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Private Health Sector Assessment in Mali

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Private Health Sector Assessment in Mali

The Post-Bamako Initiative Reality

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The subseries focuses on publications that expand knowledge of government policies and the operating environment and suggest ways of better engaging the private health sector in treating illnesses among the poor and other vulnerable populations. Best-practice examples of both global and regional relevance are presented through thematic reviews, analytical work, and case studies.

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Foreword

Mali was one of the first countries to open its health system to private community-based and NGO-based health care. In 1989, the Minister of Health, in the context of the Bamako Initiative, authorized the creation of the country's first health center managed entirely by the community, through a Community Health Association (ASACO). Mali is proud of the 990 community centers (CSCOMs) that have been opened since that time in nearly every part of the country under an aggressive policy to expand geographic coverage of primary health care. These private, not-for-profit, community-based health associations constitute a unique feature of the Malian health system and form the foundation of the health pyramid. They also occasioned the development of the first public-private partnerships in the area of health, with government supporting their foundation and, later, their operation. Mali has also been active in the development of private community-based mutual health insurance and now has 128 approved schemes. Finally, Mali counts many nongovernmental and faith-based organizations that are active in the area of health as well as numerous traditional practitioners that belong to a federation.

Parallel to this strong community- and NGO-based health sector, the private commercial sector has also grown, under the dual impulsion of the health sector liberalization of 1985–86 and the strong increase in demand for health services, especially in cities. The private, for-profit, health care sector today encompasses about 250 medical and nursing practices and 80 hospitals—most of them, unfortunately, located in cities. The pharmaceutical sector is almost entirely in private hands, accounting for 80 percent of turnover. And last, the number of private schools has mushroomed since the liberalization of health education and training.

With this progress, the Malian Ministry of Health is eager to develop policies that will allow the private sector's resources and know-how to be fully tapped. The ministry is aware that national health goals cannot be reached without long-term engagement of all the health sector actors, whether they are not-for-profit, for-profit or civil society groups. Therefore, the Ministry of Health requested support from the International Finance Corporation and the World Bank to carry out a comprehensive assessment of the role of the private health sector and identify key areas for reform and partnership. The assessment analyzed the current contribution of the private sector in every area of the health system: policy and regulation; delivery of care, medicines, and other health products and services; education and training of health professionals; and health financing.

This comprehensive assessment, which had never been previously done in Mali, enabled us to collectively identify strategies for improving the private sector's contribution to health goals and developing public-private partnerships. By enlisting broad and active participation, this assessment has helped break the ice between the public and private sectors, put the problems on the table, and spur the search for solutions that can be achieved in the short and medium terms. The study's findings are very timely as they will feed the preparation of the new Ten-Year Health and Social Development Plan (2012–21), which has just begun.

This "Assessment of the Private Health Sector in Mali" was successfully conducted thanks to the political will of the government of Mali and strong leadership from the Ministry of Health. This continued impetus will be decisive in implementing public private partnerships in support of public health activities. As Chairman of the study Steering Committee, I had the responsibility and pleasure of seeing this work through. I thank all participants for their contributions to its success.

Salif Samake
Chairman, Steering Committee

Preface

This country assessment of the private health sector in Mali is part of a series of studies designed to deepen understanding of ways to enhance the health policy framework, business environment, and investment climate in which the private health sector operates in African countries.

The Malian health system has evolved dramatically since the middle of the 1980s. Two significant reforms included the 1985 liberalization in private practice and implementation of the Bamako initiative.

Since then the private sector has grown to the point where today it delivers around 50 percent of all health care goods and services in the country, with a focus on the following areas:

- *Treatment*. Eighty percent of curative consultations take place in the private community and in commercial areas, and 50 percent of physicians work mainly in the private sector.
- *Pharmacy*. Private players account for 80 percent of turnover (at selling price), and 50 percent of public entities' needs are covered by private wholesalers.
- *Education*. About 50 percent of individuals who pass the Superior Health Technician (TSS) examinations are educated in private schools, as are 90 percent of those who pass the Health Technician (TS) examinations.
- *Health insurance*. All mutual insurance programs (*mutuelles*) are privately organized.

Despite this valuable contribution by the private health sector in Mali, much more research is needed to fully understand its size, configuration, quality of care provided, affordability and contribution to overall health sector objectives and outcomes.

International Finance Corporation (IFC) and the World Bank conducted the review of the private health sector presented in this report for the government of Mali with financial support from the Bill & Melinda Gates Foundation and in close consultation with the Ministry of Health, other stakeholders, and the development partners.

The study was carried out by The Boston Consulting Group in collaboration with RESADE, the Malian Ministry of Health , discussion partners from the private sector, and other stakeholders in the Malian health system . It included two parallel work streams:

- An analytical work stream that would identify the private sector's role in the health care system and examine the main stakes of each of its segments (treatment, education, drugs, insurance) and components (commercial, community, associations, religions, traditional culture) and
- A stakeholders' engagement work stream that would validate and enrich the findings, discuss improvement axes, and sketch out the operational modalities.

Methodology

Definition of Private Health Sector

Private health sector, as used in this study, is defined broadly to encompass all the commercial and not-for-profit components of health care, including community services.

The private nature of community health centers has been well established since the beginning. Community health associations (ASACOs) were created by civil society. Today, community health care is still managed by the beneficiaries themselves through those associations. Politically, the choice made at that time to entrust primary health care to the communities has not been challenged. These organizations have been expanded as a result of a deliberate policy choice.

Juridically, ASACOs/CSCOMs are constituted under private law, and their accounting practices distinguish them from the public institutions under the Ministry of Health. They are supported and advised by public authorities and supervised by regulatory bodies, all of which delineates, but does not suppress, their managerial autonomy. Financially, their public subsidies do not exempt them from having to balance their accounts.

Economic and Financial Modeling

A large part of the analysis in this report relies on the reprocessing and the mining of existing databases, the financial and macroeconomic models based on those data, and elements reconstructed through triangulation. Those calculations proved indispensable for assessing the main demographic trends in the private sector, for estimating the growth of CSCOMs and private mutual insurance (*mutuelles),* and identifying how to reinforce them.

This method provides results in terms of both public health and the financial implications of the recommendations. The study modeling relies on the construction of a typical microstructure (typical CSCOM and average rural mutuelle) and on a switch to the macro scale to measure the efficiency of supporting nationwide policies.

Main Findings

After systemic analysis of the sector, the following findings were drawn up and shared with all public and private participants in working sessions and three seminars.

These findings address each component of the health care system: private medicine, education of health care professionals, community health care, private mutual insurance, pharmaceuticals, and governance.

Governance

Concerning governance, the main findings were:

- The private sector, whose legitimacy is still to be consolidated, is not yet sufficiently included in the definition of health care policies. (It is not represented within the national bodies that monitor the Health and Social Development Program (PRODESS, the main strategic health care policy document).
- The same goes for the role of the private sector in the definition of the regulatory environment, due to the absence of sufficiently specific and inclusive forums for dialogue and consultation.

Private Medicine

Concerning private medicine, the main findings were:

- Uneven distribution of private health care throughout Mali, with a heavy concentration in Bamako, limits market absorption capacity and fosters the development of an informal sector with lower prices and lower-quality services.

- Poor communication with the public sector limits private sector inclusion in the public service missions of education and vaccination and hampers the exploitation of complementarity between private and public health care structures.
- Certain rules for classifying health care establishments, perceived by some observers as too rigid, deserve some thought.
- Young medical professionals believe the start-up phase of their practices is hampered by a lack of support. Banks are reluctant to finance their initial funding requirements. Their training does not address needs related to the realities of private practice or practice in rural areas.
- More generally, health care professionals suffer from an inefficient private sector. Despite improvements in the business environment, Mali ranks 156th out of 183 in *Doing Business 2010,* a six-place gain from the year before. Limited access to bank loans and tax requirements are the most penalizing factors in the business climate in Mali, compared with other Sub-Saharan African countries.

Rural and Community Health

Concerning rural and community health, the main findings were:

- Despite historical success in terms of coverage, with 87 percent of the population located within a 15-km radius of a center in 2009, the average CSCOM suffers from low personnel productivity, insufficient traffic and demand, and ASACO's limited management capabilities, which run up costs. Thus, the average CSCOM depends on subsidies to meet expenses.
- The current policy of strengthening CSCOM services responds inadequately to the shortage of demand. Big public health care decisions (free health care, especially) should take into account more fully the principle of cost recovery on which community health relies.
- CSCOMs are placed in specific intrinsic situations that should be taken into account when decreasing the support provided to them. Finally, the success of strategies to develop medical care requires support for physicians who settle in CSCOM.

Pharmaceuticals

Concerning pharmaceuticals, the main findings were:

- The irregular scattering of pharmacies throughout the country limits market absorption capacity. Improvements are needed for the start-up phase of pharmacies and also training of pharmacists.
- Funding needs are partly covered by pharmacy partners (wholesalers).
- The skills and knowledge needed to start up a pharmacy are poorly taught.

Education of Health Care Professionals

Concerning education of health care professionals, the main findings were:

- The lack of regulation over the number of students enrolled in initial training and by the poor quality of some of the teaching weaken this sector.
- The growth of the private sector is further held back by insufficient educational preparation for practice in the private sector and in rural areas.

Mutual Insurance

The main findings about mutual insurance were:

- At the current pace of expansion, by 2015 only about 5 percent of the population would be covered by private mutual insurance. Thus, a scale-up is necessary.
- A scale-up could begin with a phase of preliminary experimentation in one or two pilot regions. One option for changing the scale would be to create 100 mutual insurance schemes to meet the needs of the rural population at an affordable cost (CFA F 300 per month).
- The impact of such a deployment of mutual insurance would be significant for the health care system (increase in the contact rate and activity volume of the CSCOMs) and would allow an increase in demand for health care by alleviating the financial constraint on households.

Main Recommendations

The following avenues for improvement, resulting from the analyses done for this report and dialogue with stakeholders, were shared at the three seminars mentioned above in the discussion of methodology.

From a systemic viewpoint, the recommendations concerning rural and community health and development of mutual insurance appear the most likely to have a major impact on Malians' state of health and the attainment of the Millennium Development Goals (MDGs). Mutual insurance development and rural health issues are closely connected, mainly because both target the same, extremely fragile rural population that benefits the least from the health care system. Such ambitious recommendations probably cannot be implemented without sustained technical and financial support.

Partnership and Dialogue between the Public and Private Sectors

To encourage dialogue between the public and private sectors, the following recommendations were made:

- A public-private committee for dialogue and consultation should be created as soon as possible, organized along the lines of the future dialogue committee. Its role could be to render opinions on regulatory proposals that affect the private sector and to help enrich the body of law relative to public health care.
- The private commercial sector should be better integrated in the PRODESS
- A body should be created to represent the whole private health sector. The above-mentioned precursor to the permanent dialogue and consultation committee will give the private sector an additional incentive to appoint interim representatives and rationalize its current organization.
- A national policy should be designed to reinforce public-private partnerships (PPPs). This policy will present a consistent framework for actions to better connect the public and private components of the health care system. A close public-private relationship is necessary to build such a policy.
- Measures should be taken to support the development of public-private partnerships. (A longer-term strengthening of public entities' capabilities to steer complex contracts appears to be a prerequisite for scaling up PPPs). Specifically, the Health Equipment and Regulation Division (DESR) should be reinforced,

and a section devoted to PPP should be created. Model agreements should also be drafted for sharing equipment and specialties in a given territory and for joint training, laboratory diagnostic, and vaccination activities.

Creation and Revision of Regulatory Texts

For the creation and revision of regulatory texts, the following recommendations were made:

- The requirements should be tightened for authorization to open private schools, to ensure that the school has the requisite supervisory and educational capabilities.
- The requirements for licensing wholesalers should be tightened. Criteria should be introduced to check the validity of the license applicant's wholesaling activities.
- The requirements should be tightened for awarding diplomas in the health care sector at the risk of creating several health professional markets, because health care is not a state monopoly.
- Thought should be given to the zoning rules for physicians, because 70 percent of Mali's physicians are located in Bamako with only 30 percent covering the rest of the country
- Thought should also be given to strengthening the mechanisms for accreditation and verification. In the context of compulsory health insurance (AMO), quality accreditation should be introduced. The Ministries of Health and Education should work especially closely in these areas.

Law Enforcement Mechanisms

- The self-regulation capabilities of the professional councils (*ordres)* should be strengthened. This includes reinforcement of staff within professional associations. Thought should also be given to ways professional associations might exercise their disciplinary roles.
- An ombudsman should be created for the private sector (discussed below). His or her task would be to broker amicable agreements between the administration and complainants. The ombudsman would also propose improvements in laws and procedures.

Education Policy

The educational network's tools for improving regulations and quality should be strengthened by

- Negotiating legally restrictive agreements setting maximum education capacity for each private higher-education organization in the health field
- Changing the current qualifying examinations into competitive exams for the jobs of health technician (TS) and senior health technician (TSS)
- Establishing a state monopoly for awarding health care diplomas
- Giving some thought to siting of educational establishments.

Training capacity for physicians and pharmacists should be expanded by

- Working with the private sector (e.g., internships in medicalized CSCOMS and private hospitals, dissertation advising by private physicians

- Encouraging opening of decentralized, regional branches of the school of medicine, pharmacy, and Dentistry (FMPOS).
- Educational standards should be raised to prepare health workers for practice under 21st-century conditions. Specifically,
- The education modules preparing health care professionals for practice in the private sector and in rural areas should be reinforced.
- The councils should organize opportunities for the continuous training of members who enter the private sector, offering them management training that is appropriate for private practice, especially during their first year.
- Within the CSCOMs or other organizations, an effort should be made to train physicians who will set up their practice in rural areas in order to promote programs to improve medical care those regions.

Geographical Distribution and Quality Improvements of the Private Commercial Sector

To improve the geographical distribution and quality of private commercial health care, the following recommendations were made:

- A specific office should be created within the professional associations to publicize available incentives, for example, under the Investment Code and the tax regime.
- For-profit and not-for-profit health care providers, pharmacies, and schools should be given better access to funding during start-up. Partial guarantee of bank funding could be extended up to 50 percent of an asset portfolio of CFA F 1 billion (that is, about 50 percent of funding needs to settle practices, private hospitals, and pharmacies from 2010 to 2012). Other financial engineering strategies (participation, etc.) could also be devised.
- Fiscal incentives should be targeted toward settlement of less densely population regions under or as a complement to the Investment Code. Additional advantages would be offered health care professionals for investments in these areas: prolongation of the fiscal exemption. A solution should be designed for pharmacists who receive no incentives under the Investment Code.
- Consideration should be given to a pricing agreement among private practitioners that participate in the compulsory health insurance (AMO).
- Begin to think about the zoning rules for private physicians (discussed below).

Reinforcement of Rural and Community Health Care

Among action to strengthen rural and community health care, the following recommendations were made:

- Strengthen ASACO and CSCOM management capabilities. CSCOM partners should be sensitized to the necessity of avoiding weakening ASACO management, making sure the support provided to them responds to their actual needs.
- Support continuous training programs for ASACO members.
- Provide external support to ASACOs that feel the need to reinforce their management capacity. These managers would be selected from among the applicants responding to an invitation from a group of ASACOs. They would take charge of the delegated management of CSCOM on their behalf under the direction of the center head. They would have an advisory role in strategic decisions. Their compensation could be partly indexed on their result.

- Redirect current subsidies toward the CSCOMs' actual needs in their particular situations (discussed below). Personnel not actually occupied in CSCOM's activities should be gradually withdrawn. State support and advice should be redirected toward the audit of their financial viability. The support provided to CSCOMs should be tailored to their specific situations.
- Further develop rural medical care. Support programs for rural health care networks should be intensified after assessment of their impact and sustainability.
- Accelerate the settlement of physicians in CSCOMs. To this end, establish a tripartite agreement between the state, the National Federation of Community Health Associations (FENASCOM) and any partner interested in participating in a program to support the development of rural medical care.

Aggressive Expansion of Private Mutual Insurance

To expand private mutual insurance, the following recommendations were made:

- Give initial support for the scale-up of the Technical Union of Malian Mutual Insurance System (UTM) to expand coverage in the context of initiatives for overall expansion of health care insurance. One of the options involves initiating an ambitious two-year trial in one or two regions. Lessons drawn at the end of this trial would allow the means of expansion to be adapted to fit the Malian context. This would be done through support to the UTM and social mobilization efforts. The small staff of UTM and the social development services could handle the job with the help of an outside contractor, selected by the UTM and the state through an invitation to tender.
- Review, on the basis of existing private mutual insurance, the best means of supporting the new insurers after start-up, including improved methods for subsidizing participation by the poor in such programs

Conclusions

The government of Mali has an opportunity to take advantage the large and dynamic private health sector in contributing to its national health care objectives and outcomes. The study describes the various instruments of stewardship towards the private sector that could be used such as information, regulations, financing and direct provision of public services in areas of significant market failure.

Alexander S. Preker
Series Editor
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The RESADE research office played a significant role in our understanding of the Malian perspective on the health care system.

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Acronyms and Abbreviations

AMC	Association des Médecins de Campagne—Association of Rural Physicians
AMLM	Association des Médecins Libéraux du Mali—Association of Physicians in Private Practice in Mali
AMO	Assurance Maladie Obligatoire—Compulsory health insurance
AMV	Assurance Maladie Volontaire—Voluntary health insurance
ANPE	Agence Nationale pour l'Emploi—National Agency for Employment
APBEF	Association Professionnelle des Banques et des Etablissements Financiers—Professional Association of Banks and Financial Institutions
API	Agence de Promotion des Investissements—Agency for Investment Promotion
ASACO	Association de Santé Communautaire—Community Health Association
CCIM	Chambre de Commerce et d'Industrie du Mali—Chamber of Commerce and Industry of Mali
CEDEAO	Communauté Economique des Etats de l'Ouest Africain—Economic Community of West African States (ECOWAS)
CNIECS	Centre National d'Information d'Education et de Communication pour la Santé—National Center of Health Information, Education, and Communication
CNOM	Conseil National de l'Ordre des Médecins—National Physicians Council
CNOP	Conseil National de l'Ordre des Pharmaciens—National Pharmacists Council
CNOSF	Conseil National de l'Ordre des Sages-Femmes—National Midwives Council
CPS	Cellule Planification et Statistiques au sein du Ministère de la Santé—Planning and Statistics Unit (MOH)
CSCOM	Centre de Santé COMmunautaire—Community health center
CSCRP	Cadre Stratégique pour la Croissance et la Réduction de la Pauvreté—Strategic Framework for Growth and Poverty Reduction
CSREF	Centre de Santé de REFérence—Referral Health Center (2nd level)
DAF	Direction des Affaires Financières—Directorate of Financial Affairs
DESR	Division des Equipements Sanitaires et de la Réglementation—Division of Health Equipment and Regulation
DNS	Direction Nationale de la Santé—National Directorate of Health
DPM	Direction de la Pharmacie et du Médicament—Directorate of Pharmacy and Drugs
DRH	Direction des Ressources Humaines—Directorate of Human Resources
FEMATH	FEdération Malienne des Associations de Thérapeutes Traditionnels et Herboristes—Malian Federation of Associations of Traditional Therapists and Herbalists
FENASCOM	FEdération NAtionale des Associations de Santé COMmunautaire—National Federation of Community Health Associations

FMPOS	Faculté de Médecine, de Pharmacie et d'Odontostomatologie—School of Medicine, Pharmacy, and Dentistry
GPSP	Groupe Pivot Santé Population—Population Health Groupe Pivot (group of NGOs)
INFSS	Institut National de Formation en Sciences de la Santé—National Education Institute for Health Sciences
INRSP	Institut National de Recherche en Santé Publique—National Research Institute for Public Health
INSTAT	Institut National de la STATistique—National Institute of Statistics
IS	Inspection de la Santé—Inspection of Health
OOAS	Organisation Ouest-africaine de la Santé—West African Health Organization
PDES	Projet pour le Développement Economique et Social—Project for Economic and Social Development
PDRHS	Politique de Développement des Ressources Humaines pour la Santé—Human Resources Development Policy for Health
PMA	Paquet Minimum d'Activités—Minimum health care package
PPM	Pharmacie Populaire du Mali—Malian Popular Pharmacy
PPP	Partenariat Public-Privé—Public-private partnership
PRODESS	PROgramme de Développement Sanitaire et Social—Health and Social Development Program
PSNRSS	Plan Stratégique National de Renforcement du Système de Santé—National Strategic Plan to Reinforce the Health System
PTF	Partenaires Techniques et Financiers—Technical and Financial Partners
RAMED	Régime d'Assistance Médicale—Medical Assistance System
SYNAPO	SYndicat National des Pharmaciens d'Officine—Union of Pharmacists (working in pharmacies)
TS	Technicien de Santé—Health Technician
TSS	Technicien Supérieur de Santé—Superior Health Technician
UEMOA	Union Economique et Monétaire Ouest-Africaine—West African Economic and Monetary Union (WAEMU)
UTM	Union Technique de la Mutualité Malienne—Technical Union of Malian Mutual Insurance System (mutuelles)
WAHO	West African Health Organisation

Note: Throughout this report, the names of French organizations, titles, and institutions are translated into English but the acronyms, when used, correspond to the French.

1. Introduction and Background Elements

The "Health in Africa" Initiative

The many efforts to improve health in Sub-Saharan African countries in recent years have led to important progress in the availability and accessibility of health care. However, those improvements were uneven and occurred mainly in the public system, particularly in access to and delivery of health care services.

All national and international players acknowledge more and more the contribution of private health care to public health care objectives in Sub-Saharan Africa. In those countries, the state is not in a position to meet the needs of its inhabitants. Gradually, the private sector has become an inevitable and dynamic player, in some instances now accounting for 40 percent to 50 percent of the system. This development occurred even as some public activities inhibited medium-term growth of private activities (for instance, through decisions to supply some medicines and services free of charge) and despite the fact that the private sector is, in most cases, only marginally integrated in public health improvement plans.

Conversely, the state can play a decisive role, if it wishes, in the development of nongovernmental players. In some areas depending on the circumstances, the public authorities could decide to become involved again and decrease the weight of the private sector. To do so, governments have several instruments at their disposal (such as regulation, implementation of a self-regulation framework, funding, information). Reinforcing collaboration between the public and private sectors is thus crucial to develop the different components of the private sector and to improve their contribution to public health objectives.

In this perspective, International Finance Corporation (IFC) developed the "Health in Africa" initiative through which it gives states the means to

- Identify private sector development opportunities
- Improve the relationship between the private and public sectors
- Articulate action plans and support their deployment.

The Malian government quickly volunteered to lead the first analyses. In this context, an initiative has been launched to

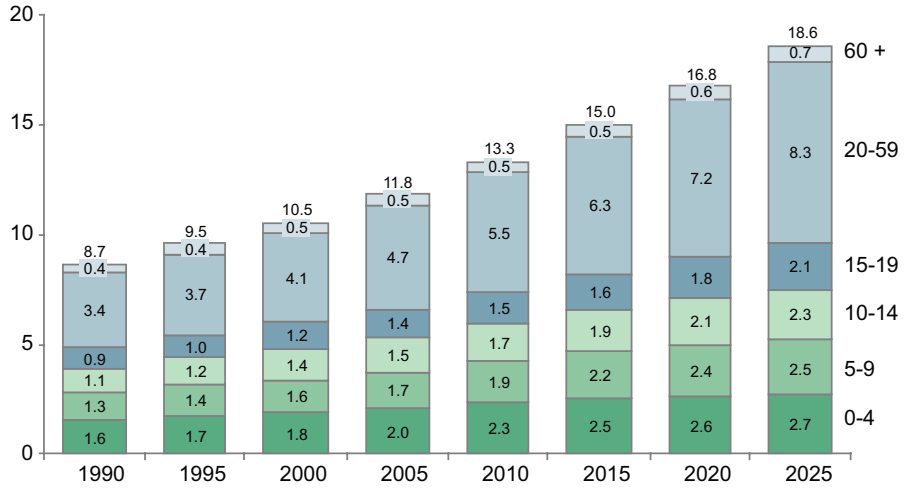
- Define a strategy and a set of recommendations for all participants (Malian government, local players, technical and financial partners) to increase the private sector's contribution to public health objectives
- Sensitize all participants to the priority given to the development of the private health care sector.

The Malian Context

Demographics

With a population close to 13.5 million, Mali has one of the highest rates of demographic growth—2.8 percent per year—and an average of 6.8 children per woman. The population will grow by almost 20 percent between 2010 and 2025, reaching 18.6 million inhabitants. The total population will thus have doubled in 30 years between 1995 and 2025 (figure 1.1).

Figure 1.1. The Malian Population, by Age Group



Source: Population Division, Department of Economic and Social Affairs, United Nations Secretariat, *World Population Prospects: The 2008 Revision*. http://esa.un.org/unpp.

The population lives mainly in rural areas (73 percent). Twenty-seven percent of the people live in urban areas, mostly in Bamako and regional administrative centers (Kayes, Sikasso, Segou, Mopti, and Gao).

Economic and Social Situation

Table 1.1 presents basic economic indicators on Mali.

Table 1.1. Mali: Economic Indicators

Indicator	1987	1997	2007
GDP (billion U.S. dollars)	1.9	2.5	6.9
Exports/GDP	16.6%	26.1%	27.3%
Debt/GDP	106%	127.4%	24.5%[a]
ODA/inhabitant (USD current)	—	—	16[b]

Source: World Bank *Mali at a Glance,* 2008. http://devdata.worldbank.org/AAG/mli_aag.pdf.
a. 2006 data.
b. 2008 data, (DAC, OECD)

Mali ranks 178th out of 182 in the United Nations Human Development Index (UNDP 2009):

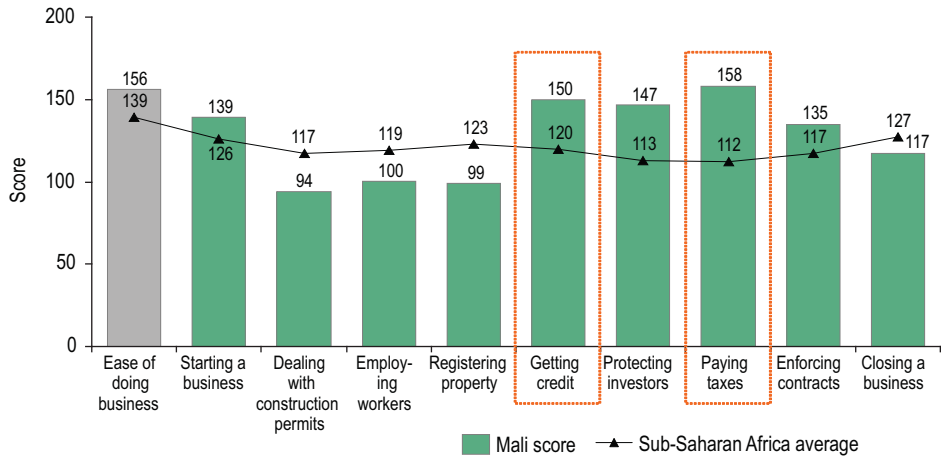
Human Development Index (HDI)	Life expectancy at birth (years)	Adult literacy rate (% of the population 15 years and older)	Combined schooling rate for primary, secondary, and post-secondary education (%)	GDP per inhabitant (PPP USD)
0.371 (178)	48.1 (165)	26.2 (151)	46.9 (162)	$1,083 (162)

Source: UNDP 2009.

