



Is the bride too beautiful?

Safe motherhood in
rural Rwanda

Victoria Chambers
and
Frederick Golooba-Mutebi

Research Report

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Victoria Chambers and Frederick Golooba-Mutebi*

Despite recent improvements in some countries, progress towards reducing maternal mortality rates in sub-Saharan Africa overall lags considerably behind that of other developing country regions. Recent evidence indicates that Rwanda has made impressive progress in this area, particularly in the rural locations. This report presents research findings from a project concerned with identifying the institutional arrangements which have enabled Rwanda to achieve significant improvement in ensuring safe motherhood for growing numbers of women in the rural districts of Nyamagabe and Musanze. Ethnographic research conducted over several months explored how actors, institutions and resources have been combined to overcome the key bottlenecks which might otherwise have undermined the provision of the key services which contribute to good maternal health outcomes. Initial analysis indicates that the coherence of the policy environment has been a key element. In addition to aiding in the clear definition of lines of responsibility, it has facilitated the avoidance of the sorts of overlapping mandates which usually encourage actors to pass the buck for service delivery failures. Laxity in professional standards and related problems ensuing from lack of motivation have been overcome by accountability mechanisms which serve as strong deterrents against misconduct by all actors responsible for service provision. Accompanying performance pressures based on consistent incentives comprising rewards and punishment ensure that all actors work toward the same objective of providing high-quality services. A crucial element in all this has been the facilitation of collaboration through which different actors, including users, can work together to overcome key bottlenecks.

* Victoria Chambers (v.chambers@odi.org.uk) is a research officer at the Overseas Development Institute and Dr Golooba-Mutebi (fgmutebi@yahoo.com) is a senior researcher for the [Africa Power & Politics Programme](#). The 2010-11 field research team consisted of Victoria Chambers, Yvonne Habiyanizeye, Jean-Claude Mugunga and Edward Munyaburanga.

Contents

1	Introduction	4
2	Background and research methods	5
2.1	Research rationale	5
2.2	Conceptualising safe motherhood	6
2.3	Method and fieldwork technique	6
2.4	Selection of fieldsites	7
2.5	Socio-economic and political overview of the field sites	8
3	Safe motherhood: an overview of the delivery arena	11
3.1	Maternal health infrastructure and human resources	13
3.2	Community health workers (CHW)	16
3.3	Improving financial access to health care	17
3.4	From home births to deliveries in a clinical environment	18
3.5	Transfers of pregnant women to appropriate health facilities	21
3.6	Programmatic maternity services	22
3.7	General health environment	23
4	Explaining the outcomes	25
4.1	A coherent policy environment	25
4.2	Effective monitoring systems and consistent incentive mechanisms	29
4.3	Collaborative space and incentives for actors to work together	37
4.4	Combining compulsion with sensitisation	38
4.5	Co-opting tradition	43
4.6	Popular participation and local collective action	46
5	Conclusion	49
	References	53
	Annex 1: Neo-traditional cultural institutions	55
	Annex 2: The local administration hierarchy	57
	Annex 3: Local government political and technical organs	59
	Annex 4: Performance based financing	60
	Annex 5: PBF maternal health evaluation criteria format for health centres	63
	Annex 6: Types of poverty reduction strategies	64

Figures, Tables and boxes

Table 1: Rwanda maternal health indicators	4
Table 2: Outcome differences in Nyamagabe District	24
Figure 1: Administrative map of Rwanda	7
Figure 2: Key health sector supervisory and accountability mechanisms	31
Box 1: The special case of Kaduha health centre	15
Box 2: How rural TBAs were eliminated: one TBA's story	20
Box 3: The role of the health committee in improving health in Musange sector	37
Box 4: COPARIMU: an <i>ubudehe</i> success story	45

Abbreviations

ANC	Ante-natal consultation
APPP	Africa Power and Politics Programme
ARV	Anti-retroviral treatment
CDF	Common Development Fund
CHW	Community health worker <i>Umujiyanama w'ubuzima</i> (Kinyarwanda) <i>Animateurs de santé communautaire</i> (ASC) (French)
COGE	<i>Comité de gestion</i> , Management Committee
COSA	<i>Comité de santé</i> , Health Committee
DDP	District development plan
DP	Development partners
DRC	Democratic Republic of Congo
EDPRS	Economic development and poverty reduction strategy
FHI	Family health international
GoR	Government of Rwanda
GTZ	<i>Gesellschaft für Technische Zusammenarbeit</i> now known as <i>Gesellschaft für Internationale Zusammenarbeit</i> , GIZ
IEC	Information, Education and Communication
JAF	Joint Action development Forum
KDH	Kaduha district hospital
LL	Local governance and leadership research stream
MCHW	Maternal health community health worker
MDGs	Millennium Development Goals
MDH	Musanze District hospital
MIFOTRA	Ministry of Public Office and Labour
MINECOFIN	Ministry of Finance and Economic Planning
MINIDEF	Ministry of Defence
MINEDUC	Ministry of Infrastructure
MINISANTE	Ministry of Health
MRND	<i>Mouvement Révolutionnaire National pour le Développement</i>
NURC	National Unity and Reconciliation Committee
PBF	Performance based financing
PMTCT	Prevention of mother to child transmission
PNC	Pre-natal consultations
RDB	Rwanda Development Board Previously <i>Office Rwandais du tourisme et des parcs nationaux</i> (ORTPN)
RDRC	Rwanda Demobilisation and Reintegration Commission
RPA	Rwandese Patriot Army <i>Forces Armées Rwandaises</i> (FAR) (French)
RPF	Rwandan Patriot Front <i>Front Patriotique Rwandais</i> (FPR) (French)
SACCO	Savings and credit cooperative
SIS	Health system database <i>Système d'information sanitaire</i>

1 Introduction

In July 1968 when General de Gaulle swept to power in France, one television commentator mused that ‘the bride is too beautiful’. What he meant was that the sheer magnitude of the landslide Gaullist victory created such great expectations on the newly formed government to perform that failure was almost inevitable.¹ Within the Rwandan context this analogy could be used to express judgement about what the Government of Rwanda (GoR) has achieved less than two decades on from the debilitating abyss of civil war and genocide. That this small land-locked country can be making serious inroads into delivering the essential public goods necessary for poverty reduction and thus creating the foundation for potential development, defying all reasonable international expectations to the contrary, seems too incredible to be true. For many there must be some sort of catch and there is an assumption that the achievements are either exaggerated, simply untrue or that there is something inherently sinister about how they have been made; in short for many, the Rwandan bride is too beautiful. Our research reaches a different conclusion.

Based on research carried out within the framework of the Local Governance and Leadership research stream of the Africa Power and Politics programme (APPP), this report identifies the institutional arrangements which have permitted the government to ensure safe motherhood for growing numbers of women in rural Rwanda. In the past decade data from the Rwanda Demographic Health Survey (RDHS) suggest that there have been consistent improvements in the provision of key services which contribute to safe motherhood (see table 1).

Table 1: Rwanda maternal health indicators

Element of safe motherhood		2000 ¹	2005 ²	2010 ³
Maternal mortality ratio (MMR) per 100000 live births	Total	1071	750	487
Total fertility rate (TFR)	Total	5.8	6.1	4.6
	Rural	5.9	6.3	4.8
Modern contraceptive prevalence (%)	Total	4.3	10.3	45.1
	Rural	2.6	8.6	44.9
Births at health facility (%)	Total	26.5	28.2	68.9
	Rural	19.8	23.8	67.1
Women attending ANC at least once (%)	Total	92.5	94.4	98
	Rural	-	94.4	98
Women attending ANC four times (%)	Total	10.4	13	35.4
	Rural	-	9.5	34.7

Sources: ¹Rwanda Demographic Health Survey (RDHS) 2000 ²RDHS 2005 ³RDHS 2010

Our research supports these data and indicates that in the local delivery arena for maternal health services, something worthy of attention is taking place in Rwanda; the provision of safe motherhood in rural Nyamagabe and Musanze districts is of high quality. This report puts forward a number of institutional factors which might explain the advances made. We argue that they are the result of a combination of high levels of horizontal coordination, the existence and functioning of strong upward accountability mechanisms, and a collaborative

¹ <http://www.time.com/time/magazine/article/0,9171,712134,00.html#ixzz1RQ3ugTww>

arena within which actors work together as a result of popular mobilisation directed at overcoming collective action problems.

Part One of the report outlines the research methodology and provides a detailed socio-economic and political overview of our field sites. Part Two provides a detailed examination of the local maternal health delivery arena in our field sites. It identifies how the different elements of reproductive health services which contribute to ensuring safe motherhood are provided, the actors involved in their delivery, and how they interact and collaborate with one another. The main body of the report then lays out the key institutional factors which we think explain the good outcomes observed. It does so through an in-depth examination of the local policy environment in which maternal health services are provided, analyses the supervisory and evaluation mechanisms through which the service delivery arena and actors are monitored, and examines the incentives motivating public health and local authority personnel. It also analyses the role popular participation has played in the delivery of safe motherhood and notably the way in which community members have overcome the bottlenecks, or collective action problems which typically prevent smooth provision of services.

2 Background and research methods

2.1 Research rationale

The research was carried out within the framework of the Local Governance and Leadership (LL) research stream of the Africa Power and Politics programme (APPP). The overall aim of the research was to shed light on the institutional arrangements that permit 'better' provision of local public goods which are essential for poverty reduction and development. Specifically the research was concerned with identifying local instances of where things are working well and then exploring how the local actors, institutions and resources combine to overcome whatever bottlenecks which, if left to persist, might undermine their provision. In particular the stream was interested in establishing whether the institutional or governance arrangements in place 'work' because they are somehow anchored or rooted in local societies.

Following the devastation of the four-year civil war, the 1994 genocide and the post-1994 insurgency, the GoR implemented a number of governance reforms at the end of the nineties and during the first ten years of this century. In particular it made innovative use of neo-traditional concepts by applying them to state-building and development processes. Specifically, it used them as instruments for eliciting a performance orientation at the national and local government levels. Preliminary research suggested that these reforms had translated into effective provision of goods and services at the local level and that Rwanda had some institutional configurations that were working well for poverty reduction and development. On this basis Rwanda was selected as one of the LL country case studies.

The Rwanda country study undertook an in-depth examination of the delivery of three 'public goods': maternal health, water, and sanitation. The fieldwork investigated the institutional arrangements contributing to the provision of safe motherhood, the availability of clean water, and the maintenance of good sanitation standards for people at village level. In particular it investigated how state and other actors combine and coordinate to solve the collective action problems that undermine the production of and delivery of these public goods elsewhere and institute processes that produce good outcomes.

2.2 Conceptualising safe motherhood

Maternal health, or safe motherhood/birthing, refers to the health of women during pregnancy, childbirth and the post-partum period. The provision of safe motherhood entails availing a combination of goods and services, usually by different actors using a diversity of means. The overall 'delivery configuration' which permits the provision of safe motherhood is made up of a number of 'components', 'each of which poses specific delivery problems' (Olivier de Sardan, 2010, p. 5). It is at this level, 'that the problems of collective action are posed' and that the delivery configurations and challenges are likely to be different for each component which contributes to the overall delivery of safe motherhood (ibid.).

According to international standards there are a number of key components which contribute to reducing maternal mortality rates and are critical to the provision of safe motherhood:

- ☐ Geographical access to health care units
- ☐ Financial access to health services
- ☐ Provision of and demand for ante-natal care
- ☐ Childbirth under professional supervision
- ☐ Efficient transfers to and between medical facilities
- ☐ Provision of and demand for post-natal care
- ☐ Uptake of family planning services
- ☐ Good levels of general hygiene (access to latrines, management of waste, personal hygiene)
- ☐ Improved nutritional status of households, and women and children specifically

It is the delivery configurations of these key 'components' which were taken as an entry point for the more intensive phase of fieldwork and which serve as a conceptual aide to analysing the findings of the research.

2.3 Method and fieldwork technique

In order to answer the research questions, ethnographic research was conducted over a period of eleven months by a team of four researchers² between November 2009 and March 2011. A first phase of preliminary research was undertaken during four weeks in November/December 2009 followed by a second more intensive phase of fieldwork, carried out from May 2010 to March 2011. In total fieldwork was carried out in twelve villages situated in five different administrative units (sectors) in two districts³.

In order to obtain rich evidence of the realities of governance and the actual practices and behaviours of actors which contribute to the provision of public goods, the team drew extensively on methods such as participant and non-participant observation, casual conversations, informal, in-depth interviews with a wide range of respondents, individually and in groups and semi-structured interviews. Actual interviewing was preceded by an extensive review of official documents provided by the local authorities, health facilities and development partners.

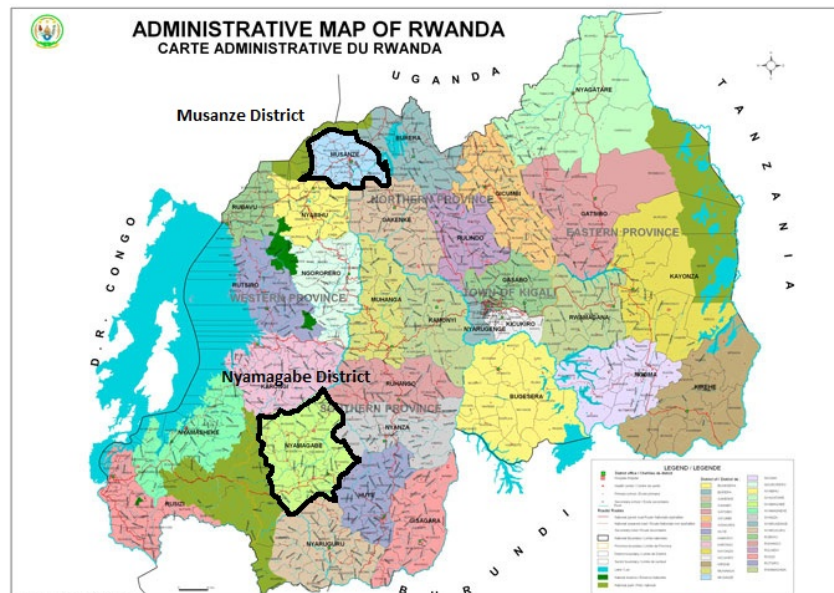
² The research team consisted of three Rwandans and this paper's first author and was guided and supervised by the second author.

³ In Nyamagabe District six villages were studied in three of the district's seventeen sectors: Nyanza1 & Kavumu (Cyanika sector), Kabuga & Nyaruryango (Kaduha sector) and Karama & Mubuga (Musange sector). In Musanze District six villages were studied in two out of the district's fifteen sectors: Rubara & Nyakigina (Kinigi sector) and Karushenyi, Nyamugari, Nkomero & Cyiri (Gacaca sector).

2.4 Selection of fieldsites

Nyamagabe and Musanze Districts where the fieldwork was conducted are located in southern and northern provinces respectively, and are highlighted (in bold) in the map below.

Figure 1: Administrative map of Rwanda



Administrative Map of Rwanda ©National Institute of Statistics of Rwanda

They were selected on the basis of their good performance in the annual performance contract (*imihigo*) rankings⁴ and for their contrasting historico-political legacies. Nyamagabe District was ranked N°1 in the annual *imihigo* evaluations in 2007, 2008 and 2009; a particularly impressive achievement given that it had historically been one of Rwanda's poorest and most underdeveloped regions. Musanze has also registered consistently good performance in the areas of economic and social development. Politically both districts can now be considered strongholds of the party of government and former rebel Movement, the Rwanda Patriot Front (RPF). However, Musanze was historically more militantly anti-RPF. Located in the home region of former President Habyarimana and many of the key elites in his regime as well as a key stronghold of the former ruling party, the MRND which he founded, the district was privileged during his twenty-year rule and it was the epicentre of much of the post-genocide fighting between elements of the former national army, the ex-FAR and their *interahamwe*⁵ allies, and the new government's forces, the RPA, which continued well into the late-nineties⁶.

⁴ Annual *imihigo* performance contracts, in which the goals necessary to achieve national and local development objectives are agreed upon, are drawn up between the President of Rwanda and the district mayors and used as a mechanism to hold districts to account for progress towards these objectives (see annex 1 for further information).

⁵ *Interahamwe* was originally the youth militia of the ruling MNRD party. Meaning 'those who work together' the youth movement was originally formed to help organise social tasks in the framework of community works, *umuganda*, in the post-1973 era. However they played an active role in the civil war in 1992 and were later main perpetrators of the genocide.

⁶ In the immediate post-genocide period, ex-FAR soldiers and *interahamwe*, many of whom were recruited from the MRND youth in the region, retreated to the Virunga forest region from where they carried out repeated insurgency attacks on the North Western region.

The preliminary research was carried out in one sector (Cyanika) in Nyamagabe District. It is located around 5km from Nyamagabe town. The sector was selected because of its accessibility to the town and because there is a health unit within its boundaries. Cyanika was ranked the 2nd best performing sector in the district in terms of economic and social development indicators and over 82% of the population had access to clean water. In terms of infrastructure, it had a health centre and piped water and at one time had been the headquarters of the Southern Province.

During the second phase of intensive fieldwork, two sectors were selected in each of the two districts. In Nyamagabe District a conscious decision was made to study sectors which were more geographically isolated than Cyanika had been. Kaduha and Musange sectors, located in the most northern, and isolated area, of the district, were chosen. In Musanze District care was taken to select at least one sector from each of the two distinct natural regions. Kinigi sector was situated on the slopes of the Virunga volcano range on the edge of the Virunga National Park whilst Gacaca sector was located in the district's mountainous lake region. In both districts logistical considerations were also taken into account in the selection process.

The twelve villages were selected on the basis of locally perceived impressions of their good or bad outcomes in terms of maternal health and water and sanitation provision in order to establish the factors behind them. Two villages were selected from two different cells per sector. Care was taken to ensure that villages within each sector were similar with respect to their geographical isolation and the diversity and productivity of their local economies. However, although all the villages in each sector were similar in respect to these contextual variables, the sectors and districts themselves are not strictly comparable.

2.5 Socio-economic and political overview of the field sites

Nyamagabe District

Nyamagabe⁷ district is an administrative unit located in the Southern Province in south-western Rwanda with a population of roughly 320,000. It is made up of a hierarchy of administrative units: 17 sectors below which are 92 cells and below those, 536 villages⁸. Lying at altitudes of between 1800m and 2700m the district is an endless vista of steep hills and valleys which epitomise the country's nickname, 'the land of a thousand hills'. The area has a high rainfall that, coupled with its mountainous relief, means that Nyamagabe has an abundance of potential water sources. The hillside slopes, which can reach gradients of up to 120° and the flatter valley areas, are dominated by individual and, under the new system of land consolidation, collectively cultivated terraces⁹.

The district is badly served by transport infrastructure, with only one tarmac road which weaves its way from Huye, formerly the seat of the Belgian colonial administration¹⁰, through the Nyungwe National Park rainforest in the southern most part of the district, towards the

⁷ Nyamagabe District was created by Organic law n°29/2005 on 31st May 2005. It includes the old districts of Kaduha, Mushubi, Mudusomwa and 11 sectors of Karaba district as well as the town on Gikongoro, now known as Nyamagabe (Republic of Rwanda, 2005)

⁸ See Annex 2 for further information on local government administration in Rwanda.

⁹ Land consolidation has been an integral part of Rwandan national policy towards the rural areas. Given Rwanda's high population density, rural villages have been encouraged to consolidate their land and use it to produce agricultural products which are known to grow well in the area. Many villages have farming cooperatives in which members grow crops for market sale.

¹⁰ At the time of Belgian colonialism the capital city was known as Astrida. Its name was changed at independence in 1962 to Butare and it was renamed Huye in the territorial administrative reforms of 2005.

