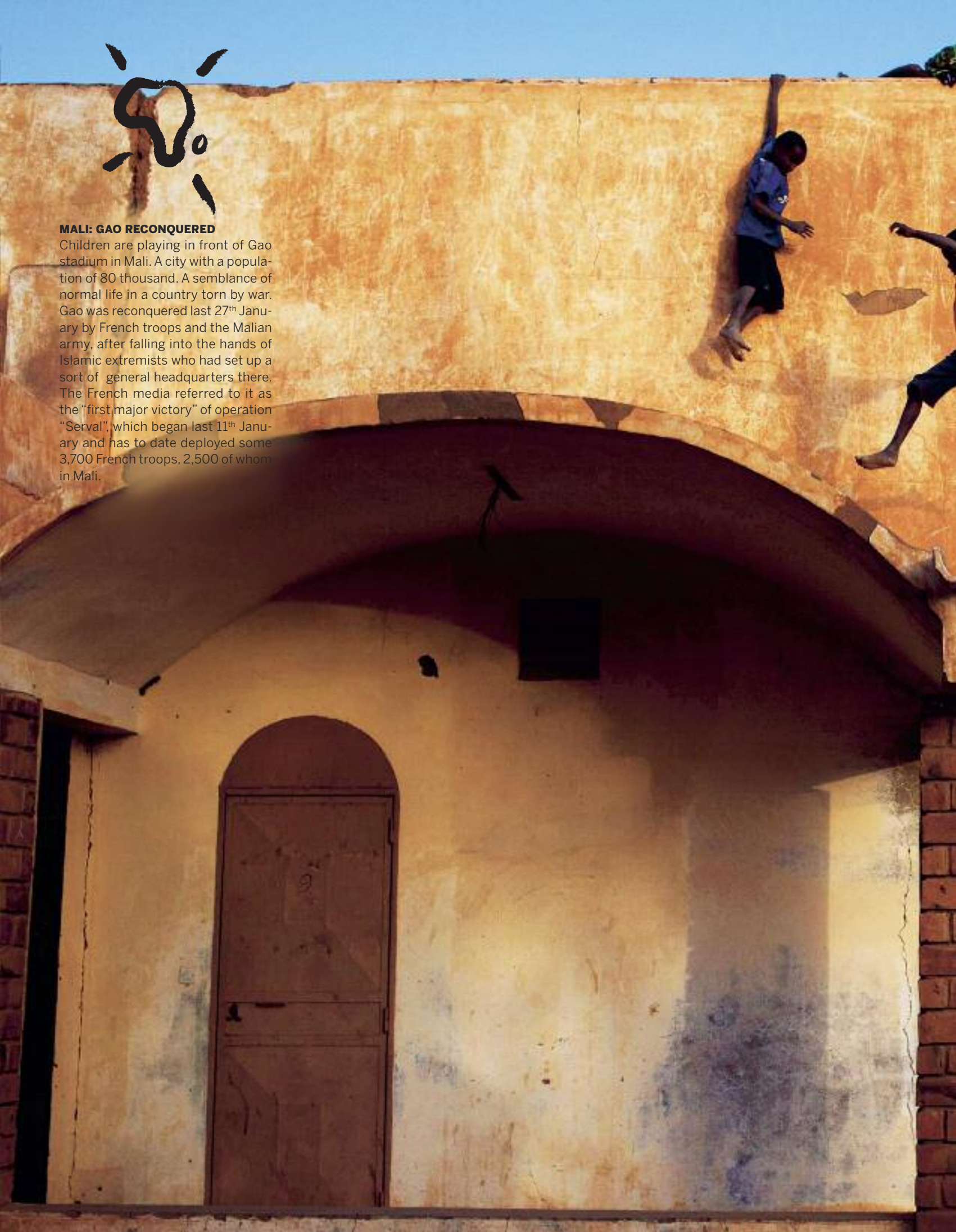
⁵ Moreno-Serra R., Smith P.C., *The effects of health coverage on population outcomes: a country-level panel data analysis*. Results for Development Institute Working Paper. Washington, DC: Results for Development Institute, 2011.

⁶ Frenk J., De Ferranti D., *Universal health coverage: good health, good economics*, *Lancet* 2012; 380:862-3.



MALI: GAO RECONQUERED

Children are playing in front of Gao stadium in Mali. A city with a population of 80 thousand. A semblance of normal life in a country torn by war. Gao was reconquered last 27th January by French troops and the Malian army, after falling into the hands of Islamic extremists who had set up a sort of general headquarters there. The French media referred to it as the "first major victory" of operation "Serval", which began last 11th January and has to date deployed some 3,700 French troops, 2,500 of whom in Mali.







A CLOSER LOOK

THE “MOTHERS AND CHILDREN FIRST” PROGRAMME

The aim is to contribute to reducing maternal, fetal and neonatal mortality by guaranteeing free access to safe child delivery and neonatal care in four healthcare districts in Angola, Ethiopia, Uganda and Tanzania. Why? Because many women and too many children in Africa still die through lack of skilled attendance at child delivery

TEXT BY / GIOVANNI PUTOTO, ANDREA ATZORI, FABIO MANENTI, DONATA DALLA RIVA, CALISTUS WILUNDA / DOCTORS WITH AFRICA CUAMM

In 2012, Doctors with Africa CUAMM started its five-year programme entitled, “Mothers and children first,” in four healthcare districts in Angola, Ethiopia, Uganda and Tanzania. The aim is to contribute to reducing maternal, fetal and neonatal mortality by guaranteeing free access to safe child delivery and neonatal care. The strategy revolves around intrapartum care, specifically emergency obstetric and neonatal care¹. The endpoint of the programme is to improve the coverage, quality and equity of these services. Why a multidimensional approach?

In Africa, internationally developed strategies and the most recent evidence urge politicians and health professionals not to focus solely on coverage. In recent years the rise in the use of healthcare services by women and children has not translated into a corresponding reduction in maternal and neonatal mortality². There are two underlying reasons for this discrepancy: the increasing gap between richer and poorer social groups (the so-called “equity gap”)³, especially in relation to assisted child delivery, and the difference between the technical quality of services actually delivered and expected evidence-based standards (the so-called “quality gap”)⁴. One limitation is clearly due in part to the lack or inadequacy of tools to appropriately measure these three dimensions in decentralized district healthcare systems (the so-called “data gap”). Accordingly, the programme has adopted a multidimensional approach using innovative assessment methods and tools together with the help of experts. Below are the setting-based data for the programme’s three points of intervention⁵. This is followed by an outline of the surveys’ objectives, methods and results conducted on coverage, quality and equity.

Ethiopia: MM (maternal mortality) 676 x 100,000, NM (neonatal mortality) 31 x 1,000; perinatal mortality: 25.6 x 1,000; healthcare staff: 2.4 x 10,000 population; per capita healthcare expenditure: \$42 (PPP - Purchasing power parity).

Districts of Wolisso, Goro and Wonchi: total population 372,478; 14,170 expected deliveries; coverage rate 20%. Total healthcare facilities: 10. Assisted as part of the programme: 7 peripheral maternity wards and 1 hospital – Wolisso of the Ethiopian Episcopal Conference (200 beds). Number of midwives: 29. Expatriate Doctors with Africa CUAMM staff: 1 surgeon, 1 paediatrician, 1 public health doctor. Services guaranteed at the district: free transport and management of obstetric emergencies, equipment, medicines, local staff training.

Uganda: MM (maternal mortality) 438 x 100,000; NM (neonatal mortality) 26 x 1,000; perinatal mortality 25 x 1,000; healthcare staff: 14.3 per 10,000 population; per capita healthcare expenditure: \$118 (PPP - Purchasing power parity).

District of Oyam: total population 378,900. Approx. 18,000 expected deliveries; coverage rate, 42%. Total healthcare facilities: 22. Assisted as part of the programme: 6 peripheral maternity wards and 1 hospital - Aber of the Diocese of Lira (200 beds). Number of basic midwives: 37. Expatriate staff of Doctors with Africa CUAMM: 1 surgeon and 1 paediatrician. Services guaranteed at the district: free transport and management of obstetric emergencies, equipment, medicines, local staff training.

Tanzania: MM (maternal mortality) 458 x 100,000; NM (neonatal mortality) 25 x 1,000; perinatal mortality: 25.6 x 1,000; healthcare staff: 37 per 10,000 population; per capita healthcare expenditure: \$73 (PPP - Purchasing power parity).

Rural district of Iringa: total population: 274,417. Approx. 8,500 expected deliveries; coverage rate: 90%. Total healthcare facilities: 70. Assisted as part of the programme: 6 peripheral maternity wards and 1 hospital, namely Tosamaganga, of the Diocese of Iringa (160 beds). Number of basic midwives: 83. Expatriate staff of Doctors with Africa CUAMM: 1 internist, 1 paediatrician, 1 public health doctor. Services guaranteed at the district: free transport and management of obstetric emergencies, equipment, medicines, local staff training.

