

Hubert Balique

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## **Giving birth at a maternity hospital: the key strategic option to be adopted in order to combat maternal and neonatal mortality in Mali**

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**Abstract.** The end result of the past 40 years of experience in combating maternal mortality in Mali suggests that the emphasis should be changed, and that giving birth at a maternity hospital should be the basic strategic option chosen. This means creating “compounds set aside for mothers-to-be”, where women approaching the end of their pregnancy will be invited to come and await the onset of labour, and at the same time enjoy the rest they need. However, the prerequisites for such an initiative will be first to guarantee the necessary quality of care in maternity hospitals, by virtue of an accreditation system, and second to ensure that the system is fully operational in terms of referring obstetric emergencies. Giving birth in the woman’s home village will then no longer be regarded as a clearly expressed strategic choice, but as an unintended course of events. The introduction of a subsidised system of fixed-charge obstetric care will remove any financial obstacles, and is a necessary step to ensure the feasibility of such a programme.

**Keywords.** Maternal and neonatal mortality, traditional midwives, giving birth at a maternity hospital, access to care, healthcare financing.

### **1 Introduction**

Like most countries in Sub-Saharan Africa, Mali embarked on efforts to combat maternal mortality as soon as it gained its independence in 1960. Fifty years later, the maternal mortality rate of this country of 15 million inhabitants is still excessively high, in light of the potential now offered by modern scientific medicine. The vastness of its territory (1,247,000 km<sup>2</sup>) and the fact that it ranks among the world’s poorest countries (with a per capita income of just US\$ 650) may explain this situation, but cannot justify it.

### **2 A situation that is intolerable in the 21<sup>st</sup> century**

The latest demographic and healthcare survey estimated the maternal mortality rate in Mali at 464/100,000, i.e. 3,500 maternal deaths per annum, and calculates that 6,000 women per annum suffer an obstetric fistula. The neonatal death rate, for its part, is estimated at 46/1000, i.e. nearly 35,000 deaths per annum of children aged less than 1 month. This figure

accounts for approximately 40% of infant mortality, which has fallen in relative terms, as it was previously estimated at 96/1000, representing 72,000 deaths per annum of children aged less than 1 year.

The WHO attributes 25% of maternal deaths to severe haemorrhages, 15% to infections, 12% to eclampsia and 8% to dystocias, i.e. virtually 2 out of every 3 maternal deaths can be preventable in the current context in Mali<sup>2</sup>.

The latest study of maternal mortality in Mali, performed by the University of Montreal<sup>3</sup> demonstrated “the rapid effects, attributable to the availability of major obstetric interventions at district health centres<sup>4</sup>, to reducing the time taken to reach these centres in order to receive treatment and to reducing the financial obstacles to healthcare delivery”.

### **3 A genuine commitment on the part of Mali**

In 2000, Mali committed itself to achieving the Millennium Development Goals, which involved reducing the maternal mortality rate by 3/4 between 1990 and 2015, and it was at Bamako, under the impetus of the country’s First Lady, that Vision 2010<sup>5</sup> was initiated, setting a goal of

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<sup>1</sup> National Institute of Statistics

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<sup>2</sup> WHO

<sup>3</sup> Fournier and Col.

<sup>4</sup> The equivalent of a district hospital

<sup>5</sup> Ministry of Health (Ref. 7)

achieving a 50% reduction in maternal mortality rates by 2010.

In October 2007, a roadmap for reducing maternal and neonatal mortality in Mali was adopted by the country's Ministry of Health<sup>6</sup>. This mainly revolves around improving prenatal consultations and Emergency Obstetric and Neonatal Care (French acronym: SONU), and is being implemented by the National Direction of Health, which receives substantial financing from the State and its partners, coupled with the intervention of numerous NGOs throughout the country.