DRC border town of Cyangugu on the shores of Lake Kivu. Apart from Nyamagabe town most of the district is thus very isolated. The terrible condition of the roads in Kaduha and Musange sectors means that although they are located a mere 30-38km away from Nyamagabe town, the trip takes 2 to over 2 ½ hours in a four-wheel drive. For 90% of the district population the main source of energy is wood or charcoal, as access to mains electricity remains limited to Nyamagabe town and institutions such as Kigeme hospital (District de Nyamagabe, 2007).



Landscape view of Nyamagabe from Nyanza 1 village in Cyanika sector

Economic diversification is limited and despite the generally poor fertility of the land, the majority of the district's population of 320,000 survive as subsistence farmers producing cassava, sorghum, sweet potatoes, plantain, bananas, cabbage and carrots. It is also common for households to have some livestock such as a cow, goats or pigs. The limited revenue-generating activities include small scale farming (some of it on a cooperative basis), breeding of small livestock, burning of charcoal for cooking, and the preparation of local sorghum beer. The district's demographic make-up is one of a very young population; 71% are under 34 years old and 35% are of school age (District de Nyamagabe, 2007).

In Nyamagabe, villages make use of the mountainous topography to define their boundaries and are spread over several hills and valleys. Access to villages is typically by a rough road which is situated on or near the top of the hill, where the centre or commercial area of a village is also generally located. Homestead compounds tend to be concentrated on or near the top of the hills, many in agglomerations¹¹ of several houses, or on the upper levels of the hillside, with the odd house to be found in the low-lying valley areas. The division of labour is influenced by gender and age. Women are largely responsible for agricultural production and household maintenance whilst water collection is the domain of small children from the age of three or four upwards and unmarried girls. Livestock are almost exclusively kept in the household compound and are for the most part the responsibility of men. Smaller boys tend goats and pigs whilst older men are often tending to or fetching food for cattle.

¹¹ Rwandan national policy is to encourage villagers to move to grouped housing areas called *imidugudu*. Originally built to re-settle returning refugees the *imidugudu* policy aims to address land scarcity issues by promoting land consolidation and freeing up land for agricultural production. It is anticipated that grouped housing in a defined area also facilitates the provision of social and economic services to the population and finally it encourages the construction of modern, sustainable, mud-brick housing; encouraging the destruction of traditional grass-thatched huts and the protection of forests from which trees were used to build traditional housing.

The district was hard-hit during the genocide and its aftermath; it was the scene of several important mass killings¹² and estimates suggest that during this period 75% of the Tutsi population were killed (Verpoorten, 2005). Furthermore from July 1994, the district was the command centre for the Safe Humanitarian Zone established under the French 'operation turquoise', in which many more lives were lost up until 1995¹³ ..

Musanze District

Musanze District¹⁴ is made up of 15 sectors, 48 cells and 432 villages and has a population of around 330,000. Nestled into the foothold of the Virunga National Volcano Park to the north and west, and delimited to the east by Lake Ruhundo, the district is composed of two distinctive topographies: the gentle slopes of the volcanic range to the West which descend into flat open plains in the centre of the district and the mountainous clay-soil lands situated to the East where the altitudes reach 1800m.



Lake Ruhundo as seen from Karushenyi village in Gacaca sector, Musanze District

The district's transport infrastructure is well developed. All of the district's sectors are linked by tarmac roads and are within a 20-minute drive of Musanze town. In terms of national links Musanze town is well served by the Kigali-Ruhengeri road which is currently being rehabilitated within the framework of the Transport Sector Development Project (TCDP)¹⁵. It is also an important regional transport hub. The Ruhengeri-Gisenyi road provides an important entry point into Eastern DRC via North Kivu and Southern Uganda via Kisoro and provides a commercial transport corridor from the DRC through to Mombasa¹⁶. The main source of

¹² Kaduha Parish Church, Cyanika Parish Church and Murambi technical school in Nyamagabe town

¹³ During the early days of *opération turquoise* there was a high level of confusion amongst the French forces as to whom they were supposed to be protecting and who the 'enemy' were. Taking advantage of this situation, the Safe Humanitarian Zone (SHZ) was used as a safety zone by the retreating ex-FAR forces and *interahamwe* who, considering the French to be their allies, continued their killings under the noses of the French forces. A recent article citing *Groupe d'Intervention de la Gendarmerie Nationale* (GIGN) chief warrant officer Thierry Prungnaud (Dupaquier, N° 10, Printemps 2010) highlights the confusion which reigned within the French forces and makes references to several incidents in which inaction on the part of the French forces cost hundreds more Tutsi lives which could have been saved.

¹⁴ Musanze District was created by Organic law n°29/2005 on 31st May 2005. It includes the old districts of Mutobo, Kinigi, 14 sectors of Bugarura district and 3 sectors of Bukamba district as well as the town on Ruhengeri, now known as Musanze (Republic of Rwanda, 2005).

¹⁵ <http://www.market.gov.rw/tenders/np-notice.do~4005910>

¹⁶ 'The Gisenyi-Ruhengeri road is one of the arteries in the country and is part of the northern corridor that leads from Mombasa up to the eastern DRC. The road in is used by some 1,200 vehicles per day, the majority of which are trucks'. <http://focus.rw/wp/2009/04/ruhengeri-gisenyi-road-gets-more-eu-money/>

energy is wood and although Musanze town is electrified, the electrification of the rural areas outside of public institutions is progressing slowly.

Despite the predominance of subsistence agriculture, economic activity in Musanze District shows signs of diversification. The volcanic soils are very fertile and lend themselves well to the production of Irish potatoes, sweet corn, beans, bananas, fruits, vegetables and floriculture. Many households are able to generate revenue from small-scale agricultural surpluses, particularly from potato and pyrethrum production. Furthermore, with Virunga National Park within its borders, Musanze District is also home to Rwanda's mountain gorilla population. The National Park represents an important source of revenue for the Rwanda tourism industry, with the district hosting a regional office of the Rwanda Development Board (RDB). The RDB provides employment opportunities for educated graduates and school leavers and, in its role as protector of the national park, works hard to ensure that tourist revenues are re-invested in community projects to provide income-generating activities for the local population.

Musanze District is also home to the fourth largest town in Rwanda, its capital, Musanze (previously known as Ruhengeri), which is an important market town on the crossroads of the main transport routes from DRC to Kenya and boasts a small but developing tertiary sector. Although there are no unemployment figures for the district, with increasing land scarcity and 60% of the 330,000 population under 25 years old, of which 26% are of school-going age, this may become an issue in the future.

Politically, the northwest region of Rwanda was the source of much of the National Republican Movement for Democracy and Development (MRND) support (during the Habyarimana years) and anti-RPF sentiment during the civil war and in the immediate post-genocide period. Historically it was the last region to be integrated into the Rwanda kingdom when it was defeated with the assistance of the German military at the advent of colonial rule. Until then political organisation in the area was based upon kinship structures in the form of *umuryango* (lineage) identities. During Habyarimana's Second Republic (1973-1990) the region was politically and economically privileged with opportunities being reserved for its elites (Prunier, 1995). It was also during this period that the *akazu*, essentially Habyarimana's wife and her family, who came from a dominant northern clan lineage originating farther on in the Gisenyi area, became powerful. It is widely accepted that this 'inner circle' was responsible for the organisation of the genocide (Uvin, 1998). When the civil war broke out in 1990 the north was once again the site of violent massacres and as it progressed, was a stronghold of MRND hardliners hostile to the Arusha peace negotiations. Subsequently it became the arena for an anti-RPF insurgency following the genocide and the collapse of the MRND regime.

3 Safe motherhood: an overview of the delivery arena

On arrival at the numerous health facilities of Nyamagabe and Musanze Districts the first impression is, without exception, one of calm and order. A series of low-level brick buildings with tiled or metal roofs are positioned around spotless courtyards, surrounded by immaculately kept landscaped gardens bordered with flowers and colourful trees. Clearly identifiable staff dressed in white or blue overalls, move with purpose amongst the steady but manageable stream of patients. There is little noise and a sense of peacefulness prevails. In short there is none of the anticipated poorly dispensed healthcare, bad service and disorder that we normally expect sub-Saharan African rural health facilities to demonstrate in abundance.

Initial forays into the statistics also throw up surprises, indicating that not one maternal death has been recorded at a health centre in either district since 2008. The immediate assumption is that maternal deaths are simply not recorded or are taking place elsewhere in the community and surprise turns to perplexity when it becomes clear that this is not the case. In fact within the community villagers struggle to recall the rare occasions that women have died during childbirth and when such tragedies are identified it inevitably transpires that these deaths have taken place once women have been transferred to the district hospital. Nonetheless maternal mortality rates in all the three district hospitals are below the MDG targets¹⁷. In 2009 both Kaduha and Musanze district hospitals were within the Vision 2020 target, eleven years ahead of deadline.

Empirical evidence pointing to similarly unexpected outcomes is abundant in both Nyamagabe and Musanze Districts across the range of elements which contribute to promoting safe motherhood. A random survey of secondary school pupils in Kaduha sector led to the surprising discovery that high numbers of girls were carrying condoms whilst in neighbouring Musange sector the young local authority staff regularly distribute condoms in response to requests from young men and women. Apparently, taboos about family planning (and protection against sexually transmitted diseases) for rural Rwanda's unmarried youth are slowly being eroded. And in Musanze District, where vasectomy campaigns are proving to be popular and some women's main preoccupation with family planning is why nothing is being done to reduce the side-effects of contraceptive methods, it would seem clear that spacing and limiting one's family size is well on its way to becoming institutionalised.

High subscription rates to the community health insurance scheme, which has fast come to be considered an important and non-negotiable financial burden, has also had extremely positive side-effects; evidence suggests that households are beginning to make decisions about family size based on the economic cost of health insurance¹⁸.

Another notable observation is the widespread practice of men accompanying their wives to their first antenatal consultations (ANC). During this visit *both* prospective parents are tested for HIV and educated about the implications of an HIV+ result for the household, and the steps needed to reduce the risk of mother-to-child transmission for the baby. Such a feat would be remarkable in Europe let alone elsewhere in Africa. Behaviour and attitudes towards childbirth also appear to have undergone significant change. Where once it would have been considered normal to give birth at home local men and women in all the study villages consistently and repeatedly maintained that nowadays nobody gives birth at home. And their testimonies are borne out by the evidence. Even more significantly, our research suggests that the percentage of women giving birth at health centres in Nyamagabe and Musanze Districts may be even higher than the official statistics indicate.

And it is not just the health service providers and users that leave one with the impression that something remarkable is happening in the service delivery arena in rural Nyamagabe and Musanze. Contact with local government officials leaves the same impression. At the district headquarters mobile telephone numbers are displayed prominently on the doors of even the most senior staff and our experience proves that not only do these numbers work but the majority of staff answer calls in the evening and weekends, and even when they are on

¹⁷ The MDG maternal mortality target rate is 268 deaths per 100,000 births by 2015. The Vision 2020 maternal mortality target rate is 200 deaths per 100,000 births by 2020.

¹⁸ During a group meeting several informants told us that they had started using family planning because with the arrival of the community health insurance (*mutuelle*) they had realised that having lots of children was costly and had thus taken steps to prevent successive births. (Interview 4th December 2009)

holiday and maternity leave¹⁹. This work ethic of district civil servants means that they are regularly to be found in their offices until late at night and bumping into local government staff at the monthly communal work, *umuganda*, is the norm rather than the exception. High performance it would seem is not just expected but a non-negotiable part of the local government landscape.

In this climate of general efficiency it is hardly surprising that the Rwandan Minister of Health finds time to Tweet on a Saturday morning that Rwanda has halved its infant mortality rates since 2005. This fact is well illustrated by one local health worker's claim that once common children's names such as 'survived death' (Rutamujyanye), 'death did havoc' (Rwarakabiye), and 'this child belongs to god' (*Uwimana*) have been replaced with names such as 'lucky one' (*Hirwa*), 'blessing' (*Mugisha*), and 'Thanks [to god]' (*Ishimwe*)²⁰. The extent to which such a trend, marking a departure from a time when parents didn't expect their offspring to survive childhood to one in which a more optimistic outlook prevails, would need to be the subject of further investigation. Nonetheless, one gets an overall sense that a renewed sense of hope in the future pervades the rural local populations in Nyamagabe and Musanze Districts.

TABOO / KIRAZIRA	
1. Inattention to results: Status & ego	1. Gukora utazirirana intego: Ikuzo no kwikunda
2. Avoidance of accountability: Missed deadlines	2. Guhunga inshingano: Kutubahiriza igihe ntarengwa
3. Lack of commitment: Ambiguity	3. Kuba nyiranjyibijya: Gufata ibyemezo bidafatika
4. Fear of conflict: Artificial harmony	4. Kwanga kwiteranya: Kurenzaho
5. Lack of trust: Invulnerability	5. Kutizerana: Kubaka akazu

Posters such as these are repeatedly displayed on walls and doors in district and sector local authority offices.

NATIONAL VALUES TO PROMOTE PROGRESS TO VISION 2020 INDANGAGACIRO ZAFASHA KUGERA KURI VISION 2020	
1. Speed and respect for time: A country in hurry	1. Kwihuta no kubahiriza igihe: "kugira igihugu cyihuta mu iterambere"
2. Customer service mentality: Constant improvement and anticipation	2. Kugira umuco wo - kunezeza abo dukorera: Guhora turushaho kunoza ibyo dukora, kureba kure;
3. Quality of delivery: High standards, spirit of excellence, efficiency	3. Kunoza ibyo dukora: kuba Indashyikirwa, gucunga neza
4. Completion – towards results: We finish what we start	4. Kurangiza ibyo watangiye: kurangiza ibyo watangiye hagamijwe umusaruro
5. Self respect: National pride	5. Kwiye ubaha: kugira ishema ry'igihugu

It would indeed appear then that in the local delivery arena for maternal health services, something remarkable is taking place in Rwanda; the assurance of safe motherhood in rural Nyamagabe and Musanze Districts is becoming a reality. But what are the institutional factors which enable the provision of the intermediate outcomes, or key elements, essential to the delivery of safe motherhood? In order to answer this question we first need to arrive at a more in-depth understanding of the service delivery arena for safe motherhood in the two districts. A detailed examination of the delivery configurations of the key elements of safe motherhood in our two field sites is important in order to identify how they are being provided, which actors/institutions are involved in their delivery and what, if any, collaboration takes place.

3.1 Maternal health infrastructure and human resources

Musanze and Nyamagabe districts are served respectively by one and two fully staffed, district hospitals with functioning and well-equipped maternity wards. All but one of the

¹⁹ We secured a meeting with the Musanze vice-Mayor of economic development and the Nyamagabe District health director, who was on maternity leave, by contacting them on numbers left on doors, along with several district level health officials.

²⁰ From an interview on 3rd July 2010 with a health worker who had worked at the health centre for over 35 years.

sectors we studied has at least one health centre within its geographical boundaries and bar the semi-private Kaduha health centre in Nyamagabe District, they all offer the minimum package of health care required by MINISANTE: providing childbirth facilities, ante-natal care and family planning services. In practical terms inhabitants of all the villages we studied were within an hour's walk of the nearest health centre and a three-hour walk to the nearest district hospital. With the exception of Kaduha health centre, no other private healthcare alternative exists in any of the sectors we studied.

Overall technical and administrative responsibility for all public health facilities in Rwanda is the remit of MINISANTE. In many cases health facilities are privately owned by religious organisations. However, they still fall within the technical remit of MINISANTE with their administration being overseen jointly by health-sector officials and religious authorities. This is the case with Kigeme hospital in Nyamagabe District (which is owned by the Rwanda Anglican church, EAR) and Rwaswa and Cyanika health centres (which are run by Catholic Church orders). Exceptionally Kaduha hospital, also in Nyamagabe, is administered by the Ministry of Defence (MINADEF) whilst Kaduha health centre is run privately as a non-profit institution by a Catholic order.



The maternity ward at Kaduha District Hospital, June 2010



A non-medical worker at Jenda health centre

In our study districts, the three district hospitals and all the health centres, apart from Kaduha, are overseen by two supervisory bodies; the former by management committees²¹ and management boards²² and the latter by management committees²³ and health committees²⁴ (see Figure 2; p31). The management committees are responsible for operational issues pertaining to human resources, equipment, finance, and administrative issues. The health centre health committees and hospital management boards are the highest decision making bodies which consider matters brought to their attention by the management committees and approve decisions made by them. These higher management organs both have seats reserved for health facility and local authority staff as well as representatives from private and civil society. Where the health facilities are owned and/or run by churches, a seat is also reserved

²¹ At the hospital level the management committee, or *comité de gestion (COGE)*, is composed of the hospital's senior managers and departmental heads.

²² The hospital management board or *conseil d'administration*, includes the hospital director and district executive secretary, and representatives from the private sector, civil society and the district. The district representative is selected by the district authorities and in the case of Musanze is the president of the district council.

²³ At the health centre level the management committee, or *comité de gestion (COGE)*, whose composition is pre-defined by ministerial regulation, is composed of the health centre director and administrator and an elected nursing and non-nursing staff representative.

²⁴ The health committee, or *comité de santé (COSA)*, includes the health centre director and the sector social affairs officer as well as representatives (from the church, private sector, civil society, CHWs and local schools) voted in during elections that are organised and held by the sector local authorities.

for a clergy representative.

All health facilities are reasonably staffed with trained and polite, professionals who provide a respectful service to clients. All health centres, apart from Kaduha, have nurses responsible for antenatal care, family planning and maternity services as well as dedicated administrative staff responsible for data management, the coordination of community health workers and health insurance advisors. All hospitals have heads of maternity, maternity nurses, and general practitioner doctors who can perform caesarean interventions.

In some cases the health facilities are not at optimal employment capacity in relation to the facilities available, indicating that they are under-staffed. However this situation does not appear to be endemic and neither does it seriously impede the functioning of maternity services. The largest human resource risk to maternal healthcare noted is the absence of an anaesthetist at Kaduha district hospital. The administration of analgesics is by the doctor practising the intervention. It means that caesareans are carried out under general rather than local anaesthetic, with the associated increase in risks that this entails. Apart from the Kaduha health centre, health centre personnel are mostly financed by the Ministry of Public Services and Labour (MIFOTRA) or specific development partners in contracts managed by MINISANTE or in the case of Kaduha district hospital MINIDEF. All health facilities receive medical supplies from the district pharmacy and our research indicates that there were no supply or distribution issues; medicines are readily available and we did not observe any stock shortages.

Box 1: The special case of Kaduha health centre

Kaduha Health Centre (KHC) is owned by a German Roman Catholic order and was run for 37 years by a German nun. After the decentralisation of health services in 2005 KHC was integrated into the national public healthcare system and was required, amongst other things, to provide childbirth facilities and to implement the community health insurance scheme (*mutuelle*), which meant patients would be charged a token 200RWF (around 0.20 UK pounds) per visit. KHC didn't comply with these requirements for two reasons. Firstly, because the non-profit facility was against charging patients for its services and secondly, part of the health centre had been used as an orphanage since 1994 and opening a maternity ward would have entailed its closure. As the nun considered that the district hospital, located next door, was operating below capacity she felt that they were more than capable of supplying these services instead. Although KHC had undoubtedly had an enormous impact as a service provider in the area, since 2005, its refusal to comply with directives was undermining the implementation of health policy. For example, KHC's provision of free healthcare discouraged the rural population from paying for the *mutuelle*, which provides subsidised financial access to second-level health care interventions such as caesareans. After a protracted negotiation, the nun was eventually removed from her post in August 2010.

3.2 Community health workers (CHWs)²⁵

In both Nyamagabe and Musanze Districts public sector health personnel are supported by volunteer community health workers (CHWs) at the village level. Each village has four elected CHWs; two have specific responsibility for child health, one for maternal health and the fourth for social affairs. After training, the CHWs provide basic health care services at the community level²⁶ and raise household awareness of simple preventative health measures²⁷ with the objective of promoting behavioural change. In the area of maternal health CHWs sensitise the population about the need to use family planning methods and for pregnant women to attend pre-natal and post-natal consultations and give birth at health centres. They are also responsible for providing health and population statistics to the village authorities and the health centre. At a more general level CHWs play a key role in educating the population about the importance of enrolling for the community health insurance and maintaining good personal hygiene standards. CHWs are for the most part well known and respected in their communities. Living in close proximity to their fellow villagers and undertaking household visits, as well as participating in village meetings, they are a vital part of decentralised health service delivery.