NOTE

¹ Pattison R. et al., *Stillbirths: how can health systems deliver for mothers and babies?* *Lancet*, 2011 May 7;377(9777):1610-23.

² Who/Unicef (2012), *Countdown to 2015: building a future for women and children: the 2012 report*. Washington, DC: World Health Organization/Unicef.

³ Victora C.G., Barros A.J.D., Axelson H., Bhutta Z.A., Chopra M., et al. (2012), *How changes in coverage affect equity in maternal and child health interventions in 35 Countdown to 2015 countries: an analysis of national*

surveys. *Lancet* 380: 1149-56. doi.org/10.1016/S0140-6736(12)61427-5.

⁴ Graham W.J., McCaw-Binns A., Munjanja S. (2013), *Translating Coverage Gains into Health Gains for All Women and Children: The Quality Care Opportunity*. *PLoS Med* 10(1): e1001368. doi:10.1371/journal.pmed.1001368.

⁵ National mortality data and data on human and financial resources have been drawn from the latest DHS documents and from World Health Statistics, 2012, WHO Geneva. In Angola, the programme has started but the analyses on coverage, quality and equity will be performed in 2013.



EXPERIENCES FROM THE FIELD

QUALITY: EVALUATION AND IMPROVEMENTS

The results of this research highlight the urgent need to devote special attention to ensure that strategies to increase access and equity are accompanied by quality delivery. Shortages of staff, equipment and medicines, which do exist, cannot be blamed for organizational, training and cultural shortcomings and can be addressed with available resources and by exercising managerial prerogatives.

TEXT BY / GIORGIO TAMBURLINI / CENTRO PER LA SALUTE DEL BAMBINO-ONLUS AND EUROPEAN SCHOOL FOR MATERNAL, NEONATAL, CHILD AND ADOLESCENT HEALTH, TRIESTE

QUALITY

The international community and NGOs began to take an interest in the quality dimension rather late in the day. For decades the emphasis was on access to care. Yet accessing services that fail to provide appropriate care is not only useless, it is also counter-productive in terms of iatrogenic injury, the inevitable direct and indirect costs incurred by both the population and the system, and the prejudice resulting from quality being perceived as poor. The first systematic approach to evaluating and improving quality of care dates back a little under ten years, with the focus of attention on paediatric care. More recently, the spotlight has moved to maternal and neonatal care¹⁻⁴.

This contribution outlines the quality-oriented objectives, methods and initial results of the project, "Mothers and children first," with reference to interventions at the hospitals of Aber (Uganda), Tosamaganga (Tanzania) and Wolisso (Ethiopia) between August and October, 2012. The objectives at this early stage were to carry out a systematic baseline analysis of quality of maternal and neonatal care and, in parallel, to provide suggestions on drawing up action plans to bring about improvements.

TOOLS AND METHODS

Assessment was based on the approach developed by WHO in cooperation with the Collaborating Centre for Maternal and Infant Health based at the Burlo Garofolo IRCCS Institute of Trieste. The materials and methods relating to paediatric care can be found on the WHO Geneva website of the *Department for Child and Adolescent Health*⁵ and on the *Making Pregnancy Safer* site of the WHO Regional Office for Europe⁶.

In short, an assessment was made of various aspects of care (support services, availability of medicines, equipment, case management of all the main situations, from physiological labour to obstetric complications, from normal newborn to low-weight or pathological newborn), as compared to context-specific international standards⁷⁻⁹. The assessed items related chiefly to safety and efficiency, but also concerned aspects of women and children's rights to respectful care, according to a quality definition encompassing all these aspects. Five sources of information were used to

evaluate level of compliance with standards: a site visit to the services and wards, assessment of hospital admissions, assessment of an adequate sample of medical records (deaths and major pathologies), interviews with medical and nursing staff, interviews with mothers. The outcomes of the assessment were expressed as a score for each item, contributing to a mean score for each of the 17 areas (normal delivery, complications etc.). Scores ranged from 0 to 3, with 3 corresponding to the optimal situation and 0 to the presence of serious healthcare deficits.

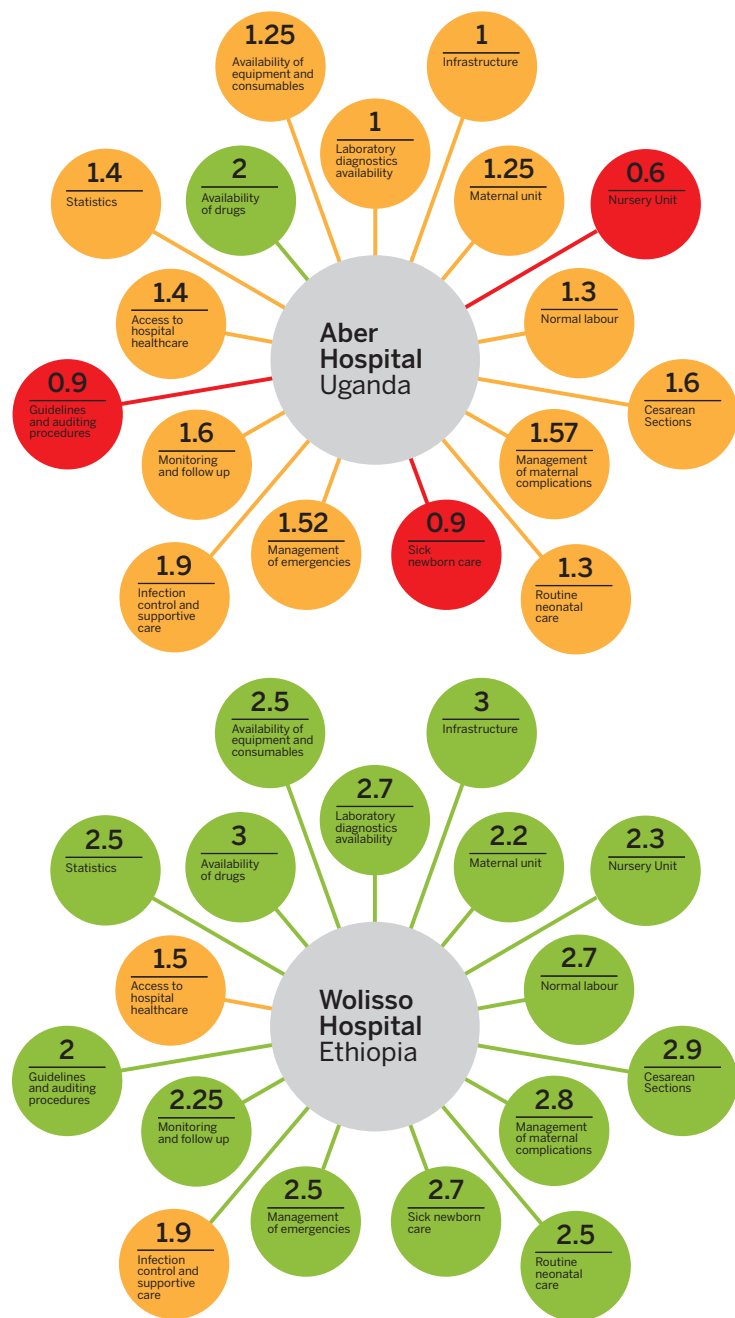
The assessment was conducted by a multidisciplinary team of experts (a gynaecologist-obstetrician, an obstetrician, a neonatologist-paediatrician and a paediatric nurse). At the end of the assessment, lasting on average four days and carried out in coop-

TABLE / ITEMS FOR EVALUATING CARE

AREAS EVALUATED
ACCESS TO HOSPITAL CARE
STATISTICAL DATA
AVAILABILITY OF MEDICINES
AVAILABILITY OF EQUIPMENT AND DISPOSABLE MATERIALS
DIAGNOSTIC SUPPORT OF A LABORATORY
INFRASTRUCTURES
MATERNITY WARD
NEONATOLOGY WARD
ASSISTANCE AT NORMAL DELIVERIES
CAESAREAN SECTIONS
MANAGEMENT OF MATERNAL COMPLICATIONS
CARE OF NON-COMPLICATED NEWBORNS
CARE OF NEWBORNS WITH COMPLICATIONS
EMERGENCY MANAGEMENT
INFECTION CONTROL AND PATIENT CARE
MONITORING AND FOLLOW UP (MOTHERS)
GUIDELINES AND AUDITING PROCESSES

eration with the staff of the various services and wards, the results and related recommendations were presented and discussed at a meeting attended by the entire management and non-management staff. A plan based on the findings was drawn up within 1-2 months, indicating actions deemed feasible in relation to existing resources, deadlines, responsibilities and the autonomy of management staff ^a. Since at least one of the assessors was present in all three hospitals, the assessments lent themselves to comparison.