But the strategic choices underlying this commitment are not convincing. What we are witnessing is the re-emergence of approaches that may appear intellectually attractive, but which have not delivered results commensurate with the scale of the investments made in them, despite being widely applied in recent decades. They are based primarily on improving the conditions under which women give birth in their home village. The main initiatives here involve retraining and supervising traditional midwives, and training the women acting as intermediaries.

#### 4 A wealth of experience

In Mali, efforts to combat maternal mortality go back more than 40 years. They were initially marked by the creation of the first rural maternity hospitals in 1972, which relied on the involvement of local populations and financing from the co-operative movement. In order to provide these establishments (built of adobe brick walls with a sheet metal roof) with the qualified healthcare professionals they needed<sup>7</sup>, a 6-month training programme was introduced for young women who had received a few years' education. Using the services of these "rural midwives", who had no formal qualifications and were given a moped to enable them to carry out "advanced activities" in the 3 to 8 villages comprising their "basic sector", under the supervision of the chief nurse in charge of their district [arrondissement] health centre<sup>8</sup>, thousands of women were monitored during pregnancy and then allowed to give birth under the supervision of people who had learned how to combat the main causes of mortality.

This campaign continued in 1976, taking on board the experience acquired in Niger<sup>9</sup>, and implementing the first re-training programmes to reintroduce traditional midwives; this was initiated by the Faculty of Medicine's Centre for Training and Research in Rural Health, firstly within the Kolokani Circle<sup>10</sup> and later extended to cover the whole country. These traditional midwives were usually placed under the supervision of the "rural midwives", and were equipped with an instrument case enabling them to deliver babies in accordance with aseptic techniques. Relying on their empirical

knowledge of the risks associated with childbirth, during a short training course they had learned how to (i) identify at-risk pregnancies on the basis of simple signs (limping, small-size baby, previous stillbirths, etc.) or pathologies (limb oedema, white conjunctivas, persistent cough, etc.), (ii) combat infections by making deliveries on a plastic sheet, in situations where the event unfolds inside a hut, (iii) prevent neonatal tetanus by abandoning traditional knives and using brand-new razor blades to cut the umbilical cord aseptically, and (iv) refer difficult deliveries to the appropriate body.

Since then, thousands of traditional midwives have been trained or retrained, and by 1985, there were few villages in Mali that did not have their own pharmacy, their own healthcare representatives or retrained traditional midwives (French acronyms ASV and ATR respectively).

As part of the same dynamic, in 1978 two young doctors who had recently graduated from the Faculty of Medicine took the initiative of setting up an operating theatre at their district health centre to deal with emergencies. Using surgical skills acquired during their hospital training courses, they masterminded a major programme involving the construction of a large number of operating theatre in all of the country's healthcare districts. As a result, by 1990, these had been put in place almost everywhere in Mali, thereby reducing the waiting times involved in attending to surgical emergencies, especially caesarean sections. Following the example set by their elders, most medical students attempted to carry out the main surgical interventions at district level themselves, before they had completed their university education.

Over the course of these years, a number of Information, Education and Communication (IEC) programmes were implemented to promote appropriate reproductive health behaviour. Relatively large sums of money were also raised to build new rural maternity hospitals, by co-operatives (FGR), associations of pupils' parents (APE) and village associations (AV), financed from the rebates granted to them by the Malian Textile Development Company (CMDT) in return for their contribution to cotton marketing.

In the end, in 2005 the government decreed that caesarean sections would be performed free of charge: this step has produced remarkable effects, and fully justify the fact that it was taken, as the proportion of caesarean sections rose from 1.8% in 2006 to 2.3% in 2009. The sum of 1.6 million euros has been earmarked within the 2011 budget to finance this measure.

#### 5 Ongoing support from the international community

Thanks to all these activities, which have benefited from substantial support from the country's technical and financial partners, the rate of assisted childbirth is currently (2009) 64% for the country as a whole, and varies between 97% in Bamako and 24% at Gao (35% for rural areas of Mali as a whole). The proportion of caesarean sections (2.3%), for its part, varies between 7.3% in Bamako (adding women from the country's interior undergoing caesarean sections) and 1% at Timbuktu<sup>11</sup>.