Villagers consider them as authority figures and for the most part appear to accept and follow their instructions. In all our study villages the local population made repeated references to CHWs, for example, when discussing why they had chosen not to give birth at home. One woman, who had given birth to her last three children at the health centre told us that she had given birth to her first three children at home because “that was in the past when nobody checked whether women give birth at home, now its obligatory”²⁸. Furthermore, although CHWs have no mandate to impose sanctions on people, our research indicates that popular perception is that they can. This is particularly the case when CHWs collaborate well with and are supported by local authorities and health service providers, which, together with the roles they play, serve to legitimise their role.

²⁵ Community health workers have existed in Rwanda in different forms as far back as the 1980s and were actively encouraged by the Ministry of Health post-1995. Our research suggests that in the early 1980s “health mobilisers” worked at the equivalent of the village level; first on vaccination campaigns then with the national population office, Office National de la Population (ONAPO), in family planning campaigns. In the post-war period, two CHWs were elected at the cell level and integrated into the community health strategy in a more formal fashion in 1999. However it was only in 2007 that CHWs were integrated into the formal health structure when the government initiated the selection, training and placement of CHWs in all of the country’s villages with the objective of providing curative and preventative healthcare and to promote social welfare and behavioural change at the community level. The Rwanda Health Sector Strategic Plan 2009-2012 reiterates the government’s commitment to the community health strategy, acknowledging the important role that the CHWs play in decentralising health care to the community level and in envisaging a reinforcement of their contribution.

²⁶ The principle behind the idea of CHWs (and not only in Rwanda) is that they should provide ‘emergency’ care, particularly outside normal working hours for health units. For example CHWs with responsibility for children under five treat fevers and administer medicine to control diarrhoea which if left uncontrolled can be quickly fatal for babies and small children. If further treatment is required the children are referred to health units.

²⁷ The second function of CHWs, sensitisation (or awareness raising) and catalysing behavioural change, is their more important function in terms of organising primary health care systems is concerned. For example CHWs sensitise the population about joining the community insurance health schemes, the importance of vaccinating children, using family planning, undertaking pre-natal consultations when pregnant and giving birth at the health centre, as well as promoting basic hygiene and sanitation measures such as hand-washing, wearing shoes, having covered toilets, drinking boiled water, clearing bushes and general cleanliness.

²⁸ From an interview on 5th July 2010 with a women in Kabuga village

informal sector workers who fall outside of the other, public and private, insurance schemes. The principle behind it is mutual aid and the collective, community-level pooling of risks. In its current form, the scheme was rolled out at the national level in 2005 and now people who are not members of other insurance schemes are strongly encouraged to join up³¹. The payment of annual *mutuelle* membership fees entitles adherents to free curative care after a one-off additional contribution by patients³² of just 200F for an initial consultation. It also entitles them to free specialist care at district and national hospitals. Annual membership fees initially cost 3000RWF per family. However, this was later increased to 1000RWF per family member, payable in one lump sum. Further reforms to the payment structure were introduced towards the end of 2011, in the form of a tiered payment system entailing different fee rates, ranging from 1000-7000RWF per person, for different income categories. In the rural areas *ubudehe* poverty categories (see Annex 1) are being used as a yardstick for assessing income groups.

Except for Kaduha health centre which, as a charitable facility offering free health services did not recognise the *mutuelle* scheme³³, all other health centres housed a *mutuelle* office with at least one permanent member of staff to manage the scheme, register patients and collect annual subscriptions. Annual subscription fees are payable in advance for the year January to December. Late payments receive no pro-rata reduction and in the event of late payment patients are subject to a 2-month penalty delay before they can benefit from the insurance³⁴. All adherents receive a yellow *mutuelle* card which records their unique details including their photo, national identify card number and a unique *mutuelle* number.

Subscription enables women to access a wide-range of maternal health services at an affordable cost including health centre or hospital deliveries, surgical interventions, pre-and post-partum hospitalisation, and ambulance transfer costs. After one-off annual subscriptions patients pay a maximum of 10% of the health centre, hospital and transfer costs related to maternity interventions and care and although this still represents an important cost to households it does not represent the financial burden that it once was to the local population. Subscription to the *mutuelle* is high in both districts. In Nyamagabe District, 2010 subscription rates for Kaduha and Musange sectors were 76% and 87%. However in Musanze District the subscription rates were higher in 2010 with Gacaca and Kinigi sectors at 79% and 92% respectively. Furthermore a high number of early subscriptions for 2011 were recorded overall in these sectors, particularly Kinigi.

3.4 From home births to deliveries in a clinical environment

Interviews with health workers revealed that in both districts the number of women giving birth in a clinical environment has increased over the last four or five years. Also, interviews with recent mothers, medical personnel, CHWs and local authority staff suggest that there has been a significant shift in behaviour and although as recently as a few years ago homebirths were considered to be the norm, local villagers, both men and women, maintained that nobody gives birth at home nowadays. Although strictly speaking this is not the case, we were able to establish that the general trend was for women to deliver at health units, with home deliveries more and more the exception rather than the rule. Although it is difficult to get hold

³¹ According to a Nyamagabe District council member (interview 2009) district policy renders it a chargeable offence to not pay the *mutuelle* when you are capable of doing so. It is important to note however, that this is not national policy.

³² '*Ticket modérateur*' in French

³³ The nun running Kaduha health centre refused to accept the *mutuelle* insurance system because it meant charging patients for services which they had, until then, offered for free.

³⁴ In Nyamagabe new born babies are covered under their mothers' *mutuelle* until they reach 3 months old, then charged pro-rata for the remainder of the year.

of data to triangulate these trends over time, some data do exist. For example in Nyamagabe the percentage of women birthing at Jenda health centre increased from 9% to 72% in the five-year period between 2004 and 2009³⁵. Furthermore, data retrieved from the Rwanda health management information system permit us to confirm the high levels of women currently giving birth in a clinical environment. The 2010 figures for Kinigi and Gacaca sectors in Musanze District, stand at 85% and 83% respectively³⁶. Given that on average only 44% of all births in sub-Saharan Africa were attended to by a skilled professional in 2009³⁷ this is exceptional.

Government policy to outlaw the activities of traditional birth attendants (TBA)³⁸ in the late 1990s has contributed to the trend away from home delivery. It amounted to the removal from the equation of a major alternative option, thereby encouraging more women to give birth at the health centre. Until their activities were outlawed, TBAs had served their communities for generations, playing an important role in assisting women in labour. They managed pain, often by the administration of traditional medicine, and dealt with complications such as expelling retained placenta. During the pre-war period TBAs operated outside the purview of the formal health care system. However, after the war, in line with prevailing orthodoxy in the reproductive health arena, TBAs were trained and equipped with tools and equipment, on the grounds that they played a vital role in assisting women in labour. However, against the background of persistently high maternal mortality rates that for the most part were attributed to the influence of TBAs, their activities were outlawed. In outlawing their activities, therefore, the Rwanda government was operating in line with the orthodoxy of the time.

It was during the late 1990s and early 2000s that the Rwanda government, as with others elsewhere, attempted to integrate the TBAs into its formal health system. One consequence of these steps was that the government could quantify, control and supervise their activities. Initially government policy sought to change in the role of TBAs from that of assisting women in labour to encouraging women to use health centres or even accompanying those who were about to deliver to health facilities. This happened in tandem with the decentralisation of responsibility for service provision, including health care, to local authorities. Part of the process in the health care domain was the introduction of elected community health care workers at the grassroots, among them, those responsible for maternal health. The maternal CHW was to be responsible for ensuring the wellbeing of pregnant women, a responsibility that would entail providing advice for how to deal with simple ailments, encouraging them to go to health units for check-ups and other services, alerting health units to emergency cases, and accompanying some to health facilities to deliver. Because many, especially the elderly were illiterate and did not fulfil the minimum criteria for election, very few TBAs became CHWs after their activities were outlawed. While many governments in Africa embraced this new approach of outlawing TBAs ostensibly in order to eliminate risks associated with their activities, evidence suggests that Rwanda has been exceptional in ensuring that no vestiges of TBA practice have remained. This success may be attributed to two supplementary factors:

³⁵ Data extracted from the Jenda Health Centre Annual Reports, 1999-2010.

³⁶ Based on 2010 data extracted from the Rwanda Health Management Information System (SIS)

³⁷ Based on data extracted from World Development Indicators, The World Bank (2000-2009) <http://databank.worldbank.org/ddp/home.do>

³⁸ TBAs were usually older women without formal training but who had acquired their knowledge and skills through apprenticeship with relatives practicing the same trade. Other women who had had many children and who had therefore acquired extensive experience of childbirth also assisted women in labour. Although as elsewhere (see, for example, Langwick, 2010) the general practice is for TBAs not to be paid for their services, they often receive appreciation or gifts in kind. For example they were the guests at the christening of babies they had delivered, where they were served food and drink. Also, the respect accorded to them within their communities acted as moral compensation for their services.

the absorption of former TBAs into new roles and the government's capacity for monitoring and supervision, as well as enforcement of laws and regulations.

Box 2: How rural TBAs were eliminated: one TBA's story

In the late nineties the two TBAs in the photo below were integrated into the local health centre TBA association. They received basic midwifery materials and training to identify risky pregnancies so that they could refer women at risk to the health centre immediately. From 2002 onwards, to reduce the risk of spreading illnesses like HIV, the Ministry of Health decreed that TBAs should no longer deliver babies themselves but accompany women to the health centre instead. At regular monthly TBA association meetings they were required to show a recorded detail of all their activities and around 2005 they were prohibited from delivering babies altogether. The former TBA told us that for several years after this, women still turned up on her doorstep asking for her help but that she refused, taking them to the health centre instead. Little by little the women stopped coming.



A former TBA showing us the notebook in which she was required to record all childbirth deliveries at which she assisted after 2003

Waiting wards, known locally as *tegereza*, are set aside at all the health centres with maternity facilities for expectant mothers nearing their delivery due date, whose use is free of charge. Our observations indicate that these *tegereza* regularly accommodate women.

Although most pass just a few days in the waiting facilities we met several women who claimed to have been there for several weeks. In the latter cases women had either arrived before their expected due date and were overdue, or had been advised during an ANC to go directly to the waiting facilities because their pregnancy was considered high-risk. Women typically arrive at the health centre on foot or by traditional ambulance known as *ingobyi*, a stretcher carried on the shoulders of four men with the aid of two poles. When the time comes the health centres and their qualified nurses are fully equipped to deal with deliveries without complications. Also found at health centres are dedicated maternity wards in which new mothers can recuperate.



Expectant mothers using the Jenda Health centre waiting facilities, Aug 2010

3.5 Transfers of pregnant women to appropriate health facilities

In the event of complications once at the health centre, women are transferred by ambulance to the relevant referral hospital in anticipation of specialist or surgical intervention.

Each of the three district hospitals has at least two ambulances and in Musanze District three of the four health centres we studied had their own ambulances or shared with others³⁹. In all cases the running costs, maintenance and staffing of these vehicles are guaranteed by the relevant health facilities. Patients contribute towards the cost of evacuation by ambulance. However, for those with health insurance, the *mutuelle* covers 90% of the cost of evacuation from the health centre to the district hospital leaving patients to cover only 10% of the overall fee. The risk of delays, due to lack of transport, in transferring emergency cases to hospital was rarely raised as problematic by either the health centre or local authority staff, or users. Our observations and health centre records which suggest that between 20% to 33% of expectant mothers are transferred to district hospitals, indicate that it is not a major issue. However the perilous road conditions in Nyamagabe District, particularly during the rainy season, present a challenge; the bumpy journey increases the risk of women suffering complications such as a ruptured uterus and lengthens the transfer times.

Although theoretically feasible in cases where the terrain would permit it, ambulance transfers from a woman's home to the health centre are a bit of a grey area⁴⁰. In Nyamagabe District the hospitals' ambulance resources are insufficient to provide this service and instances are therefore rare. They are already stretched transferring patients from the health centres to the district hospital and from there to other referral hospitals. In Musanze District it would appear that transfers from the home to health centre are more frequent. The district hospital has a larger number of vehicles to facilitate such a service and the superior transport infrastructure presents fewer challenges. However, the Rapid SMS pilot scheme has also played a role in increasing the number of women being collected from their homes by ambulance in the case of pregnancy 'risk' or other emergencies signalled by the text message system⁴¹. In all the villages informants made repeated reference to traditional ambulances or *ingobyi* being used to transport pregnant women to the health centre as did the health workers at the health centres. *Ingobyi* consist of a stretcher with a pole on either side, carried on the shoulders of four men, two on each side. In both districts the limited options for transport by ambulance from a patient's home to the health centre means that evacuation by traditional ambulance which is organised by groups of village residents, remains an important element in the provision of maternal health services. In its absence women at risk would have little chance of arriving promptly in a clinical environment.

³⁹ In Musanze District Kinigi and Bisate health centres share an ambulance and two 24h on-call drivers with a third health centre. Rwasa health centre had its own ambulance which is shares with two others whilst Karwasa health centre made use of Musanze District hospital's two ambulances. In Nyamagabe District none of the health centres we studied has an ambulance. However Kaduha and Musange health centres uses Kaduha district hospitals two ambulances.

⁴⁰ Officials in Nyamagabe District informed us that ambulances affect transfers between health centres and referral hospitals only but radio advertising at the time of our fieldwork in July 2010 suggested that ambulances can also be used to transfer patients from villages.

⁴¹ Whilst working in Rubara village we witnessed a woman in labour who had been transported from her village in *ingobyi*, being picked up on route by the Kinigi health centre ambulance. The Rapid SMS logs at the health centre suggests that an ambulance pick-up of a pregnant women in a village is not an isolated case and maternal CHWs confirmed this with their numerous stories about how the health centres have sent out ambulances to collect pregnant women in trouble. However, Kinigi health centre staff informed us that in the event the health centre ambulance is unavailable women and CHWs are advised to use traditional ambulances. CHWs confirmed that they regularly called on traditional ambulances to assist pregnant women.

3.6 Programmatic maternity services

Antenatal care is universally offered free of charge by all health facilities. During the first ANC visit, women must attend with their partners so they both undergo obligatory HIV and syphilis testing. In all but two of the health facilities, HIV+ expectant mothers are subsequently integrated into prevention of mother-to-child transmission programmes (PMTCT)⁴². A large number of pregnant women in both districts visit their health centre at least once to undertake ANC. Across our seven study health centres antenatal coverage rates in 2009 varied between 60% and 100%. Informal interviews with women suggest that this is not a new phenomenon. Historically antenatal care was provided in both districts by the Roman Catholic Church and so it is perhaps not surprising to note that the Kaduha health centre which was run by a German nun statistically had nearly a 100% coverage rate of pregnant women receiving at least one pre-natal consultation⁴³. However despite this positive tendency to undertake ANC the number of women making the four visits recommended by national guidelines remains low; in Nyamagabe District it has not surpassed 10% and in Musanze the figure stands at only 15%.

Free family planning services are also provided by all health facilities, either directly or via affiliated but detached family planning centres in the case of two of the health centres run by the Catholic Church. Only Kaduha health centre does not offer this service, which is provided



Contraceptive methods available to women at the Bisate health centre in Musanze District

instead by the adjacent district hospital. Women have an extensive range of family planning methods available to them, including the contraceptive and injection pill, female and male condoms, IUDs, and implants. Implants are fitted at the health centre⁴⁴ whilst permanent contraceptive methods (vasectomy and sterilization) are carried out at the district hospital. Our interviews with village women, in both districts, strongly indicated that the use of modern family planning methods, to both space and limit family size, has become increasingly popular. This is supported by available data which show that although the

overall coverage of modern family planning methods remains low in both districts, their use increased between 2008 and 2009. In Kaduha District Hospital the number of people registering for family planning methods rose from 495 to 635, an increase of 28%, whilst Jenda health centre, in Musange sector, recorded an increase of 30% from 312 to 405. Similarly in Musanze District the number of clients increased by 21%⁴⁵ over the same period. In 2004 district authority figures show that only 2.8% of women were using modern methods of contraception in Musanze District compared to 28.3% in 2009. The fact that the women we interviewed in Musanze consistently voiced concerns about the side effects of different methods rather than questioning their use *per se* shows just how ingrained it had become in

⁴² In Nyamagabe a PMTCT programme was offered by the district hospital to Kaduha health centre patients and in Musanze District, Karwasa health centre patients used the programme at a neighbouring sector's health centre, a short distance away.

⁴³ Coverage rates are based on a statistical calculation of the anticipated number of pregnant women.

⁴⁴ The implants are inserted in a sterile environment for which the health centres are equipped.

⁴⁵ Data sourced from Rwanda Health Management Information System, 2008-2009

our study villages. Our observation of family planning sessions also suggests that women frequently change between methods⁴⁶.

Both antenatal and family planning services, for the most part, function on specific and different days for first-time and returning patients and involve women in collective information, education and communication (IEC) sessions prior to their individual appointments.

Women attending an ante-natal IEC session at Rugege health centre, September 2010

These sessions inform participants about government policy, their obligations and their choices. IEC sessions are integrated into every level of the health care system and reflect the central commitment to using public education as a means of bringing about behavioural change. CHWs work with the local authorities to encourage family planning and ANC uptake at the village level through participating at village meetings, social gatherings, taking part in targeted campaigns and undertaking household visits.



3.7 General health environment

Both districts have regulations designed to promote high standards of personal and public hygiene and thus contribute to improving general health standards. Strict conditions are imposed on public institutions such as churches, schools, health facilities, and administration offices which are required to have toilets with places for hand washing, and waste management facilities. Across the board these regulations appear to be respected as public places were always impeccably clean. There is never any rubbish on the streets, roads are swept and institutions and commercial centres meet the minimum hygiene standards.

⁴⁶ During one family planning session one of the authors followed a young teacher, who was interested in the option of five-year implants after she heard about them during the IEC session. After a discussion with the family planning nurse she decided to change her contraceptive method and she had her implants inserted at the end of the morning the same day; a procedure to which she was witness.

Individual households are also required to maintain high hygiene standards. In particular common requirements include keeping the front yards of homesteads well swept, and to have 'hygienic' latrines⁴⁷, a compost pit for waste disposal, hand-washing facilities, a clothes drying line, and a drying rack for cooking and eating utensils. Household members are also expected to observe minimum standards of bodily hygiene. They are encouraged to wash themselves regularly, and to wear shoes. During observations in our study villages in Nyamagabe District we noted that the large majority of houses had toilets which fulfilled most of the criteria required to be hygienic. And whilst the volcanic rock soil in Musanze District complicated the task of digging latrines, nonetheless around half of the households we visited had access to reasonably hygienic sanitation facilities. Large numbers of households in both districts also now have clothes drying lines, utensil drying racks, and compost pits. Hand-washing facilities constructed with local materials, known as *Kandijira Ukarabe*, (illustrated in the photo above) are also a common sight both in public areas and in private households in both districts, although the extent to which they are actually used varies from place to place.



A *kandijira ukarabe* at Jenda health centre, complete with side soap box.

The description of the maternal health delivery arena above captures the general tendency in all our study villages. However, it is useful to draw attention to the observed differences in key elements which contribute to improvements in maternal health. The most notable is that observed between the percentage of women giving birth in a clinical environment in Kaduha and Musange sectors in Nyamagabe District. Monthly sector-level health reports indicate that the level of health centre births in Musange sector is considerably higher than in Kaduha sector (see Table 2). This is despite the latter's favourable proximity to the district hospital facilities and the existence of a semi-private health centre providing free healthcare. In comparison, Musange was geographically more remote.