FIGURES 1, 2, 3 / QUALITY OF MATERNAL AND INFANT SERVICES AT THE HOSPITALS OF ABER (UGANDA), TOSAMAGANGA (TANZANIA), AND WOLISSO (ETHIOPIA)¹

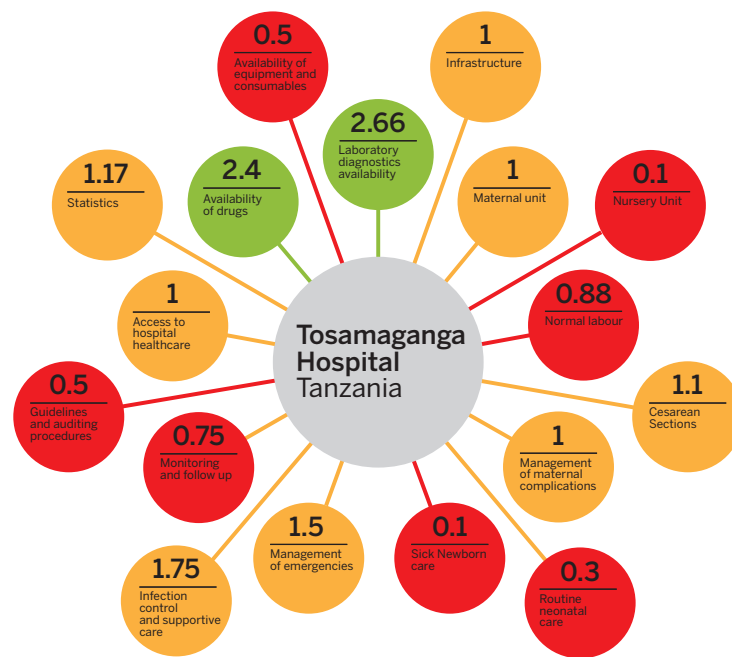


RESULTS

Figures 1, 2 and 3 illustrate the final scores in the key areas². The main findings were: a) a major effort is required to guarantee women and children a delivery and birth with minimum risks and respect for rights to privacy, information and care; b) the main gaps, in at least two of the hospitals, were in neonatal care, emergency management and monitoring; c) as in previous studies^{1,2,10}, shortages of staff, equipment and medicines, which do exist, cannot be blamed for organizational, training and cultural shortcomings and can be addressed with available resources and by exercising managerial prerogatives; d) access-related problems, which strongly influence the state in which mothers and children reach (or fail to reach) hospital, are a common critical area.

DISCUSSION

The results of the first stage of the work have revealed the urgent need to draw up strategies to increase access and equity focussing specifically on quality. Since no concrete projects have yet been initiated in the field to implement these three policies - now adopted by the major international agencies - the Doctors with Africa CUAMM project serves as a potential model.



0 - 0.9 Substantial improvements are needed in order to avoid serious threats to mothers and newborn health.
1 - 1.9 Improvements are necessary in order to avoid risks for women and newborn.
2 - 3 Improvements are needed in order to minimize potential threats to health of mothers and newborns while respecting their dignity and rights.
¹ Tool used: Assessment tool for the quality of hospital care for mothers, newborn and child. WHO 2009.

The situation is very different in the three facilities due to differences in health systems, to the work carried out by governments, and to the way the three hospitals have been managed in recent years. A similar assessment was made in Wolisso in 2010, resulting in major improvements, particularly in neonatal care.

As discussed elsewhere¹⁰, the above approach requires professionals with experience in the fields under assessment, who can: a) identify problems in the quality of care that would otherwise be missed; b) interact constructively with staff, while being perceived as authoritative and competent.

Being aware of problems and their causes is the key to success and requires a problem-solving rather than an inquisitorial attitude. Elsewhere this approach has led to significant improvements in the quality of care over the course of 12 months^{9,10}. The Doctors with Africa CUAMM project envisages an 18-month follow-up assessment. Does this mean everything is as it should be? Not at all. Various critical aspects need to be addressed:

- the **identification** of adequate indicators to monitor progress. These must be readily measurable, describe relevant aspects of identified problems and be sensitive to change. It is not easy to guarantee these requirements. Classical mortality indicators, for example, are limited by the numerosity of events (as maternal mortality) and the marked influence of case mix (see percentage of caesareans). Conversely, neonatal mortality by birth weight and time (intrapartum, first 24 hours), for example, is highly significant and sensitive to the quality of care. Process indicators as correct compilation of the partogram or active management of the third stage of labour, are significant but require medical record sampling by expert providers. A working group is currently producing a set of quality indicators that can be used for monitoring purposes.

- The conversion of international or national documents into **operating protocols** adjusted to the services on offer, their spread and use, starting from curricular training. This is no easy task and may require outside technical assistance, but absolutely must involve staff.
- **The adoption of strategies to motivate change. Experience** has shown that change is highly dependent on the presence of adequate leadership, at both hospital and individual service level. This factor is limited in two ways: above all by the considerable turnover of expatriate and other staff, and the fact that leadership is rather a rare skill. Moreover, one objective of the assessments is to seek out and activate human resources, often in need of stimulation and guidance to get moving. Motivation is a central component and context-specific strategies need to be identified and general combining professional and financial incentives (a complex subject requiring ad hoc management).
- Identification of driving forces. In the above project this refers to Doctors with Africa CUAMM staff. However, to become sustainable and gain significance, the project needs to identify other driving forces from among local professional organizations, and national or local authorities.

The success of the project's "quality" component – a particularly complex but also very important dimension – and the ability to adequately document results and thus acquire emblematic value, will depend on how these sticking points are addressed.

The assessments were carried out by Giorgio Tamburlini together with Alberta Bacci, Fabio Uxa, Gianfranco Gori, Valentina Ciardelli, Paola Stillo, and Marina Daniele. Giorgio Tamburlini coordinated the work in cooperation with Giovanni Putoto and the local CUAMM teams (Bruno Turri - Aber, Gaetano Azzimonti - Tosamaganga, Massimo Maroli and Marina Trivelli - Wolisso).

NOTES AND REFERENCES

a Where an assessment refers to several hospitals in a single country, a second list of recommended actions, commissioned by the Ministry of Health, is presented to the Ministry and includes system actions that normally require central intervention (legislation and regulations, training curricula, allocation of human and structural resources, provisioning and medicines, information system etc.).

1 Nolan T., Angos P., Cunha A.J., Pierce N., Tamburlini G. et al., *Quality of hospital care for seriously ill children in less developed countries*. *Lancet*. 2001; 357(9250):106-110.

2 Duke T., Keshishiyani E., Kuttumuratova A., Ostergren M., Ryumina I., Stasii E., Weber M.W., Tamburlini G., *Quality of hospital care for children in Kazakhstan, Republic of Moldova, and Russia: systematic observational assessment*. *Lancet*, 2006; 367:919-92.

3 Ronsmans C., Graham W. J., *Maternal mortality: who, when, where, and why*. *Lancet*, 2006; 368: 1189-2000.

4 Van den Broek N., Graham W., *Quality of care for maternal and newborn health: the neglected agenda*. *Brit J Obst Gyn* 2009; 116 (1):18-21.

5 Who, *Improving the Quality of Hospital Care at First Referral Level*. Geneva, Switzerland: World Health Organization/Department of Child and Adolescent Health and Development; 2001.

6 Who Regional Office for Europe, *Making Pregnancy Safer - Assessment tool for the quality of hospital care for mothers and newborn babies*, <http://www.euro.who.int/pregnancy>

7 Who Impac: *Managing Complications in Pregnancy and Childbirth: a guide for midwives and doctors*, 2003, <http://www.who.int/reproductive-health/impac/index.html>

8 Who Impac: *Managing newborn problems: a guide for doctors, nurses, and midwives*, 2003, <http://www.who.int/reproductive-health/publications/mnp/index.html>

9 Who Impac: *Pregnancy, childbirth, postpartum and newborn care: a guide for essential practice*. 2006, http://www.who.int/making_pregnancy_safer/documents/924159084x/en/

10 Tamburlini G., Siupsinskas G., Bacci A., *Maternal and Neonatal Care Quality Assessment Working Group. Quality of maternal and neonatal care in Albania, Turkmenistan and Kazakhstan: a systematic, standard-based, participatory assessment*. *PLoS One*. 2011;6(12):e28763. Epub 2011 Dec 22.



EXPERIENCES FROM THE FIELD

MEASURING EQUITY: HEALTH SERVICE USE

The social gradient in health service access needs to be measured. It is very high in poorer countries as a result of geographical, cultural and financial barriers.

Research clearly points to inequalities in maternal and neonatal health service use, sending out a social alarm signal.