<sup>6</sup>Ministry of Health (Ref. 8)

<sup>7</sup>In 1960, Mali had 75 doctors and 61 midwives to cover 36 maternity hospitals.

<sup>8</sup>At that time, a district [arrondissement] had between 10 and 20,000 inhabitants, and was divided into basic sectors, each with between 2,000 and 5,000 inhabitants.

<sup>9</sup>Belloncle *et al.* (Ref. 1)

<sup>10</sup>Makansiré (Ref. 6)

<sup>11</sup>Ministry of Health (Ref. 9)

## H. Balique: Giving birth at a maternity hospital

A target of 5% has been set, but the proportion of caesarean sections is thus 1% for these rural areas as a whole.

According to the data available, the maternal mortality rate fell<sup>12</sup> from 577/100,000 live births during the period 1989-1995 to 464/100,000 live births during the period 2000-2005<sup>13</sup>. A 20% reduction in maternal mortality rates has therefore seemingly been achieved in 15 years.

Now, 5 years away from the 2015 deadline that is supposed to see a 75% reduction in the 1990 maternal mortality rate, and thus take this figure below the threshold of 150 maternal deaths per 100,000 live births per annum, i.e. a further reduction of 68% compared to the 2005 level, the time has come to analyse the strategic choices to be made in order to reduce the number of maternal deaths over the next four years, as far as possible and on a lasting basis.

To this end, an urgent review is required of the effectiveness of the choices that have prevailed thus far, and which Mali shares with its neighbours. Despite the efforts made, all of these countries are still characterised by maternal mortality rates in excess of 400/100,000 live births, a fact that demonstrates the limitations of the strategies implemented over the past three decades, even though these countries have received substantial support from their technical and financial partners.

### 6 A clearly expressed strategic choice

An analysis of these decades of experience leads us to recommend that giving birth at a maternity hospital should be the basic strategic choice.

Choosing this option minimises neither the importance nor the role that traditional midwives and the various community healthcare workers and other women acting as intermediaries can and should play at village level, but rather affirms that the quickest way to reduce maternal mortality rates in Mali is to increase the proportion of childbirths taking place at a maternity hospital.

Giving birth at a maternity hospital firstly offers the advantage of providing a safe environment for childbirth, by enabling women who are about to give birth to be attended at their confinement by skilled healthcare personnel. In a maternity hospital, asepsis conditions can be optimised, complications that arise can be detected within a short time, the Basic Emergency Obstetric and Neonatal Care (SONUB) measures recommended can be taken without delay and an ambulance will be available to quickly transfer the patient to a hospital that can carry out Additional Emergency Obstetric and Neonatal Care (SONUC) treatments (caesarean sections, blood transfusions, etc.) if required. Appropriate treatment can be given in hospital for haemorrhages and eclampsia crises, and the risks of a uterine rupture or an obstetric fistula can be significantly reduced or even removed altogether. The medicalisation of rural areas, which is due to cover more than half of the country's rural municipalities by 2017,

thanks to the introduction of rural doctors, will make a significant contribution<sup>14</sup>.

There are also a number of other advantages to giving birth at a maternity hospital: mothers can start to breastfeed immediately, feeding can be supervised, vaccinations can be given for polio, BCG and hepatitis B (to combat primary liver cancer), Prevention of Mother-to-Child Transmission (PTME) is optimised, screening is available for sickle cell anaemia (on umbilical cord blood) and the women can be monitored for (at least) the first 48 hours.

Lastly, giving birth at a maternity hospital offers the benefit of establishing a close bond between the staff team at the maternity hospital's Community Health Centre (CSCOM<sup>15</sup>) and the parents of the newborn baby, with a view to accompanying it throughout this period, when its health is totally dependent on its family. The period immediately following childbirth is a special time that offers the doctor, midwife or nurse who delivered the baby an opportunity to explain the key measures to be taken in order to protect it. Their recommendations should cover exclusive breastfeeding for 6 months, attending a postnatal examination, attending consultations with the infant on a regular basis, and adhering to the vaccination calendar.