Table 2: Outcome differences in Nyamagabe District

	Kaduha	Musange
% of women giving birth at health centres ¹	35%	78%
% of eligible population subscribed to <i>mutuelle</i>	80% ³	87% ²

Source: Monthly sector health reports ¹January - March 2010 ²March 2010 ³Sector Executive Secretary, 2010

Across districts the difference between health insurance subscription rates was also marked. Community health insurance (*mutuelle*) subscriptions rates in Musanze District were higher overall than those in Nyamagabe District and subscription to the *mutuelle* earlier in the insurance year was particularly evident. For example in Gacaca cell, in Musanze District, 49.1% of the eligible population had already subscribed to the scheme within the first month

⁴⁷ In Nyamagabe District a latrine is considered hygienic if it has the following: a good floor, solid walls, a roof, a door. In Musanze District the conditions are similar although the authorities accept walls and roofs made with local materials such as bamboo and grass. In both cases the pit latrine is expected to be sufficiently deep however due to the volcanic soil in Musanze the authorities accept a pit of only 2m deep rather than the 8m in Nyamagabe District.

of 2011. Finally although the availability of maternal health services was quite similar in both districts, given the geographical isolation and the more challenging economic environment in Nyamagabe District, this is in itself surprising as one would expect Nyamagabe District to fare less well, all things being equal. These intermediate outcome differences will be drawn upon in the next section and some initial explanations will be advanced to explain them.

Evidence from our fieldwork shows that in both districts not only is the infrastructure for health care provision in place, it is also well equipped and supplied with the necessary requirements. Human resource capacity is high, of a professional quality, and penetrates right down to the community level. Geographical and financial access to healthcare is improving; standards of general hygiene are high; and the provision of programmatic maternal health services is on-going. Where the key elements which contribute to the provision of safe motherhood overall are concerned, our Rwandan field sites are doing well. This is reflected in the national health management statistics. At Musanze District hospital (MDH), MMR reduced from 217 to 100 deaths per 100,000 live births between 2008 and 2010 respectively and at Kaduha District Hospital (KDH), in Nyamagabe, the MMR reduced from 213 to 143 between 2008 and 2009⁴⁸. With the national Vision 2020 target set at 200 by 2020 and the MDG target at 268 by 2015 both Nyamagabe and Musanze Districts are on target to meet national and international goals.

4 Explaining the outcomes

What explains these outcomes? In responding to this question, we look at the institutional factors which support the harnessing of the key elements contributing to safe motherhood. First, we examine the national and local policy environment in which services are provided, focusing on policies and reforms which have taken place at national and local levels since the genocide. Placing the local delivery arena within a wider context permits us to assess the extent to which external factors impact on the way local level services are provided.

We show that decentralisation and governance reforms have played a role in improving the delivery of maternal health services at the local level; ensuring that policy is implemented, that quality of service is a priority, and that local actors are answerable for the services they provide. In terms of specific strategies, we show that measures have been instituted to persuade local people to abide by service regulations and norms. Of particular importance are enforcement measures, incentives and public education campaigns that have been adopted at the local level to promote certain practises. Alongside enforcement, popular participation has played an important role by way of helping service users and providers to overcome bottlenecks and collective action problems, which usually interfere with service provision.

4.1 A coherent policy environment

Consistent national policies and reforms

In the immediate post-genocide period the GoR's efforts were centred on restoring security and rehabilitating the country. However, from 1998 onwards state-building efforts became a major preoccupation. In 2000, following a nationwide consultative process organised by the Office of the President to discuss the country's future in 1998-1999⁴⁹, Rwanda's Vision 2020

⁴⁸ Data obtained from the Rwanda National Health System database (SIS).

⁴⁹ From Saturday 9th May 1998 until March 1999, weekly national reflection sessions on the future of Rwanda, organised by the office of the president, were held at Village Urugwiro. The objective of the

was published. This 'vision' sets out the country's ambitious development aspirations to transform itself into a middle income economy by the year 2020. It identifies targets for key development indicators and signals the government's intention to take a hands-on approach to state-building using East Asia as a model⁵⁰ (Government of Rwanda, 2000). Subsequently the GoR decided to decentralise power, resources and responsibility from the centre to local authorities (MINALOC, 2004). Accompanied by sector specific policies and strategic plans, the main objective of the decentralisation policy was to give 'power to the people and enable them to execute their will for self-development' by creating effective, accountable and participatory local government structures (MINALOC, 2000) to which responsibility for local service delivery and development would be devolved.

Particularly important in the devolution of service delivery were the 2005 territorial administration reforms which gave explicit consideration to accessibility for public services in delimiting the newly formed local government legal entities (districts) and administrative structures (provinces, sectors and cells). In the health sector this resulted in the elimination of the old health districts which had previously reported directly to the Ministry of Health. They were replaced instead with departments of health and social services within the administrative structures of the new districts. The practical result of this reform was that both Nyamagabe and Musanze District local authorities were geographically delimited to ensure that they had at least one district hospital within their boundaries and the location of health centres was a major factor in delimiting the territorial boundaries of administrative sectors. Clear vertical lines of supervision and oversight were established for local authorities, public service providers and committees within the decentralised health system. The territorial reforms facilitated this task by ensuring that lines of administrative and technical responsibility for health services facilities were very clear. Passing the buck was not possible.

Significant sector-level national policy reforms and strategies were concurrently developed to supplement the decentralisation policy and improve service delivery in the health sector. The National Health Strategy (2005) and Health Sector Strategic Plan (2005-2009) placed emphasis on the need to improve human resource capacity, increase the availability of drugs, improve geographical and financial access to health services, and the quality of and demand for health services. Strategies for implementing the policy reforms included the increased uptake of community-based health insurance schemes, the training of and increasing reliance on a network of community health workers (CHW), expanded referral systems between health facilities, the introduction of performance-based incentives for public sector workers, and a greater focus on Information, Education and Communication (IEC) to promote behavioural change and improvements in public and private hygiene.

The GoR's strong commitment to achieving the Vision 2020 objectives and the Millennium Development Goals (MDGs) which were both subsequently embodied in the five-year Economic Development and Poverty reduction strategy 2008-2012 (EDPRS) has been highly influential in moulding the local policy environment. Since the adoption of the decentralisation policy, five-year District Development Plans (DDPs) have become mandatory. As DDPs reflect both national policy and local priorities, both Nyamagabe and Musanze DDPs include specific objectives relating to maternal health, such as reducing fertility, maternal mortality and HIV prevalence rates, and increasing the provision of health care facilities, adherence to

sessions was to reflect on the causes of the genocide and to promote a consultative process through which Rwanda could clearly define what they saw as the future of the country.

⁵⁰ Vision 2020 concludes by noting that 'some will say that this is too ambitious and that we are not being realistic when we set this goal. Others say that it is a dream [...]. The development experience of the East-Asian tigers proves that this dream could be a reality' (Government of Rwanda, 2000).

community health insurance schemes and the number of doctors, nurses, laboratory technicians per inhabitant⁵¹.

Democratisation of local authorities

Decentralisation also introduced elected councils at two levels, the district and sector. Their function was to provide local people with a mechanism by which they could hold their leaders to account (MINALOC, 2000). At the community level elected village committees were also introduced⁵² (see annex 3 for the detailed composition of local government organs). These democratically elected political organs are responsible for local-level policy formation and are accountable to their constituencies. Women's representation in these decision-making bodies is guaranteed by the constitution which reserves 30 per cent of the seats for women.

At the district level, the reforms required that mayors and their two vice-mayors be elected from within the district council rather than being appointed by the central government. In both Musanze and Nyamagabe Districts, during the 2011 local government elections which took place during our fieldwork in Musanze, many of the councillors and village committee members were replaced. The Musanze vice-mayor for economic affairs was not re-elected and in almost all of our study villages there was some change in the membership of the village committees. Whether this was the result of poor performance is difficult to assess.

While campaigns for elected positions at local level are meant to be organised and conducted on a non-party-political basis, the extent to which this is the case, however, is questionable. Prior to these local government elections, in one village local members of the RPF held a meeting to select two candidates for each of the village committee positions, clear evidence that political parties are not entirely uninterested in their outcomes. Nonetheless, the criteria on which these 'RPF preferred' candidates were selected were determined the basis of an objective assessment of the individuals' capacity to handle the position they were being nominated for. During a protracted discussion some proposed candidates were rejected because they were considered 'too busy' and therefore unable to dedicate enough time to the job and also because they got angry easily and were well known for getting into fights. Participants also raised the issue of how representative the candidates were of the three hills which made up the village and how popular they were with other villagers. In short candidates were selected on the basis of their individual merit, including perceived capacity to act in the diverse development interest of the villages and also interact appropriately and effectively with the villagers. Therefore, although it is clear that party-political activity to an extent influences local politics and elections, the normative charge which is often levied at this influence is misplaced⁵³. The capacity of village committees to produce developmentally positive outcomes is not negatively affected by this influence and may even contribute positively to it.

⁵¹ Vision 2020 indicators: Fertility rates - 6.5% to 4.5%, maternal mortality rates - 650 to 200 per 100.000 births, HIV prevalence rates - 13% to 8%, The numbers of doctors, nurses and laboratory technicians are to be increased from 1.5 to 10, 16 to 20, and 2 to 5 respectively per 100.000 habitants.

⁵² At the district level there are two democratically elected political organs: the district council and the district executive committee (which includes the mayor and vice-mayors). At the lower local-government level elected political organs include the sector council and the village executive committees. Cell and village councils also exist and are composed of all adult residents. Village committee members were first elected in 2003 and subsequent elections were held in 2007 and 2011. District and sector councillors and representatives were elected for five-year mandates for the first time in 2006 and again in 2011.

⁵³ The presentation of candidates, selected by RPF members, to local authority elections has been used to show that local support for the RPF is based on coercion and control, and imply that the process thus neither provides real representation for local people nor works in their interests (Ingeleare, 2011). Our research indicates that this is not necessarily the case.

Local governments have technical departments responsible for implementing local- and national-level policies. Employees of the technical departments are civil servants selected through a competitive recruitment process. At each local government level they report to their respective councils with the supreme organ being the district council. Although we did not study the recruitment process by which sector and cell level employees are appointed, experience, particularly in Nyamagabe District, indicates that their continued employment is dependent on results rather than their political affiliation, although they were free to express their political views.

Managing development partners

The RPF-led government's determination to reduce Rwanda's dependency on external aid and improve the efficiency and effectiveness of development assistance has also had a considerable impact on the local provision of services. The Rwanda Aid Policy, published in 2006, requires that all development assistance be monitored by the Ministry of Economic planning and finance (MINECOFIN) to ensure its delivery is in line with national and sector policies and that it promotes equitable sectoral and regional development (MINECOFIN, 2006). Further, in the interest of increasing Rwanda's ownership of sector strategies it also clearly states the GoR's preference for receiving assistance in the form of general or sector budget support. Relationships with development partners⁵⁴ (DPs) are therefore very much centrally controlled and each sector has a limited number of active DPs to manage. The 2010 division of labour initiative to restrict DPs from working in more than three sectors further consolidated this trend⁵⁵ (Schmidt, 2011). This initiative, under implementation during the last stages of our research had, for example, resulted in GTZ's activities in the health sector being brought to an end.

At the local government level a district Common Development Fund (CDF) ensures that development assistance is aligned with the DDP and DPs are required to coordinate and report on their activities through participation in the Joint Action Development Forum (JAF). Our research suggests that the theory is translated into practise, and that DPs are well coordinated and supervised by local government structures.

One illuminating example of how Rwanda's aid policy plays out at the local level can be seen from a discussion which took place at a sector council meeting around the construction of school classrooms in Cyanika sector in Nyamagabe District. The financial cost of building these classrooms was being met through contributions from the local population and private institutions. Part of the labour also came from participants in monthly communal work. The sector authorities reported to the council that there was a financial shortfall and raised the issue of approaching donors for funding. The response was clear. Donors only provide financial support at the national or district level. Local authorities and council members were asked to concentrate their efforts on collecting the outstanding contributions which would be sufficient to cover the remaining costs. The vice-chair of the council drove home the point by reminding those attending the meeting that when World Vision had offered to provide iron sheets for the classrooms, the Ministry of Infrastructure (MININFRA) had vetoed the proposal.

⁵⁴ The term 'development partners (DPs)' is used to refer to the ensemble of International, national and local NGOs, bi- and multi-lateral donors and religious organisations which intervene to provide support to the district local authority's development efforts.

⁵⁵ The Division of Labour (DoL) initiative was adopted by the GoR and DPs in July 2010. By restricting donors to a limited number of sectors in which they have a comparative advantage the key objectives of the initiative was to increase Rwanda's ownership of sector strategies and encourage intervention in 'orphan-sectors' (Schmidt, 2011).

This clearly indicates that the principles of the national aid policy are actually being implemented at the local level. In the process it is also likely that the local population's psychological dependency on aid will be reduced; even if the money used by MINEDUC was provided by sector budget support, the population are unlikely to ever associate the building of these classrooms with external finance but instead with the GoR and a collective community achievement.

In the health sector Rwanda's aid policy has translated into well-coordinated and targeted practical interventions at the district level which contribute significantly to the provision of safe motherhood and support local authorities in key areas. DPs intervene in clearly defined areas such as support to the community health system, HIV/AIDS related services and infrastructural investment as well as the payment of health insurance for vulnerable members of the community. Coordinating external interventions means that overlaps are avoided and interventions successfully plug key resources gaps, particularly with regards to assisting the poorest members of the community.

4.2 Effective monitoring systems and consistent incentive mechanisms

Enhancing service delivery and improving living standards are part of the Rwanda Government's national objectives and are evident in the Vision 20/20 and EDPRS objectives as well the UN's millennium development goals, to which the government are committed. As the channels through which government policies and programmes are implemented, local government and public health service providers in Rwanda play an important role in ensuring that target health indicators are achieved.

In both Nyamagabe and Musanze Districts formal monitoring and supervisory mechanisms are in place at the different levels of the health facilities (district hospitals, health centres and community health workers) and between local authority entities to ensure that regulations and professional standards are respected and that national policy is implemented. There are also consistent incentives for motivating service providers and promoting the use by local people, of the services on offer. Finally the existence of advisory and oversight committees provides a space for collaboration between the different local-level actors in health service provision and ensures that everyone is working towards the same objectives.

Figure 2 below depicts diagrammatically the supervisory and monitoring structure of the local healthcare system. In particular it highlights the vertical accountabilities and supervisory relationships within and between the administrative and technical hierarchical structures and shows the advisory collaborations between the two via their participation in monitoring and oversight committees. It also shows the evaluation (and incentive) mechanisms used to evaluate health service providers and local authorities. The former are evaluated within the framework of performance based-financing (PPF) and the later within that of the annual district performance contracts (*imihigo*).

Formal monitoring and supervision mechanisms

Responsibility for providing health services is shared between local authorities (district and sector) and the Ministry of Health through its technical agencies (district hospitals and health centres). Administrative responsibility including achieving district health objectives is the domain of the local authorities, whilst technical responsibility for implementing health policies and ensuring the quality of care is shouldered by the health facilities.

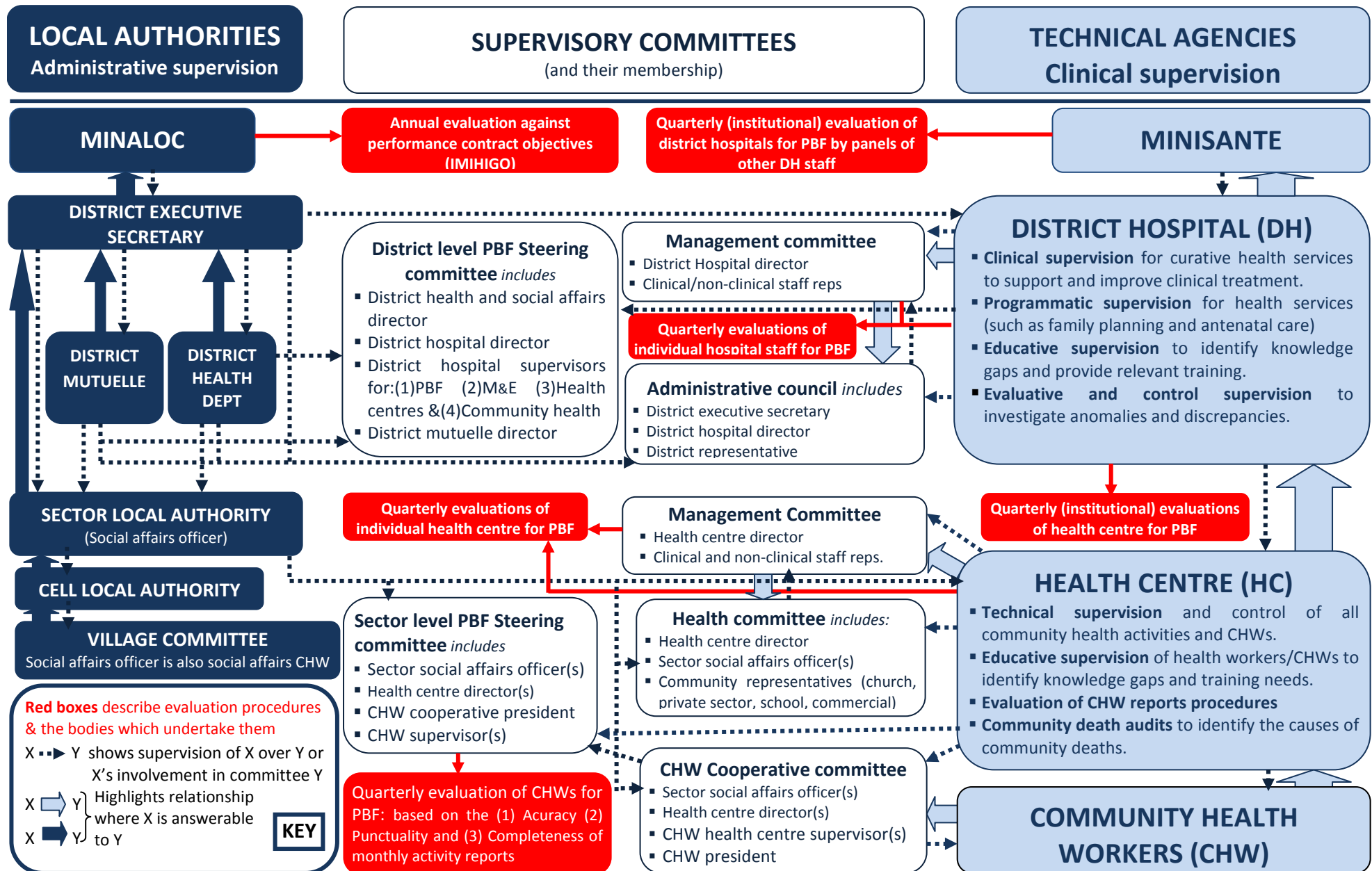
Technical supervision

As Figure 2 shows MINISANTE is responsible overall for providing local-level health facilities, each of which is supervised by the referral hospital within whose catchment area it falls. Hospitals are, however, supervised by MINISANTE while health centres supervise local-level health agents. The district hospitals therefore provide technical support to the health centres and oversee the preventive and curative aspects of health service delivery. They provide expert advice to staff, and identify technical training requirements. In both districts supervision happens via regular visits by clinical and other staff.

Both Kaduha and Musanze district hospital doctors conduct monthly clinical supervision visits and pay weekly visits to administer anti-retroviral treatments (ARV) to patients at each of the health centres within their jurisdiction. At Kaduha district hospital in Nyamagabe, supervision visits by doctors have been completely integrated into the human resource management structure, with each of the four resident doctors assigned one week of supervision duties every month. A hospital vehicle and driver was exclusively reserved for these visits. Visits always involve ARV administration and although the in-depth clinical supervision visits are supposed to take place once a month, the doctors are often to be found in the maternity wing of the health centre after their ARV duties were complete.