TEXT BY / MARIA CASTIGLIONI / DEPARTMENT OF STATISTICS - UNIVERSITY OF PADOVA WITH CALISTUS WILUNDA, GIOVANNI PUTOTO AND FABIO MANENTI / DOCTORS WITH AFRICA CUAMM

INTRODUCTION

Equity is one of the most important parameters by which to assess health system performance¹. However, increasing coverage rates and thus the use of maternal services does not automatically lead to a reduction in inequalities or even mortality². Despite a rise in use, poor women continue to be excluded from mother and child services in Africa due to geographic, financial and cultural barriers. To monitor emergency obstetric service use by the poor, their socio-economic profile needs to be determined³. This is hindered by the fact that healthcare facilities do not collect these data in the computer system on a routine basis and existing tools are too complex and impractical to be used in healthcare settings⁴. What are needed are simple but rigorous statistical tools. This contribution describes the objectives and methods adopted to determine the “equity” component and initial findings of the Doctors with Africa CUAMM project, “Mothers and children first”. Measurements were made before the removal of user fees, i.e. direct costs for obstetric emergencies (caesarean section), amounting to 8/10 euros at Wolisso in Ethiopia, 35/50 euros at Aber in Uganda, and 20/30 euros at Tosamaganga in

Tanzania. Indirect patient costs (e.g. transport, food, loss of earnings) were not calculated.

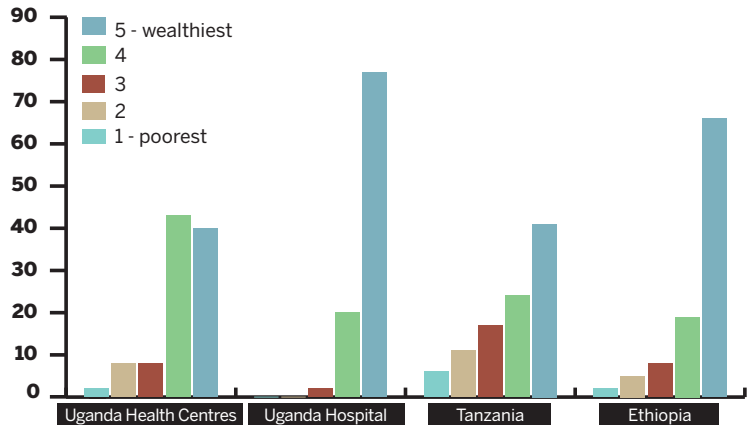
MATERIALS AND METHODS

The method developed in Bangladesh by Pitchfort⁵ was used to measure the socio-economic gradient of women giving birth in hospital facilities, based on the following steps: a) construction of a wealth index; b) construction of a questionnaire based on the index, to administer to women at discharge from surveyed hospital and health centre maternity wards; c) comparison of the results with the reference population. Social and economic variables were drawn from the most recent *Demographic Health Surveys (DHS)* conducted in Ethiopia (2011), Uganda (2011) and Tanzania (2010)⁶. The first step was to select a group of women of reproductive age who had given birth and were resident in the region. After obtaining a series of socio-economic data on this group, including educational attainment, five or six variables significantly differentiating the women’s socio-economic levels were selected, including: characteristics of household roofing, type of latrine

TABLE 1 / RAW AND WEIGHTED SCORES OF SOCIO-ECONOMIC VARIABLES OF WEALTH SELECTED TO CONSTRUCT THE INDEX. THE CASE OF ETHIOPIA

VARIABLE	TYPE OF RESPONSE	RAW SCORE	RESCALED SCORE	WEIGHT	WEIGHTED SCORE
ROOFING MATERIAL	STRAW	1	0.00	6	0.00
	IRON	2	1.00		6.00
WALLING MATERIAL	REEDS	1	0.00	5	0.00
	EARTH	2	0.25		1.25
	KILN-FIRED BRICKS	3	0.50		2.50
	NON-KILN-FIRED/MUD BRICKS	4	0.75		3.75
	CEMENT	5	1.00		5.00
DO YOU HAVE A TABLE?	NO	1	0.00	4	0.00
	YES	2	1.00		4.00
DO YOU HAVE A BED?	NO	1	0.00	3	0.00
	YES	2	1.00		3.00
DO YOU HAVE A RADIO?	NO	1	0.00	2	0.00
	YES	2	1.00		2.00
EDUCATION LEVEL	NO EDUCATION	1	0.00	1	0.00
	HAS NOT COMPLETED PRIMARY EDUCATION	2	0.25		0.25
	HAS COMPLETED PRIMARY EDUCATION	3	0.50		0.50

FIGURE 1 / SOCIO-ECONOMIC PROFILE OF WOMEN GIVING BIRTH IN 2012 IN THE HEALTH CENTRES OF OYAM DISTRICT (UGANDA), AT ABER (UGANDA), TOSAMAGANGA (TANZANIA), WOLISSO (ETHIOPIA) HOSPITALS



ate level of wellbeing are included among the hospital admissions. In all facilities, there are very few admissions from among the poorest population group.

RESULTS: CONSIDERATIONS ON METHOD AND CONTENT

Method. The questionnaire for collecting information is user-friendly and quick to fill in. The index is easy to calculate and can be done at the local level, at each service. It outlines an “equity profile” designed to identify subgroups of women who do or do not use maternity services. It can be integrated into the local information system and used on an annual basis. It is limited by the fact that it measures maternity service usage, but does not accurately identify the determinants of failure to access services, as distance, poverty, awareness, language, religion, etc., requiring separate, particularly qualitative analysis⁷. It does not measure the indirect costs of services charged to families.

Content. The wealth index calculated for hospital services in Uganda, Tanzania and Ethiopia unequivocally exhibits inequalities in maternal and neonatal health service use and serves as a form of social alert. These findings are, however, in keeping with national profiles and designed to monitor the effects over time of the partial reduction in financial barriers, as the removal of hospital user fees and the introduction of free ambulance transportation, implemented within the project framework. This is a very important starting point for negotiations with communities, local health authorities and donors to explore other approaches for reaching the poor (e.g. individual or geographical targeting) through recently introduced innovative financial strategies⁸.

Vega J., Zarowsky C., *Strengthening health information systems to address health equity challenges*. Bull World Health Organ 2005, 83:597-603.

⁵ Pitchforth E., Teijlingen vE., Graham W. & Fitzmaurice A. (2007), *Development of a proxy wealth index for women utilizing emergency obstetrics care in Bangladesh*. Health Policy Plan 22, 311-319.

⁶ www.measuredhs.com

⁷ Wilunda C. et al., *Measuring equity in access to emergency obstetric care at Wolisso Hospital in Oromiya, Ethiopia*, International Journal of Equity in Health. In attesa di pubblicazione.

⁸ De Brouwere et al., *Access to maternal and perinatal health services: lessons from successful and less successful examples of improving access to safe delivery and care of the newborn* Tropical Medicine and International Health, 2010; 8: 901-909.

used, education level, dining table and radio ownership. Responses were assigned a score of between 0 and 1, increasing with level of wellbeing. The wealth index was obtained by the sum of the responses given by the women, attributing more weight to the most significant variables (see **Table 1**). The tool was validated by analysing the principle components and performing kappa analysis. The components were used to develop a composite index of household wealth based on all DHS variables, defined as the gold standard. Kappa analysis exhibited a high level of agreement between the simplified index calculated using the selected variables and the gold standard index. These composite indexes were applied to the selected variables to establish the cut-off points for each quintile of women in the population included in the reference DHS. This enabled the women who had given birth and were resident in the districts to be divided into five groups of the same size (20% of the women), the first formed by the poorest women and the fifth formed by the richest. The selected variables, together with personal and residence data, were included in a questionnaire, which was tested and administered to all women discharged from the obstetric wards of the 3 hospitals and 7 health centres of the district of Oyam (Uganda) involved. Had there been equity in access, the surveyed population would have been formed by 20% very poor women, 20% women living in slightly better conditions and so on to 20% very rich women.

In total, 3,864 questionnaires were collected between 2011 and 2012 over an average period of six months. Twenty-one people from the area and the University of Nkozi in Uganda took part in the collection. Data analysis was performed using SPSS Version 6 software, with the support of the Department of Statistics of Padova University.

RESULTS

Figure 1 shows the percentage of women admitted to the health centres in the district of Oyam (Uganda) and the hospitals of Aber, Tosamaganga and Wolisso, classified by own and family socio-economic wealth. There is evidently a very high concentration of users from the wealthiest group: over three-quarters of the total in Uganda and over half in Ethiopia.

The health centres of Oyam district in Uganda are also attended by a large percentage of women from group 4. The situation is a little less unbalanced in Tanzania, where women with an intermedi-

NOTES

¹ World Health Organization (2000). *World Health Report 2000, Health systems: Improving performance*. Who, Geneva.

² Victora C.G., Barros A.J.D., Axelson H., Bhutta Z.A., Chopra M., et al. (2012), *How changes in coverage affect equity in maternal and child health interventions in 35 Countdown to 2015 countries: an analysis of national surveys*. Lancet 380: 1149- 56. doi.org/10.1016/S0140-6736(12)61427-5.

³ Csdh (2008). *Closing the gap in a generation: health equity through action on the social determinants of health. Final Report of the Commission on Social Determinants of Health*. Geneva, World Health Organization.