This is also the best time to stress the need to avoid a further pregnancy occurring before the infant is weaned. It therefore provides an opportunity to offer the couple contraception, and to choose the method that best suits them.

This message of spacing out births is entirely acceptable to all families in Mali, including those holding the most conservative views, provided that reference is made to the *séré*<sup>16</sup>. This term, which translates the idea of "pregnancies at close intervals" in the Bambara language, carries negative connotations, and refers to a failure to observe the requirement for sexual abstinence during the period following childbirth. Its equivalent is found in other cultural zones of Sahelian Africa<sup>17</sup>. When presented in the immediate aftermath of childbirth as one of the measures to be taken to protect the newborn baby, family planning will be seen in a positive light, which is entirely consistent with tradition and constitutes a source of relief, both for the mother and father, who will be able to resume their sex life without worrying about a further pregnancy that might lead to premature weaning and thus result in the child's death.

### 7 A demanding strategic choice

Choosing the option of promoting childbirth at a maternity hospital calls for the full diversity of the national context to be taken into account, and a systemic approach to be taken to reproductive health.

<sup>14</sup> WHO (Ref. 14)

<sup>15</sup> CSCOM are private not-for-profit health centres, which are run by an association of users, and deliver public health services within a clearly defined area, as part of an agreement binding them to the State.

<sup>16</sup> Roger-Petitjean (Ref. 17)

<sup>17</sup> In Niger, the equivalent of the "*séré*" is known as the "*nasu*" in the Zarma language.

<sup>12</sup> According to the figures available, although the level of their reliability remains doubtful, in view of the weakness of the methods used to measure them.

<sup>13</sup> National Institute of Statistics (Ref. 4)

It does not directly concern the urban environment, where any woman can reach the nearest maternity hospital in time, but rather the rural world, where one of the major problems is geographical accessibility. Two solutions can provide an effective response with a view to ensuring that as many childbirths as possible take place at a maternity hospital: (i) the adoption of 'an optimised health map, establishing where any medical training courses will take place, and (ii) organising CSCOMs in such a way that women from remote villages who are reaching the end of their pregnancy can be accommodated close to the maternity hospital before they go into labour.

- The health map should be the outcome of the best possible compromise between a legitimate desire to increase the number of maternity hospitals and bring them closer to users, and the need to deliver quality healthcare and keep costs under control, taking account of economies of scale with a view to deciding on the creation of a medical training course.

In Mali, which has nearly 10,000 villages and 30,000 hamlets, it was the desire to guarantee geographical accessibility for users that led to traditional midwives being retrained. However, the experience of past decades reminds us that there are requirements governing the quality and thus the safety of the care provided, and that a minimum level of professional skills has to be preserved in order to meet these requirements.

The effect of the decentralisation Law passed in 2003, granting mayors additional responsibility, has been to create a multitude of CSCOMs, maternity hospitals and thus healthcare subdistricts, which continue to be further divided up so as to reduce their population further and further below the threshold of 5,000. While the Sahelo-Saharan zones, where population densities are sometimes very low, justify the creation of CSCOMs in specific localities, more than 90% of Mali's population lives in areas where healthcare subdistricts have to meet standards set by the Ministry of Health and adhere to the locations defined in proposals put forward by the chief physicians of the country's 60 different healthcare districts.

The health Map, which is a product of the 60 district health and social development plans covering the period 2012-2016, is to be adopted by decree for the duration of the Ten-Year Plan for Healthcare and Social Development (2012-2021). This can be adjusted annually, and will be systematically revised once every 5 years.