District hospitals, have internal self-monitoring systems in the form of daily staff meetings. The mechanisms help develop a sense of professionalism in staff and provide them with continuous on-the-job training. Staff at the larger Musanze District hospital hold daily departmental meetings whilst at Kaduha district hospital they held a general staff meeting at 7.30am every morning. During the hour-long meetings at Kaduha district hospital, nurses took it in turns to discuss current and recent cases of illness. The doctors would ask questions of department staff about diagnoses, treatment, and follow-up and gave advice and clarification where necessary. The doctors often used these occasions to pose general questions and to educate staff about procedures, regulations, medical terminology, patient care, and to impart medical knowledge.

Figure 2: Key health sector supervisory and accountability mechanisms



Supervision of community health activities

At the district hospital level, a community health supervisor, who reports to MINISANTE, is responsible for coordinating and supervising all community-level health activities in the district. The supervisor's activities are facilitated by a clearly defined hierarchical structure comprising actors at different levels from the hospital right down to the village level⁵⁶.

All the hospitals and health centres had community health supervisors and coordinators. Coordinators in both districts pay regular visits to CHWs, attended meetings and participate in training sessions. Possibly as a result of limited logistical capacity, current supervision practises prioritise the activities of CHWs in charge of child health over hygiene and sanitation. However, transport is a major challenge and in some sectors constrains their capacity to undertake this function effectively. The operational support given to facilitate coordinators' activities varies from place to place, in both financial and logistical terms, which this seems to affect the effectiveness of the community health system in place. For example Jenda health centre in Musange, which was fully controlled by MINISANTE and under the operational supervision of the sector authorities, had a well-facilitated CHW coordinator. The entire community health system was underlain by more cohesion than was the case in Kaduha. In Kaduha sector the CHW coordinator's room for manoeuvre was constrained by the operation of Kaduha health centre outside the mainstream health system, with the local authorities having no control over it and very limited opportunities for strategic collaboration⁵⁷.

Administrative supervision

The management of human resources in the health sector and the implementation, monitoring and evaluation of district health policies is the responsibility of the relevant local authority entity, whether it be district or sector. In the area of maternal health this includes ensuring objectives such as family planning uptake, assisted childbirths, pre-natal consultations coverage, and *mutuelle* registrations are met. As illustrated in Figure 2 above the district health officials supervise the district hospital whilst the sector authorities supervise the health centres and community health workers (Government of Rwanda, 2005).

However the extent to which district authorities play a direct role in improving the quality of maternal health services is variable. Whilst in Nyamagabe District the local authorities were visibly involved in and well informed about district health policy and implementation methods, in Musanze District, the local authorities appeared under-informed about the strategies the district had for improving health indicators⁵⁸ and deflected questions to the district hospital. The Musanze

⁵⁶ At the health centre (or section) level the CHWs and their activities are supervised by a full-time dedicated community health activities coordinator. The coordinator undertakes regular field visits to CHWs to oversee their activities, providing them with training where necessary, organising monthly CHW meetings and compiling the section level reports. At the cell level a coordinating CHW, elected by the cell's CHWs, is responsible for compiling cell level reports. Finally at the village level the social affairs CHW, who jointly serves as the village committee social affairs officer, acts as the village CHW coordinator supervising the village CHW activities and reporting processes.

⁵⁷ The Jenda health centre coordinator had the use of the health centre motorbike and received financial support for community health service activities via the health centre partnership with the USAID Expanded Impact Project (EIP), a MINISANTE development partner. On the contrary the Kaduha health centre, which did not fully implement national health strategy, refused to sign a contract with EIP thus starving the CHW coordinator of funding for logistic support and refused him use of the health unit's motorbike, which meant that visits had to be undertaken on foot.

⁵⁸ The exception to this rule appeared to be in the area of community health insurance. The district *mutuelle* director told us that in order to achieve 100% coverage of the *mutuelle* they worked in close collaboration with the local authority structures, the hospital and the sector *mutuelles* to educate the population about the importance of adhering to the health insurance scheme. This is potentially because high *mutuelle* registration

District hospital management was critical of this 'insufficient' commitment from the district authorities to raise awareness about specific health issues among the local population. In particular the Musanze District vice-mayor for social affairs was singled out for criticism for declining to assist at the launch of a week-long district-wide vasectomy campaign in favour of attending a football match in Kigali, despite the fact that family planning is one of the national health strategy priorities and that vasectomies represent an important definitive family planning method.

Below the district level, however, local authorities were more actively involved in the implementation of policies which affect maternal health. In both sectors of Musanze District this was particularly evident in the area of *mutuelle* registration whilst in Musange sector of Nyamagabe District support for *mutuelle* registration as well as health centre-births was strong. The intervention of sector authorities took the form of organisation and promotion of health education campaigns and support to health service providers in enforcing policies.⁵⁹

Local authority support of this nature is important to health service providers, and particularly CHWs, because it not only serves to legitimate their activities but also enables them to concentrate on their sensitisation role. In Musanze District CHWs are generally appreciated by the communities in which they work because unlike other local leaders they use friendly ways of educating the population rather than fining them. It is clear that the more involved the local authorities are in enforcing maternal health policies, the freer this leaves CHWs to dedicate time to educating community members.

Incentive structures for public service providers

The health system in Rwanda consists of reasonably well-equipped rural facilities providing the rural population with good and accessible services. Well-motivated personnel demonstrate high levels of professionalism at all service delivery levels. The poorly dispensed health care and indifferent treatment of patients said to characterise service provision in other sub-Saharan African countries were not in evidence in the areas covered by this research. These observations raise an important question: how has Rwanda managed to overcome the usual obstacles to the provision of services corresponding to citizens' needs?

Eliciting professionalism from public health sector workers

There are incentives designed to ensure good service quality and continued improvement of general health services, which function effectively at the local level. These incentives which are intended to motivate local actors include the setting of high standards of probity in public life (i.e.

rates are more of a political priority than other maternal health indicators and thus politicians are held to account in more direct ways for failures in this area.

⁵⁹ The various local authority levels played a key role in informing lower-level authorities of implementation strategies (such as stopping villagers in public places and asking them to produce their *mutuelle* cards), asking them to report and update them on the *mutuelle* registration rates and demanding explanations for low registration rates. Sector local authority offices had also previously hung posters on their walls informing the population that those who hadn't registered for the *mutuelle* by 18th November 2010 would not be received by the sector staff. For example, intervening to force men to accompany their wives to their first pre-natal consultation so that they could undertake obligatory HIV testing and ensuring that pregnant women who refused to give their ID cards to be registered by the Rapid SMS system⁵⁹ were forced to collaborate with the CHWs. In one village a woman who gave birth at home and refused to accompany the CHW to the health centre finally accepted when the village committee intervened and in another village a woman who had given birth at home was visited jointly by the CHW and cell executive secretary.

zero tolerance of corruption at the national and local level and across all sectors)⁶⁰, evaluation mechanisms, such as *imihigo*, which promote innovation and competition within the public service, and a financial reward system which benefits service providers for good service. How do these mechanisms incentivise health sector workers, local authority staff and community health workers to ensure that they provide a good quality of service?

A key general factor is the consistent regularity with which civil service salaries are paid.. In both Nyamagabe and Musanze districts late salary payments was never raised as an issue by either health workers or technical bureaucrats. When public sector workers are paid regularly it is reasonable to assume that the need to make ends meet by engaging in activities elsewhere is less strong than it would otherwise be. This contributes to reducing levels of absenteeism, as health workers will not feel the need to engage in other income-generating activities to supplement their pay.

An important incentive for public sector health workers are the financial premiums they receive within the framework of performance-based financing (PBF). All public health facilities are subject to quarterly assessments which are linked to rewards and sanctions.⁶¹ The PBF can represent a significant 20% difference to a hospital doctor's monthly salary and the stir created by one hospital evaluation conducted during the fieldwork demonstrated that health personnel are not indifferent to the process. One of the doctors leaked out the preliminary positive results, scribbled on a sheet of scrap paper, to a huddle of apparently relieved and pleased colleagues. These evaluations result in practical recommendations for improvement where necessary. One hospital was strongly advised to recruit an anaesthetist whilst a health centre was encouraged to chase up on 'lapsed' adherents as a means of increasing family planning uptake after they lost points for failing to follow-up on women who had dropped out of the programme.

The introduction of PBF is orienting health facilities towards finding innovative ways of implementing health policies. One health centre invested PBF funding in the purchase of presents designed for distribution to women who had given birth at the health centre; as health centres receive a certain amount of money for every child born in their facility this helped increase their overall PBF funding. Another health centre, understanding that every child born at home would represent a reduction in their PBF, introduced a 'commission' of 500F to be paid to CHWs every time they accompanied a pregnant woman to the health centre to give birth.

Despite issues to do with delayed payments as in the case of Musanze District hospital⁶², the over-reliance on quantitative assessment of records, and the difficulty of ascribing specific improvements to the PBF, it has certainly made a contribution. The evaluation and

⁶⁰ A moral incentive to encourage the commitment of public sector workers to providing a professional service has recently been implemented. In the aftermath of President Kagame's re-election in August 2011, all public sector workers (including hospital, health centre, and local authority staff) were required, along with other public sector employees to undertake a public oath to the state, amongst other things pledging to exercise their duties to the best of their ability and not to use their authority in pursuit of personal interest. It remains to be seen what impact this will have on the quality of service. However, such a public pledge to uphold the values of the state and the regulations of their specific professions represents a visibly binding commitment for which civil servants can be held accountable.

⁶¹ See annexes 4 and 5 for a detailed description of the PBF approach and example of the evaluation criteria in the area of maternal health.

⁶² Until 2010, Musanze District hospital was receiving its PBF money directly from GTZ, in an arrangement unique in Rwanda. Other hospitals and health centres received their funding directly from MINISANTE. However since GTZ is no longer operating in the health sector following the assignment of development partners to different sectoral areas in order to avoid duplication, the issue of late payment may now have been resolved.

recommendations process is a tool by which local attention can be focused on district and national health policy priorities.

Internal mechanisms for improving quality of service are also becoming visible at the local level. For example, at one health centre a policy was introduced requiring staff to wear name badges identifying their position. This was a direct response to patients complaining through notes delivered in the suggestion box that they had to wait a long time before seeing the 'doctor'. The director of the health centre explained to us that patients did not know how to distinguish between clinical and non-clinical staff and so believed that nurses were stood around doing nothing. The name badges were intended to provide a means by which patients could distinguish between nurses and administrative staff.

Incentivising community health workers

In Rwanda, volunteer community health workers play a pivotal role in catalysing and pushing for behaviour change and in ensuring that key national and local policies are implemented at the local level right down to the village. Similar initiatives have been mostly unsuccessful elsewhere in Africa⁶³ so why has it worked in Rwanda? A number of factors explain the commitment of CHWs in Rwanda.

Although CHWs are not remunerated for their contribution to the provision of health services they receive incentives in other forms. First, CHWs have been encouraged to form income-generating cooperatives in which the performance-based financing due to them is invested⁶⁴. The cooperatives belonging to the CHWs attached to the health units in the study sites showed healthy financial situations, with some more advanced in their income generating projects than others.⁶⁵ Although in most cases the CHWs had not yet benefited directly from the cooperatives' activities, many had received indirect financial benefits such as the payment of their family *mutuelle de santé* subscriptions, or access to interest-free loans for the purpose. Also, there is a general sentiment amongst CHWs that they will financially benefit from the cooperatives in the near future. One CHW said she would be traumatised (*kugira ihungabana*) if she were not re-elected as social affairs officer because it would mean that she would lose her shares in the CHW cooperative.

Besides these incentives, CHWs have privileged access to other financial and non-financial benefits. They are the first to be drafted into health campaigns and are often selected for training sessions each of which is accompanied by generous per diem payments⁶⁶. Other incentives include financial rewards for accompanying pregnant women to the health centre to give birth, access to facilities they need to do their work, such as telephones⁶⁷, umbrellas and plastic boots which they are given free of charge, and gifts, such as radios given by the health centre to reward good work. In rural Rwanda where employment opportunities are scarce these incentives represent an important source of revenue and benefits for households.

⁶³ See, for example, Golooba-Mutebi (2005).

⁶⁴ Since the beginning of 2010, in an attempt to provide a financial incentive to CHWs they have become eligible for performance-based financing. The CHWs are assessed, by a sector level steering committee⁶⁴, on the quality of the monthly reports they submit⁶⁴ and receive a corresponding financial incentive which is directed through dedicated cooperatives which undertake income-generating projects on behalf of their members.

⁶⁵ See Annex 4 for details of the cooperatives and their activities.

⁶⁶ For example in Musanze CHWs received 2000F each per day for their participation in the mother and child week.

⁶⁷ At the time of our research all CHWs had recently been supplied with mobile telephones by MINISANTE (apart from the social affairs CHWs who is elected principally as the village committee member responsible for social affairs).

Having examined their roles, how they play them and the factors behind their commitment, it is worth considering how they are selected and, when necessary, how they are removed from their posts.

Becoming a Community Health Worker

Apart from the social affairs CHWs, all other CHWs are elected to their posts for an indefinite period. And although there appear to be no formal regulations governing the sanctioning or removal of CHWs, in practice health centres can and do sanction and dismiss CHWs who do not perform to standard. For example, in 2008, a maternal health CHW in one of the study villages was dismissed after she set a bad example by giving birth at home. The case of the social affairs CHWs is slightly different, however. They automatically accede to the position after being elected as the village social affairs officer for a limited five-year period. They can therefore be replaced by popular vote every five years. During the 2011 local government elections, in one of the study sites three out of six social affairs officers were not re-elected.

Finally it should also be noted that many CHWs expressed a moral incentive for undertaking their duties. When asked directly what motivated them in their roles many spoke of their personal responsibility and commitment to contributing to the reconstruction of their country. As previously mentioned the position of CHW bestows a certain status on the person occupying it. Consequently the majority of CHWs take this position of authority very seriously. The various forms of training received by CHWs, particularly the *itorero* training, is important in cultivating in them a sense of responsibility as special cadres or change agents. The training equips them with knowledge and sets them apart as “the chosen ones” (*intore*). Serving the community through sharing this knowledge confirms their status as members of a special ‘elite’ expected to be exemplary in their conduct and set an example for their compatriots.

Incentivising local authority personnel

Unlike health workers, local authority personnel do not receive any financial incentives besides their salaries, to perform their functions. However, the introduction of the *imihigo* (performance contracts) has added an element of evaluation to their work.

Improvements in aspects of service provision which contribute to safe motherhood are included as target indicators in the both Nyamagabe and Musanze's *imihigo* objectives. They are therefore important objectives for local authorities at all levels. These objectives are pursued through regular reporting that facilitates the measurement of performance indicators against set targets. The process culminates in the end-of-year Annual National Dialogue. Proceedings of the Annual National Dialogue, a stock taking exercise required by the national constitution, are broadcast live on national television and radio. They include a session during which district mayors report on the progress made in the pursuit of objectives they would have set themselves the previous year. While highlighting achievements, mayors must also account for failures and poor performances. Consequently mayors strongly encourage district personnel to implement strategies likely to ensure the achievement of their targets. In the same way that they are subject to performance pressures from the central government through the ministry of local government, they, too, lean on subordinates at lower levels of the administrative hierarchy to perform.

The progress made on all *imihigo* objectives related to health generally and to maternal health indicators in particular in both districts, some of which are met and others surpassed, clearly indicates that the *imihigo* mechanism has had an important influence on performance by local authorities, not least by keeping these issues high on the political agenda.

The use of *imihigo* to drive up performance levels with local authorities ranked on the basis of outcomes has also encouraged a sense of competitiveness among them. Although there are no financial rewards for performance, local authorities compete for the prestige and status attached to the receipt of certificates of merit and the winning of trophies awarded to good performers. Some district councils in districts whose performance has consistently fallen below standard have gone ahead and sacked senior officials they have accused of being responsible for it. For local officials, therefore, career progression and one's ability to keep their job are increasingly dependent on their own good performance as well as that of the districts in which they are employed.

4.3 Collaborative space and incentives for actors to work together

The provision of an arena within which the different local-level actors in health service provision can collaborate is an important factor in ensuring that everyone is working towards the same objective. The local advisory and oversight committees within the structure of the district health services in Rwanda provide this space (see Figure 2; p31).

Health committees (COSA) are arenas within which local authorities, district hospitals and community members exercise oversight over health centre management and collaborate regularly for purposes of health policy implementation. These committees are to be found in all the public health facilities. Evidence shows that they are very effective in identifying problems in the course of policy implementation and in finding collective solutions thereto (see Box 3).

Box 3: The role of the health committee in improving health in Musange sector

In Musange sector, Nyamagabe District, during 2010 the health committee identified CHW laxity and their lack of authority as a key factor in the persistently high number of women giving birth at home. The committee members, among them health centre and sector authority staff adopted a two-fold approach to addressing the problem. On the one hand, in an attempt to improve the role of CHW they were criticised for their poor results and laxity during a CHW cooperative meeting. In the weeks following this meeting health committee members paid them random visits to establish that as individuals they were upholding in their homes the practises they were expected to promote in the community. On the other hand the health committee informed the CHWs of the support local authorities could provide them with if members of the community refused to adopt the practises they were advocating. Holding CHWs accountable and supporting their activities in this fashion requires concerted effort and commitment from the health centre and coordinated collaboration with the sector authorities of the kind health committees provide.

One of the key variations discovered during the research in Nyamagabe District were the difference in outcomes between Kaduha and Musange sectors (see Table 2 above). In particular the number of women giving birth at a health centre was higher in Musange sector than in Kaduha. The absence of a sector-level health committee to monitor maternal health indicators and facilitate coordination between service providers and sector authorities meant that collaboration between these actors was difficult. Blaming shortcomings in service provision on lack of collaboration meant that the Kaduha sector authorities could, and frequently did, use it as an excuse for poor results.

Likewise, the existence of steering committees charged with evaluating CHWs within the PBF framework contributed to promoting collaboration in service provision. There was direct and indirect evidence, from observation at meetings and minutes of past meetings, of CHW evaluation by the sector level steering committee in both districts. The issue of PBF scores was a priority topic for discussion during these meetings. The leadership of cooperatives was very sensitive to where they had lost points, knew what they needed to do to improve upon them, and were in the process of implementing changes to improve them⁶⁸.

Despite the fact that PBF evaluation criteria concentrate solely on the quality of reporting there is evidence nonetheless that the steering committees are concerned with improving the performance indicators. Examination of the minutes of one of Musanze District's steering committee meetings from September 2010 shows that the number of assisted births and ante-natal visits within the first three months of pregnancy since the PBF system was introduced had increased. It also highlighted activities that had been planned for the upcoming quarter to improve these indicators. They included evaluating the efforts of community health worker coordinators at the health centre level to increase visits to CHWs. This was in an attempt to correct the repetitive errors noted in the preceding quarter's reports.

4.4 Combining compulsion with sensitisation

An important aspect of service provision in Rwanda is participation by local communities both in terms of implementation of policies and the adoption of measures and behavioural change intended to bring about improvement in the quality of their lives. Rwanda is not unique be it in Africa or the developing world in aspiring to co-opt its citizens into civic engagement of this kind.⁶⁹ However, it is one of only a handful of cases where a great deal of success has been registered. Given failure or sub-optimal success elsewhere, including in neighbouring Uganda where a large number of Rwanda's national and local leaders started their political and military careers, it is fitting to examine how the government has managed to persuade members of local communities to engage in civic action on a continuous basis and also to make use of the formal health care system.