⁴ Nolen L.B., Braveman P., Dachs N., Delgado I., Gakidou E., Moser K., Rolfe L.,



**TANZANIA, CONFERENCE
ON MATERNAL HEALTH**

Over 900 health sector experts from 70 different countries took part last January at a world conference on maternal health and quality of services in Tanzania, where 454 mothers every 10,000 live births lose their lives. "We are training our staff and raising awareness about antenatal care, and I can assure you that we are determined to reduce maternal mortality," stated the Tanzanian Minister of Health, Seif Suleiman Rashid. "The figures are unacceptable." Let's hope they are not just empty words.





EXPERIENCES FROM THE FIELD

EMERGENCY SERVICE COVERAGE

Child delivery and neonatal care are at the centre of attention in three different African settings, using a rigorous system to evaluate availability, use and quality of emergency obstetric and neonatal services. Between May and November, 2012, 3 hospitals and 18 health centres with maternity units were assessed and 170 providers interviewed. This is the starting point for the challenge to improve.

TEXT BY / CALISTUS WILUNDA, GIOVANNI PUTOTO, ANDREA ATZORI, FABIO MANENTI, DONATA DALLA RIVA / DOCTORS WITH AFRICA CUAMM

INTRODUCTION

The strategy to reduce maternal mortality by $\frac{3}{4}$, fetal mortality by $\frac{1}{2}$ and neonatal mortality by $\frac{1}{4}$ is based on skilled attendance at delivery and on the management of obstetric and neonatal emergencies¹.

The healthcare facilities providing this care are divided into two levels. The first level, Basic Emergency Obstetric Care-BEmOC, relates to the provision of 6 essential services: parenteral administration of antibiotics, oxytocin and anticonvulsants; removal of products of conception; manual removal of the placenta; neonatal resuscitation with a mask and ambu bag. The second level, Comprehensive Emergency Obstetric Care-CEmOC, includes caesarean sections and blood transfusions. The efficacy of these services has been demonstrated by quasi experimental, observational and ecological studies².

Measuring the availability, use and quality of these services is based on eight process indicators, referred to as UN indicators³.

This contribution describes the objectives and methods for measuring the “coverage” component of Doctors with Africa CUAMM’s “Mothers and children first” project, together with the initial results of the interventions conducted in the districts of Wolisso, Goro and Wonchi (Ethiopia), Oyam (Uganda) and Iringa Rural (Tanzania).

TOOLS AND METHODS

The “Need assessment of emergency and neonatal care” tool developed by Columbia University was used⁴. This is based on questionnaires arranged in 9 modules relating to: the healthcare unit and the condition of its infrastructure; human resources; medicines, equipment and supplies; the information system; standard essential services (*signal functions*) delivered in the previous quarter; use of the partogram; staff know-how and skills; review of caesarean sections; review of cases of maternal mortality. Between May and November 2012, 3 hospitals and 18 healthcare centres with maternity units were evaluated and 170 providers interviewed. The protocol was prepared in Padova and data collection was carried out in loco with the local authorities. The University of Nkozi was involved in Uganda. Complete data processing is still in progress.

RESULTS

- *Indicator 1: availability of BEmOC/CEmOC facilities.*

All the evaluated hospitals deliver 8 essential services. None of the 18 peripheral units can guarantee the 6 basic services. The critical areas concern assisted vaginal delivery by vacuum extraction or forceps, which are totally absent, and the administration of anticonvulsants, which is lacking in 13 out of 18 units.

Ethiopia has the biggest shortage of basic services per health centre. The most frequently reported reasons for the lack of services were: inadequate procurement of drugs and equipment supplies; lack of enough clinical cases to justify the service; insufficient training; other human-resources-related problems. See **Figure 1**.

- *Indicator 2: geographic distribution of BEmOC/CEmOC facilities.*

None of the evaluated districts meets UN standards which envisage at least 5 healthcare units (1 CEmOC and 4 BEmOC) per 500,000 population. Geographic accessibility to the units was surveyed by means of spatial georeferenced information systems (GIS). Data on distances and travelling times will be processed in the near future.

- *Indicator 3: percentage of all child deliveries taking place in facilities able to manage obstetric emergencies.*

The Ethiopian districts provide 20% coverage, 2/3 of all deliveries take place in Wolisso hospital; the coverage rate in the Ugandan district is 42%, 1/3 of all deliveries take place in Aber hospital; the coverage rate in the Tanzanian hospital is 90%, 1/6 of deliveries take place in Tosamaganga hospital.

- *Indicator 4: percentage of treated vs. expected obstetric complications.*

According to international standards, all expected obstetric complications (15%) should be treated in qualified healthcare centres. It proved impossible to calculate this indicator. Many registers did not indicate type of obstetric complication.

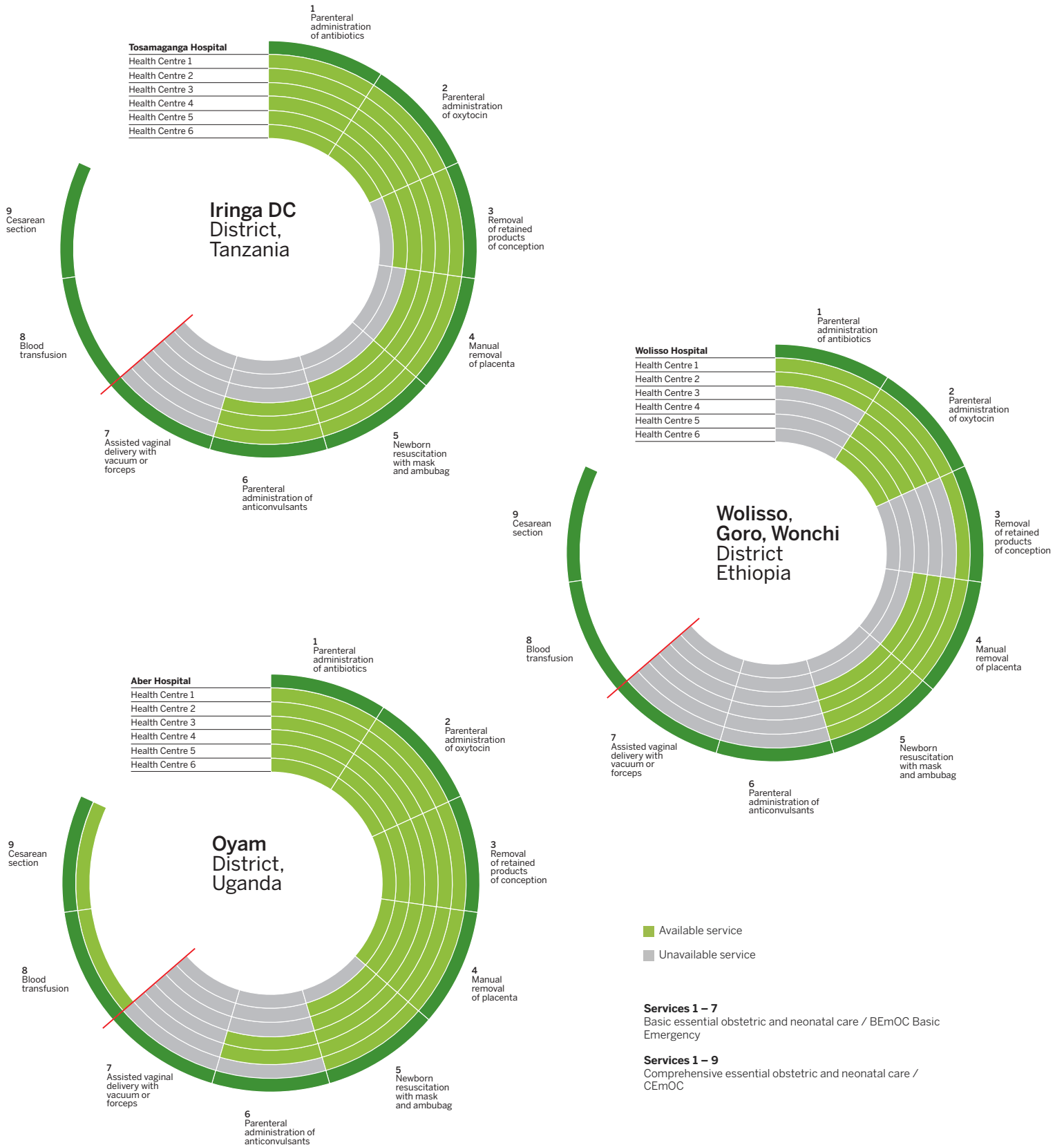
- *Indicator 5: percentage of caesarean sections vs. total expected deliveries.*

The caesarean section thresholds recommended by WHO range from 5 to 15% of all deliveries. The district of Iringa complies with set standards (7.6%). The other districts are below the minimum limit: 2.3% (Uganda) and 2.4% (Ethiopia). This indicator does not assess clinical indications for caesarean section nor patients’ geographical mobility.