- Attending a maternity hospital before going into labour should enable pregnant women who live some distance away from their local CSCOM to stay there when their pregnancy has almost reached its term. Admittedly, it is difficult to establish the best recommended date with any accuracy, but such a decision should enable the vast majority of women to attend the CSCOM at the appropriate time, prior to giving birth. It is preferable for women to stay here for two weeks awaiting the birth of their child, rather than letting 2 out of 3 women give

birth at home, a long distance away from receiving suitable treatment.

Several measures must be taken if this strategic option is to be applied:

- A "home for mothers-to-be" will have to be created in the vicinity of each maternity hospital. This will be an enhanced traditional compound (in terms of hygiene, design of huts and furniture, etc.) that pregnant women will be able to travel to on their own to await the onset of labour. The management of these homes will have to be entrusted to the municipality's women's association.
- At the prenatal consultation held during the 9<sup>th</sup> month, pregnant women will be invited to attend their health subdistrict's maternity hospital on an agreed date and await the birth of their child. They will have the option of being accompanied by people whom they have selected to look after them, and if they so wish, by their family's traditional midwife.
- During her stay at the centre, the pregnant woman will be relieved of all the domestic tasks that she would have had to carry out if she had remained in the village. The rest that she will be able to enjoy here will be very therapeutic. Its effectiveness will be optimal at the time of the first pregnancy of young brides, who constitute one of the main at-risk groups<sup>18</sup>. Newly arrived at their husband's home, they would have to show their mother-in-law and their co-wives that they were "proper" women, i.e. courageous and hard-working: they would be shamed if just one member of their in-laws' family were to say that when she was her age, she had been more active. Consequently, instead of resting during their final months of pregnancy, these women would have to continue drawing water from the well, crushing foodstuffs, gathering firewood and even cultivating the fields... all of which are activities that a woman reaching the end of her pregnancy should not engage in. Moreover, the staff of the maternity hospital can use this rest period (which is probably the only holiday these women will ever have during the course of their lifetime) to prepare them for giving birth, for caring for their newborn baby and for the behaviour they will need to adopt when they return to their family. In particular, this time spent close to the maternity hospital will be an opportunity to establish the climate of trust and communication that must exist between mothers-to-be and the CSCOM staff.

## 8 A problem that the population is fully aware of

The main obstacle to this proposal will be resistance on the part of husbands. We must expect its application to be gradual and to proceed in line with the quality of the communication and in light of the facts. Regarded both in Mali and in France in the early 20th century as a "malemort" (cruel and violent

<sup>18</sup> Ouédraogo (Ref. 15)



death), “dying in childbirth” is a risk that is clearly identified and feared by the population. The term “women’s war” [mu-sokele] used by the Bambaras and many other peoples of sub-Saharan Africa<sup>19</sup> is an aphorism conveying the idea that for women, childbirth represents the equivalent of combat for men on the battlefield, where they risk their life. There was a multitude of explanations for deaths resulting from combat, and many measures were taken to protect against it, in accordance with beliefs and tradition. The power of social constraints that once reigned in villages and of the initiation of young girls to prepare them for marriage, was heightened by the important role played by traditional midwives, who made their appearance at the onset of labour. The presence of older counterparts who had passed the menopause and were the bearers of family traditions, alongside women who were about to give birth, provided the latter with the relief they needed to enable such a hazardous event to proceed smoothly. On account of their age and their esoteric practices, they created the conditions that enabled more than 4 out of 5 women to give birth successfully, a proportion probably comparable to that of the warriors who returned from battle. The status of these traditional midwives resulted both from the knowledge they had acquired over the course of time from their elders, when they accompanied them during childbirths, but also from the “luck” [kunadiya] they bore. It is essential to acknowledge the weakness of the “obstetric care” role played by traditional midwives, which is limited to cutting the umbilical cord and prescribing plants. If any difficulties arise, their only form of recourse lies in calling forth invisible forces to protect the woman who is in danger, placing their only hope in ancestral practices or, in an increasing number of cases, religious practice.