For the health care system to achieve national aspirations such as raising the numbers of women giving birth under skilled care, increasing the uptake of family planning methods and getting people to subscribe for health insurance requires, first of all, success at bringing about significant behavioural change. In the pursuit of behavioural change and the attainment of their aspirations local authorities in the two districts have adopted a dual strategy that marries public education campaigns with enforcement and persuasion. Public education campaigns are meant to teach the public the importance and benefits of adopting certain forms of behaviour. Sanctions seek to compel recalcitrant members of the public to adopt the required conduct, while rewards are meant publicly to acknowledge the efforts of people who would have adopted the new behaviour.

Making Use of Sanctions and incentives

Sanctions have been an important ingredient of strategies to encourage women to use the formal health care system for their reproductive health needs both in the past and present. Typically,

⁶⁸ For example the Jenda health centre cooperative president told us that although they received 55% and 65% in their first two evaluations they had lost points for accuracy and completeness and that they were now working on this and expected to get 80% in the next evaluation.

⁶⁹ For examples of similar attempts elsewhere, see Tendler (1997); Crook and Manor (1998); Golooba-Mutebi, (2004); also Putnam (1993).

sanctions take the form mainly of fines imposed on those individuals or households that do not respect guidelines and exhortations to adopt new behaviour. In the promotion of new practices designed to improve maternal health, fines are imposed or threats to do so made in order to discourage women from giving birth at home, not attending pre-natal consultations within the first three months of their pregnancy, and using traditional medicine and folk therapies.

There is an element of continuity in the use of fines to encourage women to use the formal health care system. During the 1990s in present-day Nyamagabe District pregnant women who did not visit their health centre during their pregnancies were fined. Likewise, in current-day Musanze District fines were imposed as far back as the 1980s. Although within the Musanze area giving birth at home was the norm, health centres, most of which were run by the Roman Catholic Church, assisted women mainly in response to emergencies. Informal interviews with older women suggest that it was not uncommon for certain health centres to fine women who gave birth at the health centre without having previously attended an antenatal examination. Our discussions with men and women in our study villages also indicated that some women were fined for home deliveries in Musanze in the late 1990s and since the turn of the century in Nyamagabe but that this has become more commonplace since 2005 in both districts.

In practice, however, the imposition of fines and the amounts levied have not been consistent⁷⁰ and has acquired a tinge of arbitrariness, as sometimes whether or not one is fined depends on their ability to pay or even the inclination of health centre personnel to fine⁷¹. There are, however, moves to institutionalise the application of fines. In Musanze District, for example, these moves became evident with the August 2010 publication of a district council directive detailing a list of punishable offences accompanied by their corresponding fines. The directive instructs local authorities to impose a fine of 2000 francs on women who give birth at home and those who do not adhere to the requirement to undertake antenatal consultations. For non-payment of community health insurance fees, a 5000-franc fine was introduced. Evidence that these fines have been implemented exists⁷² and the impact of this directive on the population in Musanze is clear; respondents referred to giving birth at home as 'a crime' and emphasised that home deliveries were a thing of the past.

Non-financial sanctions are also used. In Musanze District the first week in December is known as '*mutuelle* week'. During this time local authorities join forces with other local actors (including the local police) to pressurise people into subscribing for the *mutuelle*. Pressure was applied via restriction of access to local markets whereby only those traders and customers who had validated their *mutuelle* health insurance cards could get in, checking for evidence of individual subscription in bars and other public areas and threatening those without subscription and a valid *mutuelle* card with the refusal of access to local authority services.

While the imposition or threat of sanctions to compel compliance with rules and regulations has a clearly coercive edge, it has been a particularly important factor in influencing the decisions that women make about what services to seek and where to give birth from. Women repeatedly cited fines as the main reason for choosing to give birth at the health centre. The strength of sanctions as an incentive for women to give birth at health units is shown by the fact that in Kaduha sector in Nyamagabe District, where the only health centre which did not impose fines was located, the

⁷⁰ The amounts of these fines varied widely, between 500F and 8000F.

⁷¹ In Kinigi sector one maternal CHW gave us information about a woman who had given birth in November 2010 who had been fined 2000F and in Gacaca sector a young girl was fined for only doing three PNCs instead of four. When she gave birth at the health centre they refused to discharge her until the fine was paid.

⁷² A respondent showed a member of the research team a document detailing the different fines which had been approved by the Musanze district council.

number of women giving birth at the health centre was amongst the lowest in the study sites. This was despite the fact that the district hospital was located in this same sector. The semi-private nature of Kaduha Health Centre shielded it from the obligation to respect the Ministry of Health's minimum service requirements. It is also arguable that, as it did not have a maternity ward, women in the area who delivered at home could not be sanctioned. It is also noteworthy that the non-financial sanctions of the type employed in Musanze District to encourage early payment of health insurance fees were not used in Nyamagabe District where, tellingly, the early *mutuelle* subscription rates were substantially lower.

Incentives designed to induce behavioural change in service users take the form of financial or in-kind gifts and are dispensed at the level of health facilities. In Nyamagabe District they include the payment of a child's first year's health insurance; the exemption of pregnant women from paying delivery charges if they have undertaken four antenatal consultations, and occasional small gifts to women such as those seeking post-natal care. Here too, there is an element of continuity in the sense that such incentives date from the 1960s⁷³ and were cited by respondents as the reason they used to seek antenatal consultations in the past. It is also important to note that, both in the past and present, incentives have often been linked to specific development partner projects or campaigns with definite funding timelines and have consequently tended to be sporadic and highly dependent on external assistance,

The current initiative of gift-giving in Musanze sector is somewhat different. Several of the health centres we studied were taking part in a MINISANTE experiment to see which types of incentives, if any, encourage women to give birth at the health centre. Specific health centres in the region had been instructed to either provide gifts to pregnant women or CHWs and others were instructed to give no incentives at all. Two of the health centres we studied had received funds from MINISANTE and were rewarding women who give birth at the health centre and undertake ante- and post-natal consultations with presents such as baby clothes, soap, umbrellas and material for mothers' clothing. Many local women referred to these incentives. However the initiative was not known for only positive reasons. Women who had opted to follow government guidelines and use family planning felt that the Ministry of Health did not value them and was privileging rewards for women having babies over those limiting their family size. One CHW told us that she was worried women were going to stop using family planning and instead get pregnant in order to receive presents linked to service use. Unintentionally then, the government initiative was sending out mixed messages, some of them unintended and contrary to the objectives of the initiative.

Normative judgements about the use of coercive policy implementation aside, it is evident that the use of sanctions to support policy implementation in Nyamagabe and Musanze Districts has been an important factor in their successful execution. Incentives have also played an important role in the past as well as in the present, although in some situations they have the potential to produce perverse outcomes.

Public Education

In addition to sanctions, a number of strategies have been devised and used to ensure that efforts to improve maternal health start at the grassroots level through on-going educational activities

⁷³ As far back as the late 60s and early 70s women in Gacaca sector were given vegetable oil (one litre), yellow maize flour and milk powder when they undertook PNCs. Women in the sector regularly told us that they undertook two or three PNCs before giving birth and the use of these incentives must go some way to explaining why the practise was so widespread.

and where necessary, awareness campaigns designed to induce behavioural change. Public awareness campaigns have played a pivotal role in educating the population about the importance of certain policies and practises, and consequently, in encouraging behaviour change. In both districts public education is a central feature of strategic and action plans⁷⁴.

There are three ways in which communities are 'sensitised': public sector health education efforts, focused collaborative education campaign initiatives and community mobilisation.

Public sector health efforts to raise awareness about maternal health issues are important and rely extensively on the use of Information, Education and Communication sessions (IECs). These collective sessions held at health facilities inform participants about the choices they have as patients, provide them with an opportunity to engage with trained nurses, and communicate national health policy priorities to them. IECs preceding antenatal appointments explain why women should receive antenatal care, the importance of using family planning methods, the reasons why HIV testing is crucial during pregnancy, how the PMTCT programme works, and why it is important to give birth at the health centre. Women attending the family planning clinic participate in IECs designed to provide them with detailed information about the types of contraception available to them. It is often supplemented with practical demonstrations of how different contraceptive methods are used⁷⁵. These question-and-answer sessions are conducted in an informal environment in which women are able to pose questions and exchange experiences.

These sessions also act as channels through which service users are made aware of national health policy guidelines. Also transmitted is information about the different incentives to encourage women to use maternal health services and about the obligations of individual service users to respect local government regulations. In one session attended by the research team (in Nyamagabe District), participants were informed that women who gave birth at home were considered 'enemies of the country'. They were informed that the district council had sanctioned fines for such behaviour and warned that the local authorities fully intended to implement the measures. Putting information to service users in this kind of way has contributed to ensuring that Rwandans are aware of their governments' policies and to the development of civic mindedness which, elsewhere, has been shown to influence public policy outcomes in positive ways (Putnam, 2000, Putnam, 1993; Verba, Schlozman & Brady, 1995).

In addition to the facility-level IECs, there are community-level, multi-actor sensitisation campaigns which raise awareness of different issues and which can be credited with contributing to improvement in service provision. These campaigns often have specific objectives such as increasing the number of *mutuelle* subscriptions and raising awareness with regard to a whole range of things. Evidence of coordinated public education campaigns involving the district and sector level authorities, and health centre personnel in Musanze District were particularly widespread. Examples of coordinated action include the mother and child week, circumcision week and vasectomy week during which district hospital staff worked closely with local authority staff, CHWs and health centre personnel. However, the campaign that stands out as having achieved the most impressive results was '*mutuelle* week' during which local authorities joined

⁷⁴ For example the Nyamagabe Annual Action Plan 2009 makes specific reference to training, information, education and mobilisation campaigns as does the Nyamagabe *Imihigo* 2009-2010.

⁷⁵ For example during our research we witnessed participants of IEC sessions being shown how to use both male and female condoms and during one session, in which women expressed fear that implants would snap when they were farming, the nurse circulated an implant so that the women could see how unbreakable and bendy it was.

forces with other local actors (including the local police) to enforce *mutuelle* adhesion within their communities via a combination of sensitisation and application of sanctions.

Community education and mobilisation at the village level have also played a key role in sensitising the local population about maternal health issues. This takes place by two key means, via the role of CHWs and through the use of community gatherings.

In the case of maternal health, mobilisation has been spear-headed by the community health workers who work on a continuous basis in villages with support from local authorities. The role of CHWs in villages includes paying household visits, participating in village meetings where matters pertaining to service delivery are often discussed, and engaging informally with their fellow villagers. During these interactions they sensitise their communities about, among other things, the importance of using family planning, undertaking prenatal consultations, giving birth at the health centre, subscribing to *mutuelle* health insurance, maintaining good hygiene standards, having good toilets and drinking clean water. Villagers everywhere attested to their regular contact with CHWs and their repeated efforts to inform them of, and educate them about, the local authority policies in the areas mentioned above.

Occasions when community members gather together are good opportunities for spreading important messages and provide the ideal platform from which to educate villagers, launch campaigns, and disseminate information about national government and local authority policies and guidelines. In both Nyamagabe and Musanze Districts these meetings are a regular occurrence and are used to a lesser or greater extent as platforms from which local actors, including sector, cell and village local authorities; health centre personnel, community health workers and local security forces, communicate important messages and information to the local population. However, the effective use of such occasions by different local actors to transmit information and sensitise the population about maternal health issues varied across villages and local authorities.



The Musange sector executive secretary addressing a gathering during the Presidential inauguration ceremony celebration 6th Sept 2010

In the case of Musange sector in Nyamagabe District, public gatherings such as cell and village meetings, celebratory occasions and *umuganda* were used to a greater extent to transmit broader messages in the area of maternal health than appeared to be the case in Kaduha sector. In Kaduha, sector-level gatherings were less frequent and so the local authorities did not make use of them. One main explanation for this appears to be the strong committed leadership of the Musange executive secretary, a second is that the Musange sector authorities collaborated closely with the health centre personnel, community health workers and the cell and village local authorities. These two factors appear to have made them more inclined to

educate and sensitise the population in a sustained and coordinated approach than that which was evident in Kaduha sector where the local leadership was weaker and links between local authorities, health centre personnel and CHWs were less collaborative (see Table 2 above).

The capacity and inclination of local actors to seize opportunities to promote awareness, including of maternal health issues at unrelated events in various domains seems to be where the real

value added of such gatherings can be seen. It is this type of opportunistic sensitisation which ensures that public gatherings can make a sustained contribution to the provision of maternal health services. To a large extent this depends on the motivation of specific individuals - sector and cell executive secretaries, village leaders and other local actors, among them CHWs and public health-sector employees - to promote policies related to ensuring safe motherhood. The extent to which the local authorities and other local actors collaborate effectively with one another and are implicated in coordinated approaches to sensitisation is also very important.

Public education at the local level contributes significantly to efforts to improve the provision of maternal health services. However an analysis of the various ways in which it is implemented also points to the limitations of a purely educative approach especially if it does not involve the collaboration of other key local actors. In Nyamagabe District the public education campaigns in Musange sector, where the local authorities and service providers supported the CHWs, including applying sanctions, was more successful than in Kaduha sector where the collaboration was weaker.

Likewise, in Musanze District the most effective public education campaigns have been in the promotion of community health insurance, which was accompanied by support from various local actors in the form of controls and sanctions. Furthermore one can explain variations in how effective CHWs have been at influencing and changing behaviour in specific areas by reference to the uneven and inconsistent support they have received from local authorities and local service providers in collaborative education campaigns and the implementation of sanctions and incentives which legitimise their role.

4.5 Co-opting tradition

There are socio-cultural and political institutions and practices in Rwanda's history, which in the past served the purpose of promoting social and political order, and whose abandonment in the pursuit of modernity contributed significantly to the destabilisation of society and the country's politics. These include: *ubudehe mu kurwanya ubukene* (collective action to combat poverty), *gacaca* (informal conflict settlement arrangements), *imihigo* (competitive performance contracts and accountability mechanisms), *itorero ry'igihugu*, (cultural mentoring and leadership training) and *umuganda* (communal work).

Following the end of the 1994 genocide and the formation of a government of national unity, the Rwanda Patriotic Front together with other political actors launched a national consultative process involving the country's significant elites. The objective was to chart a way forward founded on a permanent solution to the governance problems, including the cycles of political violence and exclusion made possible by the adversarial, winner-takes-all politics practised by previous regimes. The Village Urugwiro consultations, so-named because of the venue at which they took place, the complex housing the President's Office, endorsed the exhumation of these cultural institutions and practices⁷⁶ and their use in the government's reconstruction, stabilisation and development efforts.

Our research sought to examine how these institutions and practices were applied in practice and to gauge their impact. In the local policy environment the annual performance contracts have played an important role in efforts to improve service delivery, as they act as 'an implementation device' for the District Development Plans (Government of Rwanda, 2007). The elements of maternal health services which contribute to ensuring safe motherhood feature as indicators in

⁷⁶ See Annex 1 for a detailed description of these neo-traditional cultural institutions.

the *imihigo* objectives of both Nyamagabe and Musanze Districts. Consequently, they are important objectives for attainment by local authorities at all levels. They include the acquisition of health care facilities, subscription to the community health insurance scheme, family planning uptake, antenatal service usage, training of CHWs, delivery under the supervision of skilled personnel, at health units. National-level prioritisation and pressure for implementation have helped keep the delivery of these services high on the political agenda. The use of *imihigo* as a mechanism for comparison of performance among districts has also encouraged a spirit of competition among local authorities. Although there are no financial rewards for performance, local authorities compete for the prestige and status attached to the certificates of achievement and trophies awarded to good performers. One senior local official characterised *imihigo* as a 'political game which benefits the population', through 'disguised competition'⁷⁷. For elected and appointed local officials, good performance by their local authorities is necessary if they are to stay in the game, and for them to retain their jobs and also climb the career ladder. It is not uncommon for officials, elected and appointed, to lose their jobs, through votes of no confidence or contract termination, in districts whose performance consistently falls below standard.

The *ubudehe* initiative is akin to a longstanding tradition of mutual self-help within local communities. In one of its most widespread forms, farming households help each other with land clearing, planting and, eventually bringing in the harvest. In its official form it has, among other things, facilitated the implementation of national poverty eradication initiatives. Implementation starts with classification of poor people, thereby enabling the poorest and most vulnerable households to be identified by their fellow villagers. In this way they become the priority recipients of any support available from the government or its development partners, including payment of *mutuelle* subscriptions. Inclusion of payment for *mutuelle* has helped extend *mutuelle* coverage to poor households that would otherwise not have the capacity to pay for themselves. The initiative has also played a more direct role. The funding for anti-poverty activities received by villages in 2006-7 facilitated the creation of income-generating opportunities in the form of paid employment for the poor working on public projects such as classroom construction. It has positive knock-on effects on health and general wellbeing by providing largely subsistence farmers and other operators in the informal sector with the capacity to pay for their own family's health insurance, thereby guaranteeing them access to healthcare. On senior local official in Nyamagabe District was emphatic about its impact: "the *ubudehe* scheme has left an unforgettable mark here"⁷⁸.

The COPARIMU cooperative rice de-husking machine in Masangano cell, Jenda sector



⁷⁷ Interview, Musange sector, 3rd August 2010.

⁷⁸ "*l'ubudehe a laissé une trace inoubliable ici*" in French. Interview Musange sector, 13 August 2010.

Box 4: COPARIMU: an *ubudehe* success story

The cooperative COPARIMU started in 2007 and now counts 135 members who farm 13 hectares of land and produce 45 tonnes of rice a year. Started on the advice of the sector executive secretary, it was given a boost by *ubudehe* funds which financed the draining of marshland on which the rice fields were created. Further sector authority support then enabled the cooperative to secure financing from GTZ for the purchase of a de-husking machine in 2008 which arrived just in time for their first harvest. The activities of COPARIMU have transformed the village and its economic status and have brought numerous benefits to its households and the sector. Amongst other things the cooperative pays for the *mutuelle* health insurance of its members and their families (up to seven per family) and provides each household member with 70kg of rice per year.

Since its introduction in 2007, the national civic education programme, *itorero*⁷⁹, has played an important role in orientating and mentoring current and future leaders. Operating under the auspices of the National Unity and Reconciliation Commission (NURC) the *itorero* is not to be confused with *ingando* (re-education) which is aimed at *génocidaires* and former insurgents who return from the jungles of the Democratic Republic of Congo (Thomson, 2011). Aiming to create a spirit of self-reliance and collaboration amongst its 'students', the purpose of the four-week *itorero* is to cultivate in current and future leaders the capacity to find innovative solutions to their own problems and a good work ethos to ensure efficient service delivery for those already in public service as volunteers or paid employees.

Itorero graduates gain the 'valued' status of *intore* ('chosen one') and are expected to become 'change agents' seeking to promote development in their communities and raise awareness at the local level about important issues and policies for national development. By the time this research was conducted, all local authority leaders, teachers, agriculturalists, CHWs and youth leaders had gone through this four-week training. *Itorero* is therefore an important mechanism through which a vision of the future in which leaders exist to serve the people they lead, not themselves, is being communicated and into which the young Rwandan elite are being drawn.

Finally, *umuganda*. In its official or officialised version, *umuganda* is a monthly exercise in collective action designed to address an issue or need of common interest to the residents of specific localities on the last Saturday of the month. In many settings people come together to clean public spaces or build or repair infrastructure. In bringing people together in this fashion, *umuganda* provides another platform from which local authorities and other actors can engage in activities designed to educate the public about a whole range of matters, including those directly related to maternal health. Typically, informal meetings take place at the end of *umuganda*. Local authorities use the opportunities for communication they provide to campaign for increased adhesion to the *mutuelle*, for example, and to encourage the CHWs to continue sensitising women about issues related to maternal health and, specifically, the importance of giving birth



During community works in Musanze sector in February 2010, participants discussed the local government elections.

⁷⁹ The *itorero* ry'Igihugu is organised by the national unity and reconciliation commission (NURC).

at health centres.