General Business Climate for the Private Sector

Health professionals suffer from an ill-functioning private sector, even though the overall business environment is improving (table 1.1). According to *Doing Business 2010*, Mali ranks 156th (out of 183), a year-to-year gain of 6 ranks (figure 1.2).

Figure 1.2. How Mali Compares with the Average of All Sub-Saharan African Countries



Source: World Bank 2010.

Table 1.2. How Mali Ranks, Selected Indicators

Indicator	Score
Starting an activity (rank)	139
Number of procedures	7
Lead time (days)	15
Obtaining a loan (rank)	150
Index of creditors and borrower rights (scale of 1 to 10)	3
Index of loan information quality (scale of 1 to 6)	1
Paying taxes (rank)	158
Enforcing contracts (rank)	135
Number of procedures	36
Lead time (in days)	626

Source: World Bank 2010.

Compared with other Sub-Saharan African countries, the most penalizing factors in the general business climate are access to bank loans and payment of taxes. Conversely, compared with other Sub-Saharan African countries, Mali ranks well in the granting of licenses.

Health Conditions

Thanks to the effort undertaken by all players, the health conditions of the Malian population have improved over the last 15 years. The improvement is illustrated by significant decreases in key indicators: from 237 percent in 1996 to 191 percent in 2006 in the infant-child mortality rate and from 582 per 100,000 in 2001 to 464 per 100,000 in 2006 in the maternal mortality rate. Despite this progress, the situation is still troubling. Close to

one child in five dies before the age of five, and life expectancy at birth is 48 years (Human Development Index UNDP).

Architecture of the Malian Health System

The Malian health system is organized according to the health and population sectoral policy directives. The organization of public health care is pyramidal, with four levels.

- The first level is the health district. Currently, there are 59 health districts, each divided into catchment areas with a CSCOM that offers the minimum package. A community health association manages each catchment area. The CSCOM is the base of the pyramid, the first point of contact. (In mid-2009, more than 900 CSCOMs were active in a total of 1,030 catchment areas.)
- At the second level, each district has a referral health center (CSREF), equipped with a more substantial technical platform and more highly qualified personnel to take charge of cases referred by the CSCOMs. It thus completes the function of the health district, or "first referral" level. There are about 250 private practices.
- At the third level are seven "second referral" public hospitals, usually located in the regional capitals, which receive patients referred by the CSREF. There are also 70 private hospitals.
- The highest level consists of four "third referral" public hospital institutions, two of them generalists and two specialized.

The schematic correspondence between private and public providers is roughly described in figure 1.3).

2. Private Health Care under the Malian System

The private health care sector in Mali is a result of reforms introduced in the second half of the 1980s.

History

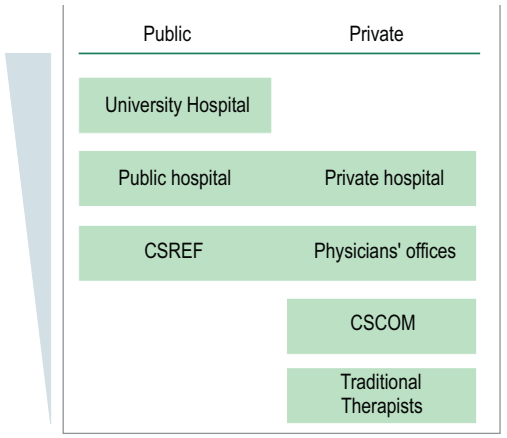
Since those reforms, the system has greatly evolved under the combined effects of the liberalization of the private practice of health professions and the Bamako initiative.

1985–86: Liberalization of Private Medicine

Since 1964, the system implemented by Malian authorities, partly inspired by socialism, was based on

- The quasi-exclusive role of the state in health care provision and drug distribution
- A policy of free health service.

Figure 1.3. The Organization of the Health System



Source: BCG analysis.

Under the structural adjustment programs, state budget cuts led the Malian authorities to stop recruiting graduate health professionals for the public sector. Mali then authorized, through Law 85-41 of June 22, 1985, the private practice of health professions.

1987–89: The Bamako Initiative

The three main objectives of the Bamako initiative inspired Mali's health policy: access to essential drugs, reinforcement of primary health services, and community participation in local management of health services, especially cost recovery. In this context, community health centers (CSCOMs) were set up, beginning in 1989 with its first provider, the Banconi Association of Community Health (ASACOBA), in the Bamako district.

Health Policy in Mali

The Sectoral Approach

Supported by the donor community, Malian health policy is framed by

- Various programming documents, in particular, the Strategic Framework for Growth and Poverty Reduction (CSCRP) 2007–11
- The coordinating support mechanism, The Health and Social Development Program (PRODESS), extended until 2011 to coincide with the CSCRP.

The PRODESS became the reference document for the coordination, monitoring, and assessment of all partners. It includes a multiannual budget-building framework with all technical and financial partners (PTF), as well as for all monitoring entities at national, regional, and local levels.

The PRODESS includes the following developments and objectives for the social sectors:

- Project for the Economic and Social Development (PDES) of the President of the Republic
- Decennial Plan for the Achievement of the Millennium Development Goals (MDG) 2006–2015.

The main indicators of the Malian Health Policy are described in box 2.1.

Box 2.1. Main Indicators of the Malian Health Policy

The main indicators of Malian health policy are:

- Percentage of underweight children under the age of 5 (MDG 1)
- Mortality rate of children under 5 (MDG 4)
- DTCP vaccine coverage among children under 1 year of age (MDG 4)
- Maternal mortality rate (MDG 5)
- Rate of attended baby deliveries, including by retrained traditional midwives [*accoucheuses traditionnelles recyclées*] (MDG 5)
- Prevalence of the HIV/AIDS virus among pregnant women 15 to 24 years of age (MDG 6)
- Percentage of the population living within a 15 km of a functional health center
- Antenatal consultation coverage

Source: PRODESS, Malian Ministry of Health.

Articulated with the PRODESS, other documents are also being prepared. They include:

- The Human Resources Development Policy for Health (PDRHS)
- The National Strategic Plan to Reinforce the Health System (PSNRSS), and
- A document on public-private partnerships. (This is in a preliminary stage. It tries to involve the commercial private sector more closely in a contractual framework for cooperation with the administration, while nongovernmental organizations (NGOs) and community health providers are already bound with the state through agreements.)

Decentralization/Deconcentration Policies

Since early 2000, the Malian government has followed a policy for decentralization/deconcentration of key services: education, water procurement, and health. Responsibilities, as well as skills and resources, are being progressively transferred to local communities.

Primary health care services have already been turned over to local authorities. Now, the town councils intervene first to support the ASACOs and CSCOMs. However, the effective transfer of skills and resources is still slow.

Health Care Delivery

Private sector health care in Mali is delivered through different players: the CSCOMs, rural practitioners, and urban practitioners (private practices and hospitals).

Primary Health Care Services

The CSCOMs are private entities that fulfill a public service mission, with strong support from the public authorities. The CSCOMs are nonprofit organizations, created by the communities grouped in ASACOs at the catchment area level.[1] CSCOMs are tasked with delivering a minimum health package (PMA) of curative, preventive, social, and promotional services. They are funded by

- Cost recovery (health care service prices fixed within the community, margin of about 15 percent on pharmaceutical sales)
- Contributions from the communities
- Subsidies from public authorities or NGOs.

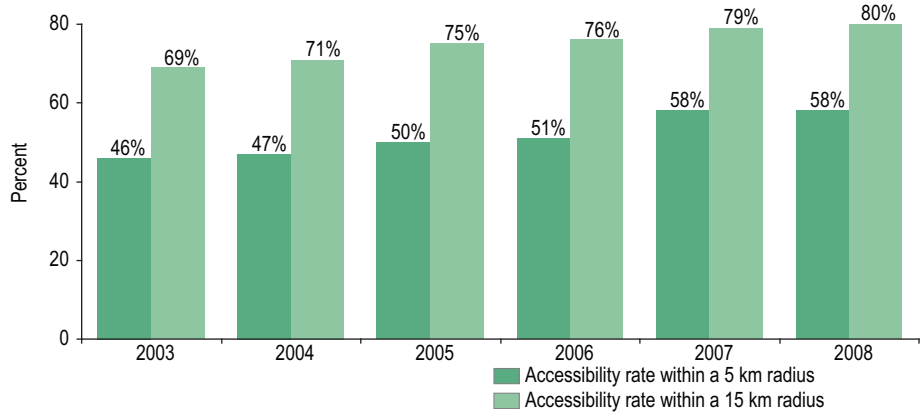
In this study, CSCOMs are considered private health care players. They are a unique feature of Malian primary care delivery. They form the base of the health pyramid and represent 56 percent of the contacts with conventional health care providers (0.23 contact/person/year on average).

The ASACOs own and manage the CSCOMs in association with the technical head of the health center. Under the decentralization policy, the ASACOs sign a mutual assistance agreement with the town councils, defining the modalities of the support to be provided to the health center. The state also provides support for the creation of centers (e.g., construction of premises, initial equipment) and throughout their activity. The CSCOMs globally achieve an estimated turnover of CFA F 30 billion and receive CFA F 23 billion in subsidies (40 percent financial subsidies, 60 percent subsidies in personnel).

An Extensive Territorial Network

By mid-2009, the network of about 900 CSCOMs covered almost 90 percent of health areas defined in Malian sectoral policy. Outside of Bamako, 87 percent of the population is located within 15 km of a CSCOM and 51 percent within 5 km. To date, 90 percent of the catchment areas (1,070 in all) have a CSCOM, whose rate of creation accelerated since the end of the 1990s (figure 2.1).

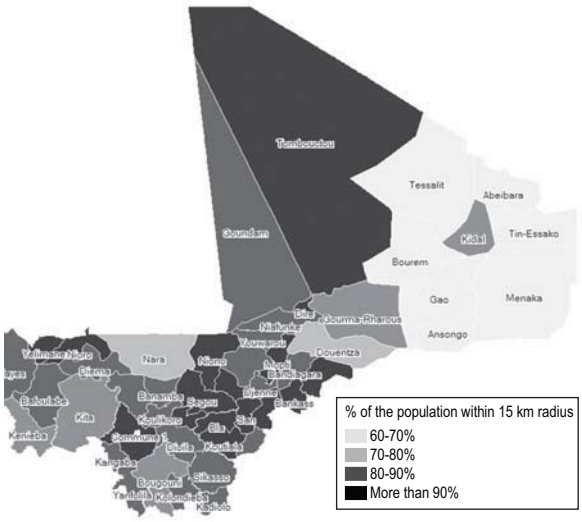
Figure 2.1. Evolution of CSCOM Accessibility



Sources: Statistical Directory 2009; health map—Bilan C files 2008 DNS CPS; interviews, BCG analysis.
Note: Data for Bamako are excluded from this analysis.

This fast progression results from the deliberate policy to improve rural dwellers' geographical accessibility to health services (figure 2.2). It is a significant success for public policy. Some CSCOMs, however, have opened although they do not meet viability criteria, in particular in terms of population pool.

Figure 2.2. Population within 15 km of a CSCOM (percent)

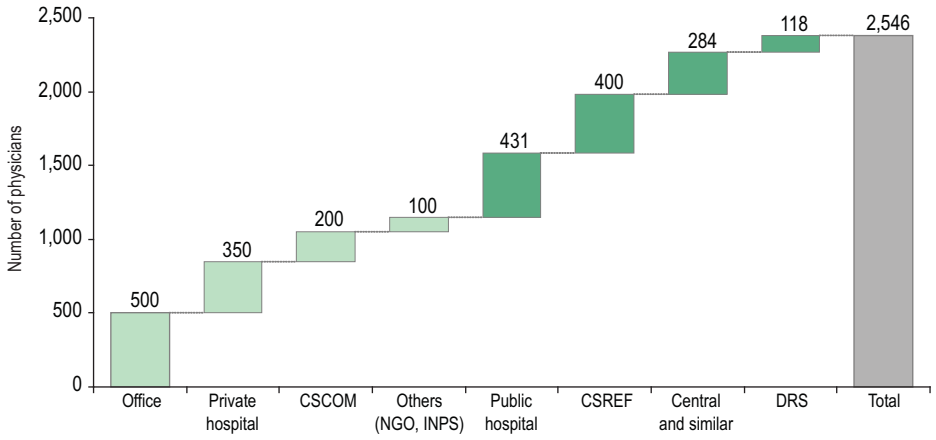


Sources: Bilan C files; BCG analysis.
Note: CSCOM excluding Gao.

Private Medicine

Nearly half of all physicians in Mali have their main practice in the private sector. Because the public sector cannot employ all newly graduated

Figure 2.3. Distribution of Physicians, by Main Practice Location, 2008



Sources: Ministry of Health (data 2008); BCG analysis.
Note: Assumption of two physicians per office and five physicians per private hospital.

physicians, the number of private practitioners is growing every year. Private practitioners represented around 48 percent of all physicians in 2008 (figure 2.3).

Rural Practitioners

Less than 10 percent of all physicians practice in a rural environment. Partly grouped within the rural physician association (AMC) and supported by the programs of the Santé Sud association, rural practitioners consist of

- Physicians (about 200) working in a CSCOM, according to the Human Resources Directorate of the Ministry of Health
- Family physicians (about 30) with their own practice and physicians employed by religious/associative providers, according to the AMC).

Most private family physicians have less access to technology than do their urban colleagues. Some of them have an echograph, but rarely do they have even a small laboratory for medical analyses.

Urban Practitioners

Private practices and hospitals are the main medical providers in urban areas. The main types of private health institution are medical practices for outpatient care and private hospitals for inpatient care. Private hospitals can be further differentiated by the nature of health services they are authorized to render: medical hospitals and surgical hospitals.

Most medical practices offer generalist health care services. The most important among them, such as private hospitals, offer specialty services usually delivered by publicly employed specialists who go to the private hospital as outside specialists to deliver a specific service. This double activity is common among public doctors.

The technical platform of the best-equipped private hospitals does not reach the level at cutting-edge public hospitals, but it is sometimes comparable to the level at second-referral hospitals, and thus completes the technical platform available at territorial level. Pasteur private hospital is a special case; its superior equipment and number of specialists make it a referral center in Bamako, especially for wealthier people.

The number of practices in Mali is estimated at 250, and the number of private hospitals at 70. A practice usually has two full-time physicians. The smallest practices employ only one; the largest, five or six people. A private hospital usually has five physicians; the smallest, three or four people. The biggest private hospitals in Bamako can have 20 to 25 health care professionals. Box 2.2 lists some typical fees.

Box 2.2. Some Typical Fees

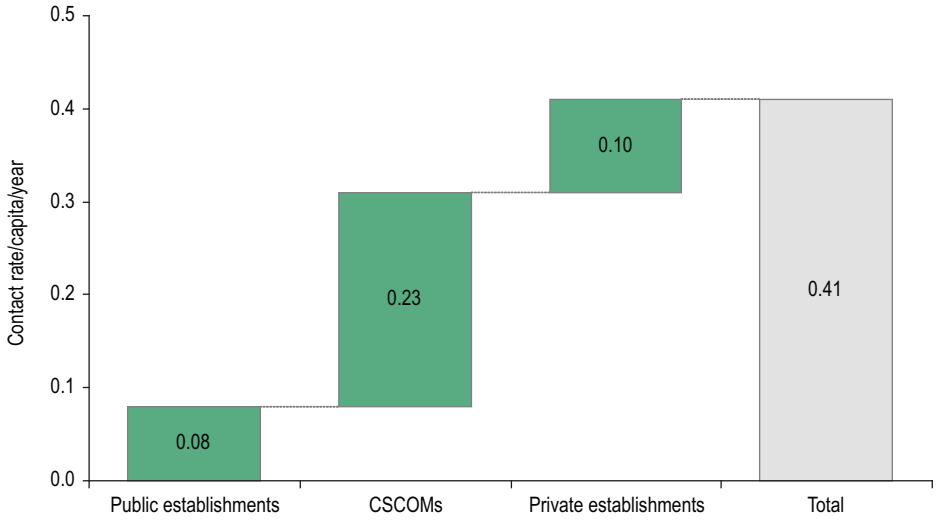
The following prices are charged in Dr. Koné's private hospital in Niono (CFA F):

- Consultation: 2,000
- Echography: 8,000
- Analysis: 3,000
- Light surgery: 2,500
- Birth: 20,000
- Hospitalization: 2,000 a night

Source: BCG interview.

Private providers represent, at the national scale, a contact rate of 0.1/person/year (figure 2.4). There are also a few private nursing practices and private midwife practices.

Figure 2.4. Contact Rate, by Provider Type



Sources: SLIS 2008, 2007; DNS; CPS; Bilan C files: BCG analysis.

Uneven Regional Distribution of Private Providers

The estimated distribution of private providers, in the absence of an official census, is 70 percent in Bamako and 30 percent in the regions (table 2.1).

Table 2.1. Private HC Provider Geographic Distribution

Provider	Bamako	Regions	Total
Practices	175	75 total, located in • Kayes, Koulikouro, Segou, and Mopti (10 to 15 practices) • Gao, Kidal, and Timbuktu (2 to 5)	250
Private hospitals	49	21 total, located in • Kayes, Koulikouro, Segou, and Mopti (3 to 5) • Gao, Kidal and Timbuktu (0 to 1)	70

Source: BCG analysis.

Such a distribution of health care providers represents:

- *Practices*: 1 practice for 7,700 inhabitants in Bamako, 1 practice for 156,000 inhabitants in the rest of the country, and 1 practice for 52,000 inhabitants for the whole of Mali.
- *Private hospitals*: 1 private hospital for 27,700 inhabitants in Bamako, 1 private hospital for 557,000 inhabitants in the rest of the country and 1 private hospital for 186,000 inhabitants for the whole of Mali.

Informal Market for Medical and Paramedical Care

The informal health care provision sector involves physicians, as well as health care technicians (nurses, midwives). It encompasses three main types of situations:

- Young physicians or (superior) health care technicians searching for an activity at the start of their careers, especially in Bamako with its high concentration of health care professionals
- Retired nurses and midwives who continue to practice at home or on house calls
- People trained in health care for various reasons (e.g., former undergraduate students of health care schools) offering their services without official qualification.

In the first two instances, the informal activity is essentially transitional.

Service Quality and Equity

The mechanisms for regulating quality of privately provided services include administrative controls and self-regulation within the National Physicians Association (Ordre des Médecins). Quality breaches in the private sector are not always reprimanded, due to the limited means for administrative control and the difficulties professional associations have enforcing discipline. Incentives to comply with quality standards are on the rise, however, as the sense of medical responsibility increases and the perception that legal actions against health care personnel are becoming increasingly frequent.

In addition, the implementation of compulsory health insurance should be considered a new incentive for accredited institutions to improve quality. The inclusion of private institutions in the AMO would help reinforce demand for higher quality.

Services in the private commercial sector are priced higher on average than the official price charged by publicly subsidized providers (table 2.2).

Table 2.2. Average Cost and Cost Structure of Health Care Services, by Provider

Item	Traditional practitioner	CSCOM	Family member	Itinerant healer	CSREF	Other	Public hospital	Medical practice	Private hospital
Cost (total in million CFA F)	3.35	8.31	10.33	14.54	15.12	18.10	25.13	27.21	28.31
Transport (% of total)	1.0	20.9	1.4	4.4	11.57	9.7	15.8	23.3	7.17
Drugs (% of total)	48.1	68.7	52.0	83.2	76.87	62.9	70.0	57.3	69.53
Consultation (% of total)	50.9	9.4	46.6	12.4	10.60	27.4	14.2	19.5	23.30

Source: Survey of 1,050 Malian households.

Analysis of the main features that influence patient perceptions of the different types of providers[2] indicates that private practices and private hospitals are considered of a better quality than CSREFs and public hospitals in terms of equipment quality, staff competence, cleanliness of the premises, and the quality of welcome and listening (table 2.3).

Table 2.3. Grades Given by Patients to Provider Performance on Evaluation Criteria

Importance rank/criterion	Traditional practitioner	Traveling healer	Medical practice	CSCOM	CSREF	Private hospital	Public Hospital
Efficiency of recovery	3.71	2.57	3.95	4.11	4.36	4.60	4.68
Appropriate distance	3.72	2.97	3.27	4.17	3.49	3.37	3.15
Appropriate consultation price	4.10	3.11	3.07	3.87	3.81	2.84	3.55
Appropriate prescription price	4.10	3.15	3.13	3.55	3.61	2.90	3.36
Drug availability	3.90	2.97	3.10	3.70	3.91	3.58	4.04
Quality of welcome and listening	3.43	2.44	3.8	3.96	3.82	4.23	3.90
Equipment quality	2.77	2.28	3.64	3.25	3.80	4.37	4.43
Cleanliness of premises	2.89	2.36	4.03	3.78	3.71	4.61	3.85
Staff competence	3.69	2.48	3.9	3.96	4.24	4.37	4.47

Source: Survey of 1,050 Malian households.

Education of Health Care Professionals

Two types of health care professional are trained in Mali: physicians and pharmacists trained at Bamako University and health care technicians trained at public institutions and private schools.

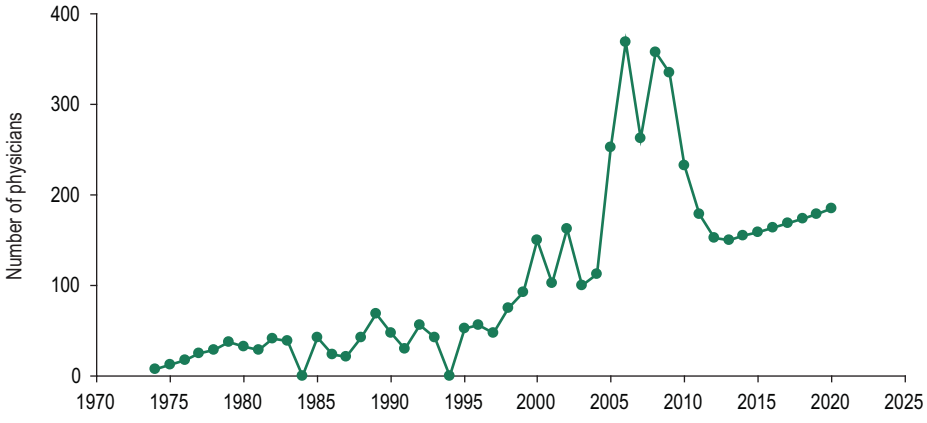
Education of Physicians and Pharmacists

Physicians and pharmacists are educated at the University of Medicine, Pharmacy, and Dentistry (FMPOS), run by the Bamako local education authority. The creation of a second University of Medicine, in Segou, is under study.

A private University of Medicine was authorized to start its activities in Bamako in June 2009. Its promoters are seeking funding to create a 10-to-15-ha campus to prepare about 50 students a year for the national examination. Medicine would be the initial disciplines taught. Tuition fees would be about CFA F 2 million/year/student versus CFA F 5,000 for FMPOS.[3] The new university does not plan to educate pharmacists.

The physician education policy for 2005–08 favored a high increase in the number of graduates, switching from between100 and 150 a year to between 300 and 400 a year (figure 2.5). The establishment of a numerus clausus will allow stabilizing at 150 the number of graduates each year.

Figure 2.5. FMPOS-Educated Physicians (forecasts beyond 2010)



Sources: CDRH; FMPOS, BCG analysis.
Note: Assumes 3 percent annual growth in the number of people trained starting in 2014.

Education of Health Care Technicians

Superior health care technicians (TSSs[4]) and health care technicians (TSs[5]) are educated at private health care schools and public institutions (National Education Institute of Health Care Sciences, created in 2004 by the merger in 2004 of all public training schools).

These private schools—the first created in 1995—saw their numbers grow from 6 in 2004 to 41, in 2009. Forty-six percent of those private schools are in Bamako. In 2008, they graduated 53 percent of the candidates admitted to TSS certification and 95 percent of

Box 2.3. Documents Needed for Authorization to Teach

Decree 94-276/PRM, Article 4 stipulates that the following documents must be presented to obtain an authorization to teach.

About the Institution

1. Note to present to the institution (educational, professional, and social goal of the institution and about its utility in the framework of the country's general interest)
2. Detailed plan of the premises and of health installations, all agreed upon by the housing service
3. Nature of the education or training to be provided in the institution

About the Registrant

1. Copy of the birth certificate or anything else that can serve as such
2. Certificate of Malian or foreign nationality
3. Copy of any criminal record of less than three months old
4. Brief biographical note indicating the registrant's antecedents of the last five years, successive places of residence, and professions
5. For corporate bodies, a certified true copy of the statutes, articles of incorporation, and legal authorization to settle in Mali of the association, company, union, grouping of congregation represented by the registrant
6. Minutes of meetings of the board of directors of the organization that mandates the registrant
7. Proof that the registrant or the corporate body he/she represents satisfies the settlement requirements for foreigners in Mali

Source: Authors.

the candidates admitted to TS certification, according to the Human Resources Directorate of the Ministry of Health.

There is no specific law on the creation of private health care schools, which are under the authority of the ministry in charge of higher education. Those schools need consequently fulfill only the generic conditions of Decree 94–276/PRM for all private educational institutions. Moreover, authorization is granted automatically if the administration does not respond to an application within three months, according to Article 11 of the same decree.