- *Indicator 6: maternal mortality rate due to direct causes.*

(the rate measures hospital mortality since data is not available for the peripheral health centres).

FIGURE 1 / ESSENTIAL OBSTETRIC AND NEONATAL EMERGENCY CARE IN TANZANIA, UGANDA AND ETHIOPIA



This indicator indirectly measures the quality of obstetric care. The minimum standard is <1%. Wolisso hospital has a value of 0.4%; Tosamaganga of 0.6%; Aber of 1.5%.

- *Indicator 7: fetal mortality rate (fresh stillbirth) and early neonatal mortality rate (<24h).*

These, too, are indirect indicators of the quality of obstetric care. There are no reference standards. Due to the unreliability of local data, a single indicator was calculated of fetal and neonatal deaths before discharge of the mother. Aber (2.8%) and Tosamaganga (2.4%) are consistent with evaluations of hospital quality, reporting problems in maternal and neonatal care, whereas Wolisso had a rate of 1.1%.

- *Indicator 8: rate of maternal mortality due to indirect causes* (the rate measures hospital mortality since data are not available for the peripheral health centres). It indicates the presence of non-obstetric pathologies prior to the pregnancy or which onset during it. Wolisso: 20%; Aber: 33.3%; Tosamaganga: 66%. One possible explanation for these data is the influence of HIV/AIDS. Serum HIV prevalence was 2% in Wolisso; 11% in Aber and 5% in Tosamaganga. Since non-obstetric maternal deaths are not always recorded as such, this finding is probably underestimated.

DISCUSSION

The healthcare setting varies considerably⁵.

Ethiopia has a low health system. Eighty percent of women give birth at home, few deliveries are assisted at community level and Wolisso hospital is congested. Uganda has a middle health system with approximately half of women giving birth in health facilities. Tanzania has a high health system. Roughly 90% of deliveries are institutionalized and distributed in over 70 health centres with low volume and quality.

Overall, while different, the decentralized healthcare systems did not function properly in any of the analysed settings. Maternal mortality continues to be high and has not shown significant reductions over time⁶. The case of Tanzania is significant.

The assessment tool provides a picture of health system gaps in responding to obstetric and neonatal emergencies.

The collected data provide a baseline survey to monitor the progress made by the project. Its efficacy depends on the availability and reliability of data. It has its limits⁷. It requires more specific, more sensitive tools to measure hospital quality and equity. Operating decisions must be taken within the framework of health planning between the district's government team and diocesan hospital management.

Political decisions are also needed. Unfortunately, international and local agendas are not always aligned, despite the slogans.

NOTES

¹ Pattinson R. et al., *Stillbirths: how can health systems deliver for mothers and babies?*, *Lancet*, 2011, Published Online April 14, 2011DOI:10.1016/S0140-6736(10)62306-9.

² Kongnyuy E., Hofman J., van den Broek N., *Ensuring effective Essential Obstetric Care in resource poor settings*. *Bjog* 2009; 116 (Suppl. 1):41-47.

³ Who, Unicef, Unfpa, Amdd. *Monitoring Emergency Obstetric Care: a Handbook*. Geneva: WHO; 2009.

⁴ *Needs Assessment of Emergency of Obstetric and Neonatal care: Data collection modules.*

<http://amddprogram.org/d/content/needs-assessments>

⁵ Using coverage of skilled attendance at birth helps to categorize different settings

into three "health system contexts": providing a framework for assessment of priority MNCH interventions in local contexts: **Low health system context** (skilled attendance, 30%), **Middle health system context** (skilled attendance 30-60%), and **High health system context** (skilled attendance, 60%). Quoted from Rudan I. et al. (2010), *Evidence-Based Priority Setting for Health Care and Research: Tools to Support Policy in Maternal, Neonatal, and Child Health in Africa*. *PLoS Med* 7(7): e1000308. doi:10.1371/journal.pmed.1000308

⁶ Trends in maternal mortality: 1990 to 2010. Who, Unicef, Unfpa and The World Bank estimates, 2012.

⁷ Gabrysch S., Civitelli G., Edmond K.M., Mathai M., Ali M., et al. (2012), *New Signal Functions to Measure the Ability of Health Facilities to Provide Routine and Emergency Newborn Care*. *PLoS Med* 9(11): e1001340. doi:10.1371/journal.pmed.1001340.



AN ULTRASOUND SCANNER IN AFRICA

Turning an idea into a project: sending an ultrasound scanner to Tosamaganga and training local staff to use it. Unfortunately our underestimation of the setting, which is radically different from our experience in Italy, led to negative initial results. But we have learnt some lessons for next time.

TEXT BY / MARIA ROSARIA ACQUARO, SARA BIGNULIN, DARIO CAPPELLO, ANTONIO DAVIDE CIRINGIONE, VALENTINA GAMBINO, STEFANO PARLAMENTO, SAMANTHA PEGORARO / STUDENTS OF ITALIAN SECRETARIAT OF MEDICAL STUDENTS (SISM)

After spending many years developing the Wolisso Project¹, we decided, in our capacity as medical students of the Italian Secretariat of Medical Students (SISM), to take a more complex project on board and back the introduction of a sophisticated medical instrument in an African health centre. Essentially, the idea was to provide a Doctors with Africa CUAMM hospital with an ultrasound scanner and the basic instructions on how to use it. Below is an outline of the steps taken to achieve our goal and the critical areas encountered, showing why the project has still not produced the desired results.

In the first stage we defined the project objectives and tasks required to achieve them.

Objective 1. Make an ultrasound scanner available and operational at Tosamaganga Hospital in Tanzania.

The first task was to raise funds to purchase the scanner, transport it to the hospital and ensure its maintenance, with a view to guaranteeing a high quality service over time. The number of tests performed and the maintenance records were identified as an indicator of efficacy.

Objective 2. Train doctors and health assistants to train others to use the ultrasound scanner.

We drew up a draft training programme: 25 hours of teacher-led theoretical lessons on the rudiments of abdominal and chest ultrasonography, together with practical training during clinical activity alongside a specialist. Course participants would then be tested on what they had learnt. The indicators of goal achievement were the trainers' assessment of the number and appropriateness of the tests taken and how far ultrasonography was able to correctly guide clinical decisions.

Objective 3. Provide the public with a project evaluation report, focusing particularly on the project's financial backers.

This is to be achieved by developing a clinical database of tests carried out, performing a data analysis, drawing up study protocols (clinical studies, theses) and evaluation reports, and arranging meetings to present the results to the financial backers. Indicators of goal achievement include the number of protocols and product assessments.

Objective 4. Promote dissemination of the results achieved and build awareness among medical students, doctors, and other

members of civil society, about health problems in developing countries.

The objective is to be attained through meetings at the various faculties of Medicine and through presentation of the project at all promotional events organized by SISM. Efficacy is to be gauged by "measuring" the number of students, trainee doctors and citizens reached by the various initiatives.

Thanks to two special financial backers, we managed to raise approximately 7,000 euros, covering the scanner purchase and travel costs. We set off in February 2012 and began training doctors and health officers. We left a register on site in which to record all scans performed and then left them to it. On our return, in September 2012, to collect data and evaluate the Ultrasonography in Tosamaganga project, we were presented with the following situation: 30 scans had been recorded in the register (in 6 months). The number was small, but not all scans had been recorded. Not having enough data to analyse, we sought to rationalize the positive and negative aspects of the project to that point in time².

Status of objective 1:

POSITIVE: ultrasonography scanner operating and in good condition.

NEGATIVE: the ultrasonography gel had run out about one month before our arrival, but the hospital administration had failed to order a new supply.

Status of objective 2:

POSITIVE: according to the register, 30 scans had been performed (22 abdominal, 8 thoracic), all considered to have "impacted" clinical decisions. The doctors trained to use the machine reported that more scans had been performed but that not all of them had been recorded.

POSITIVE: the trained doctors recognized the pathognomonic pictures explained to them during the course.

NEGATIVE: scans were mainly performed to address very difficult diagnostic problems (with errors).

NEGATIVE: the technique was underused in daily practice and to address simple questions (the main target of the course), resulting in a high error rate in the most common differential diagnoses.

NEGATIVE: doctors were reluctant to upgrade.



A CAMEO OF DIGNITY

A lesson on life and death learnt from a Masai girl aged 8. This too is Africa, where you quickly learn that life is a barefoot journey, from birth to death.

TEXT BY / FABRIZIA DEL GRECO AND RAFFAELLA MARINO

Here, more than anywhere else, life is cyclical. The hospital is a hub of vital energy exchange between new entries and discrete departures. At the delivery ward, just sitting among the murmured, dignified moans of women in labour, the arrival of new life can catch you off guard. But after spending weeks in this oasis, secluded from the rest of the world, where the newborn seem to seek your hands as their first point of anchorage even before opening their eyes, we also encountered death.