4.6 Popular participation and local collective action

Identifying the institutional arrangements contributing to ensuring safe motherhood in rural Rwanda requires examining how different actors work together to solve the collective action problems that typically undermine service production and delivery. In maternal health key bottlenecks include delays in transporting women in labour to a clinical environment where any complications could be dealt with, limited human and financial resource capacities preventing the state from providing services, and geographical and financial constraints which limit access by rural populations to health care facilities. The earlier examination of the local strategies different actors employ illuminates only one side of the story, that relating to state actors: local officials and technical personnel. In this section we examine the roles local people and communities play in trying to overcome these bottlenecks and how, if at all, state action influences community action. What local-level institutional arrangements encourage cooperation in ensuring safe motherhood?

Community health workers

One of the most clearly identifiable areas in which community members contribute to the provision of safe motherhood in both Nyamagabe and Musanze Districts is through their role as community health workers. By providing basic health services at the community level and raising household awareness of simple preventative health measures, CHWs link communities with the healthcare system. This army of volunteers educate the population about the importance of using family planning methods, attending prenatal consultations and giving birth at the health centre and more generally they sensitise the population about the importance of enrolling for the community health insurance, maintaining good personal and home hygiene standards, having good toilets and drinking clean water. The CHWs carry out this educative and informative role during household visits at village meetings, and through informal contact, made possible by living in close proximity with their fellow villagers.

However the extent to which CHWs are effective in ensuring that policies essential for improving health care and hygiene and sanitation standards are implemented varies between villages and depends on a number of other key factors. The extent to which CHWs can influence people and change behavioural patterns depends not only on the individual CHWs, the training they have received, their motivation and their position in the community; it also depends upon the support they receive from other local actors such as the local authorities and local service providers. CHWs alone cannot achieve the improvements in the ambitious qualitative health indicators that the central government has set itself. As we have noted above, public education campaigns work better when they are reinforced by other local actors (local authorities and health workers) and where necessary, supported by appropriate local authority sanctions and incentives.

Village emergency evacuation teams

Another feature of community participation helping to overcome bottlenecks in the provision of maternal health care is the existence of organised groups of village residents who use 'traditional' ambulances (*ingobyi*) to evacuate critically ill villagers and convey them to health facilities. The limited options for transportation by motorised ambulance from patients' homes to health centres means that evacuation by traditional ambulance, remains an important element in the local maternal health landscape, ensuring that in emergency situations women have a chance of arriving safely in a clinical environment.

A woman being transferred to the health centre by traditional ambulance, Nyanza1 village, November 2009



In Musanze District all villages are equipped with several traditional ambulances managed by member associations, known as *imiryango y'abahetsi*, each of which groups together between 30-50 neighbouring households. These member associations have a long history dating back to before the war and have traditionally always provided a system of transportation for the sick as well as providing burial services for their members, however they have undergone considerable transformation in the post-genocide era; at the end of the war the newly installed RPF government was keen to extend the transportation service of these associations to all community members and encouraged local authority leaders to promote their use.

The *imiryango y'abahetsi* that have evolved since that period have distinct functional and organisational differences. A common theme, however, is that most now have a fee-paying element. In Kinigi sector members who contributed towards the initial purchase of the *ingobyi* are accorded free use of it whilst other members pay a fee if they wish to use it. In Gacaca sector free transportation by *ingobyi* is dependent on whether a household has a male member capable of being a 'carrier' and transporting patients. Those households who don't have a 'carrier' are required to pay an annual fee of between 1000-2000F. This system is not only considered acceptable and just by the population but the majority of respondents said that despite the fact that people had to pay for the use of the *ingobyi*, the system was better now than before. According to some respondents, previously carriers could refuse to transport patients to the health centre whereas nowadays carriers who refuse to transport someone to the health centre can and are fined by the *imiryango y'abahetsi* committee.

The current use of traditional ambulances provides an example of collective action in which community members have responded to a genuine need. However closer inspection of how the *ingobyi* are managed in Musanze District reveals that this current organisation has not developed independently of local authority intervention. In Musanze District the existence of the *imiryango y'abahetsi* provides an example of a situation in which local government has effectively facilitated and encouraged forms of local community collective action which provide a critical response to a well identified bottleneck in the provision of safe motherhood.

Mutuelle committees (amasinda ya mutuelle)

In order for ordinary citizens to benefit from a full year's community health insurance, annual fees must be paid in full by 31st December of the year preceding the coverage. Otherwise they are subject to a time-delay penalty (of between one to three months) before they can benefit from the insurance. This is logical because otherwise patients would only pay for insurance at the moment they become ill.

Although the annual subscription rates to the health insurance are high in both Nyamagabe and Musanze districts (see Table 2 above) these rates do not reflect when annual fees have been

paid. Typically, in both districts, subscription rates in the first month of coverage, January, have been considerably lower than by the middle of the insurance period. As popular buy-in into the scheme has increased, local actors' concerns have become more focused on ensuring that the population register as early as possible. In Musanze District not only are health insurance subscription rates higher overall than those in Nyamagabe District, the rate of early subscriptions in 2011 surpassed, quite considerably, those in Nyamagabe. While in Kaduha the sector authorities were still pushing to get subscription rates in some villages past the 50% mark in June 2010 (six months in to the coverage year), several villages in Musanze District had already reached this subscription rate in January 2011. A widely-adopted (district authority) initiative to group village households into '*mutuelle* committees' responsible for organising and collecting regular instalments towards members annual fees and depositing them on a village SACCO account might go some way to explaining this success.

In one form or another, these committees existed in all of the villages we studied in Musanze District with the objective of ensuring that each household contributed on a regular or monthly basis to ensure that the family's *mutuelle* was paid by the end of the year. In some villages new committees known as *amasinda ya mutuelle* were created to manage the scheme and payments whilst in other villages responsibility for the health insurance savings scheme was added on to pre-existing organisations such as the *imiryango y'abahetsi* groups (discussed above). In some cases these household groupings have added a micro-credit component to their schemes, using the *mutuelle* contributions to provide small loans to their members. The interest accrued from these small loans is not inconsiderable and in some cases has been sufficient to pay the annual health insurance of at least one family member per household within the grouping.

Overall villagers have embraced these schemes. Poor people who previously found it difficult to pay their health insurance in one go find that the system facilitates their payment by allowing them to save gradually. On the other hand the scheme also overcomes the time-constraints faced by better-off people. In taking responsibility for paying members health insurance contributions and collectively validating members' *mutuelle* cards, the '*mutuelle* committees' save them time. The system also facilitates the work of cell and village leaders who used to do door-to-door visits to encourage registration and appears to have improved implementation of local policy on health insurance registration.

Although a top-down initiative from the Musanze local government, the introduction of *mutuelle* committees has been successful at facilitating collective action at the village level by providing an innovative solution to problems that previously prevented villagers from paying their health insurance annual fees. Furthermore in building on a form of social organisation which has historical relevance in this geographical area of Rwanda, it could be argued that this initiative has cultural relevance to many segments of the local population.

Collective poverty reduction activities

In both Kaduha and Musange sectors in Nyamagabe District there is ample evidence that national and local poverty reduction strategies have had an impact at the village level. Collective community actions to reduce poverty take the form of nationally initiated and directed poverty reduction programmes such as *girinka* (one cow per family⁸⁰), *ubudehe*, and a plethora of informal

⁸⁰ The objective of the *girinka* programme, introduced in 2006, was to enable every poor household in Rwanda to own a cow. Although with key nuanced differences, this programme has some similarities to the ancient Rwanda tradition of *ubugabire* in which wealthy people gave poor families cows to look after in reciprocally beneficial arrangements. Although not reciprocal in the same sense, the *girinka* program, which requires that

local associations which provide revolving savings schemes, micro-credit and solidarity funds to their members (see annex 6 for further details). These different institutions have contributed to the provision of maternal health both directly and indirectly. By increasing rural household's access to income generating activities, they have provided many of the largely subsistence farmers in Nyamagabe and Musanze Districts with the capacity to pay for their family's *mutuelle* health insurance.

These collective responses to improving living standards have also contributed to creating a community spirit of collective action and have re-opened up important arenas of exchange in which villagers work together and share ideas and information. Indirectly, these occasions provide opportunities for the community's opinion leaders, who for the most part make up the committees of these institutions, to promote awareness and sensitise the population about sanitation and spread the word about sanctions or incentives in these areas.

5 Conclusion

The research was concerned with identifying institutional arrangements that permit the provision of maternal health services which ensure safe motherhood at the local level in the two rural districts of Nyamagabe and Musanze in Rwanda. The objective was to identify where things are 'working well' and to explore the institutional configurations responsible for this 'good' provision. It sets out to answer the following question: how have state and civil society actors, institutions and resources combined and been coordinated to overcome the key bottlenecks which might otherwise undermine the provision of health services to ensure safe motherhood?

Evidence from the fieldsites suggests that there have been consistent improvements in the delivery of maternal health services. This is evidenced by falling maternal mortality rates, growing geographical access to health facilities, well-equipped and stocked health facilities, availability of skilled and highly professional human resources at all levels, the high and growing number of women delivering at health centres, growing demand for antenatal and postnatal care; increasing demand for family planning services; the reduction in barriers to access via the introduction of the *mutuelle* health insurance scheme; growing capacity for evacuation of the critically ill from their villages, and concerted efforts at improving hygiene standards in private and public spaces.

The recent preliminary DHS survey data (see Table 1) indicate that these findings are not atypical of the overall situation in the country (Government of Rwanda, 2010). The evidence points to a number of institutional factors responsible for the good provision of maternal health services in rural Rwanda.

Firstly, there is a high degree of horizontal coordination in the maternal health delivery arena at the local level. National and local development objectives are consistent, and the policy reforms, and accompanying strategies necessary to achieve and implement these objectives have been coherent and mutually reinforcing. Development partners have also been well managed and coordinated; at the local level the physical presence of development partners is minimal, overlaps have been avoided by the obligatory participation in district level forums, and external assistance appears to be successfully plugging key resources gaps. Although it could be argued that many of

the first born calf of the *girinka* cow be given to another poor family, can be seen as an arrangement with the state which continuously produces cows for the benefit of poor families. Owning a cow helps improve a household's welfare by providing income (from milk, milk products, and manure), improving the household's nutrition (through milk consumption) and increasing soil fertility (through use of manure on fields).

Rwanda's recent policy reforms are typically representative of more orthodox policy elements (such as performance management, pay reforms and decentralisation) a unique element of the Rwandan context is the implementation of accountability mechanisms that ensure that each actor in the delivery chain performs their respective functions in the ways envisaged.

Accountability enforcement and responsibility taking reduce whatever space may exist for actors to blur lines of responsibility and pass the buck for failure. However it is also important to acknowledge that in many respects post-genocide Rwanda had a blank sheet on which it could design its national objectives and policies and that may have provided an increased opportunity for consistency and coherence. Nonetheless, the Rwanda government's commitment to pursuing national development objectives, such as reducing the maternal mortality rate, and implementing the policy reforms necessary to achieve them has played an important role in bringing about the good outcomes in maternal health. This commitment and the state's strong top-down approach and single-minded manner in pushing through reform have been crucial.

Secondly, strong vertical coordination of public sector health provision, local authorities and users has also played an important role in ensuring that professional standards are respected, national policy is implemented and that the shift in behaviour necessary to bring about change happens. At all levels, top-down administrative and technical supervisory mechanisms are in place and enforced to ensure that the quality of health care and those responsible for providing it are answerable for the services they provide. Upward accountability mechanisms exist and are accompanied by consistent incentive structures for all health sector actors: evaluations, in the framework of performance-based financing, are linked to monetary incentives for public health service providers; progress towards performance contract objectives (*imihigo*) motivates local authority staff; and CHWs receive various incentives to provide regular, accurate, village-level reports to monitor user compliance. National objectives to improve maternal health and reduce maternal mortality rates cannot be achieved if users do not follow policy guidelines, in this respect users themselves are also held to account and their responsibility in following guidelines is ensured by a mix of public education, enforcement measures and rewards. In particular the use of sanctions to support the implementation of key maternal health policies has been an important factor in their successful execution amongst the rural population, combined with a real commitment to public education, as a means of bringing about behavioural change.

The decentralised maternal health delivery arena is thus operating in a coherent and coordinated local policy environment but one which remains very much linked with and accountable to the national government apparatus. As shown below, these supervisory mechanisms are supported by advisory and collaborative structures.

Thirdly, the existence of a collaborative space within which local actors come together is also important. Advisory and oversight committees which bring together service providers and local authorities, function and play an important role in ensuring that local actors are working towards the same objectives and pulling in the same direction. There is also evidence that key local actors collaborate in public education and enforcement efforts. This integrated collaborative working mutually reinforces and legitimises the roles of all actors concerned and provides a favourable environment in which the national commitment to promoting real behavioural change can be achieved. However it should be noted that the extent to which collaboration occurs also depends on the quality of the sector local authority leadership and on the upward accountability faced by local actors. The motivation, dynamism and drive of strong local leaders is a key component in ensuring that efforts are made to increase collaborative working methods and that subordinate local authority administrations are held to account.

Community participation at the local level also plays a role in contributing to ensuring safe motherhood in key ways. The impetus for effective collective action in the area of local service delivery has not been the result of spontaneous bottom-up initiatives. Instead, effective popular participation has been fostered in a framework of top-down, centrally driven policies which have received strong support from decentralised local authority structures in the form of effective enforcement and public education, coupled with the collaboration of other local actors. Effective collective action has rather been the result of top-down state policies in which the state has facilitated and directed community mobilisation within an arena whose boundaries it has defined, but which is nonetheless driven and influenced by key national development objectives. Within this defined arena, space has been created for participatory processes which allow some level of feedback and autonomous decision making at the local level, as is the case with *ubudehe*. Furthermore, there has also been a genuine effort to ensure that the mobilisation arena is sensitive to local context, by wherever possible moulding its boundaries to build upon pre-existing institutional arrangements such as the traditional ambulance organisations. Overall, the existence of this community mobilisation arena, albeit centrally defined, has facilitated the creation of a local environment in which behavioural change has been possible.

Fourthly, the Rwanda government's innovative revival of neo-traditional practices has also played a role in overcoming key bottlenecks to ensuring safe motherhood at the local level. In particular the marriage of cultural practices with modern approaches to public administration such as performance contracts has facilitated governance reforms which have contributed to creating a culture of bureaucratic efficiency, in which local actors are supervised and have incentives to collaborate with one another. However it is important to point out here that rather than building on ancient cultural norms which have always, and continuously, existed, these cultural concepts have been re-invented to fit the purposes of the contemporary context. For example *imihigo* has been used to get elite buy-in into vertical accountability structures and to inject a culture of competition into the contemporary state bureaucracy.

In other words, cultural values or 'extant cultural norms' have been adapted and embedded into the public sector reform process from above rather than through a bottom-up participatory process. Another area in which the use of neo-traditional concepts has been important is in the teaching of Rwandan cultural values, citizenship and new public management techniques to the country's elites. *Itorero* acts as a powerful mechanism by which a national vision of Rwanda's future is being communicated and by which committed strong leaders are being formed. Whether one agrees with this 'vision' or not, it would appear to be successfully forging a common vision of the future amongst the new leadership class as well as the commitment, and a common understanding of the values necessary to achieve it.

Our findings imply that a high level of horizontal coordination, strong vertical accountability mechanisms and an adequate facilitating collaborative arena allows for service delivery that ensures safe motherhood at the local level in Rwanda. In response to the implied question in the introduction to this report, the bride is not too beautiful; there is no catch.

It was not within the scope of this research to explore the wider historical, social and political conditions that may explain the institutional configurations analysed in our report. However, especially in view of the polarised positions surrounding research on Rwanda, it is impossible to conclude without some reference to these questions, and in particular, the issues they raise about the sustainability of Rwanda's progress in maternal health and other fields.

Among the wider topics arising from this research on which further reflection is required, the following seem particularly important. To what extent has Rwanda's historical legacy as a

monarchist state, characterised by top-down hierarchical decision-making processes, played a role in fashioning the institutional fabric upon which the contemporary state has been able to impose and enforce top-down policies? How far does Rwanda's contemporary success in delivering services represent a break from the past? To what extent does Rwanda's success depend on the fact that the political system is a relatively authoritarian form of democracy? And to what extent will the gains which have been made be sustainable under a new regime; in other words will they outlive Kagame's regime?

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Annex 1: Neo-traditional cultural institutions

The innovative use of neo-traditional cultural institutions as operational tools to support the implementation of the country's poverty reduction and development strategies was born out of the 1997-1998 elite national consultation process at village *Urugwiro*, the official seat of the president of the Republic of Rwanda, and were presented as practical ways of overcoming the immense challenges faced by Rwanda at the turn of the century.

Local collective action measures to reduce poverty (*Ubudehe*)

Ubudehe mu kurwanya ubukene which means collective action against poverty, is a national government programme whose objectives are two-fold: (1) to facilitate collective action to reduce poverty at the village level by providing villages directly with funding to implement locally-designed problem-solving activities which address problems identified during village consultations and (2) to classify households into poverty categories enabling the poorest community households to be selected for special assistance.

Ubudehe as a poverty reduction strategy first emerged in Rwanda in 1999-2001. After the execution of a successful pilot scheme in villages in Huye district, *ubudehe* was made national policy in 2004. With funding from the EU the policy was rolled out to villages nationwide in 2006-2008 with each village receiving 600.000RWF, roughly \$1000 to engage in poverty reduction activities decided upon by the villagers themselves. In the context of the decentralisation policy it was intended to promote participatory planning and budgeting at the village level as a tool of bottom-up planning which would eventually feed into decentralised policy making and national sector strategies. Traditionally *ubudehe* refers to the Rwandese concept of mutual self-help in the fields.

Competitive performance and accountability mechanism (*imihigo*)

The concept of *imihigo* dates back to the 16th century and refers to the traditional practice of warriors making public pledges to their kings to engage in specific accomplishments, to test their bravery. *Imihigo* was undertaken in a competitive spirit, with pride and high status being the reward of success, whilst failure was not punished.

The concept was revived in 2005 as an accountability mechanism to provide incentives to local government leaders and their populations to implement the decentralisation policies and to meet local and national development targets. An annual *imihigo* contract is signed between the President of the Republic and the District Mayor based on a clear set of national and local priorities and specific targets, selected by the district, backed by measurable performance indicator targets. Performance is evaluated on an annual basis and the Mayor must report back on the progress towards the objectives directly to the President during a public meeting.

Cultural mentoring and leadership training (*Itorero r'igihugu*)

Itorero ry'Igihugu is a national civic education programme, organised by the national unity and reconciliation commission (NURC), which trains present and future Rwandan leaders how to become change agents for development in their community by promoting positive social and cultural values and denouncing negative ones. Key objectives of this training include equipping Rwandans with the capacity to find innovative solutions to their own problems in order to promote community, social and economic development, to create a spirit of collaboration and self-reliance,

to encourage the population to appropriate national policy and to create a good work ethos to ensure efficient service delivery.

The *itorero* camp is a four-week national programme which takes place simultaneously at the district level. Those who graduate from the *itorero* camp are known as *intore* which means chosen one in Kinyarwanda. As appropriated by the current programme, *intore* refers to the diverse groups of people who characterise Rwandan values (integrity, patriotism, nobility, and heroism) and who are motivated and capable of bringing about positive change in terms of mindset, behaviour and service delivery in their place of residence and work and who will be selected to participate in *itorero* camp.

The first *itorero* camp was opened by the President of the Republic on 16th November 2007 and was attended by all local authorities and leaders. The 2nd was held in April 2008 for primary and secondary school teachers, the 3rd in December 2008 for CHW and agriculturalists, the 4th in April 2009 for sector executive secretaries and diaspora youth (which President Kagame's children attended) and the 5th in November 2009 for school leavers and youth leaders from the cell, sector and district level.