## 9 Quality of care, a prerequisite for any initiative

The pre-condition for initiating any debate on the validity of this measure is delivering high-quality care: this applies both to maternity hospitals themselves and to the system of referrals.

- In maternity hospitals, the search for quality in the offering will rely on using the three widely accepted pillars on which it is built: the structure, procedures and results<sup>20</sup>.

This quality will govern both the effectiveness of the care provided and the extent to which women attend maternity hospitals; they will find it all the more easy to attend these hospitals if they come to appreciate the services provided there, especially in terms of the way they are received and the trust that is established.

- This search for quality should first of all place the emphasis on the structure delivering the care. A maternity hospital should have: (i) premises which, in addition to their functional requirements, provide women who are

about to give birth with the necessary confidentiality, modesty and privacy, (ii) a permanent and sufficient supply of drinking water, any disruption of which will have drastic consequences on attendance at a maternity hospital, (iii) an INN pharmaceutical storeroom holding a stock at all times of all the products required to meet demand, (iv) qualified, competent and motivated staff. A community health centre requires a full staff team, including at least 2 nurses trained in obstetrics<sup>21</sup>, one of whom must be a woman. The medicalisation of rural CSCOMs, the validity and feasibility of which have been demonstrated by 20 years’ experience in Mali of establishing rural doctors<sup>22</sup>, will supplement this manpower. The additional cost of these qualifications can be borne not only by an increase in the numbers of people attending, and therefore the fees charged, as a result of the improved quality of the offering, and also of the contractualisation of medical action plans (covering EPI, AIDS, tuberculosis, malaria, family planning, etc.). Its profitability will be guaranteed by the heightened impact resulting from an initiative of this nature.

- Next, the search for quality should place the emphasis on appropriate procedures, which must be based in particular on the existence of an inventory of behaviours to be adopted, a micro-plan, effective organisation of the centre, appropriate financing methods, etc.
- Lastly, the search for quality should emphasise the results obtained by the structure. Mastering this will be the result of four dynamics maximising their potential effects:
  - the CSCOM monitoring system, which should enable the various stakeholders (the centre’s own team, ASACO members, the supervisory authorities, etc.) to meet around a wall chart, so that they can conduct a joint analysis of trends in the micro-plan’s indicators, and take the necessary decisions based on this.
  - external assessments of CSCOMs, to be carried out at least once every 5 years. These should be entrusted to a body that possesses the necessary skills and independence to discharge its mission legitimately. Such assessments will enable the various stakeholders in the local healthcare system, and especially the ASACO, to make the adjustments needed to correct any shortcomings that come to light.
  - an accreditation process for each centre, which should be put in place to show that it is fit to discharge its missions. Relying mainly on the periodic assessment report covering each CSCOM, this should result in these centres being ranked in one of 4 categories, as indicated by the colour of the pin

<sup>19</sup> LASDEL (Ref. 5)

<sup>20</sup> Donabédian (Ref. 2)

<sup>21</sup> The number of nurses currently available in the labour market in Mali should more or less cover the manpower requirements.

<sup>22</sup> WHO (Ref. 13)

showing its location on a map, as follows: red: non-accredited centre; yellow: centre accredited in terms of its structure; blue: yellow + accreditation for compliance with procedures; green: blue + accreditation covering results.

- select committee and general meetings of the ASACO, which should be valuable opportunities to discuss the functioning of a CSCOM, and in particular its maternity hospital, taking a look at its strengths, weaknesses, any shortcomings that need corrections, and measures to be taken in order to meet the needs of the health subdistrict's population more effectively.

To ensure that this concept of quality, which has been discussed for so long, can actually produce its effects, Mali must rely on a simple definition of the notion of “quality of care”, which everyone can understand. The definition most strongly advocated states that “the quality of care is what we would like for our own parents, our husband or wife, our children, etc. if they need to turn to a healthcare professional”. First of all, it provides an opportunity to collectively identify what is not right, then to decide what needs to be done to remedy this, taking into account the resources needed to do so, and finally for everyone to conduct a joint assessment of what has been done, the changes that have been brought about and the difficulties encountered, with a view to making any further decisions necessary to deliver the required results.