Pharmaceuticals and Medical Products Distribution

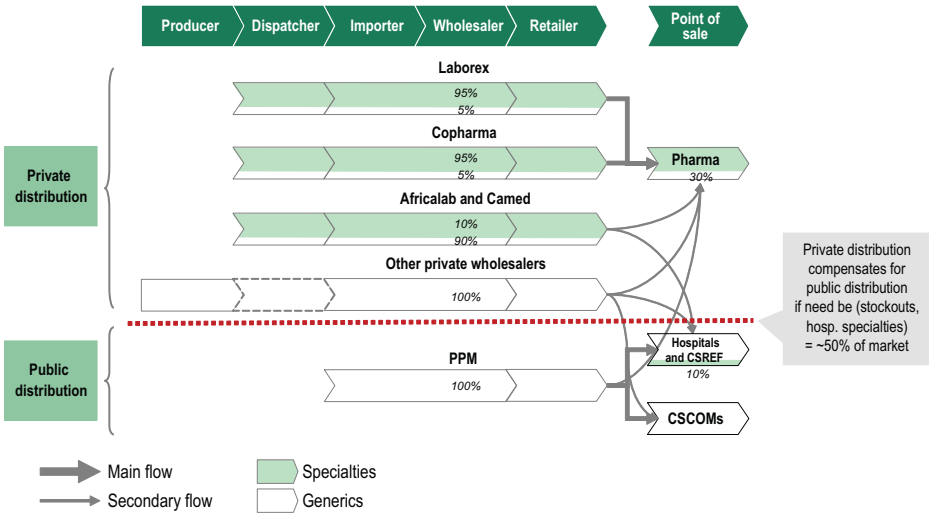
This section describes the split between public and private distribution, the geographical distribution of pharmacies, the size of the drug market as well as illegal trade in pharmaceuticals.

Public-Private Split for Distribution

Pharmaceuticals and medical products in Mali are distributed through public and private channels. The private channel has about 30 wholesalers-dispatchers and 363 pharmacies. The public channel has a public importer/wholesaler/dispatcher, the Malian Popular Pharmacy (PPM), and pharmaceutical depots of public and community providers (hospitals, CSREFs, CSCOMs).There are also some private pharmacy depots—retail outlets run by nonpharmacists in areas where there are no pharmacies.

Complementarity between the two channels is ensured by allowing private wholesalers to serve public providers in case of stockouts at the PPM and to supply hospital providers with specialty drugs. An estimated 50 percent of demand from public providers is covered by private wholesalers (figure 2.6).

Figure 2.6. Overview of Drug Distribution

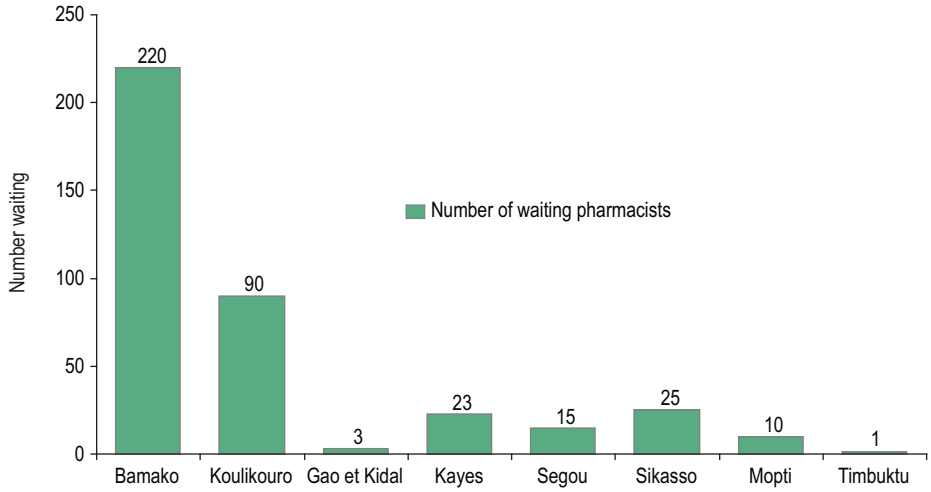


Source: Interviews; BCG analysis.

Geographical Distribution of Pharmacies

Pharmacies are concentrated in the regional and local administrative centers. About 50 percent of them (190 out of 363) are located in Bamako). In addition to this concentration in Bamako, every large city (regional administrative centers) in Mali is saturated relative to the zoning rules or the minimum number of inhabitants required to obtain a license. This is why there is a waiting list in every region (figure 2.7).

Figure 2.7. Waiting List for Licenses to Open a Pharmacy, by Region



Sources: CNOP; INSTAT; BCG analysis.

Box 2.4. The Zoning Rules Governing Pharmacy Opening

Decree 98-0908 MSPAS SG, Article 1 prescribes the number of inhabitants required to open a pharmacy or a depot for pharmaceuticals:

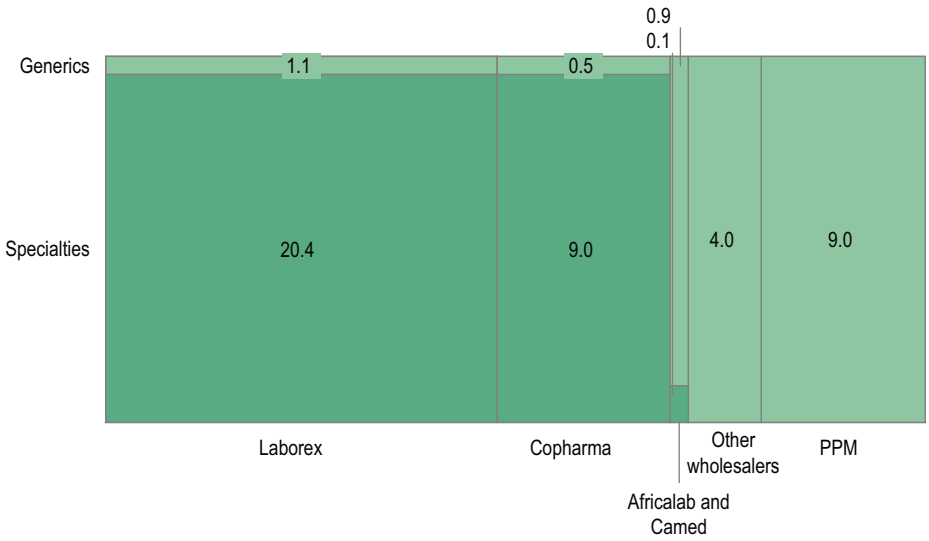
- One organization for 7,500 inhabitants in cities of 100,000 to 500,000 inhabitants
- One organization for 6,500 inhabitants in cities of 10,000 to 99,999 inhabitants
- One organization for 5,500 inhabitants in cities of fewer than 10,000 inhabitants

Source: Authors.

Size of the Drug Market

The turnover of public and private wholesalers represents CFA F 45 billion (selling price). Private players, dominated by Laborex and Copharma, focused on specialty drugs, represent 80 percent of the market. The two other main wholesalers, Africalab and Camed, concentrate on generics (figure 2.8).

Figure 2.8. Pharmaceutical Sales by Private and Public Wholesalers (turnover at CFA F billion selling price)



Sources: Outtara et al. 2004; interviews with distribution players; BCG analysis and modeling.
Note: Data 2008. Hypotheses: estimated sales at the selling price of main players—1.2 multiplying coefficient applied by all wholesalers based on cost price sales (specialties and generics included).

The drug price structure, though free in theory, has actually been decided through consultations among players since the devaluation of the CFA F in 1994.

Illegal Trade in Pharmaceuticals

The illegal drug market has grown since the 1990s. In 2008, this market was estimated at CFA F 10 billion, 15 percent of consumption.

This private black market operates throughout the country and encompasses every type of drug: specialties and generics, with and without marketing authorization, authentic and counterfeit (PRSAO 2008; interviews). This market thrives because it makes drugs easy to obtain and at lower prices. It contributes to the overall financial accessibility of drugs.

The illegal drug market benefits from complicities. Shopkeepers, public servants, health care professionals, and influential personalities play roles of varying importance. Pharmaceutical stakeholders, public and private, sometimes participate. Pharmacies may buy on the illegal market or sell their own stock. Wholesalers without known official activity (more than half of the 30 wholesalers) are suspected of supplying the illegal market.

Indeed, today's requirements for obtaining a wholesaler license are not being met—having sufficient supply to cover the monthly consumption of the pharmacies served; carrying stock that represents two-thirds of the products that have received market authorization; and being able to deliver drugs to client pharmacies in 72 hours.

Pharmaceutical Manufacture

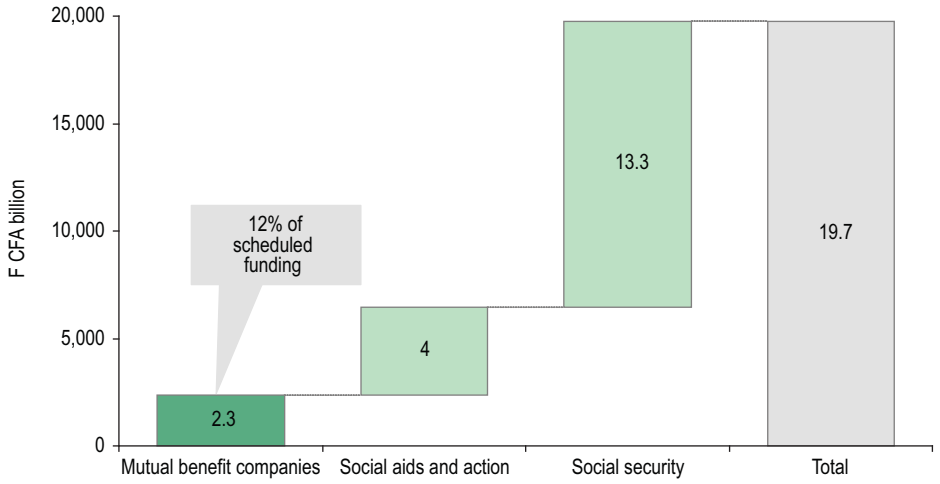
With the exception of herbalists, there is no national production capacity. The Malian Pharmaceutical Production Plant (UMPP) has undergone a strong reduction in its capacity and is no longer considered capable of manufacturing anything but a few medical products (serum).

Health Insurance

The 2005–09 National Plan set the objectives of extending social insurance protection (AMO), and social support (RAMED) though the Medical Assistance Fund (for the destitute). These two regimes were created in 2009, and the application decrees are being prepared. AMO will cover 16 percent of the population, essentially formal sector employees and civil servants. RAMED, intended for the very poor, should cover 5 percent of the population

Funding is not weighted equally for these three types of social protection (health insurance, social support, mutual insurance). The AMO was developed first (figure 2.9).

Figure 2.9. Scheduled Funding for the Social Protection Extension Plan, 2005–09



Source: Ministry of Social Development 2009b.

Private Mutual Insurance

Mali implemented a legal framework to favor the development of private mutual insurance:

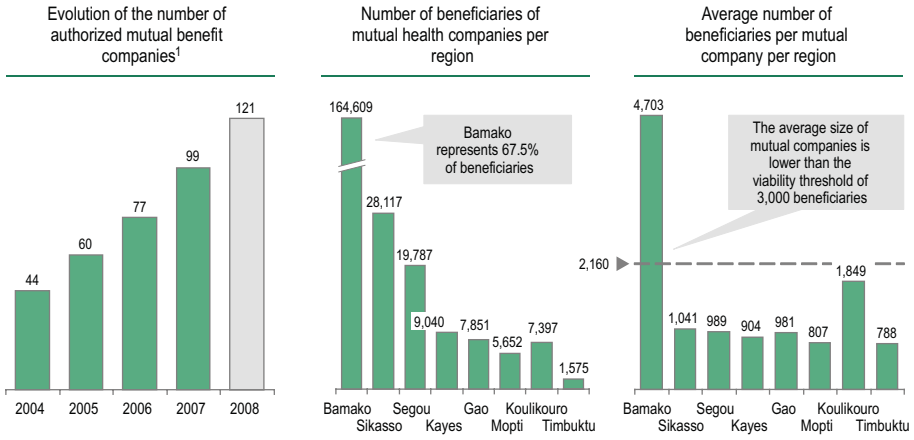
- Law 96–022 governs mutual insurance.
- Decrees 96–136 and 137 sets requirements for the fund investment and deposit of the mutual and sets the statutes of mutual insurance.

The institutional framework of the mutual insurance movement was consolidated with the creation, in 1998, of the UTM, a towering provider that exercises both a representation and advocacy role, and a centralized managerial role, for some affiliated mutual insurance.

The objectives set in the national plan for extending social protection in 2005–09 include covering about 3 percent of the population under mutual insurance regimes. In 2008, the coverage rate was close to 2 percent, according to the Ministry of Social Development, with 76,667 subscribers and 244,028 beneficiaries, 70 percent of them in Bamako.

In 2008, there were 121 chartered mutual insurance companies (health and retirement/death services combined, figure 2.10). Beyond Bamako, where the average number of beneficiaries reaches 45,000, those risk-sharing entities have an average beneficiary base of between 800 and 1,800 members.

Figure 2.10. Growth of Private Mutual Insurance Entities and Beneficiaries (numbers)



Sources: DNPSES 2008: BCG analysis.
Note: Health and other services included (pension/death), threshold as generally estimated by the UTM.

Clinical Pathway

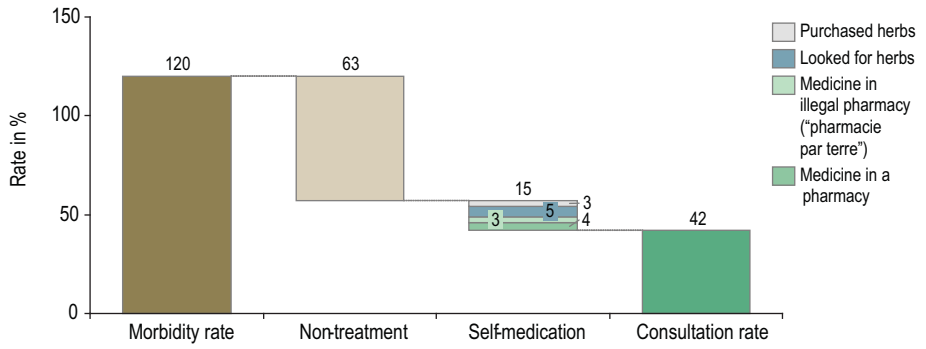
An opinion survey involving 1,050 Malian households was conducted by BCG early in the project to find out about Malian patients' clinical pathway. As a target for health facility consultation rates, 120 percent[6] was used (figure 2.11). Among the findings were:

- Sixty-three percent of health service subscribers forgo treatment. Reasons given include patient estimates that his/her state of health does not justify treatment as well as situations in which financial or other factors preclude treatment).
- The self-medication rate is 15 percent (8 percent taking traditional herbs, 7 percent modern drugs).
- The advice-seeking rate is 42 percent (41 percent at conventional facilities, hypothesis of 1 percent from traditional practitioners).[7]

The same survey allows tracking of the clinical pathway of patients looking for advice to cure themselves (figure 2.12):

- Small numbers of people seek advice from traditional practitioners. (Three percent first go to traditional healers when seeking advice; 13 percent when seeking advice the second time.) These numbers seem understated in the survey.

Figure 2.11. Advice-Seeking versus Self-medication: Patient Behavior in Response to Health Problem

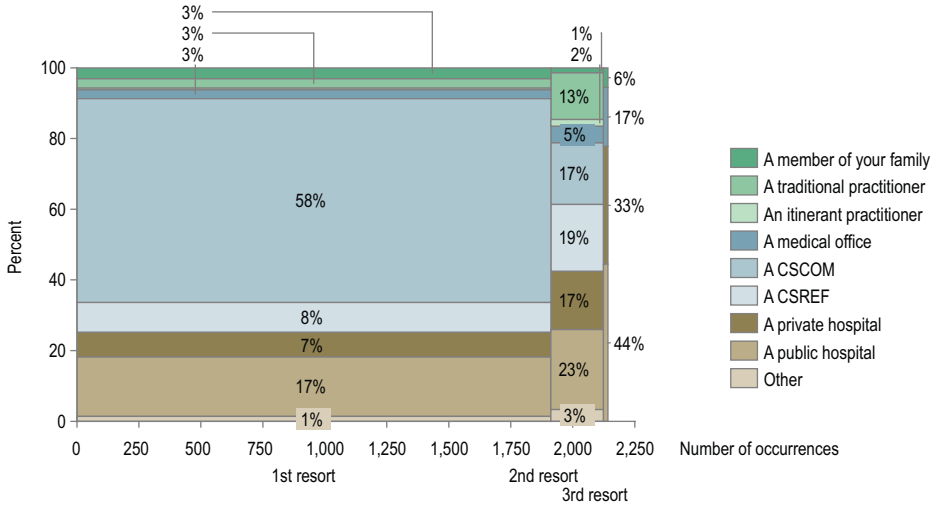


Sources: Survey of 1,050 Malian households; BCG analysis.
Note: The consultation rate integrates prenatal care—contribution estimated at 8 percent. Hypotheses: Target level = one consultation per illness episode, i.e., a consultation rate of 120 percent. The gap should be even larger when an illness generates more than one consultation.

- For first visits, the CSCOM is the most frequented type of facility, with 58 percent (81 percent in rural areas and 40 percent in urban areas).
- Private commercial facilities see an increase in visits between the first and second consultations: 3 percent to 5 percent for a medical practice; 7 percent to 17 percent for a private hospital (figure 2.12).

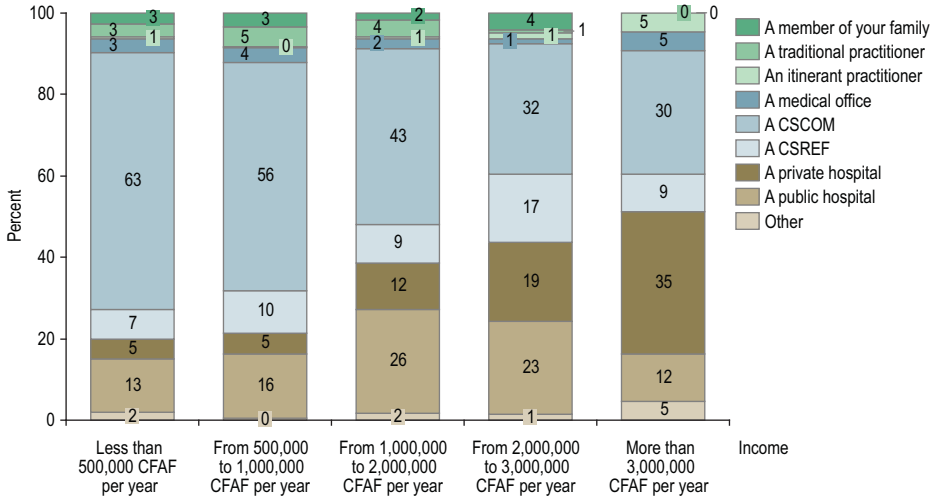
Breaking down the clinical pathways by household revenues reveals that the choice of going to CSCOMs or private hospitals is connected to patients' financial situations (figure 2.13).

Figure 2.12. Breakdown of Health Providers, by Consultation



Sources: Survey of 1,050 Malian households; BCG analysis.

Figure 2.13. Choice of Providers Depends on Household Income



Sources: Survey of 1,050 Malian households; BCG analysis.

- The consultation rate at CSCOMs is 63 percent for households with annual revenues lower than CFA F 500,000, versus 30 percent for households with annual revenues of more than CFA F 3 millions.
- The consultation rate at private hospitals is 5 percent for households with annual revenues lower than CFA F 500,000, versus 30 percent for households with annual revenues higher than CFA F 3 millions
- The whole population, including the poorest people, uses some component of the private health care sector (CSCOMs for the poor populations, private hospitals for richer populations).

Synthesis: Sizing the Health Care Sector

All health care expenditures at country level have grown substantially over a period of almost 15 years (figure 2.14).

Almost 50 percent of all health expenditures throughout the system (including all support functions) are paid out of pocket (CFA F 108 billion in 2008). Table 2.4 presents a breakdown of health care expenses in Mali.

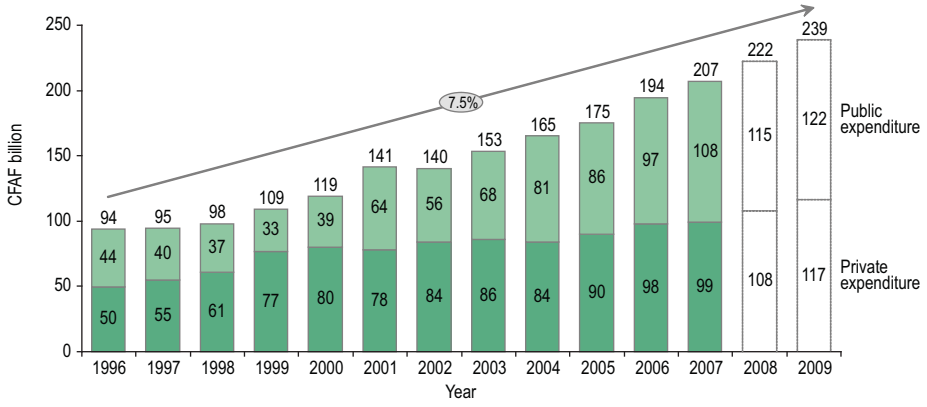
This corresponds to annual average expenditures of about CFA F 8,000 per capita, almost 65 percent of it on drugs. Spending on traditional products and traditional consultations is not included in those numbers. Their informal and potentially nonmonetary nature (such as compensation in-kind) makes their estimation difficult.

The private sector represents more than half of the health care system.

- For the health care delivery channel, 80 percent of curative consultations occur in the private sector and 50 percent of physicians practice in the private sector.
- For the pharmaceutical channel, 80 percent of the turnover at selling price is achieved in the private sector and 50 percent of the needs of public facilities are covered by private wholesalers.

- For the education channel, about 50 percent of students admitted to TSS examinations are educated in private schools, and about 90 percent of students admitted to TS examinations are educated privately.
- For the health insurance channel, All mutual insurance entities are private.

Figure 2.14. Growth of Health Expenditures in Mali



Sources: WHO n.d.; Malian National Health Expenditures, http://www.who.int/nha/country/mli/en/; BCG Projections for 2008 and 2009.

Table 2.4. Breakdown of Health Expenses in Mali, 2008

Provider/type of expenditure	2008 amount (CFA F billion)	Comments
Drugs	70	Based on the analysis of the pharmacy value chain, taking into account the illegal market: CFA F 45 billion at wholesalers' selling price with a public-private retailer gross margin of 30 percent on average and expenditures associated with the illegal market of about 15 percent of the total
CSCOMs (excluding drugs)	15	On an estimated turnover of 30 CFA F billion, including drugs, with subsidies (including personnel made available) estimated at CFA F 23 billion
CSREF	0.4	For the 59 CSREFs, 400,000 annual consultations charged in 2008 with an average price of CFA F 1,000
Hospitals	4	About 675,000 annual consultations with an average price of CFA F 6,000
Private practices	7	Of the 250 registered private practices, an estimated 900,000 consultations charged at CFA F 7,800 on average.
Private hospitals	8	About 500,000 annual consultations for 70 institutions with an average price about CFA F 16,000.
Not explained	4	

Sources: BCG primary studies, consolidation of sources (SLIS 2008, 2007; Bilan C files).

3. Governance, Regulation, and the Business Environment

This section covers the role of the private sector in the governance of the health system, private sector regulation, and the business environment.

Associating the Private Sector in Governance of the Health System

Despite its ever-growing role in health care delivery, the private sector is poorly integrated in Mali's policy-making centers. Of the two private streams, the community private health sector is more closely integrated in the policy process than the commercial and traditional private sector.

Perceived Legitimacy of Private Sector

The private sector developed out of necessity after the government was forced to relinquish its role as sole health provider in Mali. The circumstances surrounding the birth of the private sector still taint its legitimacy. The private commercial sector is often perceived to be motivated by profit to the detriment of the peoples' health and well-being. Conversely, the public sector is imagined to be more sensitive to equity and accessibility considerations for the people most in need of medical attention.

The health sector in Mali, as in many other countries, is symbolically dominated by the medical profession. In the public sector, the prestige and intellectual authority of medical professors, teachers at the FMPOS, and service managers in third-referral hospitals all feed a public sector superiority complex, a sort of "VIP system." This perception is all the more acute because failure in the competitive examinations for public service often relegates would-be public physicians to private practice.

Integration of the Private Sector in the PRODESS National Monitoring Bodies

The PRODESS monitoring entities constitute the design and strategic programming center for health care policy in Mali.

The commercial private sector, as opposed to the private associative sector (GPSP) and civil society (UTM), is not represented in the national monitoring bodies, the steering committee, or the technical committee.

Conversely, "a representative of the private and religious health facilities" is seated with "representatives of NGOs in the health and social action sector" and a health representative of the regional/local communities within regional and local PRODESS monitoring entities: regional committee to direct, coordinate, and assess the PRODESS (CROCEP), and a management council.

Institutionalization of the Administration–Private Sector Dialogue

Dialogue between the public sector and the private sector is mainly informal—at conferences, seminars, and training sessions and within the Professional Councils.

Though not a unique referent for the private sector, the DNS division in charge of contracts and public-private partnerships (DESR) has been progressively reinforced since 2006.

Box 3.1. The Policy-Making Bodies for the PRODESS

The following are excerpts from Decree 01–115/PM-RM of February 27, 2001, on the creation of the bodies to direct, coordinate, and evaluate the Health and Social Development Program.

"Article 3: The steering committee is composed as follows:

"Presidents: The ministers in charge of health care and social development;

First vice president: A representative of development partners;

Second vice president: A representative of the civilian society.

Members:

- The representative of the minister in charge of finances;
- The representative of the minister in charge of foreign affairs;
- The representative of the minister in charge of education;
- The representative of the minister in charge of the promotion of women, children, and family;
- The representative of the minister in charge of the territorial administration;
- The representative of the minister in charge of the environment;
- The representative of the minister in charge of energy;
- The representative of the minister in charge of youth;
- The representative of the minister in charge of communication;
- The directors of central services of the ministries in charge of health and social development;
- The general manager of the Malian plant of pharmaceutical products;
- The general manager of the Popular Pharmacy of Mali;
- The representatives of the development partners;
- A representative of the Groupe Pivot Santé Population;
- A representative of the Malian Federation of the Associations of Disabled People;
- A representative of the National Council of Aged People;
- One representative per Professional Council of health care professionals;
- One representative per union;
- The national coordinator of readaptation on community basis;
- The representative of the technical union of private mutual insurance.