Community work (*umuganda*)

Community work (*umuganda*) was enshrined in law in November 2007. Organic law n° 53/2007, article 3, states that every able-bodied Rwandan between the ages of 18 and 65 "shall have the obligation to perform community work". Article 2 outlines the objectives of community work noting that it shall "aim to promote development activities, the framework of supporting national budget and to provide an opportunity for conviviality among people". Article 13 also makes provision for fines of up to 5000F to be imposed as a penalty on individuals who have not participated in community works.

Communal work has been part of the socio-economic landscape of Rwandan life for centuries and became institutionalised in 2007 after being legislated for by Organic law n° 53/2007 (17/11/2007). Since then national level community work, taking place on the last Saturday of every month between 8-11am, has become an obligation for all eligible Rwandan nationals with the objective of bringing Rwandans together to carry out general public interest activities. Otherwise known as *umuganda*, community works take place across Rwanda, at either the village, cell or sector level, on the last Saturday of every month.

Annex 2: The local administration hierarchy

Under Rwanda's decentralized system of local government, the country is divided into a hierarchy of administrative units which in ascending order are: village (*umudugudu*); cell (*akagari*); sector (*umurenge*); district (*akarere*), and province (*umutara*). The Akarere (district) is the basic politico-administrative unit of the country.

The village (*umudugudu*)

The *umudugudu* is the lowest administrative entity. Among its responsibilities are the maintenance of security and the promotion of peace and social harmony among the citizens. In addition, it is responsible for mobilizing the village community for various development and social agendas. The administrative organs of the village include the village council which comprises of all people living in the village who are 18 years old and above; and the village executive committee which is composed of 5 people: The village coordinator; and members in charge of security, social affair, information, and development. The village committee members are elected for five-year mandates.

Cell (*akagari*)

The *akagari* is the next level above the village. The cell is responsible for collecting basic statistics about the population and their welfare. The data are then used for planning purposes at the sector level to facilitate service delivery. All citizens living in a particular *akagari* who are aged 18 and above are members of the *akagari* Council. The council mobilises local residents of the *akagari* to identify, discuss, and prioritize their collective problems, and make decisions about their resolution. The *akagari* council elects the 10-member *akagari* executive committee. The committee executes functions related to administration and community development, including the day-to-day administration of the *akagari* and the implementation of the decisions taken by the *akagari* council.

Sector (*umurenge*)

The sector is the principal service delivery point where most services are rendered. A sector has five employees, including the executive secretary who is the overall coordinator. The others include individuals in charge of agriculture and livestock; social affairs; social services and the secretary who also works as the cashier. The sector also supervises cell-level employees. The sector is governed by a council which oversees policy implementation. The sector council approves reports and advocates for the sector at the district level. They decide on the priority programs and activities of the sector and also monitor the performance of sector-level staff. Also, tax collection is done at the sector level by private tax collectors, who are paid 5% of the revenues they collect or, where tax collection has not been privatized, by tax collectors employed by the district. Tax money collected at the sector level is deposited on the district account. According to the law, each sector is given a certain percentage of the amount collected.

District (*akarere*)

Districts were originally created as the focus of the decentralized service delivery. The district plans, coordinates, and promotes socio-economic development in areas within its jurisdiction. It also mobilises resources from different sources including the central government, the private sector, civil society groups and development partners. Districts have their own elected councils

and mayors and prepare their own budgets. In addition to receiving transfers from the central government, districts have taxing powers which allow them to mobilise resources locally. The cells and sectors serve as constituencies within districts and provide an important vehicle for citizens' voices. The district promotes and supports activities in which the population participates at grass-roots level and is also responsible for infrastructure maintenance.

In planning development activities, a district administration takes people's wishes into account. District administrations work hand in hand with community-based associations and cooperatives. To enable it to accomplish its mission, each district administration has eight departments: human resources, economic development and planning; finance; infrastructure and environment; education, youth and sports; health and family promotion; and land. Each department is headed by a director. The directors report to the executive secretary who in turn reports to the executive committee. The executive committee reports to the district council. The district council is the supreme organ of the district.

All civil servants at the district, sector and cell levels are recruited by the district council which reserves the right to punish, fire, or promote any employee based on a report from the executive committee and evidence from his or her immediate supervisor. Nonetheless, in doing so it must respect the rules and regulations which govern the employment of public servants. Also, the salaries of all local administration employees at all levels are paid by the district.

Province (*intara*)

The intara serves as a coordinator between the districts and the central government in the planning, execution and supervision of decentralized services. In addition it serves as a channel through which the central government receives complaints from the population concerning the quality, quantity, and fairness of service provision. Its other responsibilities include:

- ☐ Co-ordinating district planning and allocating implementation budgets;
- ☐ Ensuring that districts implement policies with the objective of supporting the culture of peace, transparency, and participation by citizens in decision making;
- ☐ Ensuring that district-level governance and administration are in line with national policies, laws and regulations;
- ☐ Ensuring that development within districts is based on scientific research

At the summit of the administrative hierarchy is the central government which, through line ministries has the following responsibilities:

- ☐ Policy formulation: developing policies, programmes and principles which govern the country;
- ☐ Resource mobilization: mobilisation of resources to facilitate programme implementation;
- ☐ Capacity building: building the capacity of the population and entities which implement programmes formulated at national level;
- ☐ Monitoring and evaluation: evaluating and monitoring the implementation of set policies and programs

Annex 3: Local government political and technical organs

Composition of elected political organs

The **District council** is composed of one elected representative from each sector, three representatives from the National Youth Council, the district coordinator of the National Council of Women and a disabled person representative. Women must account for 30% of district councillors. Councillors are elected for a five-year mandate.

The **District executive committee** is composed of the District Mayor, the Vice-Mayor in charge of finance and economic development and the Vice-Mayor in charge of social affairs. The three members of the executive committee are elected from within the district council for a five-year mandate and are full-time employees.

The **Sector council** is composed of all the sector's cell coordinators, one cell representative from each cell council, members of the sector national youth bureau, the sector coordinator of the National Council of Women one primary school and one secondary school headmaster representing the schools in the sector and a representative of cooperatives operating in the sector.

The **Village executive committee** is composed of five elected members: a village coordinator, a security officer, a social and family affairs officer, an information officer, and a development officer.

Composition of technical organs

The **District executive secretariat** is composed of the district's technical employees and is headed by the district executive secretary. Technical employees are recruited civil servants, are governed by the civil servants code, and include the sector and cell staff as well as the district administrative staff, and department directors and their staff.

The **Sector executive secretariat** is headed by the sector executive secretary and composed of the sector's technical employees: the livestock and agriculture officer (which we often refer to as the development officer), the social affairs officer, the civil services officer and a cashier/secretary.

Other organs

District development committee (CDC), advises the executive committee on development issues and, according to the law on the functioning of the district, article 89, is composed of the two district vice-mayors, the district executive secretary, the director of the planning, monitoring and evaluation unit, the districts' executive secretaries, the person in charge of development in the district executive committee of national women's council, the executive secretary of the district national youth council and all those having development projects in the district upon confirmation by the district council.

Annex 4: Performance based financing

Performance-based financing is one of the key pillars of health sector reform in Rwanda and was rolled out nation-wide in 2006⁸¹. It is a contractual approach to improving health service delivery. The principle behind PBF is to improve health service provision by providing financial incentives to health facilities and their staff for good performance - denoted by increased utilisation and quality of services (Government of Rwanda, 2005).

The PBF approach is now implemented at each level of the health service system (district hospital, health centre and community health). At the district hospital and health centre level evaluation of performance and incentive structures are composed of an institutional and individual evaluation component. The institutional PBF evaluations are undertaken by steering committees at the relevant level⁸² whilst individual staff PBF is the domain of the health facility's management committees and department heads (as depicted in Figure 2; p31).

MINISANTE assumes evaluative supervision of the district hospital which in turn is responsible for the evaluative supervision of the health centres. At the lowest level of service provision it is the health centres which are responsible for the evaluation of the CHWs.

District hospital and health centre PBF

Institutional evaluations

Quarterly institutional PBF evaluations have qualitative and quantitative components for which a health facility is given a score out of 100. The institution will be awarded a PBF sum equivalent to the amount of money available⁸³ multiplied by the institution's percentage score. So for example if a health facility has a potential maximum PBF amount of 1.000.000RWF and receives a quarterly evaluation score of 80% it will receive 800.000RWF for that quarter in PBF.

Quantitative evaluations examine health facilities reports and documents to assess their achievement of target indicators goals. In the area of maternal health this would include analysing the progress made towards achieving targets such as family planning uptake and assisted births rates.

Qualitative evaluations are carried out against pre-defined national evaluation checklist formats which are designed to test the quality of services provided. Each department is evaluated on criteria specific to its service. Scores are awarded for each element of the checklist and then totalled to give a department score. Annex 5 shows the criteria which are used to evaluate maternal health services – childbirth facilities, ante-natal service and family planning services - of a health centre. The evaluation criteria fall into three main types (1) observation of facilities and materials (2) observation of patient treatment and (3) examination of patient record files; all of which are supposed to provide a proxy for the quality of care that patients are provided with.

⁸¹ It was originally piloted by NGOs and donors in 2002 and 2005 in the former provinces of Butare and Cyangugu, firstly in general health centres then for HIV services. The pilot was then extended to health centres in Kigali Ngami and Gitarama. The PBF approach subsequently became a pillar of the Ministry of Health strategic plan 2005-2009 and by 2006 was applied to the health sector as a whole.

⁸² District hospital institutional evaluations are undertaken by a steering committee whose members include staff from other district hospitals and MINISANTE. Health centre institutional evaluations are undertaken by a sector level PBF steering committee whose members include district hospital staff and PBF evaluation teams and sector local authority staff.

⁸³ The amount of funding available for PBF is not fixed and can change quite substantially from quarter to quarter. Figures for the four health centres we studied in Musanze District show that between the 2nd and 3rd quarter 2010 the health centres received a reduction of between 15%-53% in their potential PBF.

Individual evaluations

Individual PBF evaluation sheets which are designed at the national level are used to evaluate individual staff performances on a monthly basis on the following indicators: professional conscientiousness (punctuality, availability, presentation) team spirit (sense of cooperation and collaboration, commitment, initiative and technical competences and flexibility (quality and quantity of work).

The health facility's management committee decides how the PBF money available will be distributed between different budget lines, departments and individual staff members. Typically, though, part of the funds are allocated to operational costs and a proportion is allocated for staff incentive payments. The amount a member of staff receives will depend of his/her department's evaluation note and their individual evaluation score.

Community health PBF

Since the beginning of 2010, in an attempt to provide a financial incentive to CHWs for the contribution they make to health service provision, CHWs have become eligible for performance based financing. At the health centre (or section) level, CHWs have been grouped into cooperatives, each of which receive PBF funding and undertake income-generating projects, on behalf of and for the financial profit of their members.

Assessment of the CHWs is based on the quality of the monthly activity reports they produce and which are evaluated by a sector level steering committee, which includes representatives from the public sector and local authorities. The reports are evaluated on three criteria: (1) punctuality (2) completeness and (3) accuracy which are worth 30, 30 and 40 points respectively.

Kinigi HC cooperative, *Dufate neza ubuzima* (Take good care of life or health) has a fertiliser depot and a thriving potato farming business, producing 3 tonnes a season, provides its members with opportunity for paid labour.

Bisate HC cooperative, *Twite ku buzima*, has been in existence since 2008 and 109 out of the 116 health centre CHWs are members after paying an initial fee of 5000F. It has recently stopped a non-profitable potato-farming business in favour of collective cell-level sheep-rearing projects.

Rwaza HC cooperative, *Turengere ubuzima* (Let's save lives), regroups all 128 CHWs, each of whom paid an initial contribution of 7000F. It has a pig-rearing business and although the CHWs have not yet benefited individually from it they are hopeful that it will generate income for them in the future. However the cooperative does provide some benefit to its members in the form of small loans and, exceptionally, it gave interest-free loans of 5000F to each of its members in January 2011 to pay for their 2001 *mutuelle* registrations.

Karwasa HC cooperative, *Ubuzima kuri Bose* (Health for all), has been in existence since 2006 and regroups 120 CHWs, each of whom paid for an initial share at the cost of 1150F. It has a plot of land on which it produces vegetables and has recently bought a plot of land in a commercial centre on which it has built premises which it plans to rent out to traders. Although the CHWs have not yet benefited financially from the cooperative, with its projects, it is worth 3.5million francs.

Jenda health centre cooperative, '*Turwanekubuzima*' (let us save lives), has existed since 2009 and regroups all 198 CHWs from Musange sector who paid an initial contribution of 5000F. It has

a pineapple plantation which is tilled by the CHWs on a Monday afternoon. It also has a pilot mushroom producing project and in has future plans for a soap-making venture. The cooperative is currently worth about 3 million francs.

Annex 5: PBF maternal health evaluation criteria format for health centres

MATERNITY SERVICE			
N°	Checklist elements	Score guidelines	Max score
4.1	Confidentiality: curtains or painted windows (if the delivery room is shared), closing doors	Assured confidentiality = 7	7
4.2	Available and functioning material and equipment: 1) clean and moving delivery bed 2) at least 3 boxes of sterile delivery equipment 3) Obstetric stethoscope 4) thread for stitches 5) light source 6) Baby weighing scales 7) 8) Eye cream 9) 10) Plastic apron 11) local anaesthetic [at least 50ml in reserve] 12) 13) boots 14) mask 15) glasses 16) Gloves without tears 17) Thread for tying the umbilical cord 18) hat	Functioning and available material = 1 If even one of the materials (1) to (4) is not available or not functioning = 0	18
<i>Analysis of last three months partograms</i>			
4.3	Analysis of 10 partograms chosen at random: 1) The partogram is completed in accordance with norms 2) Decision taken within one hour of the passing of the line of alert 3) Delivery undertaken by trained staff (at least a nurse A2)	Partogram meeting all 3 criteria = 4 A partogram which fails even one criteria = 0	40
ANTE-NATAL SERVICE			
N°	Checklist elements	Score guidelines	Max score
<i>Direct observation of PNC room and material</i>			
5.1	Confidentiality: Individual consultation area with curtains or painted windows, divider if room is shared, closing doors	Assured confidentiality = 2	2
5.2	Available and functioning material and equipment: 1) Consultation table 2) tensiometer 3) Stethoscope 4) measuring tape 5) weighing scales 6) Foetoscope 7) Gloves without tears	All materials functioning and available = 3 One material not available or not functioning = 0	3
<i>Direct observation of a PNC session</i>			
5.3	IEC/CCC: 1) education session carried out before PNC 2) Up to date PNC register with details of a) theme b) no of participants c) staff member responsible for session d) date e) signature	IEC/CCC which fills all criteria = 3 Even one criteria missing = 0	3
5.4	PNC undertaken by a trained member of staff (at least a nurse A2)	Yes = 2.5 No = 0	2.5
<i>Observation of 5 new inscription visits</i>			
5.5	Consultation: 1) previous gynaecological history including previous pregnancies, vaccinations, and deliveries 2) convulsions 3) previous medical-surgical history a) diabetes b) heart problems c) HTA d) nephropathology e) tuberculosis f) asthma g) HIV testing	A case filling all criteria = 1 A case missing even one element = 0	5
5.6	Physical examination: 1) weight 2) height 3) tension arterial 4) breast examination 5) check for bruising	An examination with all five elements = 5 An examination missing even one element = 0	5
FAMILY PLANNING SERVICE			
N°	Checklist elements	Score guidelines	Max score
<i>Direct observation of FP room and material</i>			
6.1	Contraceptive methods: Pill, Injection pill, Implant, IUD, Condoms, Cap. 1) Contraceptives available with theoretical stock equal to the actual stock 2) Defined and respected security procedures and rupture precautions in place	A contraceptive method which meets both criteria = 1 A contraceptive method with even one criteria missing = 0	6
6.2	The existence of a system to identify lapsed women and a strategy in place to locate them (with assistance of CHWs, invitations etc: Analysis of 5 cases of lapsed women.	System applied to all 5 cases = 6 The existence of one lapsed woman for whom the application of the system was not applied = 0	6
<i>Analysis of 10 FP files from last 3 months</i>			
6.3	Justification of the methods recommended, accepted and prescribed with regards to the consultation, previous history and physical examination	Correct justification = 3 Non-justified = 0	30
6.4	Control and follow-up: Fixed appointment	Yes = 1.5 No = 0	15

Annex 6: Types of poverty reduction strategies

Revolving-savings groups are groups in which a set number of members contribute an identical amount of money on a pre-defined regular basis over a set period of time. At each meeting one member receives the total amount of money collected. The order in which members receive the money is usually drawn out of a hat and is decided at the start of the savings cycle. For example if 30 members contribute 1000F every week, each week one member would collect 30.000F. The revolving savings cycle will be completed at the end of 30 weeks when everyone has received their 30.000F.

Tontines are informal revolving savings schemes which also provide micro-credit to their members; both of which can be used to finance small income generating projects such as buying livestock or land or to pay for *mutuelle* registration or school fees. Encouraged by the sector local authorities, tontines permit villagers to save small monthly amounts and give them access to short-term loans which are reimbursed with interest.

‘Specific objective’ informal associations (popular in Musanze District) are revolving-savings schemes which are formed for a set period of time with a specific objective in mind. Their existence has enabled households in Musanze District to connect their homes to the national electricity and water grids and more recently ‘*sasaneza*’ associations have sprung up to facilitate the purchase of mattresses for households.

Traditional informal associations were historically based around collective work in the fields. On a rotational basis members would work together on one member’s field. After the communal work is finished the recipient of these efforts hosts a social event, with food and drink, for everyone. More recently revolving savings scheme components have often been introduced into these societies.

Income generating women’s’ associations: many associations gather together women on a weekly basis to undertake a collective activity such as weaving. Typical elements of such associations include payment of a small amount into a joint fund which is used to provide micro-credits to the association’s members at an interest rate and the existence of a revolving-savings scheme often used to buy small livestock, pay for children’s school fees and to start small businesses. The activity generates much needed income for these families and whilst the weekly meetings provide a space in which women can get together and discuss their personal problems and seek advice from their peers.

‘Intambwe’ is a women’s savings and credit association. It is a recent initiative started by Care International to improve women’s living conditions. The main objective of these associations is to enable women to save regularly, whatever their financial capacity, and to invest these savings into income-generating activities. *Intambwe* has three pillars (1) *ingoboka* is an emergency fund built up from weekly contributions (2) *ubuwizigame* are individual members savings, the minimum of which is 100F per week (3) *inguzanyo* are loans which are offered to members at a 10% interest rate. Each *intambwe* group receives official documentation from the cell local authorities, has a steering committee and is supported by a trained, paid, facilitator. Members each have small yellow books in which their savings contributions and credits are recorded. The groups’ money is kept in two wooden boxes which are each kept by one of the group’s members. The keys to the boxes are kept by members who do not have access to them.

Local cooperatives

Mubuga village has a rice-producing cooperative COPARIMU which has played a crucial role in increasing welfare in the village as well as contributing directly to the provision of maternal health by increasing the village population's access to healthcare.

COPARIMU started in 2007 and now counts 135 members who farm 13 hectares of land and produce 45 tonnes of rice a year. The cooperative was started on the advice of the sector executive secretary and was given a boost by *ubudehe* funds which financed the draining of marshland on which the rice fields were created. Further sector authority support then enabled the cooperative to secure financing from GTZ for the purchase of a de-husking machine in 2008 which arrived just in time for their first harvest.

The activities of COPARIMU have transformed the village and its economic status and have brought numerous benefits to its households and the sector. According to the Musange sector authorities it has provided regular occupations for the village population, reducing vagrancy and insecurity. Furthermore it has also “contaminated” other villages in the area with the cooperative spirit. At the household level the cooperative pays for the *mutuelle* health insurance of its members and their families (up to seven per family) and provides each household member with 70kg of rice per year. The cooperative also offers a micro-credit scheme through which members can borrow money to pay for things like school fees.