The possibility of a functional benchmark calls for the presence in each healthcare district, first of a team that can deal at any time with obstetric emergencies (SONUC) and in particular can handle caesarean sections, safe blood transfusions and pre-eclampsia, and second an ambulance that can contact the CSCOM at any time, in the event of a difficult delivery, so that the woman who is about to give birth can be taken there as quickly as possible, in complete safety.

### 9.1 Keeping human resources motivated

Over and above simply being there, and having appropriate training, the motivation of human resources constitutes a key dimension in terms of achieving objectives, especially with regard to the quality of care.

The three main keys to maintaining this motivation reside in:

- a proper application of the collective agreement establishing the rights, duties and working conditions of ASACO staff,
- providing acceptable housing conditions for staff and their families, especially doctors,
- putting in place a profit-sharing scheme that enables members of a given team (and not only individual) to receive, for 12 consecutive months, a monthly bonus comprising an amount proportional to a summary index of results (ISR), obtained by calculating the weighted average of a basket of indicators at the end of the past year.

### 9.2 Financing childbirths taking place at a maternity hospital:

Each pregnant woman must be invited to buy a pregnancy treatment package at a fixed price when she attends her first prenatal consultation: this fixed-charge obstetric care service, which has proved its worth in Mauritania<sup>23</sup>, should cover:

- first the cost of prenatal consultations, pregnancy-related healthcare, childbirth, looking after the mother and the newborn baby during the first month, postnatal consultation plus any pharmaceuticals prescribed in accordance with the rules laid down by the Ministry of Health.
- second, the cost of any transfers to recommended health centres and of any care provided as a result thereof (in particular caesarean sections).

In Mali, the cost of this fixed-charge obstetric care package will have to be paid in part by the family, at a price acceptable to the majority of the population (around 7 euros, to be paid by the husband), supplemented by a grant from the State and its partners (approximately 18 euros per fixed-charge service), as part of a contract to be signed between the healthcare district and the National Direction of Health. This sum of 25 euros per pregnancy will guarantee the financial equilibrium that is vital for healthcare structures (taking into account the wide variations in unit production costs of healthcare among the country's 60 different healthcare districts).

Like any official charge payable by households, this sum will be able to benefit from mechanisms involving third parties paying for people who are covered by the national social welfare benefits system currently under creation, comprising compulsory medical insurance for staff employed by the formal sector (16% of the population), mutual insurance companies providing insurance cover with no excess, in the case of the informal sector (79%) and the Medical Assistance Scheme for vulnerable persons (5%).

The introduction of these packages will have to be computerised at healthcare district level, in order to facilitate the performance of cohort studies, which are essential for any reliable measurement of maternal and neonatal mortality rates.

## 10 Conclusion

Despite its modest resources (US\$ 38 per person per annum<sup>23</sup>) half of which is derived from households, Mali can take a huge step forward in reducing its maternal mortality rates, by ensuring that giving birth at a maternity hospital becomes the basic strategic option within its policy. The support announced by major partners (the Muskoka Project in France, the World Bank, USAID, etc.) will enable it to make the necessary investments and to subsidise fixed-charge obstetric care services, so that the amount payable by households is commensurate with what the vast majority of the population can afford.

<sup>23</sup> Ministry of Health (Ref. 11)

The decision taken by Africa's First Ladies, who met again at Bamako in November 2011, to extend the "Vision 2010" plan to 2015, was a reminder to the continent's Heads of State, i.e. their husbands, of the urgent need to address the issue of maternal mortality. Even though the deadlines set are not far away, pro-active implementation of the methods currently available will enable some eloquent results to be delivered<sup>24</sup>.

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