"Article 4: The Committee can call upon any person due to his/her particular skills."

Source: Authors.

Organization of the Private Sector

The private sector is organized around Professional Councils, unions, councils and associations.

THE PROFESSIONAL COUNCILS

The three Professional Councils consist of all health care professions. They were created by law in 1986 to serve as a framework for self-regulation of the health professions, which liberalization removed from the hierarchical authority of the Ministry of Health:

- Ordre des Médecins (National Physicians Council)
- Ordre des Pharmaciens (National Pharmacists Council)
- Ordre des Sages-Femmes (National Midwives[8] Council).

The Professional Councils do not have a representative or defensive role for private sector interests, not even when their members, such as pharmacists, operate mostly outside the public service.

Interest Groups: Councils, Union Federations

To exercise an advocacy role, part of the private sector is organized around an umbrella council or federation:

- The community private sector is grouped within the FENASCOM.
- The associative private sector is grouped within the Groupe Pivot Santé Population (GPSP).
- The traditional private sector is grouped within the Malian Federation of Associations of Traditional Therapists and Herbalists (FEMATH).
- Mutual insurance arrangements are, for the most part, represented by the UTM.

The commercial private sector is represented by a variety of sectoral organizations, including:

- *For physicians.* Association of Physicians in Private Practice in Mali, Association of Rural Physicians
- *For pharmacists.* National Union of Pharmacists, Collective of Young Pharmacists, Association of Diagnostic Laboratories
- *For paramedical professionals.*[9] Nurses Association, Midwives Association
- *For health care schools:* Association of Private Health Care Schools.

The extent of representation of those associations is more or less established. In the absence of permanent staff and due to limited resources, their capacity to circulate information to their members is limited, and their influence with public authorities is minimal. Those observations are also valid, but to a lesser extent, for Professional Councils. To deal with this situation, and following the commitments made during the August 2009 seminar, a collective of the different associations in the commercial and nonprofit private sector is being created.

Private Sector Regulation: Strategic Documents and Regulatory Framework

Health care strategic documents do not deal specifically with the private sector, but a number of regulatory frameworks do.

Strategic Documents

No strategic document, as such, deals with the private sector overall. The sector is summarily mentioned without any global perspective, in PRODESS II. However, several policy documents are being prepared on ways of improving the private sector's contribution to public health objectives. A contracting guide between the public and private sectors has been in the works since 2003 with support from the World Health Organization (WHO) and the World Bank. That process led to the elaboration in 2007 of a contracting policy document in the sociosanitary sector.

Normative Framework

The texts mentioned below are not an exhaustive inventory of norms in effect.

Commercial Private Sector

The main laws liberalizing the health care professions were adopted in 1985; the application texts, between 1989 and 1992. They are:

- Law 85–41/AN-RM concerning the authorization of the private practice of health professions
- Decree 89–2728/MSP.AS/CABn setting the details of the granting of authorization of private practice of sociosanitary professions
- Decree 91–106/P-RM concerning the organization of the private practice of health professions modified by decree 92–106/P-RM
- Decree 91–4319/MSP.AS.PF/CABn setting the modalities of the organization of the private practice of medical and paramedical professions
- Law 02–050 AN-RM organizes cooperation between private and public health facilities and their participation in public service missions.

Pharmaceutical Industry

The two main documents addressed to the pharmaceutical sector are not binding:

- Master Plan for the Supply and Distribution of Essential Drugs (SDAME)
- The national pharmaceutical policy of Mali.

The zoning rules are defined by Decree 98–0908 MSPAS SG (number of inhabitants required for a pharmacy or a depot).

Pharmaceutical pricing is free in the private sector,[10] except for a list of 107 essential drugs that are subject to ceilings. The relevant laws are:

- Decree 07–087 regulating essential drug prices in the private sector
- Decree 03–218 regulating essential drug prices in the public sector.

Community Private Sector

The texts supervising community health were adopted between 1994 and 1995. There is no law governing community health care. The main law is the Cross-ministerial Decree 94–5092/MSSPA.MATS.MF setting the conditions for the creation of the CSCOM and the management modalities of sociosanitary services in districts, towns, CSCOM, as amended by Cross-ministerial Decree 95-1262/MSSPA.MATS.MFC.

Business Environment

Access to credit, tax payment, and permits and licences delivery are considered barriers to the development of the private sector in health care.

Access to Credit

Both credit availability and credit demand are underdeveloped.

Credit Availability

Due to the macroeconomic environment, Banks estimate that their long-term resources are limited, and interest rates are high (between 12 percent and 15 percent). In addition, because credit institutions are risk averse, Bank funding consists mainly of short-term, low-risk loans (such as lines of credit for shopkeepers). Young physicians just starting out in practice find it difficult to obtain the required guarantees.

Finally, most financial institutions feel that the quality of loan applications filed by health professionals, (lacking managerial training) is insufficient. Thus, bank lending to health professionals is sporadic—and rare for covering start-up costs. When these professionals are granted loans, however, credit institutions report good experience.

Credit Demand

A credit culture is not highly developed in Mali, and health professional demand is low for funding through an intermediary. Young health professionals starting out on their own or with others frequently go to individuals (family, private investors) for the largest investments (private hospitals, schools).

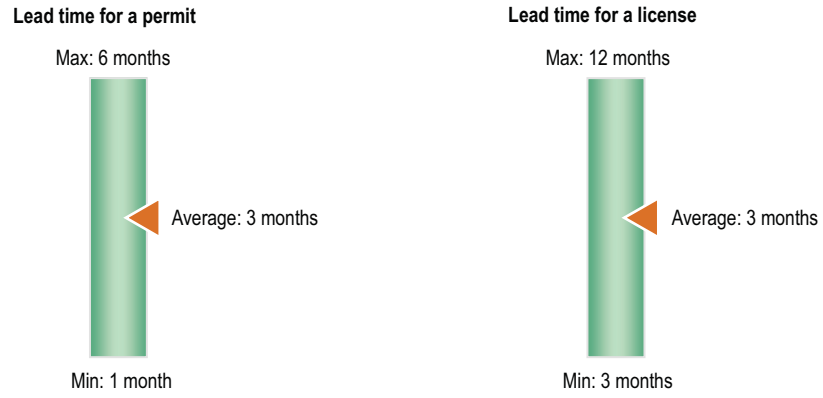
Tax Payment

Health care professionals' main tax complaint is about the opacity of instructions for calculating them. Most health care professionals know little about their eligibility for tax breaks. Regarding tax rebates, private health care professionals are wary of any information-forwarding system that they suspect of feeding information to the tax authorities. This partly explains their reluctance to participate in the health information system. Pharmacists specifically resent the alignment of their tax rates on shopkeepers' rates.

Permits and Licenses

Average estimated lead times[11] are three months to obtain a permit and then the license (figure 3.1).

Figure 3.1. Average Lead Time to Obtain a Permit and a License



Source: BCG analysis.

Use of the one-stop shop of the Investment Promotion Agency (API) is a rarity: only three medical practices have used it since May 2008. It would simplify the licensing procedure by allowing simultaneous registration with the Office of the Trade Court and with the Tax Office. However, the existence of the API is barely known in the health care sector, especially in the private sector and, if known at all, it is misunderstood. Professional Councils fear the one-stop shop might take the responsibility for examining requests away from them (verification of compliance with technical requirements).

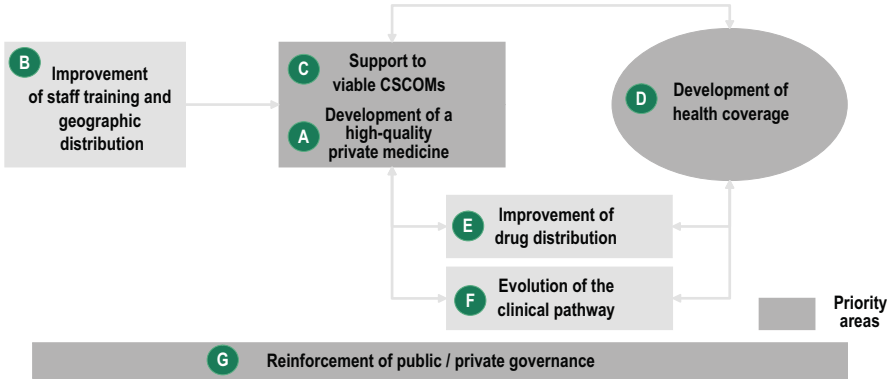
Licensing requirements are demanding for young physicians. According to the professionals interviewed however, in the eyes of the administration, despite the laws, a permit confers a de facto temporary license. A license is required for employers, in order to pass the technical visit, to hire their staff using a permanent work contract. Employers perceive this requirement as too rigid and constraining.

4. Analysis of the Health System

Analysis of the health system must begin with a "systemic" point of view. The different facets of the Malian health care system are tightly interconnected, so that the development of one component drives the others.

As an illustration, the expansion of health coverage allows payment for health services to be separated from utilization. The removal of the payment barrier to use automatically brings about an increase in visits to health institutions. This increased use raises turnover, which allows investment in quality resources (employment of physicians, equipment purchases). The perceived increase in quality prompts people to make better use of their health coverage. This simple loop occurs in every part of the system (figure 4.1).

Figure 4.1. Systemic Representation of the Health System



Source: BCG analysis.

The systemic analysis concludes that the best way of improving Malians' health is to strengthen the community and rural health system and expand mutual insurance.

Private Medicine

Private medicine is characterized by:

- Uneven distribution nationally, which entails the limitation of the market's absorption capacity, leads some providers, looking for business, to deliver lesser-quality services.

- Tenuous contact with the public sector limits private parties' inclusion in the public service missions of education and vaccination and does not allow the exploitation of complementarity between private and public health facilities.
- Stakeholders challenge rules categorizing different types of health institutions that would penalize private sector contribution to the public health objectives.
- Support is lacking for funding and training needs during the start-up phase.

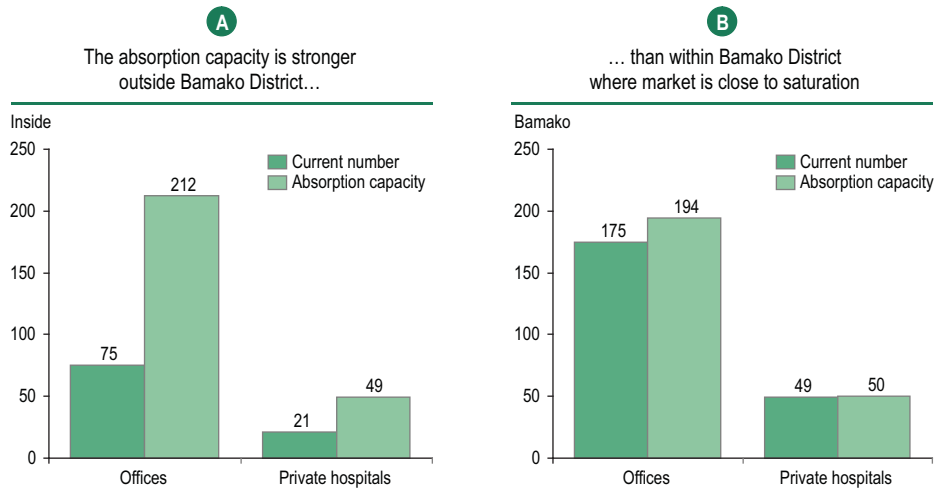
Glut in Bamako, Shortages Elsewhere

About 7 out of 10 private physicians have practices in Bamako. Even limiting the potential market of commercial private providers to the urban population would leave distribution unbalanced, considering that only 4 out of 10 Malian urban dwellers live in Bamako. This situation presents two series of drawbacks:

- *For overcapacity areas (Bamako).* Young professionals seeking work practice, mostly for a transitional period, in relatively informal settings (e.g., home consultations), while work for established professionals decreases.
- *For subcapacity areas (regional cities).* The public facilities are overwhelmed. Some patients could go to private facilities, but they are scarce. Thus, there is little incentive to improve quality in existing public and private facilities. In addition, pharmacies do not benefit from specialty prescriptions written by private physicians who fill them.

Moreover, the poor distribution of private medicine limits the absorption capacity of the market. To evaluate the maximum number of private practices and hospitals that can reach breakeven (figure 4.2), average minimum activity levels to cover costs were assigned, CFA F 12 million a year for a private practice and CFA F 120 million a year for

Figure 4.2. Market Absorption Capacity for New Private Practices and Hospitals, 2009



Sources: Part A, BCG analysis, 2009 data.; part B, DRH Ministry of Health, 2008 data; and BCG analysis.
Note: Hypotheses: absorption capacity calculated through the ratio between potential turnover of offices and private hospitals per region (average expenditure per urban inhabitant adjusted with a coefficient depending on the poverty area –0.6/0.8/ 1.3 x urban population of region) and the breakeven point of offices (CFA F 12 million of turnover per year) and private hospitals (CFA F 80 million of turnover per year).

a private hospital. The market size for each region was then calculated from the urban population size and the average annual expenditure per urban individual. On this measure, Bamako appears to be close to saturation. The future growth of private providers therefore depends on improved geographical distribution.

Lack of Private-Public Cooperation

Private providers are poorly connected with the public sector. This curbs their contribution to the achievement of public health objectives in health care, education, and disease prevention.

- *Health care.* In the absence of implementing texts for hospital law (n° 02-050 of July 22, 2002), there is no framework for private sector participation in public hospital service. Moreover, there is a lack of fluidity in patient referrals between the public and private sectors, and there is no network for making the most of the skills and capacities available nationally and regionally.
- *Education.* Although private physicians are authorized to teach as temporary contractors, the private sector feels the teacher-selection criteria are opaque. In addition, private physicians are not authorized to supervise theses or to welcome graduates of the University of Medicine as interns in private hospitals and practices.
- *Prevention.* Although several private providers say they volunteer, CSREFs are reluctant to include private physicians in routine activities and vaccination campaigns. Indeed, public providers fear that requirements will not be fulfilled (e.g., maintaining correct temperatures for vaccines, training vaccinators, maintaining a minimum volume of activity) and that the principle of free service will not be respected.

Categorization of Health Institutions

The texts determining the categories of private medical and paramedical institutions have not been reviewed since 1991. Some directives no longer fit the current context (due to growth in the private sector and technical progress in medical equipment and practices) and especially concerning the activities authorized and the necessary infrastructure in different types of private institution.

Private medical practices regret that the current typology distinguishing permissible care at inpatient and outpatient institutions, respectively, does not allow them to render certain services without proving they have inpatient capabilities and some beds reserved for inpatient observation The situation is particularly muddled for authorization to perform obstetrical deliveries. Improving maternal and infant health is a priority objective, yet deliveries are authorized at the CSCOMs where personnel are often less qualified than those at private facilities.

Start-Up Funding

Private physicians have no mechanisms to support and fund their start-up, which costs an average of CFA F 8 million for practices and CFA F 20 million for private hospitals. Rarely do these physicians seek funding at banks, which are reluctant to finance such start-ups anyway. By default, most of these physicians self-finance or seek financing from families and friends. This situation presents several disadvantages:

- Interest rates on loans from individuals are sometimes usurious.
- The relationship with those investors offers little legal security.

- Those investors do not demand the same proof of financial viability (business plan) and compliance with quality criteria as banks.
- By not seeking bank financing at start-up, a young physician forgoes an opportunity to establish a good credit reputation and trustful relationships for future funding needs.

Private providers rarely report difficulties meeting their funding needs after start-up. Their profitability allows most of them to fund further development on their own.

Start-Up Skills Not Taught at Medical School

To set up commercial facilities—during the first two years—private physicians need certain skills not taught by the FMPOS in the areas of finance, accounting, taxation, human resource management, and information management. Neither does the FMPOS adequately prepare private physicians for practice in rural environments (e.g., clinical practice with limited technical platform, rural customs). These physicians need training in public health and management (accounting, taxation, human resource management).

Education

The education channel is characterized by weak instruments for regulating the number of health care professionals in initial training, inadequacy in the way this volume is set, and inadequate education for health professionals setting up a private practice in a rural environment.

Need to Strengthen Strategies for Regulating Numbers in Initial Training

For physicians and pharmacists, the numerus clausus established at the end of the first year of training regulates the number of graduates. However, the creation of a private medical school could weaken the efficiency of this regulation system if the new school decides to increase the number of students (the numerus clausus, at this stage, is imposed only on the FMPOS).

For TSS/TS, there is no quota for the number of people certified.

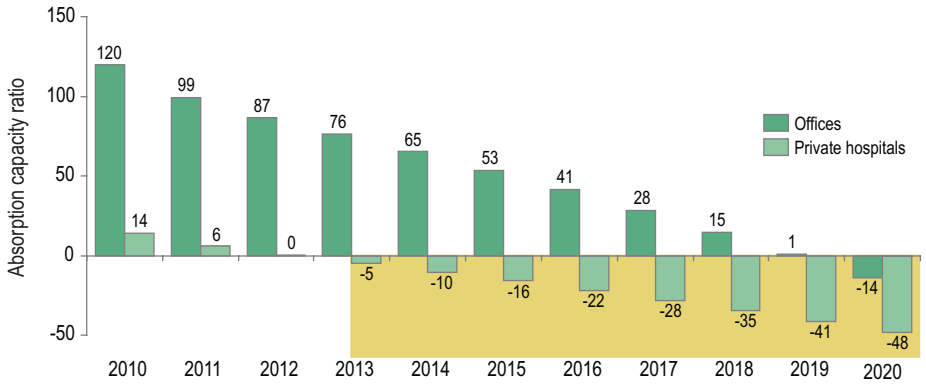
- The National Education Institute for Health Sciences (INFSS) organizes an examination but not a competitive one.
- Law 94–032, Article 17, allows private schools to issue their own diploma (most of them, for the moment, refuse to do so).
- There is no mechanism for regulating the number of people preparing for examinations. This number is increasing with the opening of private schools and with the decrease in the quality of student preparation. Only the INFSS requires applicants to pass an admission examination. Nonetheless, more students pass the entrance exam than are graduated from the INFSS, and the nongraduated individuals feed a parallel market of less-qualified job seekers.

Setting an Appropriate Annual Number of Trained Health Care Professionals

An efficient mechanism for regulating the number of health professionals is indispensable. The market can absorb only so many new entrants a year, despite the often-heard complaints about a lack of human resources in the health sector. Only part of the population, mainly urban dwellers, has the financial means to seek care in the private commercial sector. This potential market can generate enough revenues to cover the costs of only a limited number of practitioners.

Thus, with demand for private commercial health care constant, depending on demographic trends, the market will have a hard time absorbing the private practices and hospitals that the numerous physicians educated between 2000 and 2010 will want to open (figure 4.3).

Figure 4.3. Market Absorption Capacity versus Young Physicians' Hopes for Opening Private Practices and Hospitals



Sources: DRH Ministry of Health; AMLM; UTM; BCG analysis.
Note: Absorption capacity is the ratio between the potential turnover of offices and private hospitals (average expenditure per urban inhabitant x urban population) and the breakeven point of offices (CFA F 12 million of turnover per year) and private hospitals (CFA F 80 million of turnover per year). Opening number calculated based on projected flows of medicine graduates (+3 percent from 2013) joining the private sector (50 hires in the civil service/year) and settling in private establishments (80 percent with 2 physicians/office and 5 physicians private hospital).

The method for determining the number of students to be educated does not take into account market-absorption capacity.

- The FMPOS education capabilities (numerus clausus) are determined only by the school's own supervisory capacity (premises, teaching personnel).
- The capacity to educate TSS/TS students is poorly regulated due to the absence of competitive examinations/numerus clausus.

Making Educational Quality and Adequacy Meet Health Care Professionals' Needs

The general quality of the initial education is deficient.

- *For physicians and pharmacists*. The market is saturated with FMPOS students. About 1,900 students are in the first year of medical/pharmacy school but the market will be able to absorb only 800 graduates. There are about 4,200 students in medicine for 1,000 hospital beds in Bamako.
- *For TSS/TS.* Low-quality private schools are proliferating due to a lax regulatory framework (no criteria for checking the reality of supervisory capabilities and the soundness of the education provided).

The adequacy of the educational content to prepare health care professionals for the new practicing conditions should be strengthened to better take into account what they will need in private practice (e.g., management skills) and practice in rural areas (e.g., public health).

Private Community Sector

An analysis of the community health situations leads to the following findings:

- The average CSCOM depends on subsidies to cover its costs due to low staff productivity, low frequency of patient visits, and poor management capabilities of the ASACO.
- The CSCOMs are put into specific situations according to their population pool and their contact rate, which should be taken into account.
- The success of strategies to expand rural services and trained medical staff depends on the support available for physicians settling in a CSCOM.
- The CSCOM ecosystem is fragile. Major public health decisions should take into account the principle of cost recovery on which CSCOMs depend.

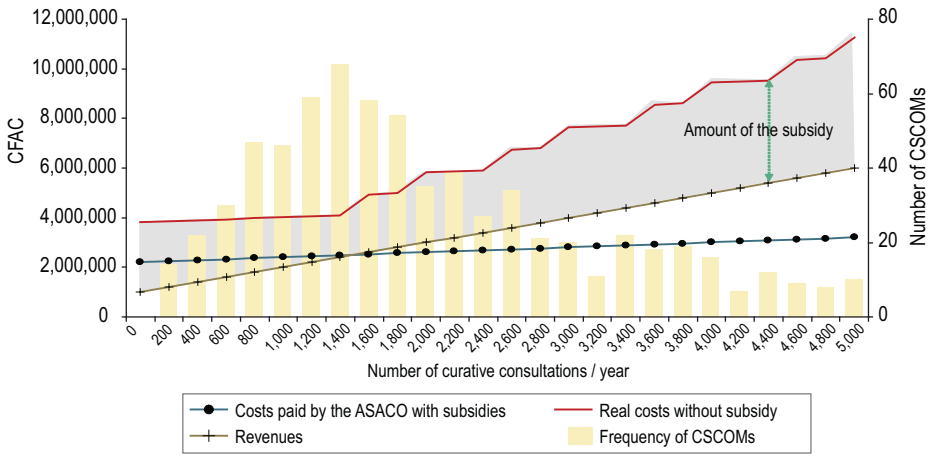
Portrait of an Average CSCOM

Starting from a database of information sent by each CSREF to the central level, a picture of an average CSCOM can be drawn. They have

- *Staff.* Three agents upon opening
- *Labor productivity.* 500 consultations per employee per year
- *Unit labor costs.* CFA F 800,000 per year
- *Fixed costs.* CFA F 1,400,000 per year
- *Variable costs.* CFA F 150 per patient
- *Revenue per patient.* CFA F 1,000 (excluding drugs)
- *Revenue per patient, pharmacy.* CFA F 1,200 (15 percent of margin on drugs)
- *Subsidies.* CFA F 1 million of functioning subsidies—CFA F 1.6 million in the shape of two agents made available
- *Contact rate.* 0.23 per person per year.

The average CSCOM runs a deficit due to labor-cost load (low agent productivity), and only subsidies allow it to reach the breakeven point (figure 4.4).

Figure 4.4. Financial Balance of an Average CSCOM



Sources: Bilan C files 2008 DNS CPS; interviews; BCG analysis.

Figure 4.4 shows

- Through the histograms, the distribution of CSCOMs by the number of curative consultations given (right-hand axis).
- The evolution of revenues (left-hand axis expressed in CFA F, hatched line) depends on the volume of activity, or on the number of patients going to the CSCOM, and on the average revenue per patient.
- The evolution of actual costs (solid line) is stable at the beginning (fixed costs) but increases each time the volume of activity entails the addition of one more agent—the actual costs (without subsidies) increase faster than revenues due to the low labor productivity. (The salary cost of an additional consultation costs a CSCOM more in salary than revenue generated by it, and breakeven is never reached.)
- The line representing evolution of the costs supported by the CSCOM (line with circles), or the costs it still must bear after factoring in subsidies, is much flatter because it represents fixed costs and the cost of consumables. Personnel are partly supported by the subsidies in the model.

This dependence on subsidies weakens the principles on which community health relies. The contribution of subsidies is justified in certain proportions as compensation for the public service missions fulfilled by the CSCOM and is included in the CSCOM's business model (Decree of April 21, 1994, Article 25-2). However, when the CSCOM's financial balance is too heavily dependent on subsidies, they are harmful and undermine community health care. The cost-recovery principle on which community health relies is weakened by funding that comes mainly from public sources. Moreover, some public funding is not sustainable in the long term (e.g., Heavily Indebted Poor Countries [HIPC] funding). Subsidies for personnel hinder ASACOs' management authority, can disengage the personnel, and dissuade the patients when there is not enough activity to justify additional staff. The annual productivity of CSCOM personnel needs to be doubled to 1,000 consultations per agent to stabilize the total amount of subsidies and avoid increasing these subsidies when volume increases.

Strengthening ASACOs' Managerial Capabilities

ASACOs' managerial capabilities are key in the mobilization of strategies to reestablish financial balance through

- *Cost decreases.* Increase staff productivity, motivation and cohesion, organize work more efficiently.
- *Revenue increases.* Increase frequency of visits, inculcate a culture of quality, switch from a fixed model to outsourcing some services, refine health services available and pricing, raise the technical platform standard.