Two orderlies left a side exit at Tosamaganga hospital, carrying a stretcher covered with a white sheet. They were followed by us, curious bystanders, and two Masai. Proceeding beyond the courtyard of a house and a field of undergrowth, they reached a cemetery dotted with bare tombs. Awaiting them were a gaggle of strangers and a shallow grave dug with pounding beats of a shovel. The woman's tiny body, wrapped in checked cloth, with straps to hold her ankles and neck, slid effortlessly in. And then we noticed her. She must have been eight years old when she witnessed her mother's burial. Stolid, composed, wrapped in the red cape of the Masai, leather sandals on her dusty feet, clutching onto a white plastic can. Standing there in the thin, smoky, sultry air, while the wind blew away the smell of burning brushwood, she was a cameo of dignity. She stared at us motionlessly and with more detachment than the benevolent blue sky that embraced, without distinction, the humble funeral party, the nearby group of noisy children playing ball, and the placid trip of grazing goats. As her father wept under a bare tree, her wide, tearless eyes seemed to tell us that each daily experience of new life had its downside. That was how it was. Because in Africa, with its sublime nature, you learn from a very early age that life is a barefoot journey over red earth, between life and death.

NEGATIVE: imminent transfer of some of the trained doctors to another hospital.

The first phase of the project has produced negative results due to our underestimation of the complexity of the target setting, which differs radically from our experience in Italy. There are various reasons for this: on the one hand, the trained medical staff were poorly motivated, possibly because they were not yet sufficiently aware of the scanner's advantages, despite training; on the other hand, the local community continues to underattend health centres where they have access to a scan. These two aspects are crucial to the achievement of good practice since they produce responsible health providers and informed users at the local level.

We would rather consider this a "false start" than a failure. So we identified a new doctor keen to learn about ultrasonography and started a new cycle of lessons and ward-based support, completed in September 2012. Data will be monitored once again in 2013.

We sought to bear in mind human aspects and African culture and have positive feelings about the newly trained Tanzanian doctor, who is motivated, has proved to be particularly keen on adopting good clinical practice, will remain at Tosamaganga hospital for a long time, and has access to all the lessons and scanner literature provided. What is more, the ultrasonography scanner is now also available to an Italian neonatology ward which recently opened at the hospital.

Apart from all the difficulties encountered, the experience has left us with: a burning desire to gain a deeper understanding of problems related to the African way of life, in the hope of helping to overcome them; the advice of hardened professionals who have made it their vocation "to fight *with* Africa", together with their example, which opens up previously unimagined horizons for our future efforts; the sensation that we belong, in our own small way, to something infinitely big and beautiful.

NOTES

¹ www.wolisoproject.org

² Obviously we cannot draw any conclusions regarding objectives 3 and 4 since these tasks have not yet been implemented in the project.



REVIEW

THE GLOBAL BURDEN OF DISEASE (GBD). THIS UNKNOWN MEASURE.

To measure the burden of disease on the health of a population, the Global Burden of Disease (GDB) combines years of life lost due to premature mortality with years of life lived in less than good health due to morbidity/disability.

TEXT BY / GAVINO MACIOCCO / DEPARTMENT OF PUBLIC HEALTH, UNIVERSITY OF FLORENCE

The paradigm for measuring population health radically changed following publication of the World Bank report, *“World Development Report 1993. Investing in health”*. A new indicator, the *Global Burden of Disease* (GDB), was developed using *Disability Adjusted Life Years* (DALYs) as its unit of measure. The aim was to replace traditional population health indicators (life expectancy, incidence, prevalence, etc.) with a more concise, informative metric that could improve the definition of a population’s health status and priorities in terms of health service funding and organization.

To measure the burden of disease on the health of a population, the GDB combines:

- years of life lost due to premature mortality, calculated by comparing actual age at the time of death with the life expectancy of countries with low mortality (85 years for women, 80 years for men);
- years of life in less than good health due to morbidity/disability.

The main innovation was the addition of a “weight” to each specific condition and risk factor (DALYs) that combined the effect of years lost due to premature death (Years of Life Lost, YLL) with the number of years lived with disability (Years Lived with Disability, YLD), attributing a disability quotient of between 0 and 1 to the years spent in non-optimal physical conditions.

The product of said quotient and the time spent in a given condition thus equate to the years of life actually lost due to premature death (e.g. 30 years of life with a motor disorder assigned a disability quotient of 0.2 equal 6 YLD years of life lost).

THE DALYS MEASURE IS THUS EXPRESSED BY THE SUM: YLL + YLD

The measure has been widely criticised for being arbitrary and debatable and for its many inherent assumptions, extrapolations and

the varying margins of uncertainty for each estimate. Nonetheless, it remains the first attempt to comparatively estimate the magnitude of problems, taking account of the “disability” dimension, rather than just indicators of mortality or incidence and prevalence. It has therefore been adopted by WHO, amongst others, to assess the impact of various factors, as pollution or tobacco. It has also served to highlight major disparities in the use of resources: to stress, for instance, that research investments are not directed towards pathologies with more “weight” or used in countries where the overall “weight” of the disease is lower.

The first *Global Burden of Disease Study* has therefore stimulated studies in specific sectors or geographical areas (although to be truthful, it was cited more often than actually used), becoming a tool available to governments, international agencies and NGOs for defining research and intervention priorities.

A new study in 2010 revised some of the methods, recalculating previous 1990 and 2005 estimates. One of the key innovations has been to estimate the disability quotient, originally defined by expert consensus and now determined by surveys on different population groups in various cultural settings, with different values attributed to different conditions of disability/disease.

A further innovation has been the use of a wider information base including not only systematic reviews of evidence, which have already been conducted and in many cases commissioned ad hoc, but also reports, current statistics and “grey literature”.

The number of conditions taken into consideration has risen to 291, the number of sequences to 1,160, and risk factors to 67. “Weights” have been determined for each of these in terms of DALYs, YLL and YLD, the trends between 1990, 2005 and 2010 have been recalculated, and projections have been made for 2030. All this has been done for the world’s 21 regions, for 22 age groups (from the first week of life to 80 years and over), and naturally for women and men.

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2 Tamburlini G., Monasta L., *Il nuovo Global Burden of Disease study: cosa c’è di nuovo?* <http://www.saluteinternazionale.info/2012/12/il-nuovo-global-burden-of-disease-study-cosa-ce-di-nuovo/>

TRAINING OF TRAINERS (TOT) AND BEYOND

From training to public awareness. The ToT course in Florence, attended by 48 people, was the most well-structured event of its kind to date, involving careful *ex ante* design and thorough *ex post* evaluation.

TEXT BY / CHIARA DI BENEDETTO AND CHIARA CAVAGNA / DOCTORS WITH AFRICA CUAMM

TRAINING OF TRAINERS

Teachers don't just teach, they often learn. Or more to the point, teaching and "building knowledge" go hand in hand with open mindedness and change. Which is why Training of Trainers (ToT) courses envisage workshops especially designed for exchanging and sharing both content and teaching methods. They have become a relatively widespread tool in the field of education and are part of the key activities of the *Equal opportunities for health: action for development* project, designed to spread the Global Health model¹, coordinated by Doctors with Africa CUAMM, in partnership with 18 universities and institutions in Italy, Poland, Latvia, Bulgaria, Romania, Hungary and Malta.

Within the framework of the project, a ToT addressed to both academic teachers and professional trainers, is held once per year in each of the seven participating countries. The number of participants is generally low (usually a maximum of 50) to accommodate group exchange; each ToT normally lasts 2 days. Doctors with Africa CUAMM organized the first ToT in 2008, supported by the first edition of the *Equal opportunities for health* project. Since then, 4 ToTs have been organized in Italy (in 2008, 2010, 2011, 2012). Here we will dwell specifically on the latest event, held in Florence (22-23 November, 2012) in close collaboration with the University's Department of Hygiene, and implemented with the backing of RIISG (Italian Network for Global Health Teaching)².

The ToT in Florence, attended by 48 people, was the most well-structured event of its kind to date, involving careful *ex ante* design and thorough *ex post* evaluation. Prior to the ToT, the participants took part in a video conference to determine how the training experience had influenced each of them. Accordingly, the sessions were designed to alternate brief seminar contributions with plenty of non-conventional training: presentation of experiences by teachers and students; a case study analysis on international health cooperation to identify social determinants of health; "market place" activities – small group exchange work – on content, objectives and teaching; "buzz group" work – i.e. rapid exchange work in pairs – on teaching methodologies; and simulations of

Global Health courses for university students or regional government employees. Teaching methods and content progressed in perfect synergy in the course room, demonstrating that effective training does not separate content and methodology.