These managerial capabilities are currently low:

- ASACO members are volunteers and not necessarily qualified
- Continuous training/professionalization programs are poorly developed
- Resources dedicated by local state services to the support and advice function are limited, and this function is more focused on the concept of viability at the creation phase than the sustainability of operations long term
- In the absence of a bankruptcy or guardianship mechanism, there is no sanction for bad management

Moreover, ASACOs' managerial capabilities are weakened by the "offer policy" pursued by state and local authorities (while CSCOMs suffer from slack demand), consisting of making personnel available. In other words, they offer too many services despite low demand. In addition,

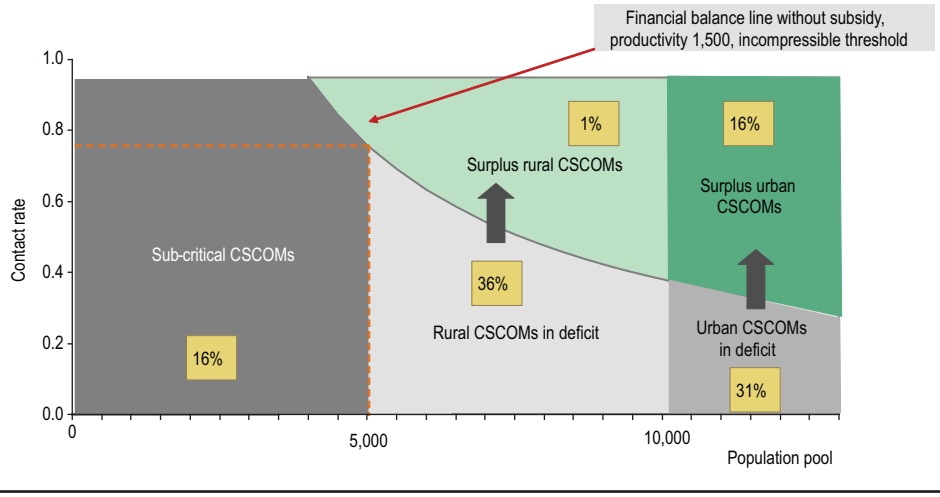
- More than one agent out of two in the CSCOMs is not hired by the ASACO
- The managerial authority of the ASACOs and the center manager is hindered by the multiplicity of agents subject to different statutes and several hierarchical lines

Specific Situations

Five CSCOM categories would adequately reflect the highly varied intrinsic conditions within the centers (figure 4.5):

- *By financial viability.* Do they reach breakeven? In other words, does the minimum volume of activity cover their costs without subsidies and with a productivity of 1,500 contacts/agent/year?
- *By population pool.* The viability threshold is 5,000 inhabitants; the threshold to differentiate urban and rural areas is 10,000 inhabitants.)

Figure 4.5. CSCOM Typology, by Catchment Area and Contact Rate



Sources: Bilan C 2008 files DNS CPS; interview; BCG analysis.

Each of the five CSCOM categories faces specific issues, requiring adapted answers, especially in terms of profile of subsidies provided:

- *CSCOMs with too low a population (16 percent of the total).* The catchment area is structurally insufficient to generate the required revenues. Created without meeting all the criteria for viability, those CSCOMs should adapt their business models to the area's low population density and to the blocking factor of distance. Below the critical mass (minimal size to be economically viable), they should retain large subsidies.

- *Unsubsidized rural CSCOMs in deficit (36 percent of the total)*. Meeting all viability criteria, with low competition from modern providers, those CSCOMs (the majority) can significantly reduce their dependence on subsidies. Under comparable conditions, similar CSCOMs with better performance succeeded in consolidating their results. The subsidies provided to those CSCOMs should decrease over time and be allocated to improving treatment quality.
- *Unsubsidized urban CSCOMs in deficit (31 percent of the total).* Though situated in places where they could become financially autonomous, those CSCOMs have not captured a sufficient market share. Faced with strong competition, those CSCOMs should adapt their care to meet the competition and consumer preferences. Subsidies granted to those CSCOMs should be large enough to allow them to invest in technical platform improvements.
- *Unsubsidized balanced urban CSCOMs (16 percent of the total)*. With activity and productivity levels that allow them to be close to profitability, or financial autonomy, they should continue to adapt to meet the competition and become centers of excellence for the other CSCOMs. Investment subsidies can be justified to keep up the level of equipment.
- *Unsubsidized balanced rural CSCOMs (1 percent of the total).* They should maintain their situation, but they do not have the means to offer much support to the other CSCOMs. Subsidies for equipment maintenance should allow them to sustain service quality.

Expanding CSCOM Services and Trained Medical Staff

The expansion of CSCOM services and trained medical staff allows reinforcement of ASACO/CSCOM managerial capabilities and improvement of their contact rate and revenues. At constant unit price,

- The cost/quality ratio of treatments improves with the expansion of services and trained medical staff.
- A physician can provide revenue-generating services (e.g., light surgery).
- The presence of a physician helps improve the technical platform and allows a more complete range of services to be offered.
- Expansion of services and trained medical staff can promote the reputation of a CSCOM beyond its catchment area.

The absence of an unequivocal statistical relationship between the presence of a physician and the number of visits can be explained by the fact that several conditions should be present for the proper integration of the physician within the ASACO/CSCOM:

- Preparation of physicians for rural practice
- Attractive financial conditions and professional opportunities
- Quality of relationships with the ASACO
- Support and "socialization" of the rural physician.

Reconciliation of the Cost-Recovery Principle with the Public Health Programs

A CSCOM's ecosystem is fragile. Several conditions should be respected to avoid indirect damage to its financial viability.

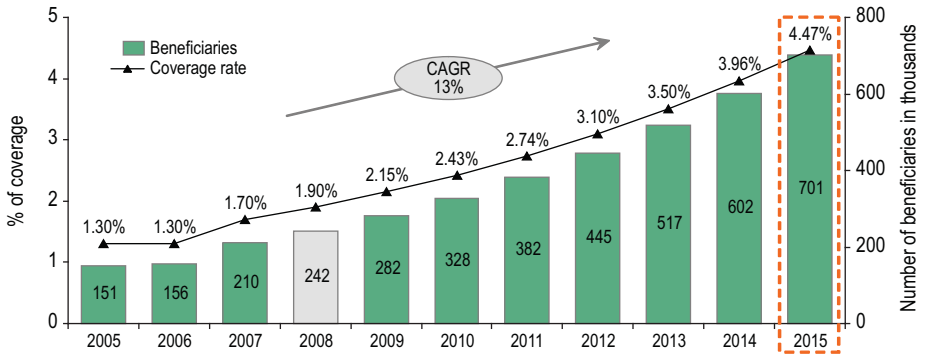
- Ensure compensation for any shortfall due to free delivery of some care and products decided by the authorities.

- Reconcile the centrality of the CSCOM in the health care network and the vertical programs to fight diseases/pandemics.
- Preserve the compatibility of (paying) activities of the CSCOM and of associative/religious providers within the catchment area.

Health Insurance

At the current pace of growth of private mutual insurance, less than 5 percent of the population will be covered in 2015 (figure 4.6). With such a slow linear progression, a scale-up is thus necessary. The obstacles to scaling up have been clearly identified, and it should begin with preliminary experimentation in one or two pilot regions.

Figure 4.6. Health Insurance Coverage Rate, 2015



Sources: DNSI; Ministry of Social Development 2009.
Note: Hypotheses: 13 percent CAGR in number of beneficiaries derived from the CAGR observed between 2005 and 2008 for existing mutual insurance plans; CAGR population of 3 percent.

One option for scaling up is the creation of 100 mutual insurance entities a year to meet the needs of the rural population at an affordable price (CFA F 300 a month). The impact of such a deployment of mutual insurance would be highly significant for the health care system (increase of the CSCOM contact rate and activity volume). Financially, rapid growth of mutual insurance coverage entails small adjustments for evolving needs during the different stages of growth.

Obstacles to the Expansion of Health Insurance

There are five main obstacles to the expansion of health insurance coverage:

- *Social mobilization.* Difficulty convincing people of the relevance of a contingency approach
- *Contributive capacity and subscriber base*. Required subscriber base to reach the equilibrium estimated at 3,000 beneficiaries; premiums to be mobilized in rural area of CFA F 3,000 per beneficiary; pre-harvest periods for rural populations whose revenues are seasonal
- *Commercial model*. Existence of a three-month waiting period while payment of premiums does not give right to the benefits; absence of commercial incentives to subscribe to the system
- *Quality and behavior of health care providers*. Weakness of some CSCOMs; overbilling by private mutual insurance

- *Functioning and management.* Coverage of management expenses beyond the technical balance motivation and training of mutual agents.

Scaling Up Requires a Preliminary Experimentation Phase

An immediate scale-up, without experimentation, runs into two hurdles: (1) The Malian mutual insurance movement is too weak today to constitute a sufficient starting base and (2) The modalities of an immediate scale-up in the Malian context are not sufficiently described, and the body of best practices is not yet large enough to sustain an immediate scale-up. The administrative authorities and the UTM have insufficient experience to manage a much broader system; health care providers are ill-prepared for it; and the population has not been fully sensitized to its advantages. Moreover, the Ghanaian and Rwandan models are not directly transferrable, even though they demonstrate the positive impact of a scale-up.[12]

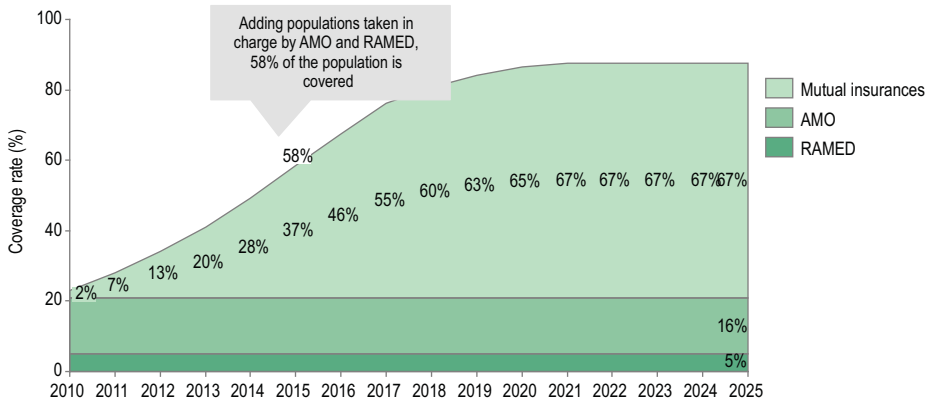
The parameters of a deployment model rely on the creation of numerous private mutual insurance entities adapted to the rural population. To better appreciate the conditions for scale-up success, a mutual insurance model was constructed

- With a subscription per beneficiary comparable to the one of the existing rural private mutual insurance firm: CFA F 300, and
- With attractive reimbursement rates: 99 percent for CSCOMs, 75 percent for CSREFs, hospitalization in a hospital and pharmacy.

A scheme to extend this mutual insurance model throughout the country was then elaborated, moving from micro- to macroeconomic analysis:

- Seven years were posited to create a mutual insurance in each town in Mali. This scale of social mobilization is necessary so that as broad as possible an area of natural solidarity can be tapped.
- An attractive penetration rate was set through a compulsory subscription scheme. Though not quite 100 percent, the rate is better than under a voluntary subscription model (figure 4.7).

Figure 4.7. Expansion of Health Insurance Coverage in a Compulsory Subscription Scenario



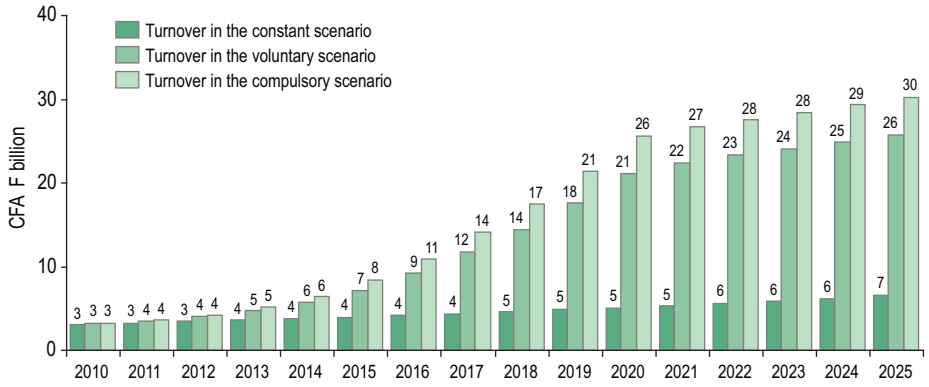
Source: BCG analysis.
Note: Hypotheses: compulsory scenario—constant AMO and RAMED coverage rate.

High Potential Impact on the Health Care System

The systemic impact of the expansion of private mutual insurance was measured with emphasis on the expected benefits for the CSCOMs (figure 4.8). The results were

- By 2015, 37 percent of the population would be covered (in addition to the 25 percent covered by RAMED and AMO).
- The average contact rate would be double the rate under a business-as-usual scenario (0.29–0.57/persons/year) with a contact rate higher than 1 for the beneficiaries.
- CSCOM turnover of 80 percent would grow to 110 percent in 2015.

Figure 4.8. Impact of the Contact Rate on CSCOM Turnover



Source: BCG analysis.
Note: Hypotheses: Calculation for both scenarios of the increase in average contact rate as compared with the average contact rate in a constant scenario (CAGR of the contact rate in CSCOMs of 2 percent)— average revenue per patient in a CSCOM = CFA F 1,000 (outside drugs).

Controlling the Financial Impact through Simple Adjustments

The financial sustainability of private mutual insurance was measured at different stages of development:

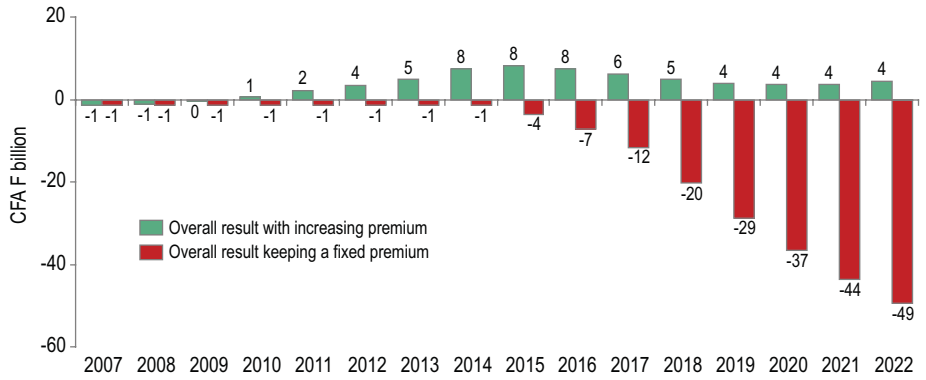
- Technical balance (premiums less reimbursements) was maintained for about 10 years without adjustments to the initial scheme.
- Managerial costs put a strain on the total financial balance from start-up, but minor adjustments (annual increase in the monthly premium of CFA F 20) enabled a systemic surplus (figure 4.9).

Pharmaceuticals

The pharmaceutical channel is characterized by

- Uneven geographic distribution of pharmacies, which limits the market-absorption capacity
- Funding needs partly covered by pharmacies' partners
- Insufficient preparation during initial education for needs while starting up a practice.

Figure 4.9. Compulsory Model with Constant Premium versus a Compulsory Model with Rising Premium

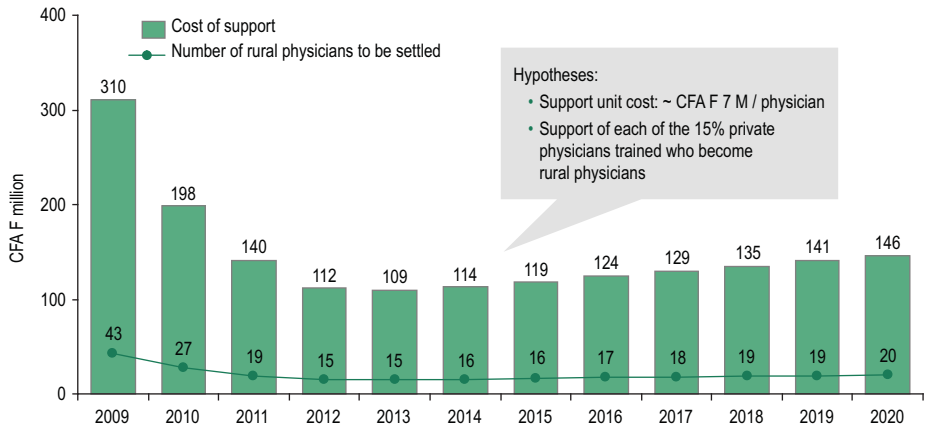


Source: BCG analysis.
Note: Overall balance = total revenues – total costs (includes technical balance and management costs); key hypotheses: CFA F 20 increase of the monthly premium each year in the compulsory model with rising premium, constant subscription of CFA F 300/month for the model with constant premium.

Uneven Geographic Distribution and Absorption Capacity

As a result of the current distribution of pharmacies and the zoning rules in force, there are waiting lists throughout Mali for new pharmacy licenses. This backlog will continue into the medium term. Assuming an average annual growth rate of 3 percent in the number of graduate pharmacists between 2013 and 2020), waiting lists will not begin to decrease until 2014 (figure 4.10).

Figure 4.10. Backlog in New Pharmacy Licenses until 2014



Sources: CDRH; FMPOS; CNOP; BCG analysis.
Note: Hypotheses: 3 percent annual growth in the number of graduated pharmacists by 2013; 90 percent of the pharmacists in the private sector work in a pharmacy; 1 percent annual rate of growth in the number of pharmacists in the public sector.

In the short term, the expansion of pharmacies in small cities is the main growth opportunity.

- For young pharmacists, settling down outside big cities is the best remedy for the current lack of job opportunities. There are not enough other possibilities (e.g., development of diagnostic labs channel) to decrease waiting lists.
- A statute for the institution of an assistant pharmacist position is needed (and a law is being drafted) but it alone will not solve the long-term employment issue for most young pharmacists.
- For increases in business in the short term, wholesalers will have to expand their retail networks.

Extension of the pharmacy network affects the average profitability of pharmacies that settle in less densely populated areas.

- In terms of revenues, since purchasing power in small cities is lower than in larger ones, the share of generics in their turnover (50 percent) is higher than the national average (30 percent).To maintain revenue flows, it is therefore important to offset the negative price effect of the generic/specialty mix by volume increases and ensure that there are private physicians to guarantee a certain volume of specialties (prescriber).
- In terms of costs, the labor cost of salespeople is lower. Also, taxes are usually lower due to the low value of a store. Rents are also lower but this is offset by the cost of bringing the premises into compliance with norms in effect.
- The supply cost is higher.

Start-up Funding Needs Partially Covered

Pharmacists have two types of supporting mechanisms to fund their start up (needs estimated at CFA F 5 millions on average). The two main wholesalers, Laborex and Copharma, in the framework of a commercial agreement, fund the creation of certain pharmacies, especially by providing an initial inventory.

For access to cheap loans, pharmacists negotiated a specific partnership with Banque Atlantique. After start-up, pharmacies sometimes report funding difficulties connected with the deterioration of their drug stock and with their working capital needs. Banking institutions and microfinance institutions partly cover those needs.

Training Needs during Start-Up Poorly Covered

During the first two years while pharmacists are taking their place as commercial providers, they need some skills and knowledge that their FMPOS education does not provide. This includes general information about how to start up a practice and specific information on financing, accounting, taxation, human resources management, and information management and systems.

Clinical Pathway

The opinion survey done for this study changes somewhat the common thinking about the role of traditional practitioners in Malians' clinical pathway. Indeed, this role seems to have been generally overestimated (even after allowing for understatement by respondents): 3 percent for a first consultation, 13 percent for the second. Those surprising

numbers call into question the idea that traditional practitioners are frequently consulted at the beginning of the clinical pathway, before resort to conventional medicine. The decision to consult traditional practitioners is relatively revenue-inelastic up to CFA F 2 million but strongly decreases above that amount.

The 58 percent average for a first consultation at a CSCOM (81 percent in rural areas) confirms the powerful CSCOM role in the health care pyramid, and its crucial importance for rural populations, given the lack of an alternative in the field of conventional medicine.

About the other health care providers, the survey revealed that

- CSREF represents 8 percent of the providers chosen for first consultation on average, (3 percent in rural areas) and 19 percent for second consultation.
- Hospitals account for 17 percent of the facilities visited on average (4 percent in rural areas), 23 percent for second visits, and 44 percent for third visits.
- Health care practice represent 3 percent of providers chosen for first visits (0.5 percent in rural areas), 5 percent for second visits, and 17 percent for third visits.
- Private hospitals represent 7 percent of first visit consultations (5 percent in rural areas), 17 percent of second visits, and 33 percent of third visits.

The following are highlights from analysis of patients' perception about those different providers.[13]

- Patients believe prices and distances are appropriate for traditional practitioners and the CSCOM.
- Private hospitals and medical practices and, to a lesser extent, hospitals are perceived as offering the best quality of service (cleanliness, equipment, staff skills, and quality of welcome and listening)
- The CSREF falls midway between the two extremes.

Governance

The governance of the health care system reflects the nature of the relationships between the administration and the private sector:

- Little inclusion of the private sector in the definition of health policies, which essentially rely on the contribution of the public providers (and, to a lesser extent, community providers)
- Little inclusion of the private sector in the definition of the regulatory environment that shapes it, given that the state, in its role of public authority, defines private operators' conduct (e.g., through rule making, enforcement, and tax collection).

This governance mode does nothing to alleviate misunderstandings that have accumulated between the private and public sectors since the liberalization of 1985, thereby feeding grievances and distrust. This climate poses a major hurdle to the development of partnering relationships between the private and public sectors. It has to be recognized that some stakeholders refuse to engage in constructive dialogue, first evidenced in the response of some private actors to their difficulties making themselves heard.

As a result, some health care professionals are gravitating toward the informal sector, and some physicians are emigrating. Some private schools are also thinking about issuing of their own diplomas.

Beyond the improvement in this climate, a change in governance modes is crucial so that

- The private sector improves its understanding of the objectives and means of public health policy and contribute to it more effectively.
- The state fills out its role as historic operator in the provision of care/pharmaceuticals by exercising a supporting and steering role for the private sector (stewardship).

5. Improving the Private Sector Contribution to Public Health Objectives

Among the opportunities identified for improvement, the strengthening of community and rural health and the development of private mutual insurance are the most desirable targets for policy action. The systemic stakes are significant. Today, however, the public authorities and technical and financial partners are probably not assigning sufficient priority to those dimensions of the health system.

The Boston Consulting Group models show that lack of demand is the main obstacle to expanding the base of the health pyramid—the CSCOMs—and that this demand can be fostered by creating risk-sharing mechanisms. Even if such ambitious policies require a large, sustained effort from both authorities and donors, the primary care system cannot be strengthened without taking a close, fresh look at mutual insurance and the stakeholders in rural and community health. Mali has already proven innovative in this domain, but these experiments should be supported and expanded.

Current policies focus on strengthening the availability of care, which, though necessary is not sufficient under conditions of extreme poverty. Moreover, this policy, in the case of the CSCOMs, leads to a weakening of those private nonprofits' management capacity and threatens to inhibit their efforts to adapt health care to the local context, to motivate personnel, and to mobilize the population. In the same way, other components of the rural health care system do not receive sufficient support despite the existence of innovative initiatives in civil society.

About Opportunities for Improvement

The methods sketched out in this section result from

- Primary analyses performed by BCG (modeling, opinion survey, etc.)
- Interviews conducted by various stakeholders
- Discussions during the first two seminars.

Some of these methods should be further analyzed and have not reached a sufficient consensus at this stage. The others were validated by the Minister of Health during the March 15, 2010, seminar.

Strengthening the Public-Private Partnership and Dialogue

To reestablish trust between the public and private sectors and to clear the way for a partnering approach, it is necessary to

- Create a dialogue and sharing mechanism between the public and private sectors.
- Include the private sector in the definition of some of the goals of health policy so that programs can be crafted to help reach public health objectives.
- Have the private sector participate in the design and updating of the laws and directives that shape their work.
- Give the private sector incentives to become better organized.

For this, the following improvement levers have been identified:

- Creation of a public-private dialogue and consultation committee
- Creation of a transitional structure prefiguring that committee
- Better integration of the private commercial sector in the PRODESS
- Creation of a structure representing the whole private sector.

A national policy should be defined for reinforcement and implementation of public-private partnerships

- Strengthening the DESR (DNS) and creating a section dedicated to PPPs
- Creating agreement templates
- Sharing equipment and specialties in a given territory
- Participating in training activities
- Participating in examinations/diagnostic activities
- Participating in vaccination activities.

Simply integrating the commercial components of the private sector in the PRODESS, though necessary, is not sufficient. Even if this helps the private sector become more active in defining the general lines of health policy and gives it incentives to become integrated with current organizations, the PRODESS does not address all the issues that make up the dialogue between the public and private sectors:

- The PRODESS addresses only PRODESS-related issues. Some questions, in particular about the revision of the regulation around the different channels (care, pharmaceuticals, and education) and the day-to-day enforcement of regulations are outside PRODESS jurisdiction.
- A complementary structure is thus required in order to attain all the targeted objectives. That entity would have to have autonomy to examine and give its input on pending issues and would be closely aligned with the PRODESS.

Creation of an Interim Committee for Public-Private Dialogue and Consultation

This interim committee, working with the public and private sectors, is intended to offer a forum for continuous dialogue within an institutional framework. Its role, still to be precisely defined, could be

- To render opinions (optional or compulsory depending on the topic) on normative laws affecting the private health sector
- To contribute to the enrichment of the strategic texts and documents related to public health
- To be a serious source of proposals and recommendations
- To steer the application of the joint public-private action plan that arose from the study of the private health sector in Mali, and to update it

To this end, the committee could create specialized commissions for in-depth analysis of some topics and formulation of recommendations.

To facilitate efficiency, this consultative group should meet the following to conditions:

- *Representation.* The committee should be made up of 12 to 14 members, with the same number from the public and private sectors. The membership should reflect all interested parties (from the private sector, commercial, community, traditional, associative, and religious; from the public sector, ministries of health, social development, higher education, finance, and so forth).
- *Chairmanship.* To ensure balance and create a climate of trust, the chairmanship of this institution should be rotated to a representative from each sector in turn.

Two key success factors have been identified:

- The establishment of a strong structuring of the private sector's various components, the first steps of which have been covered
- Good communication between this committee and the other consultative and steering groups of the Ministry of Health, in particular the PRODESS monitoring entities.

To avoid delaying the formation of this committee while the private sector continues the structuring efforts initiated in early 2010, a transitional group can get started with the new committee's work.

Integrate the Private Sector More Closely into the PRODESS

The PRODESS monitoring groups at the national level (steering committee and technical committee) should open their membership to representatives of the private sector, who can then be better exposed to the strategies and monitoring of the health care policy. While the associative sector is already connected through the GPSP, and the community sector through the FENASCOM, this association should be extended to the other components of the private sector:

- *Commercial representation.* To be determined. One possibility would be to offer a seat to the representatives of the three channels—care, drugs, education.
- *Traditional representation.* FEMATH.

The revision now underway of Decree 01–115/PM-RM of February 27, 2001—about the creation of entities to direct, coordinate, and evaluate the health and social development program—offers a chance to modify details on the composition of the monitoring and technical committees.

Reinforcement of the Organization of the Private Sector

The creation of the public-private dialogue and consultation committee will give exposure to representatives of the private sector (in particular the commercial sector). Within the regrouping effort, the creation of a transitional structure will be an additional incentive for the private sector to appoint interim representatives and to rationalize its current structure.

Reinforced Material and Communication Means

Beyond the number and representation of the private sector's spokespeople, the capacity of those associations/federations must be reinforced so they act as conveyors of their members' concerns and disseminators of information to their members. This necessitates improvements in their means of communication (e.g., electronic newsletter, internal newspaper). The same observation applies to Professional Councils. Since contributions can be difficult to obtain, subsidies are recommended for the entities that will be appointed to represent the private sector within PRODESS entities and within the dialogue and consultation committee. This will support them in the fulfillment of their role.

Implementation of a PPP to Foster Private Participation in Public Service Missions

The definition of a national policy is recommended for strengthening public-private partnership to afford a consistent framework for each activity initiated and better connect the various public and private components of the entire health system. Spelling out such a policy calls for close collaboration between the state and the private sector, through the dialogue and consultation committee.

The creation of a framework to facilitate the development of PPP mechanisms also requires a strengthening of the DESR within the National Directorate of Health. The DESR is best placed, in association with the private sector, to propose PPP agreement templates.

In any case, the development of complex PPPs for a growing number of health activities will require a long-term strengthening of public providers' capabilities to steer complex contracts. This seems unlikely to happen in the short term without significant support and beyond some well-defined pilot projects.

A pragmatic option for the development of PPPs would consist of introducing a performance-based dimension to the subsidies granted to the CSCOMs (which can be analyzed as private entities in charge of delivering the basic health care package in a given catchment area in the framework of a PPP). As a prerequisite, the CSCOM environment should be taken into account, and the management capabilities of the contracting party, the ASACO, should be reinforced or at the very least, not weakened.

Private institutions wishing to participate in public service missions, especially in public hospitals, should be authorized to do so by agreement with the public providers in order to define the modalities of this contribution and ensure observance of quality criteria.

Four areas for public-private partnership have been identified:

- Through an agreement, authorize private hospitals to welcome FMPOS interns in order to increase opportunities for practical training, which are insufficient today.
- Authorize private physicians to supervise the training of medical students (under the same financial conditions as public physicians).
- Create at the local level (health area or region) a scheme to share available equipment and specialties to avoid transferring patients to a higher level of the health care pyramid when there is a technical platform nearby.
- Through an agreement, associate private institutions that follow the prescribed procedures (cold chain, personnel training) with routine activities and national vaccination campaigns. Private institutions that do not have enough activity

to reach critical mass by themselves will be able to be grouped under such a contractual regime.

The ongoing revision of hospital law offers a legislative vehicle for framing such PPP public service agreements.

Creation or Revision of Regulatory Texts

In any modification of the regulatory texts, the directives from UEMOA, West African Health Organisation (WAHO) of the Economic Community of West African States (ECOWAS) and WHO should be taken into account.

It is important to differentiate between the laws that need to be revised and laws on the books that are insufficiently enforced. Beyond the analysis of the required adjustments of these laws, the way they are perceived by the health sector must be taken into account. This perception can be biased or distorted by a misunderstanding of the laws, but it is still important to take it into account in the analysis because it determines the stakeholders' trust in the system and, therefore, their behavior.

The following inefficiencies in the regulation of the different segments (care, pharmaceuticals, and education) should be addressed:

- Conditions for authorization to open private health care schools that do not ensure supervision capabilities and teaching quality
- Conditions for granting wholesaler licenses, which, to date, allow more than half to do business without any state monitoring
- Issuing of health diplomas, which is not a state monopoly and risks creating several health professional markets
- Absence of zoning rules for physicians, of whom 70 percent are concentrated in Bamako.

Box 5.1. Wholesaler License Requirements

Decree 91–4318/Mspas-Pf-cab stipulates:

"Article 18: Inventories of pharmaceuticals that wholesalers and their subsidiaries import or sell should be sufficient to ensure pharmacies' monthly supply in the areas they serve. Moreover, these inventories, in breadth, should encompass at least two thirds of the products that have obtained a marketing visa or authorization in Mali.

"Article 19: All wholesalers and subsidiaries importing or selling pharmaceuticals should be able to deliver any product within that range to any pharmacy in their usual client base within 72 hours of receipt of the order."

Another recommendation is to examine some conditions perceived to be too restrictive, which may curb the development of the private sector and limit its contribution to public health. For all those work streams, a plan and a timetable are necessary to make the approach credible and obtain quick results.

Relaxing the Categorization of Private Health Care Institutions

The regulation for categorizing different types of private health care institution should be studied. Consideration should be given to relaxing the typology defining health care

establishments and hospitals, so that, for example, authorizing private practices to deliver babies or put their patients under observation. As one option, an intermediary category could be created to authorize those activities (exceptional overnight stays) without requiring full inpatient capabilities.

Tightening Wholesaler Licensing Requirements

Criteria should be set to verify the activity of wholesalers applying for a license. Since current criteria are ill adapted, even for existing wholesalers with actual work, setting a minimum turnover threshold is proposed to maintain the benefit of the license beyond start-up.

Tightening Training School Licensing Requirements

The authority over training schools for health professionals should be transferred to, or shared with, the Ministry of Health. Requirements should be set for opening such schools—and licenses should not be renewed automatically without recertification of the promoters' educational qualifications and supervisory capabilities. Among other requirements, schools should ensure the presence of a health care professional among its promoters, obtain a partner health provider's agreement to accept its students for internships, and provide for the participation of specialists in some training. Any school that does not comply with these requirements by the end of a transition period should have its license revoked and should cease doing business. Further in-depth study should be devoted to the question of the school map and zoning of teaching institutions.

Affirmation of the State Monopoly on Diploma Awards in the Health Sector

Law 94–032, Article 17, should be reaffirmed to preserve the state's regulatory monopoly over education in the health sector. Article 17 reads "Private educational institutions award diplomas that may or may not be recognized by the state."

Zoning Rules for Physicians

To limit the overconcentration of private physicians in Bamako, and to complement the measures to encourage them to set up practice in the interior of the country, study should begin for the elaboration of zoning rules for physicians along the lines of the establishment rules for pharmacies.

Procedure and Timetable for Revising the Laws

To give teeth to the law modification procedure and get quick results, it is proposed that the dialogue and consultation committee appoint a commission to revise the laws governing the private sector. The commission, composed of representatives from the public and private sectors, should be tasked with drafting the necessary regulatory texts and laws. To guarantee legal consistency of the work, the commission secretariat should be provided by the Secretary General of the Government.

The timetable is also important. It should

- Establish, in relation to the Parliament's calendar, a schedule of laws to be revised.
- Set a deadline for modifications of regulatory texts that do not require preliminary legislative reform (three or six months depending on the complexity of the matter).
- Set a deadline for implementing the regulatory texts, counting from the day Parliament passes the modification of the law.

Reinforcement of Law Enforcement Mechanisms

To improve compliance with the regulations, considering the general reluctance to sanction, self-regulation by reinforcing Professional Councils is proposed. The office of Ombudsman for the private sector should also be created, a proposal the stakeholders still have to study in depth.

Strengthening the Professional Councils' Self-Regulatory Capacity

The Professional Councils play a crucial role in the self-regulation of health care professions, complementing the state's role of inspection and regulation. To strengthen that role, the Councils' resources should be consolidated. One option would be to make a state agent available as permanent secretary or subsidize the operating budget of the Professional Councils to allow them to recruit such an agent.

It is also necessary to start thinking about how the Councils can exercise their disciplinary roles more decisively in a cultural context that is inimical to the imposition of sanctions. Among the reform paths are:

- Modification of Article 41 of Law 86–35/86-AN-RM about the institution of the National Physician Council, which excludes public servants from the associations' disciplinary power (and therefore puts a hint of bias on disciplinary commission decisions)
- Simplification of the disciplinary procedure, recognizing a defendant's rights.

The Role of the Ombudsman for the Private Sector

Insufficient consensus for implementation has been reached on the proposal to create the office of Ombudsman for the private sector. It should therefore be further examined and discussed along the lines of the following proposals.

Role and Objectives

The role of Ombudsman for the private sector (similar to the Ombudsman of the Republic, created in 1997 in Mali, but with a much smaller field of competence) is to facilitate fair enforcement of the laws in force. In a culture reluctant to impose sanctions, the introduction of an amicable recourse mechanism seems a way of strengthening fair enforcement of guarantees given the private sector. The objective is thus to improve relations between private professionals and the administration by examining instances of misadministration, for instance, misbehaviors and inadequate laws and procedures.

Powers and Attributes

The Ombudsman will seek amicable settlement of disputes between the administration and complainants and propose improvements in laws and procedures. The Ombudsman is not a jurisdictional authority or an inspection corps, although he/she can refer disputes to such entities.

Modes to Refer to the Ombudsman

A small team with its own budget would examine the admissibility of complaints. Health professionals could then take their complaint directly to the Ombudsman (creating regional delegates would be too expensive).

Guarantees of Independence

The Ombudsman will reports to the minister who appoints him/her, on recommendation by the dialogue and consultation committee. The ideal Ombudsman would be a professional respected by both the public and private sectors.

Strengthening Accreditation and Control Mechanisms

In the context of the implementation of compulsory health insurance, use of quality accreditation mechanisms is an important means of persuading public and private providers to improve the quality of their services. The introduction of a payer is a proven, powerful incentive to improve health care quality.

In the areas of national interdepartmental jurisdiction, it is important to reinforce coordination of the quality controls exercised by different ministerial departments over service and product quality. The authority over educational institutions is a particularly good case in point.

Strengthening the Education Policy

Health education is characterized by the ill-controlled proliferation of unqualified and uncertified private providers and by the state's difficulty guaranteeing enough well-trained professionals to meet the system's actual needs. The appointment in 2010 of a human resources director at the Ministry of Health will help the directorate move in this direction, improving the administration's steering capabilities in this area.

Strengthening education policy requires improvement in regulatory capacity by determining the number of personnel trained by public and private schools; preventing the development of an informal market in unqualified health workers; increasing transparency in relations between public authorities and private stakeholders; improving educational quality for physicians, pharmacists, TSSs, and TSs; and making professional education more relevant to the conditions in which graduates will practice (private sector or rural environment). These endeavors should be integrated with efforts to harmonize education policies.

Strengthening the Tools for Regulating Education

Education would benefit from several elements: the control of the size of the trained workforce, the prevention of the development of a parallel market for nongraduates, and the ability for the private sector to self-regulate.

Controlling the Size of the Trained Workforce

To regulate the number of physicians and pharmacists, the FMPOS's numerus clausus will not be enough, if the first private school of medicine opens. A legally binding agreement to limit education capacity should be negotiated with this school and any others that may later open.

For TSSs/TSs, the current examination should be transformed into a competitive examination so that the annual number of paramedical graduates in each specialty can be specified in advance. As discussed above, the state should retain its monopoly over recognition of valid health care diplomas.

As for siting and distribution of educational institutions throughout the country, consideration of school maps and zoning mechanisms should begin.

Preventing the Development of a Parallel Market in Nongraduates

To limit the disparity between the number of people preparing for examinations and the number of graduates (and the potential for a parallel market in health professionals) and to raise the caliber of students in health schools, an entry examination should be instituted and passing it made a condition for acceptance at private or public schools. Requirements for opening private health schools should also be tightened.

The Private Sector's Responsibility in Self-Regulation

To verify that the supply of trained professionals coincides with the market's absorption capacity, the private sector should be responsible for setting the numerus clausus for physicians and pharmacists and for the number of spots opened to TSSs/TSs by competitive examination.

Because private schools compete with the INFSS, they should be associated in the elaboration of the educational policy, in the setting of the requirements for taking the entry examination for health care schools, and in the determination of the number of spots opened in TSS/TS competitive examinations.

Improving Training Quality

The education of physicians, pharmacists, and health technicians should be improved.

Education of Physicians and Pharmacists

The supervisory and welcoming skills of the FMPOS should be increased by involving the private sector in the education of physicians and pharmacists (internships in medicalized CSCOMs and private hospitals, and supervision of students by private physicians. The opening of FMPOS branches outside Bamako[14] should also be encouraged.

Education of TSSs/TSs

Tightening the conditions under which private schools can be opened will help to rid the sector of bad schools. In addition, TSSs/TSs meeting the quality criteria should be supported by a preferential funding mechanism (discussed above).

Education and the New Practicing Conditions of Health Professionals

A reinforcement of initial education modules preparing health care professionals for practice in the private sector and in a rural environment is desirable. Rural internships should be reintroduced in the FMPOS curriculum, and public health modules (e.g., in the form of a public health school project), and management training modules should be developed.

Continuous training should be available during the start-up phase. The Professional Councils should organize training for members who switch to private practice. The program should include

- *Training modules*. Starting up a practice, financing, accounting, taxation, human resource management, information systems
- *Potential financing*. Public funding (FMPOS, Ministry of Health), professional associations, self-financing, donors
- *Potential trainers.* Public (ANPE, etc.) and private operators selected by invitation to tender.

For rural physicians settling in CSCOMs or as family doctors, training upon establishment is also necessary to encourage the success of programs to expand services and trained medical staff. This venture could draw on some of Mali's recent experiences:[15]

- *Training modules*. Rural medicine (clinical practice with limited technical platform, population's habits), public health, management (accounting, taxation, human resources management)
- *Potential trainers.* NGOs and private training institutions selected by invitation to tender
- *Complementary support*. Tutoring, equipment kits.

Fight against the Illegal Pharmaceuticals Market

Reduction of illegal pharmaceutical traffic has to be a political decision:

- Obtain a commitment at the highest state level to overcome resistance to crackdowns and ensure a coordinated and determined push by all public services.
- Target the fight on counterfeit and dangerous pharmaceuticals and present it as such to the public.
- Intensify public awareness on the dangers of counterfeiting and involve in the campaign all public and private stakeholders in the health system.

This effort to repress a widely popular phenomenon would be easier if a concerted effort were made to cut prices. The increased volume resulting from reduction of the illegal drug market would compensate reduced wholesaler and retailer margins. Further discussions with parties involved will be required.

Another method would be to "integrate," in part, the illegal drug market circuits into the official economy. Their competitive retail price advantage is indeed partially linked to their illicit access to smuggled and counterfeit merchandise. Tolerating their business while cracking down on the sale of counterfeit drugs would thus open a new way to respond to the phenomenon. The pharmacies' refusal, firmly expressed, to acknowledge the illegal market in any way led to the deferral of this recommendation for the time being.

Implementation of Quality and Locational Incentives

The private for-profit sector of the pharmaceutical and health care channels, and to a lesser extent education, are concentrated in Bamako. This limits their contribution to public health objectives and has negative consequences for the whole system (low-quality informal activities of young professionals who have difficulties starting up, limitation of the absorption capacity of the market as a whole).

In addition to focusing on ideas about zoning guidelines for physicians or favoring the development of continuous training programs for professionals who are just getting started, mobilization of economic incentive strategies is recommended to rebalance the geographic distribution of the commercial private sector:

- Through professional associations, disseminate knowledge of the tax breaks available to investors under the present tax regime.
- Create a mechanism to give new health professionals access to less-expensive bank funding through a partial guarantee.[16]

- Introduce targeted tax exemptions to provide incentives for professionals settling in the regions, within the framework of the Investment Code or as a complement to it.

Create an Information Center on Tax Breaks for Health Care Professionals

The main tax break mechanism is the Investment Code. The one-stop shop of the Investment Promotion Agency (API) acquaints eligible health professionals[17] with tax breaks under the Investment Code (an investment under CFA F 150 million confers a five-year tax holiday on profits and a three-year exemption on customs duties). However, this mechanism is little known. Therefore, the professional associations should be tasked with informing their members about the tax relief available through an information center dedicated to this mission.

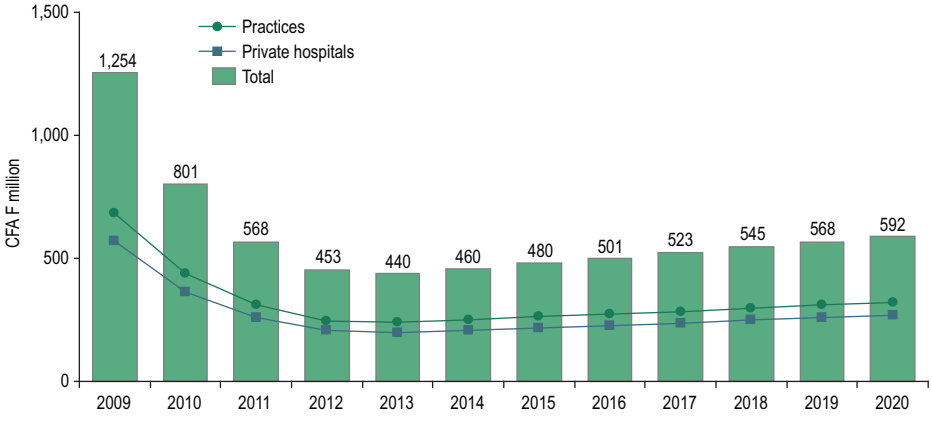
The same center could also inform members of professional associations about the applicable fiscal regime, the refund procedure, and their rights as taxpayers. Relations between health professionals and the tax authority lack transparency.

Introduce a Mechanism for Preferential Access to Bank Funding

In light of the disadvantages the scarcity of bank funding presents to health care professionals, and to support these professionals' practices in the interior of the country, a mechanism should be created to give them preferential access to soft loans from banks. These loans would be characterized as follows:

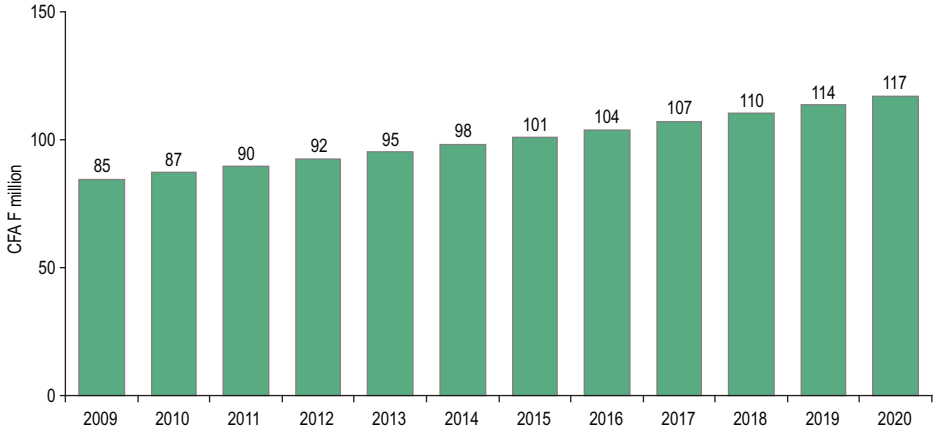
- *Amount of guarantee*. Partial guarantee (50 percent) of a loan portfolio. (CFA F 1 billion represents about 50 percent of funding needs for new practices, private hospitals, and pharmacies in 2010–12 (figures 5.1 and 5.2).
- *Nature of guaranteed loans.* Loans of more than one year to new providers (for the first three years).

Figure 5.1. Estimated Annual Funding Needs to Start New Practices and Private Hospitals



Sources: Interviews; BCG analysis.
Note: Hypotheses: Number of private hospitals and practices calculated without prejudice to the absorption capacity from the estimation of graduated in medicine (+3 percent from 2013) joining the private sector (50 recruitments in public sector/year) and joining private institutions (80 percent); two physicians/practice and five physicians/private hospital—funding need per practice of CFA F 8 million and of CFA F 20 million per private hospital.

Figure 5.2. Estimated Annual Funding Needed to Start New Pharmacies



Sources: Interviews; BCG analysis.
Note: Hypotheses: Annual increase of the pharmacy numerus clausus for urban areas (potential number of pharmacies that can be opened) x average funding need per pharmacy of CFA F 5 million.

- *Beneficiaries*. Practices, private hospitals, and pharmacies establishing in the interior (training schools could also become eligible in the future), maintaining quotas for different types of provider and avoiding favoring the best risks
- *Maximum time for banks to benefit from the guarantee*. The guarantee would be for three years, to encourage banks to behave proactively toward health care professionals.
- *Propose a partnership with the banks in Mali.* (Microfinance institutions might be interested in the smaller loans.)

An alternative solution to lower the cost of credit, which can be accumulated with a guarantee, is to subsidize loans. Other financial strategies, such as stock issues, could also be used.

Target Tax Exemptions for Health Professionals Locating in the Interior

To encourage health professionals to settle in the interior of the country, revise the Investment Code by introducing additional tax breaks for investments by health professionals locating in less-populated areas, extend the duration of tax exemptions, and set geographic eligibility criteria for the whole profession in order to rebalance demography. For pharmacists, either ensure their eligibility under the Investment Code or create a fiscal incentive through another legislative vehicle for establishing pharmacies in less-populated areas.

Bolster Rural Community Health by Consolidating ASACO and CSCOM Strengths

The financial weakness of CSCOMs is often due to inefficiencies in ASACOs' management. This situation is aggravated by a policy of making available personnel who are ill-equipped to deal with the problem of a below-breakeven number of visits to the centers. It is therefore proposed:

- To provide the ASACOs with external support in their management role
- To redirect subsidies toward actual CSCOM needs and according to their specific situation
- To support programs to expand CSCOM services and trained medical staff.

Reinforcing ASACO Management Capabilities

The prerequisite for strengthening ASACO management capabilities is to maintain management authority by ensuring that the support given matches their stated needs. Raising awareness of these needs within state services, local communities, and NGOs is a necessity in that regard.

Continuous training policies should be tailored and intensified to meet the specific needs of ASACO members by making use of the services of external operators (e.g., NGOs) through agreements.

Provision of external support is also proposed for ASACOs that feel they need to strengthen their managerial capacity:

- Managers would be selected by an invitation to apply from a group of ASACOs.
- The delegate would manage the CSCOM on behalf of the ASACO for the contractually specified time period and modalities. The delegate would work with the head of the CSCOM in an advisory capacity regarding strategic decisions.
- The delegate's compensation could be partly indexed on results.
- The managers could be individuals, companies, NGOs, or even community development technicians.
- Potential cobackers are: the ASACOs, the FENASCOM, the state, NGOs, and the PTFs.

Redirection of the Subsidy Policy for CSCOMs

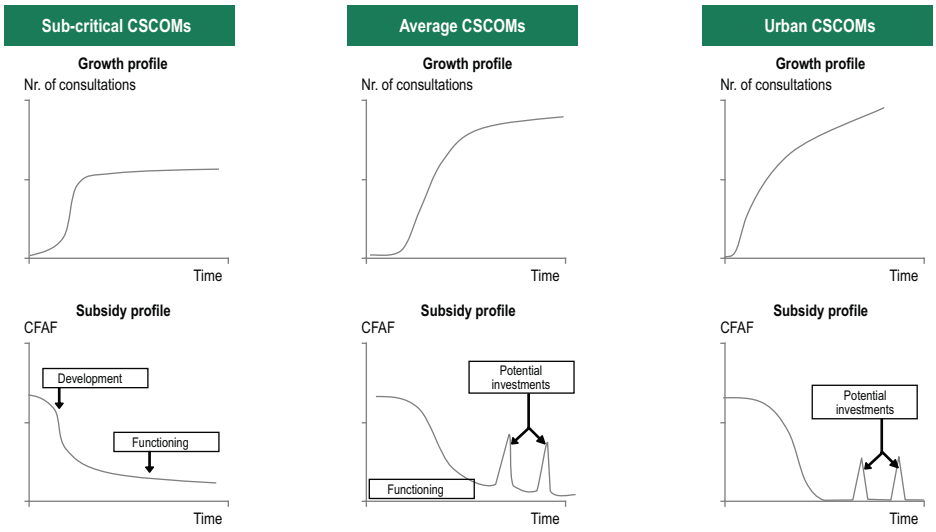
CSCOMs suffer from weak demand (low frequency of visits), but the policy pursued to date focuses on expanding care. To redirect this policy, it is recommended that the state and local authorities:

- Withdraw personnel made available for the CSCOMs if the center's activity does not justify their presence.
- Redirect the support and advice provided to the CSCOMs toward auditing their financial viability and justifying subsidies granted.
- Tailor the support provided the CSCOMs to their specific situations (e.g., subcritical CSCOMs, urban CSCOMs), favoring investment subsidies and moving gradually toward a general decrease in the amount of subsidies provided so that part of those amounts can be redeployed toward the development of private mutual insurance (figure 5.3).

Support for Expansion of CSCOM Services and Trained Medical Staff

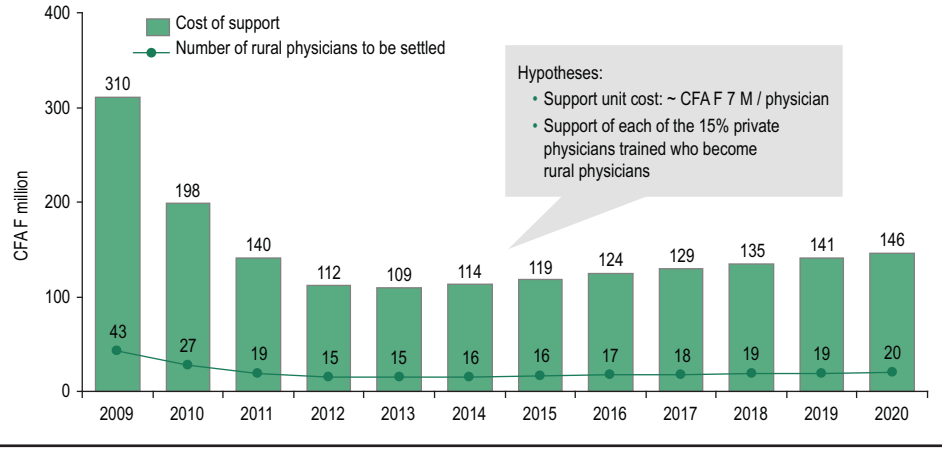
A program should be established to support expansion of services and trained medical staff and to accelerate the settlement of physicians in the CSCOMs. It should be implemented through a tripartite agreement between the state, the FENASCOM, and any interested partner (selected by an invitation to tender). As a ballpark figure, an establishment-support program costs, per physician, about CFA F 7 million (figure 5.4).The potential cobackers are the ASACOs, the FENASCOM, the state, NGOs, and the PTFs.