FROM TRAINING TO PUBLIC AWARENESS

To give more appeal to Global Health analysis and to extend the debate to civil society, a third working day open to the public has been added to the ToT course over the last two years. This takes the form of a conference, held in Florence with the support of the Regional Government of Tuscany and is dedicated to the relationship between economic crisis and European health systems. The speakers were Allison Pollock from Queen Mary - University of London, Angelica Velkova of the University of Pleven in Bulgaria, Angelo Stefanini of the International Study Centre of Bologna, Gavino Maciocco of the University of Florence. The event was well attended, by 125 participants, and it has opened a constructive debate that set aside the teacher-student approach and revealed strong links between economics and health in addition to "non insider" interest.

SHARING EXPERIENCES: FROM ITALY TO EUROPE

The ToT events are not limited to Italy. With a view to sharing the concept of Global Health – which often has different connotations in different countries due to distant historical and political processes – the first international ToT was organized in May 2012 at the University of Riga in Latvia, where teachers and trainers from seven countries shared and challenged their skills and practice in order to find common working ground. A mutual understanding of Global Health and a shared methodological approach will clearly figure among the good practices implemented by the *Equal opportunities for health* project.

NOTES

¹ For further information on the *Equal opportunities for health: action for development* project, see <http://www.cuamm.org/equal-opportunities-for-health>

and www.educationglobalhealth.eu

² <http://www.educationglobalhealth.eu/en/who-we-are>



DOCTORS WITH AFRICA CUAMM

Established in 1950, Doctors with Africa CUAMM was the first NGO in the healthcare field to receive recognition in Italy (pursuant to the Cooperation law of 1972) and is the largest Italian organization for the promotion and safeguard of the health of the African populations.

It implements long-term development projects, intervening with the same approach in emergency situations, with a view to ensuring quality services that are accessible to all.

HISTORY

In its **60** years' history:

- **1,330** people have departed to work on projects: 367 of these departed on more than one occasion. The total number of departures was therefore 1,908;
- **4,330** years of service have been carried out, with a mean of 3 years per expatriate person;
- **950** students have been accommodated at the college: 640 Italians and 280 from 34 different countries;
- **279** doctors have departed from the Veneto region in almost 60 years;
- **211** hospitals have been served;
- **40** countries have benefited from intervention;
- **150** key programmes have been carried out in cooperation with the Italian Foreign Ministry and various international agencies.

IN AFRICA

Today we are in Angola, Ethiopia, Mozambique, Sierra Leone, Southern Sudan, Tanzania, Uganda with:

- **80 providers:** 47 doctors, 4 paramedics, 29 administrative and logistics staff
- **37 key** cooperation projects and about a hundred minor support interventions, through which the organization assists:
 - 15 hospitals
 - 25 districts (for public healthcare activities, mother-child care, training and in the fight against AIDS, tuberculosis and malaria)
 - 3 motor rehabilitation centres
 - 4 nursing schools
 - 3 universities (in Uganda, Mozambique and Ethiopia).

IN EUROPE

Doctors with Africa CUAMM has for years been actively implementing projects and building networks at European level, with the aim of building public awareness on the subject of equality of access to treatment and healthcare systems. Specifically, from 2011 to 2014 the organization has been coordinator of the European project, "Equal opportunities for health: action for development", on which it has been working with 18 other partner organizations from 7 European countries. Universities, student associations, non governmental associations in Italy, Poland, Latvia, Bulgaria, Romania, Malta and Hungary are working together to give room and voice to training in Global health and to promote greater awareness about the relationships between health and development, both individually and collectively.

NOTICE TO READERS

Support and take part in our commitment to Africa, in one of the following ways:

- **Post office current account** no. 17101353 under the name of Doctors with Africa CUAMM
- **Bank transfer** IBAN IT 91 H 05018 12101 000000107890 at the Banca Popolare Etica Padua
- **Credit card** call 0039.049.8751279
- **Online** www.mediciconlafrica.org

Doctors with Africa CUAMM is a not-for-profit NGO. All donations are therefore tax deductible. They can be indicated for this purpose in the annual tax return statement, attaching the receipt for the donation made.

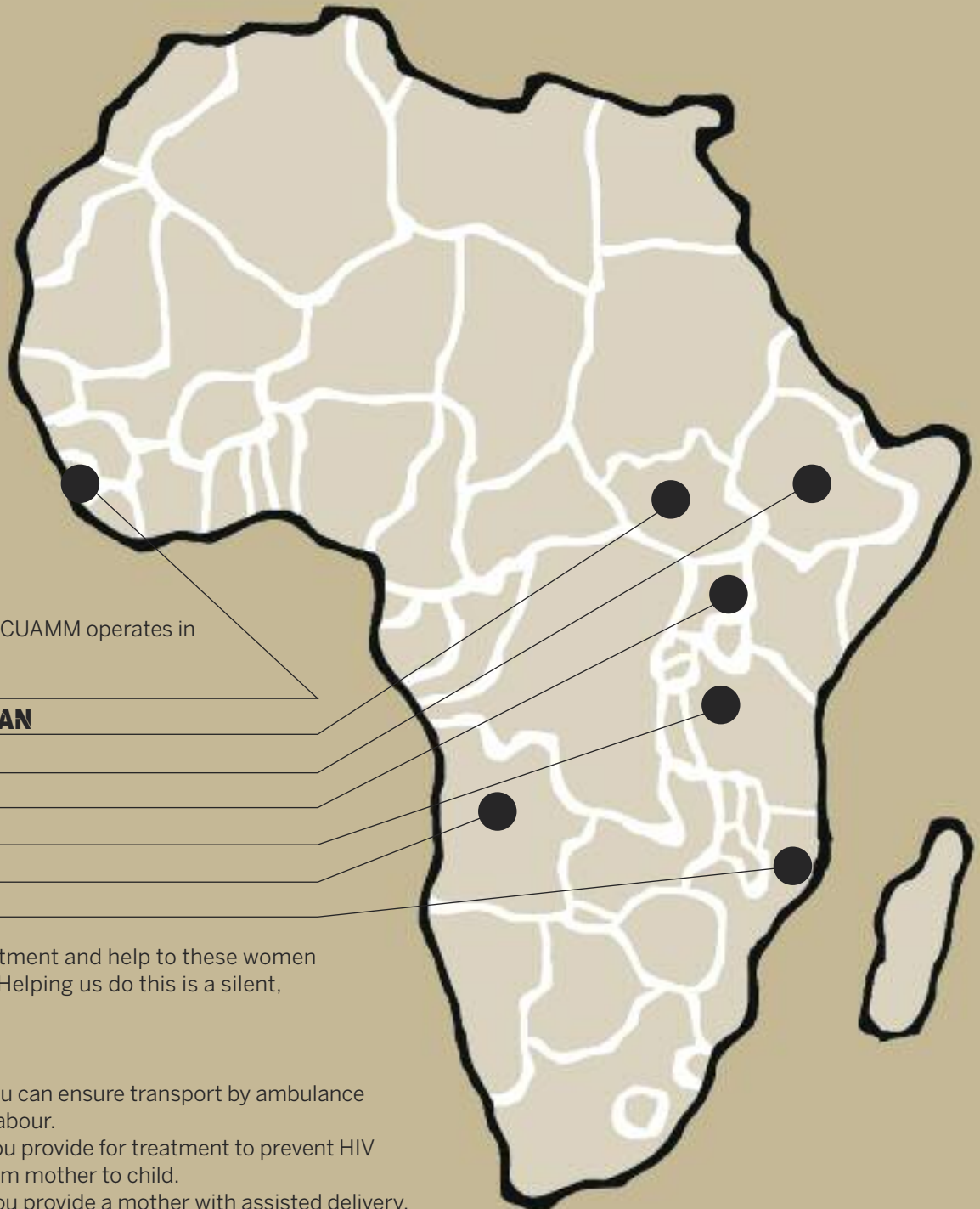
HEALTH AND DEVELOPMENT offers studies, research work and documentation which are unique to the Italian editorial world. Our publication needs the support of all readers and friends of Doctors with Africa CUAMM.



NEEDY AFRICA

EVERY YEAR IN SUB-SAHARAN AFRICA:

- 4.5 million children die before reaching five years of age, for preventable diseases that can be treated at low cost;
- 1.2 million newborn children die in the first month of life through lack of treatment;
- 265 thousand women die from pregnancy- and delivery-related problems.



Doctors with Africa CUAMM operates in

SIERRA LEONE

SOUTHERN SUDAN

ETHIOPIA

UGANDA

TANZANIA

ANGOLA

MOZAMBIQUE

where it offers treatment and help to these women and their children. Helping us do this is a silent, forgotten war.

- With 15 euros you can ensure transport by ambulance for a woman in labour.
- With 25 euros you provide for treatment to prevent HIV transmission from mother to child.
- With 40 euros you provide a mother with assisted delivery.
- With 80 euros you fund a week's training course for a midwife.



**DOCTORS
WITH AFRICA**
CUAMM



quarterly magazine
of international cooperation
and health politic
February 2013 — No **66**
www.doctorswithafrica.org



**EQUAL OPPORTUNITIES
FOR HEALTH**
ACTION FOR DEVELOPMENT



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