Figure 5.3. Ideal Growth Profile for Different CSCOM Types



Source: BCG analysis.

Figure 5.4. Estimated Annual Funding to Establish Rural Physicians



Sources: Codija, Jabot, and Dubois 2009; interviews; BCG analysis.
Note: The support includes: the study of the feasibility of the installation, training to CSCOM management for the physician and the members of the management committee, the physician's equipment including the solar panel, the internship with a referent physician, and the contractual negotiation. Estimate of medicine graduate flows (+3 percent by 2013) joining the private sector (50 recruitments in public sector/year) and becoming rural physicians (15 percent).

Rural area programs to expand services and trained medical personnel, especially those to entice physicians to open private practices, should also be encouraged to ensure the consistency of health networks at the local level, especially between for-profit providers and community institutions.

Voluntary Expansion of Private Mutual Insurance

To support experimentation with a voluntary program to deploy private mutual insurance entities quickly, in preparation for scaling up, emphasis should be placed, with the support of the PTFs, on

- UTM activities to which a large part of mutual insurance management activities would be delegated
- Quick creation of new mutual insurance through an intensive social mobilization campaign
- Mutual insurance activities after their start-up (management costs, and so forth).

Test Quick Development of Private Mutual Insurance in One or Two Regions

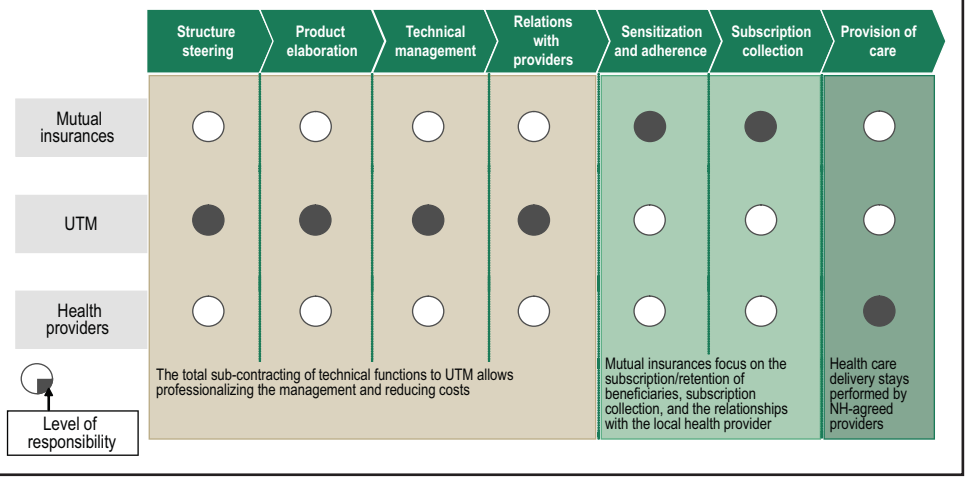
The analyses performed on the mutual insurance deployment model demonstrate the wide impact mutualist coverage can have on the health system.

One of the possible options, which were thoroughly analyzed, is to begin with one or two regions where mutual insurance has a significant established base (e.g., Segou and Sikasso). There, an ambitious test could be conducted, guided by the strategy described in the model. Lessons drawn from two years of experimentation, would allow definition of the modalities of a scale-up adapted to the Malian context. This can be done with support from the UTM, through social mobilization efforts and the creation of private mutual insurance entities, and successful operation of these entities after start-up.

Initial Scale-Up Support from the UTM

Because of its experience and expertise, the UTM is in the best position to run a pilot program for scaling up mutual insurance (figure 5.5). However, its current means are insufficient to support a significant increase in the number of mutual insurance and beneficiaries. Subsidized strengthening of its means (personnel, IS) is therefore recommended. After this initial phase, the UTM will be able to cover its costs through fees paid by the newly created mutual insurance.

Figure 5.5. Private Mutual Insurance to Depend on Task Pooling with the UTM



Source: BCG analysis.

Support for Social Mobilization Activities and Quick Creation of Private Mutual Insurance

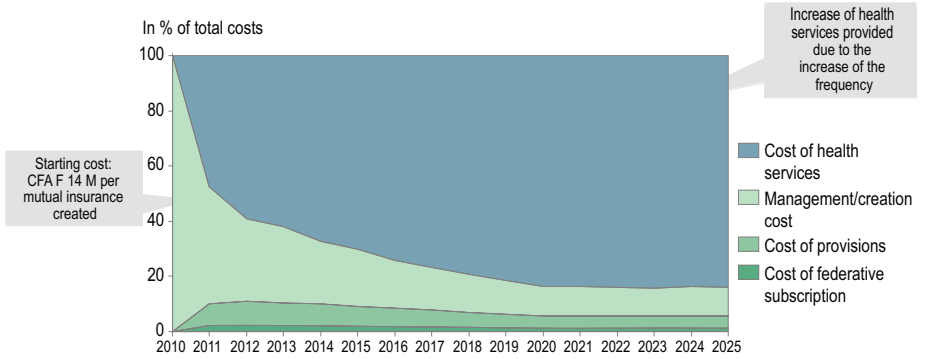
Social mobilization is the first bottleneck in the growth of mutual insurance. This activity requires

- A coordinated effort among the mutualist movement, health care providers, state services, the local authorities, and the ASACOs
- The mobilization of specially trained teams able to deploy quickly at grassroots.

Only an external operator (NGO), selected through an invitation to tender by the UTM and the state, is likely to fill out the insufficient workforce at UTM and within the social development services. The backer should support this initial mobilization effort.

Including the cost of training the mutual insurance manager, a mutual insurance start-up will a cost around CFA F 14 million the first year (figure 5.6).

Figure 5.6. Breakdown of Mutual Insurance Cost Items (percent of total costs)



Source: BCG analysis.
Note: The compulsory model was used here, but the profile of the voluntary model is similar.

Post–Start-Up Support of Private Mutual Insurance

The public authorities and the PTFs can also support mutual insurance activities after start-up by taking care of various adjustment needs. An analysis of existing mutual insurance shows the "best practices" for doing so. Two main types of subsidies are possible (table 5.1):

- *Subsidize the technical balance.* Operation subsidy, complement of subscription/beneficiary, assumption of part of the risks/populations
- *Subsidize management costs.* At federal level, at the level of each mutual insurance, reserve/reinsurance costs.

In selecting from among these possibilities, putting an unsustainable burden on public finances should be avoided, and the autonomy and viability of mutual insurance should be preserved.

Clinical Pathway

In the clinical pathway, the addressable levers are related mostly to medium- and long-term measures to raise awareness and progressively modify cultural habits. People need

Table 5.1. Adjustment Needs of Mutual Insurance over Their Lifecycle

Development stages	Adjustment need at ISO-model	Possible compensation methods
Start-up	CFA F 1.4 billion/year	Subsidize the creation of mutual insurance
Growth	CFA F 4-18 billion/year	Decrease management costs Subsidize some management costs Cover reinsurance expenses Increase premiums Raise copayments Renegotiate provider prices
Maturity	CFA F 3-30 billion/year	Decrease management costs Subsidize some management costs Cover reinsurance expenses Increase premiums Raise copayments Renegotiate provider prices

Source: BCG analysis.

to be made aware of the differences between traditional and conventional medicine (using radio, traditional communication means, and so forth), and enforcement of the prohibition on advertising by traditional practitioners needs to be tightened.

Action at the points of convergence between traditional and conventional sectors is also proposed by

- Training traditional practitioners to make use of conventional health providers
- Training conventional physicians to be able to refer to traditional practitioners.

Finally, it is important to support the structuring of traditional practitioners (capacity to regroup and dialogue as a single actor with partners and regulator), especially by integrating a referent within the DNS in charge of easing the interface between the profession and the authorities, as a complement to the role played by the INRSP in the research field.

6. Operational Proposal for Governance

The elements described below are a rough outline of a governance structure that reflects seminar participants' recommendations concerning the public-private dialogue and consultation committee, the public-private partnerships entity, and the technical adviser for the private sector. The proposals for the creation of a dialogue and consultation committee were not endorsed as such are presented here as suggestions.

Public-Private Dialogue and Consultation Committee

The public-private dialogue and consultation committee will be cochaired by a representative of the state and a representative of the private sector. It will consist of 15 representatives of the private and public sectors:

- Ministry of Health: five members (DNS, DPM, DAF, Inspection, CPS)
- Ministry of Higher Education: one member
- Ministry of Social Development: one member

- Secretariat General of the Government: one member
- Private sector: seven members (the objective is to represent the for-profit and nonprofit private sectors and all the channels: education, care, health insurance, drugs.

The representatives will be appointed for four years. The committee's secretariat will be a technical adviser from the Ministry of Health (e.g., the adviser to the minister for the private sector).

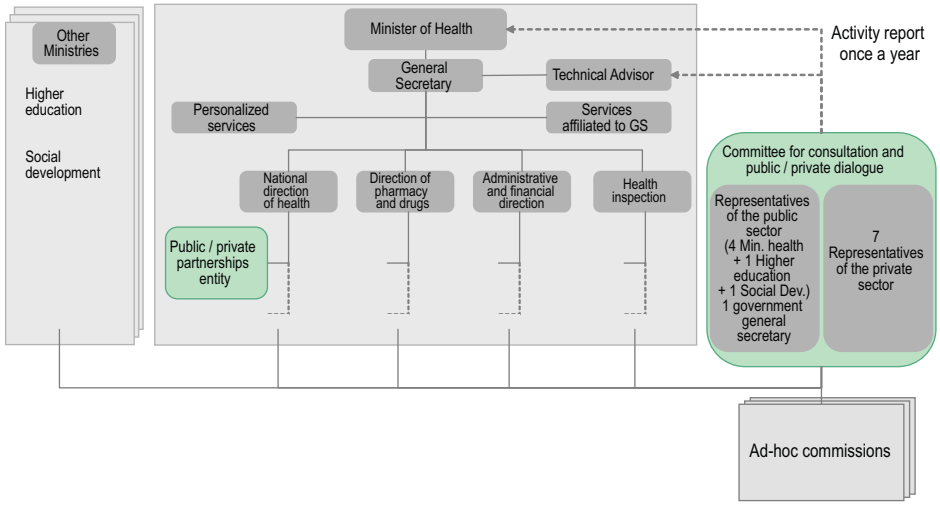
The public-private dialogue and consultation committee will write an annual report on its activities. The report will be sent to the minister and its cabinet members by the technical adviser for the private sector (reporting to the Secretary General)

The public-private dialogue and consultation committee will meet every two months. On occasion, it can be summoned upon request by one third of its members and should meet within 10 days.

The committee's role is to ensure follow-up of the implementation of the action plan resulting from the study of the private sector and to update this document. In addition, it will examine any other topic related to relations between the public and private sectors that members wish to include in the agenda (through the secretariat).

The committee can create thematic, ad hoc commissions and will monitor their work. The thematic commissions should present their conclusions within six months to ensure a short examination cycle. As an illustration, the following commissions have been proposed for the study of key issues in the strengthening public-private partnership (figure 6.1):

Figure 6.1. Proposed Organization of the Public-Private Dialogue and Consultation Committee



Source: Seminar participants recommendations, BCG analysis.
Note: Simplified representation; DRH integration conditioned by its functionalization; Personalized services includes EPA, EPHs, EPICS, EPST, and state companies; services affiliated to the General Secretary include CPS, CEPRIS, CNIECS, PNLP and CADD-MS.

- *Commission for private sector support.* Encompasses (beyond the members of the full committee) the PTFs, the associations, the API, the Ministry of Finance, the Ministry of Economy, representatives from micro-credit and banking institutions. Addresses topics about access to funding and the fiscal regime.
- *Commission for the education of health personnel.* Encompasses (in addition to the members of the full committee) representatives from the Ministry of Higher Education, the Ministry of Health, public and private public health care providers, and training schools. Addresses the following topics: association of the private medical school with the FMPOS numerus clausus, creation of a competitive examination for TSSs/TSs, creation of an entry examination before enrolment in training schools, modalities to associate the private sector with the organization of competitive and noncompetitive examinations, and to the setting of the numerus clausus and the spots open to the competitive examination for TSSs/TSs.
- *Commission for the categorization of health institutions.* Encompasses (beyond the members of the full committee) all the professional associations. Proposes an evolution of the laws about health care institution categories.

Public-Private Partnerships Entity

The Public-Private Partnerships entity, which could be hosted within the DNS Division of Health Equipment and Regulation (DESR), will be in charge of supporting of the formation of partnerships between public and private entities. It will tap its expertise to:

- Propose template contracts to the various parties, according to the desired objectives.
- Define the required means for monitoring those contracts for the public authority.

It will play a key role in the design of PPPs:

- Sharing of equipment and specialties at the health area
- Private sector participation in vaccination activities
- Private sector participation in educational activities
- Support for the expansion of services and trained medical staff of the CSCOMs (state/FENASCOM/NGO agreement)
- Intensification of social mobilization programs around private mutual insurance.

Entrust Questions Related to the Private Sector to a Technical Adviser

It is essential to anchor the questions related to the private sector and the formation of the proposed action plan as close as possible to:

- The point of decision and political impulsion
- The Secretary General's coordination and operational level.

Entrusting a technical adviser of the Minister/Secretary General with following those issues is consequently proposed. That adviser, chosen by the Minister/Secretary General, would run the secretariat of the public-private dialogue and consultation committee.

It is important that all stakeholders, especially those from the private sector who are less familiar with the split roles within the flowchart of the Ministry of Health, can easily identify that technical adviser as their point of contact within the cabinet.

7. Joint Public-Private Action Plan

An action plan was validated by the participants from the private sector and the Ministry of Health at the March 15, 2010, seminar held in Bamako in the presence of HE Oumar Ibrahima Touré, Mali's Minster of Health.

This action plan encompasses the major challenges faced by the Malian health sector analyzed through a systemic approach, and covers the following objectives (table 7.1):

- Strengthening the public-private partnership and dialogue
- Creation and revision of regulations and reinforcement of enforcement mechanisms
- Reinforcement of the education policy
- Fighting against the illegal market in pharmaceuticals
- Offering incentives to improve quality and distribution in the private sector
- Consolidation of rural and community health care
- Voluntary extension of private mutual insurance.

Levers mentioned in that action plan show different levels of technical maturity and political acceptance, which is fully recognized in their status (to be implanted versus to be further discussed).

Among the most prominent orientations set on that occasion, the following ones should be highlighted:

- Creation of a public-private dialogue and consultation committee and, consequently, creation of a structure representing the whole private sector
- Revision of requirements for authorization of training schools and drug wholesalers
- Confirmation of state monopoly on the delivery of health care diplomas
- Encouragement of sharing of public and private school means
- Expansion of training capacities for physicians and pharmacists by associating the private sector
- Creation of specific centers within associations and unions to improve knowledge of tax laws and current tax breaks
- Improvement of access to funding for new professionals through partial guarantee of bank funding and other financial strategies
- Introducing tax incentives targeting establishment in regions within the framework of or complementary to the Investment Code
- Reinforcement of ASACO and CSCOM management capacities through support of continuous training programs and of governance efforts and contribution from an external support
- Initial support to UTM scale-up to accompany extension of coverage
- Support to social mobilization activities and subsidization of quick creation of mutual insurance

Perspectives for Further Investigation

Some strategies have been identified for further complementary discussions:

- Creation of an Ombudsman for the private sector to improve law enforcement and to offer the private sector a nonjurisdictional recourse mechanism in cases of misadministration
- Beginning discussions about zoning rules for physicians in the private commercial sector
- Obtaining a political commitment at the highest level about the fight against the illegal pharmaceutical market in exchange for a devised agreement about accessibility to drugs and health care
- Redirection of current subsidies to satisfy the actual needs of CSCOMs in their particular situations.

Besides the continuation of the restructuring effort initiated by the private sector, the formation of a transitional structure prefiguring the public-private dialogue and consultation committee is a priority for further investigation. This strategy, validated by all the stakeholders, will facilitate or even be a prerequisite for the implementation of numerous other improvement axes.

Finally, from a statistical viewpoint, the available data provide numerous lessons but seem insufficiently exploited. From this viewpoint, it seems particularly appropriate for the Malian authorities:

- To consolidate available demographic data by reconciling the lists of the members of professional associations (inventory of active physicians and pharmacists) and the data from the FMPOS about the flow of graduates since the creation of the Medical University. Once those elements have been reconciled, specifying the number of health care professionals in Mali will be easier. Today, these numbers are estimated almost exclusively from public service data.
- To monitor more precisely the evolution of the CSCOMs, which so far has been estimated mainly through activity volume and the technical platform (on the basis of initial viability criteria). Today, the Bilan C files from the CSREFs are evidently underexploited by the Ministry of Health and the FENASCOM. After substantial cleaning and partial revision of the architecture, those files are a good basis for analysis and monitoring of a differentiated policy to support the CSCOMs. Such a policy would allow separation of the CSCOMs by their basic characteristics (catchment area, etc.) and their financial situation.

There are also some statistical blank areas. Generally, data about the private sector are few, due especially to private stakeholders' reluctance to give the authorities information. Information on the education sector is especially thin. The operation of the DRH should close that gap.

Table 7.1. Joint Public-Private Action Plan

Item	Activities	Actions	Pilot	Validation	Deadlines
Strengthening the public-private partnership and dialogue					
1	Create a public-private dialogue and consultation committee	• Law creating the public-private dialogue and consultation committee • Appointment of administration and private sector representatives	CPS and private sector	Initiate implementation	September 2010
2	Create a transition structure prefiguring the dialogue committee	• Joint definition of the modus operandi of the dialogue committee • Appointment of temporary representatives by the private sector and the administration	CPS and private sector	Initiate implementation	March–September 2010
3	Improve integration of the commercial private sector into the PRODESS	• Revision of Decree 01–115, setting the composition of PRODESS monitoring entities	SG of the Ministry of Health	Initiate implementation	Second semester, 2010
4	Create a structure representing the whole private sector	• Finalization of discussions within the private sector about its efficient structuring and vote on the statutes of the recognized structure • Estimate of the required means (human and financial), especially for communication between its components in Bamako and in the regions • Financing	Private sector	Initiate implementation	June 2010
5	Define national policy to reinforce public-private partnership	• Initiation of discussions within the dialogue committee and its prefiguration structure about a political document project	SG of the Ministry of Health	Initiate implementation	First semester, 2011
Reinforcement of the partnership and dialogue between the public and private sectors (continued)					
6	Implement public-private partnerships: reinforce the DESR (DNS) and create a section dedicated to the PPP	• Reorganization of the DESR to bring it closer to the private sector	DESR (DNS)	Initiate implementation	
7	Implement public-private partnerships: Create template PPP agreements Sharing of equipment and specialties in a given territory Participation in educational activities Participation in examinations and labs Participation in vaccination activities	• Preparation of template contracts • Adoption of the regulations possibly required	DESR (DNS)	Initiate implementation	

Table 7.1 (continued)

Item	Activities	Actions	Pilot	Validation	Deadlines
Creation or revision of regulations and reinforcement of enforcement mechanisms					
8	Revise requirements for authorization of training schools	• Modification of the laws and introduction of transition period • Reinforcement of coordination mechanisms between the ministries of health and education	Ministry of Health and Ministry of Education	Initiate implementation	First quarter, 2011
9	Revise requirements for authorization of drug wholesalers	• Modification of the laws and introduction of transition period	DPM and IS	Initiate implementation	March–September 2010
10	Consider strengthening AMO accreditation and quality	• Joint setting of quality criteria to be followed by public-private institutions agreed to by the AMO	DNPSS, DNS	Initiate implementation	March 2010–June 2011
11	Strengthen self-regulation capacities of professional associations	• Revision of the laws regulating sanction powers of associations and internal regulations • Identification of means required to reinforce the association's administrative and communication means • Financing	Professional Councils	Initiate implementation	September 2010
12	Create an Ombudsman for the private sector	• Discussion to be continued in the framework of dialogue committee	SG of the Ministry of Health	Discussion to be continued	First quarter, 2011
Reinforcement of the education policy					
13	Strengthen strategies to set quotas for trained workforce and reflection about zoning	• Preparation of an agreement associating the private medical school with the numerus clausus and initiation of negotiations • Initiation of reflection on creation of competitive examinations for state TSSs/TSs • Initiation of reflection on creation of an entry examination for enrolment in training schools	Ministry of Health, Ministry of Education, and INFSS	Discussions to be continued on ways and means	6 to 12 months
14	Confirm state monopoly on the delivery of health diplomas	• Modification of Article 17, Law 94–032 about the status of private education	DRH Ministry of Health and Ministry of Education	Initiate implementation	6 to 12 months
15	Encourage sharing of private and public school means	• Definition of needs and available resources • Preparation of a template sharing agreement	Association of private schools	Initiate implementation	6 to 12 months
16	Expand training capacities for physicians and pharmacists by associating the private sector	• Definition of the contribution the private sector could give • Preparation of a template agreement	Ministry of Health and Ministry of Education	Initiate the implementation	6 to 12 months
17	Ascertain adequacy of training for new practice conditions of health care professionals	• Listing of precise needs of health professionals • Evolution of FMPOS educational programs • Definition of objectives and identification of support needed by the associations to organize continuous training • Identification and search for required funding	DRH Ministry of Health	Initiate implementation	6 to 12 months

Table 7.1 (continued)

Item	Activities	Actions	Pilot	Validation	Deadlines
Fight against illegal market in pharmaceuticals					
18	Obtain a political commitment at the highest level in exchange for a negotiated agreement about the accessibility to drugs and health care	• Explaining the issue at the levels of Prime Minister and Presidency of the Republic	SG of the Ministry of Health	Discussion to be continued	12 to 24 months
19	Intensify awareness campaigns about the danger of counterfeiting, and associate all heath care public and private players	• Evaluation of the efficiency of previous campaigns • Association of the whole profession to the definition of a new campaign	CNIECS	Initiate the implementation	12 to 24 months
Incentives to improve quality and distribution in the private sector					
20	Create a specific center within associations and unions to improve knowledge of tax laws and current tax breaks	• Identification of a resource person within each association and union • Preparation of information documents	Association/ Union (to be determined)	Initiate implementation	12 to 24 months
21	Improve access to funding for new professionals Partial guarantee of bank funding Other financial strategies (participations, etc.)	• Detailed analysis of needs and modalities of considered mechanisms • Initiation of discussions with banking institutions • Implementation	Association and professional union	Initiate implementation	12 to 24 months
22	Introduce tax incentives targeting establishment in regions within the framework of or complementary to the Investment Code	• Analysis of existing mechanisms and the eligibility of the different health channels • Preparation of laws revising the Investment Code or of ad hoc laws for ineligible health channels	DNS and API	Initiate the implementation	6 to 12 months
23	Begin discussions about zoning rules for private physicians	• Continuation of analyses of demographic trends and absorption capacities • Exploration of possible zoning mechanisms	Association	Discussion to be continued	6 to 12 months
Consolidation of rural and community health care					
24	Reinforce ASACO and CSCOM management capacities Support of continuous training programs and of governance efforts Contribution from an external support	• Definition of the objectives and identification of support needs for the ASACOs • Identification and search for required funding • Preparation and launch of the invitation to tender • Planning and deployment	FENASCOM	Initiate implementation	6 to 12 months

Table 7.1 (continued)

Item	Activities	Actions	Pilot	Validation	Deadlines
Consolidation of rural and community health care (continued)					
25	Redirect subsidies toward actual needs of CSCOMs and according to their specific situations Progressively withdraw personnel whose presence is not justified by CSCOM level of activity Redirect the state support and advice toward the audit of financial sustainability Tailor support to CSCOMs according to their specific situations	• Preparation of an assessment of subsidies granted in each health care area • Preparation of best practices for state, local authorities, and NGOs • Redeployment of the personnel available	Ministry of Health and MATCL	Discussion to be continued	12 months
26	Develop medical care in rural areas Estimate of impact and sustainability of support programs to rural health care networks and the medicalization of CSCOMs	• Definition of the objectives and identification of support needs • Identification and search for required funding • Preparation and launch of the invitation to tender • Planning and deployment	AMC/Santé Sud and FENASCOM	Initiate implementation	6 to 12 months
Voluntary extension of private mutual insurance					
27	Give initial support to UTM scale-up to accompany extension of coverage	• Definition of the objectives and identification of support needs • Identification and search for required funding	SG of the Ministry of Social Development	Initiate implementation	12 to 24 months
28	Support social mobilization activities and subsidization of quick creation of mutual insurance	• Definition of the objectives and identification of support needs • Identification and search for required funding • Preparation and launch of the invitation to tender • Training of social mobilization teams • Planning and deployment	SG of the Ministry of Social Development	Initiate the implementation	12 to 24 months
29	Study, based on existing mutual insurance entities, the best means to supporting new mutual insurance	• Analysis of lessons to be drawn from existing private mutual insurance • Definition of the objectives and identification of support needs (e.g., technical balance, management)	SG of the Ministry of Social Development	Initiate implementation	3 to 6 months

Source: Seminar, BCG, March 15, 2010.
Note: This plan was validated at the March 15, 2010, seminar in Bamako by the private sector participants and the Ministry of Health.

Notes

1. Administrative division grouping in principle 5,000 to 10,000 inhabitants within a 15-km radius.
2. Analysis of main components is based on the survey of populations' health care behavior and on the averages obtained by each provider for each criterion (excluding the itinerant healers, projected on components 1 and 3).
3. CFA F 300,000 for foreign students (source: interviews with FMPOS deanship).
4. State midwives, state nurses, pharmacy laboratory technicians, decontamination technicians.
5. Obstetrician nurses, public health technicians, laboratory and pharmacy technicians.
6. In other words, one consultation per illness episode with a hypothesis of a 120 percent mortality rate.
7. This rate is likely understated in the survey results.
8. The creation of a Professional Council of Nurses and a Professional Council of Surgeons is being studied.
9. Representing the profession more than players in the private sector.
10. Despite this free-price regime, wholesalers and retailers set their margins by consensus.
11. Estimates based on data collected from a panel of public and private health care professionals.
12. Consultation rate of mutual insurance beneficiaries in Ghana (2006) is four times higher than average. In Rwanda, mutual beneficiaries had access to conventional health care services at a rate twice as high as nonbeneficiaries (2005).
13. Analysis in main components about the evaluation dimensions of the various providers.
14. This will indirectly help to improve the qualifications of personnel in the regions.
15. Santé Sud NGO in partnership with the Association of Rural Physicians.
16. Initial discussions on this topic took place with Bank of Africa, which expressed its interest in principle in participating in a mechanism of this type.
17. The eligibility of pharmacists is questionable because they can be compared with shopkeepers.

Appendixes

Appendix A. Methodology and Main Findings

Primary Data and Modeling

Pre-existing primary data collected during the project are of four types:

- *Demographic data*. Number of medical school graduates since its creation, council directories, Ministry of Health data on distribution of its workforce by profession
- *Data related to community health centers (CSCOMs)*. "Bilan C" files consolidated by the Health Planning and Statistics Unit (CPS) and filled in by the(Reference Health Center (CSREF) 2nd level) based on a survey of community health associations (ASACOs)
- *Data related to private mutual insurance*. Key figures on the mutual insurance movement established by the Ministry of Social Development and data from the Technical Union of the Malian Mutual Insurance System (UTM) on the benefits package proposed within the framework of its voluntary health insurance (AMV).
- *Macroeconomic studies.* Health demographic studies and national health accounts

The quality of those data varies. All the databases were cleaned and consolidated:

- *Demographic data*. There is little data about the total number of physicians (and other health professionals) practicing in Mali, and blanks on the private sector are especially large. Professional association directories are incomplete and do not provide a clear picture of their geographic distribution. The method selected involved reconstituting the data about the number of active private physicians and pharmacists educated at the Medical Faculty and projecting their distribution throughout the country on the basis of hypotheses derived from the public provider distribution. Those data allow an estimate of the number of private health providers in the different regions, starting from hypotheses on the average number of professionals working in private practices and hospitals. The robustness of those elements was then tested through observations in the field and interviews with professionals.
- *Data on CSCOMs*. The methodology used is based largely on the financial modeling of an average CSCOM and the simulation of the macroeconomic effects of policies supporting those providers, in particular contact rates. Data stemming from Bilan C files were cleaned (incomplete files and files with evident computing mistakes or discrepancies were eliminated). These data were consolidated into a base encompassing all the elements directly useful for building a model. A typical CSCOM profile was deduced from that database (amount of subsidies received, active personnel, contact rates, and so on), as well as a typology of the various types of CSCOM. Those elements, especially the financial ones, were compared with the actual profit-and-loss accounts of a sample of CSCOMs—especially to determine the average revenues and costs of a CSCOM. These data were refined during field visits. Correlation calculations were also made on that basis to determine the link between registered financial and health results and

the different types of support provided (impact of the expansion of services and trained medical staff, the provision of unqualified personnel, and so on).

- *Data on private mutual insurance*. Data on the mutual insurance movement as a whole from the Ministry of Social Development are relatively robust and were not subject to specific reprocessing work. Construction of the development model of rural mutual insurance used, as a microeconomic base, the voluntary health insurance (AMV) product proposed by the UTM (but with slight revisions in the benefits package and a slight decrease in the cost of the insurance to meet the rural clients' expectations). Previous UTM estimates of start-up and operating costs for rural mutual insurance allowed the financial balance of such a product to be modeled during its expansion phase. Data also existed on the impact of enrolment in a mutual insurance on beneficiaries' health-seeking behavior (contact rate).
- *Macroeconomic studies*. Because available studies used different methodologies, significant consolidation was necessary to reconcile the bulk of health funding in Mali. Those data were triangulated with the estimated turnover of private and public health providers, starting with contact rates by provider (data available for part of the public providers and reconstituted from the average number of consultations per day for private providers) and the average price of various services. In the special case of medicines, total revenue was calculated from data provided by the main wholesalers and the margins applied along the whole value chain. The gap between pharmacies' revenues and estimated expenditures on medicines allowed the volume of the illegal drug market to be estimated.

Opinion Survey: Malians' Health Behavior

To fill in blanks in the available documentation, BCG commissioned an opinion survey, conducted by the RESADE research firm. This survey included 1,050 households. It was made up of a sample composed of three regional capitals and the Bamako District, eight areas, and 40 towns. (see appendix E for technical details).

The objective was

- To measure Malians' clinical pathway as a way of better understanding refusal to receive health care, the amount of time before soliciting health care services, and the respective roles of traditional medicine and public and private providers.
- To understand who, in Malian households and along this path, decides to use, and pay for, health care.
- To measure the cost and the waiting time for each provider.
- To evaluate criteria used in the choice of one provider over another: trust, proximity, cost, and expertise.
- To rank different providers according to patients' evaluation of the services: efficiency, distance, price, medicine availability, competence, quality of welcome and listening, cleanliness, and equipment quality.

This study concluded:

- The rate seeking "external support" is 42 percent (41 percent consulting conventional providers, a hypothetical 1 percent consulting traditional practitioners).
- The rate of forgoing health care is 63 percent.

- The rate of self-medication is 15 percent (8 percent choosing traditional herbs, 7 percent choosing modern medicines).
- In 90 percent of the cases, the decision to seek health care is made by the head of the family or a member of the family.
- The most important criteria for choosing the provider are efficiency of recovery, competence of the personnel, and their quality of welcoming and listening. On all criteria assessed, CSCOMs and CSREFs are the best-valued providers.

Several other elements highlighted by this survey are included in the body of this report.

Additional Elements on Data and Sources

This report differentiates two types of observations about the current situation:

- The objective elements of diagnosis (based on facts and quantified);
- The subjective feelings and impressions expressed. When those feelings direct behavior, they have, or can have, an important impact on the health system.

The methods for compiling the objective data used by BCG were validated by the steering committee during different meetings. Depending on the case, the methods included:

- Gathering primary data (for example, opinion survey about clinical pathways)
- Exploiting existing or recomposed databases (for example, analyses done on CSCOMs)
- Constructing economic models from hypotheses validated with the participants and against existing factual elements (for example, scenarios constructed about CSCOMs and mutual insurance)
- Collecting (in the absence of other methods) data from a panel of health professionals (for example, average time to obtain an agreement/license)

The findings summarized in this report were shared in Bamako with more than 60 stakeholders during seminars on August 13–14, 2009; October 26–28, 2009; and March 15, 2010; at regular meetings of the project steering committee and at the meeting of the extended cabinet on November 16, 2009.

In addition to those official meetings, during the project the BCG team had numerous informal interactions (more than 100 interviews) with the players in the Malian health system.

Methodology and Main Results of the Analytical Work

During the project different methodologies were used to collect, complement, check and analyze data as well model different solutions. They are described below.

Contact Rate by Health Provider

The contact rates for public providers are available at the CPS. To calculate those data for the private sector, the method selected consisted of evaluating the number of patient-visits to a practice or a private hospital every day and multiplying that number by the estimated number of private practices/hospitals (table A.1).

Table A.1 Contact Rate per Health Care Provider

Health structure	Contact rate	Number of contacts (M)
CSCOM contact rate[a]	0.23	3.0
Public structures contact rate	0.08	1.1
CSREF contact rate[b]	*0.03*	*0.4*
EPH contact rate[c]	*0.05*	*0.7*
Private commercial structure contact rate	0.10	1.4
Practice contact rate [d]	*0.07*	*0.9*
Private hospital contact rate [d]	*0.04*	*0.5*

Sources:
a. Bilan C database.
b. SLIS.
c. Hospital statistical directory.
d. Hypothesis of average visits in practices (10 patients/day) and private hospitals (20 patients/day) and hypotheses on the number of practices (250) and private hospitals (70).

Estimation of the Distribution of Physicians and Private Providers by Region

In the absence of data, the estimated distribution of private physicians (table A.2) is based on the hypothesis (validated by the various stakeholders) that 70 percent of all private physicians practice in Bamako, and that the others are distributed in the same pattern as public sector physicians.

Table A.2 Estimated Distribution of Private Providers, by Region

Region	Indicative number of practices	Indicative number of private hospitals	% of split
Kayes	10	2	13.74%[a]
Koulikoro	9	2	13.31%[a]
Sikasso	16	4	21.95%[a]
Segou	15	4	21.10%[a]
Mopti	11	3	15.30%[a]
Timbuktu	4	1	5.38%[a]
Gao	5	1	7.08%[a]
Kidal	1	0	2.12%[a]
Bamako District	175	49	70.0%[b]
Total except Bamako	75	21	30.0%[b]
Total Mali	250	70	

Source: BCG analysis.
Note: Hypotheses: Seventy percent of private structures (250 practices and 70 private hospitals) in Bamako - The split in the hinterland, except Bamako, is realized applying the same split key than for public physicians (and private, by extension) from data from HR service in the Ministry of Health - a. Percentage of structures outside Bamako b. Percentage of structures in the whole Mali.

Average Expenditures at Private Practices and Hospitals

The calculation of patients' average expenditures at private practices/hospitals is based on the calculation of an average expenditure per urban inhabitant (and thus on the hypothesis that only urban dwellers go to those institutions). It assumes the total annual turnover of private practices and hospitals (number of patients per year multiplied by their average expenditure multiplied by the number of providers). This average expenditure per urban inhabitant is then weighted by a coefficient determined by the poverty level in the region (table A.3).

Table A.3. Average Expenditures in Private Practices and Hospitals

Region	Average expenditures in private practices (CFA F per urban inhab.)	Average expenditure in private hospitals (CFA F per urban inhab.)
Kayes	1,590	1,818
Koulikoro	994	1,136
Sikasso	994	1,136
Segou	994	1,136
Mopti	994	1,136
Timbuktu	1,590	1,818
Gao	1,590	1,818
Kidal	1,590	1,818
Bamako District	2,584	2,954
Total except Bamako	1,292	1,477
Total Mali	1,988	2,272

Source: BCG analysis.
Note: Hypotheses: Determination of a national average expenditure per urban inhabitant (supposing only urban people go to private providers) from the "Total turnover of practices-private hospitals/urban population" ratio. A coefficient is then applied to this average expenditure of an urban person according to the poverty area (0.6 in area 1, 0.8 in area 2, 1.3 in area 3)

Estimated Breakevens for Private Practices and Hospitals

To calculate market absorption capacity at a constant rate of expenditure, first, the number of private providers capable of reaching breakeven has to be calculated (i.e., the number reaching an activity level that allows them to cover their costs). In the selected hypotheses, the breakeven of private practices and hospitals is higher in Bamako than in the regions.

The number of urban dwellers multiplied by their average expenditure determines the potential turnover of private practices and hospitals. This allows calculation of the number of providers the market can bear at constant expenditure and the number of additional providers that can reach breakeven (table A.4).

Table A.4. Estimated Number of Additional Private Practices and Hospitals that Can Reach Breakeven

Region	Private practice breakeven (M)	Private hospital breakeven (M)	Max. number of practices	Max. number of private hospitals	Current number of private practices	Current number of private hospitals	Potential number of additional private practices	Potential number of additional private hospitals
Kayes	12	60	45	10	10	2	35	8
Koulikoro	12	60	28	6	9	2	19	4
Sikasso	12	60	43	10	16	4	27	6
Segou	12	60	33	7	15	4	18	3
Mopti	12	60	22	5	11	3	11	2
Timbuktu	12	60	17	4	4	1	13	3
Gao	12	60	24	5	5	1	19	4
Kidal	12	60	2	1	1	0	1	1
Bamako District	18	80	194	50	175	49	19	1
Total except Bamako	12	60	212	49	75	21	137	28
Total Mali	16.2	74	407	98	250	70	157	28

Source: BCG analysis.
Note: Breakeven for private practices of CFA F 12M in the regions and 18M in Bamako; breakeven for private hospitals of CFA F 60M in the regions and 80M in Bamako District.

Projected Growth in the Number of Private and Public Physicians

Demographic projections were based on the number of medical school graduates, adjusted by assumptions about mortality and rates of departure and return from abroad. Public/private distribution estimates in table A.5 were based on estimated public sector recruitments.

Table A.5. Projected Growth in the Number of Private and Public Physicians

Year	Flow of private physicians	Stock of private physicians	Stock of public physicians	% of private physicians	% of public physicians
2008	307	1,150	1,233	48.3%	51.7%
2009	285	1,395	1,276	52.2%	47.8%
2010	182	1,533	1,314	53.9%	46.1%
2011	129	1,623	1,349	54.6%	45.4%
2012	103	1,690	1,381	55.0%	45.0%
2013	100	1,749	1,411	55.4%	44.6%
2014	105	1,811	1,440	55.7%	44.3%
2015	109	1,897	1,480	56.2%	43.8%
2016	114	1,964	1,509	56.5%	43.5%
2017	119	2,045	1,543	57.0%	43.0%
2018	124	2,131	1,578	57.5%	42.5%
2019	129	2,209	1,608	57.9%	42.1%
2020	134	2,277	1,634	58.2%	41.8%

Source: BCG analysis
Note: Hypotheses: Projections of the total number of graduates up to 2014 from the number of students in the first year and from the numerus clausus in 2008, then beyond 2014 by increasing the education flow by 3 percent each year. Calculation of the flow of physicians joining the private sectors starting from the hypothesis of 50 recruits per year in the public sector. Stock of active physicians calculated from education flows with the hypothesis of a 30-year activity period and an annual mortality rate of 1 percent—hypotheses of 5 percent of foreign graduated physicians, of which 75 percent leave Mali.

Estimated Number of New Private Practices and Hospitals Enabled by Settlement of Young Physicians

The projected number of private practices and hospitals that will open in the coming years (table A.5) can be calculated from estimated education flows and assumptions about the public/private, hospital/practice distribution of those future young graduates. It is also assumed that the hospital/practice distribution will continue to follow known patterns (usually two physicians per practice and five per hospital). Table A.6 shows the funding needs of these new medical establishments.

Table A.6. Estimated Number of New Private Practices and Hospitals Enabled by Settlement of Young Physicians

Year	Flow of physicians opening their own practice	Number of practices that can be opened	Number of private hospitals that can be opened
2008	246	92	31
2009	228	86	29
2010	146	55	18
2011	103	39	13
2012	82	31	10
2013	80	30	10
2014	84	31	10
2015	87	33	11
2016	91	34	11
2017	95	36	12
2018	99	37	12
2019	103	39	13
2020	108	40	13

Source: BCG analysis.
Note: Hypotheses: Flow of physicians opening their own practice = 80 percent of the total flow of physicians joining the private sector. Number of practices that can be opened = 75 percent of the flows of physicians opening their own practice and two physicians per practice. Number of private hospitals that can be opened = 25 percent of the flows of physicians opening their own practice and five physicians per private hospital

Funding Needs of New Private Practices and Hospitals Enabled by Settlement of Young Physicians

Table A.7. Funding Needs of New Private Practices/Hospitals Enabled by Settlement of Young Physicians

Year	Practice funding needs (M)	Private hospital funding needs (M)	Total funding needs (M)
2008	737	614	1,351
2009	684	570	1,254
2010	437	364	801
2011	310	258	568
2012	247	206	453
2013	240	200	440
2014	251	209	460
2015	262	218	480
2016	273	228	501
2017	285	238	523
2018	297	248	545
2019	310	258	568
2020	323	269	592

Source: BCG analysis.
Note: Hypothesis: Funding need for settlement of CFA F 8M per practice and CFA F 20M per private hospital.

Funding Rural Physicians

Table A.8. Funding Needs Associated with Support of Rural Physicians

Year	Flow of physicians becoming rural physicians	Rural physicians education need (M)
2008	46	334
2009	43	310
2010	27	198
2011	19	140
2012	15	112
2013	15	109
2014	16	114
2015	16	119
2016	17	124
2017	18	129
2018	19	135
2019	19	141
2020	20	146

Source: Santé Sud.
Note: Hypotheses: Fifteen percent of physicians join the private sector and becoming rural physicians, average amount of the settlement of a rural physician CFA F 7 260 000.

Mutual Insurance Deployment in the Compulsory Subscription Model

The hypotheses summarized in table A.9 were constructed starting from the voluntary health insurance managed by the UTM and its members.

Table A.9. Hypotheses for Modeling Mutual Insurance Deployment under Compulsory Subscription

Hypotheses	Value	Comments
Number of mutual insurances created per year	100	
Potential population pool (social mobilization scale)	14,000	
Potential growth rate of the pool	3%	
1st year penetration rate	50%	→ 35% in the voluntary model
Annual growth of penetration rate	20%	→ Maximum rate of 90% (80% in the voluntary model)
Number of beneficiaries per subscriber	3	
Price of monthly subscription per beneficiary	300 F	
Rate of CSCOM contact per non-beneficiary population	23.0%	
Growth of CSCOM contact rate per non-beneficiary population	2.0%	
CSCOM consultation rate among beneficiaries	50%	
Growth of CSCOM consultation rate among beneficiaries	15%	
Actual cost of CSCOM consultation	2,250	
CSCOM reimbursement rate	99%	
CSREF consultation rate among beneficiaries	3%	
Growth of CSREF consultation rate among beneficiaries	5%	
Actual cost of CSREF consultation	2,049	→ Amount outside hospitalization
CSREF reimbursement rate	75%	
Rate of pharmacy visits among beneficiaries	2%	
Growth of pharmacy consultation rate among beneficiaries	2%	
Actual cost of pharmacy visits	3,300	
Pharmacy reimbursement rate	75%	
Rate of hospital consultation among beneficiaries	1%	
Growth of hospital consultation rate among beneficiaries	5%	
Actual cost of hospital consultation	29,383	
Hospital reimbursement rate	75%	→ Reimbursement of hospitalization in a hospital only
Rate of private practice/priv. hospital consultation among beneficiaries	10%	
Growth of private practice/private hospital consultation rate	5%	
Actual cost of private practice/private hospital consultation	10,250	
Private practice/private hospital reimbursement rate	0%	
Federative membership rate	2%	→ Role of simple advocate/representative without centralization of management function
Provisions and reinsurance rates	7%	

Source: BCG analysis.

Table A.10. Results of Compulsory Subscription Model

Year	Cumulated number of effective mutual insurances	Additional number of persons covered (M)	Total number of persons covered (M)	% of coverage	Total financial result (M)	Technical balance (M)	Total management-creation costs (M)	Total cost of federative subscription (M)	Total cost of provisions (M)	Contact rate of CSCOM & CSREF (total pop.) with dev. of mutual ins.	Contact rate of CSCOM & CSREF (total pop.) in constant scenario
2010	0	0.0	0.3	2.15%	-1,437.0	0.0	1,437.0	0.0	0.0	26.58%	26.58%
2011	100	0.7	1.0	7.17%	-1,289.9	1,392.2	2,442.7	50.4	189.0	28.97%	27.36%
2012	200	1.6	1.9	13.06%	836.4	2,933.8	3,234.9	112.7	422.6	32.58%	28.25%
2013	300	2.6	3.0	19.97%	532.6	4,586.2	4,217.7	189.7	711.3	37.96%	29.29%
2014	400	4.0	4.3	28.14%	337.2	6,270.8	5,255.0	284.9	1,068.2	45.86%	30.51%
2015	500	5.5	5.9	37.43%	573.3	7,791.5	6,472.8	398.3	1,493.7	57.04%	31.97%
2016	600	7.2	7.5	46.45%	-1,269.9	8,783.2	7,606.0	515.2	1,931.8	71.27%	33.77%
2017	700	8.8	9.2	55.21%	-1,201.2	9,126.8	7,309.3	635.5	2,383.2	89.14%	36.00%
2018	700	9.8	10.2	59.63%	-3,530.1	7,289.2	7,451.0	709.1	2,659.1	106.14%	38.80%
2019	700	10.8	11.1	63.10%	-7,147.2	4,345.5	7,813.8	774.5	2,904.3	125.39%	42.36%
2020	700	11.5	11.9	65.49%	- 11,703.3	228.3	7,993.7	829.0	3,108.8	145.12%	46.74%
2021	700	12.1	12.5	66.64%	- 16,294.7	-4,038.4	8,127.1	869.3	3,259.9	147.48%	49.59%
2022	700	12.4	12.9	66.64%	- 20,606.2	-8,265.1	8,088.0	895.4	3,357.7	147.86%	52.78%
2023	700	12.8	13.2	66.64%	- 24,616.8	- 12,094.1	8,142.0	922.3	3,458.5	148.26%	56.36%
2024	700	13.2	13.6	66.64%	- 28,270.9	- 15,414.6	8,344.0	949.9	3,562.2	148.68%	60.38%
2025	700	13.6	14.0	66.64%	- 31,289.3	- 18,094.0	8,547.8	978.4	3,669.1	149.10%	64.91%

Source: BCG analysis.
Note: Total number of persons covered: existing base + new beneficiaries.

Hypotheses for Modeling a Typical CSCOM

Table A.11. Hypotheses for Modeling a Typical CSCOM

Hypotheses	
Population base	13,000
Curative consultation rate	23%
Annual growth rate of curative consultation rate	3%
Personnel productivity	500 consult./year
Number of personnel subsidized	2
Average consultation price	1,000 CFA F
Drug margin	15%
Prescription average price	1,200 CFA F
Subsidy revenues	0 CFA F
Labor cost per personnel	800,000 CFA F/yr
Cost of consumables per consultation	150 CFA F
Fixed costs	1,400,000 CFA F

Source: BCG analysis.
Note: Established from the database gathering information contained in Bilan C files.

Results of the Modeling of a Typical CSCOM

Table A.12. Results of Typical CSCOM Model

Synthesis	2009	2010	2011	2012	2013	2014	2015
Consultation revenues (M)	3.0	3.2	3.4	3.6	3.9	4.1	4.3
Drug revenues (M)	3.2	3.4	3.6	3.9	4.1	4.3	4.6
Subsidy revenues (M)	0.0	0.0	0.0	00	0.0	0.0	00
Total revenues (M)	6.3	6.7	7.0	7.4	8.0	8.4	9.0
Number of personnel	6.0	6.0	7.0	7.0	8.0	8.0	9.0
Labor costs (M)	3.2	3.2	4.0	4.0	4.8	4.8	5.6
Fixed costs (M)	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Variable costs (M)	0.6	0.7	0.7	0.7	0.8	0.8	0.9
Drug costs (M)	2.8	2.9	3.1	3.3	3.5	3.7	3.9
Total costs (M)	8.0	8.1	9.2	9.4	10.5	10.7	11.8
Functioning total (M)	-2.2	-2.0	-2.7	-2.5	-3.1	-2.9	-3.6
Drug total (M)	0.5	0.5	0.5	0.6	0.6	0.7	0.7
Total (M)	-1.7	-1.5	-2.1	-1.9	-2.6	-2.3	-2.9

Source: BCG analysis.

Turnover of the Pharmacy Channel

Table A.13. Breakdown of Pharmacy Turnover, 2008

Turnover	Laborex	Copharma	Africalab and Camed	Asians	PPM
% Generics	5%	5%	90%	100%	100%
% Specialties	95%	95%	10%	0%	0%
Generic costs (M)	0.90	0.40	0.75	3.33	7.50
Specialty costs (M)	17.02	7.52	0.08		
Total costs (M)	17.92	7.92	0.83	3.33	7.50
Generic wholesaler margin	20%	20%	20%	20%	20%
Specialty wholesaler margin	20%	20%	20%		
Generic selling price turnover (M)	1.08	0.48	0.90	4.00	9.00
Specialty selling price turnover (M)	20.43	9.03	0.10	0.00	0.00
Total selling price turnover (M)	21.50	9.50	1.00	4.00	9.00
Generic retailer margin	45%	45%	45%	25%	15%
Specialty retailer margin	33%	33%	33%		
Generic selling price T/O (M)	1.56	0.69	1.31	5.00	10.35
Specialty selling price T/O (M)	27.17	12.00	0.13		
Total selling price turnover (M)	28.72	12.69	1.44	5.00	10.35

Sources: WHO 2004; BCG interviews, analysis, and modeling.
Note: Hypotheses—multiplicative coefficient of 1.20 applied for all wholesalers from the cost price turnover (spec. and generics)

Distribution of Pharmacies and Waiting Lists, by Region

Table A.14. Distribution of Pharmacies and Waiting Lists, by Region

Region	Number of pharmacies	Number of applicants in the waiting list
Bamako	190	220
Gao and Kidal	7	3
Kayes	26	23
Koulikouro	57	90
Mopti	14	10
Segou	28	15
Sikasso	37	25
Timbuktu	4	1
TOTAL	**363**	**387**

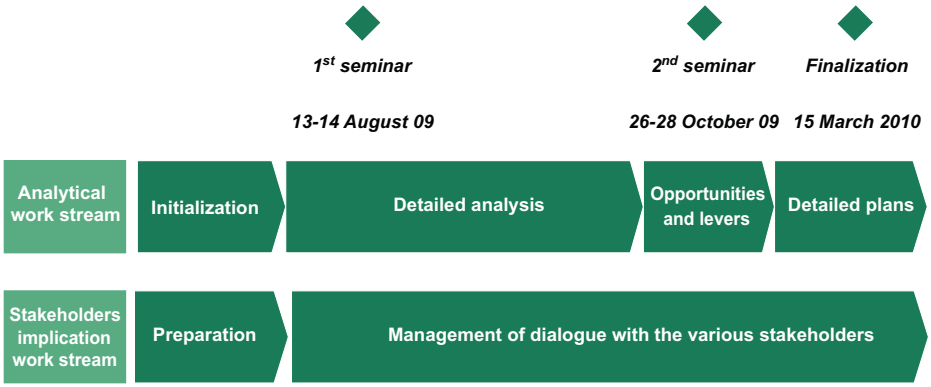
Source: CNOP.

Appendix B. Project Approach

Work Stream Complementarity: Analytic and Stakeholder Engagement

In keeping with the project objectives, the report process was structured around two complementary work streams (figure B.1). The first work stream was analytic in order to assess through a fact-based approach the role of the private sector in the health system. This allows for analysis of the main components of each health channel (health care delivery, education, pharmaceuticals, insurance) and the potential impact of various evolutions. The second work stream concerns stakeholder engagement in an effort to enrich the observations, enhance discussions about improvement axes, and sketch out the operational modalities.

Figure B.1. The Project Approach



Source: BCG.

All analyses and recommendations in the present report were shared with the main players during the seminars or ad hoc working sessions.

Analytic Work Streams

The analytic work streams allowed estimation of both the size of the private sector in 2009 and its contribution to the whole health sector. The complementary analysis axes as well as the key areas for improvement were also identified and shared with all the parties involved in the project. The key analyses were the following:

- Listing of volume, sector by sector (in particular the distribution in the territory, putting perspective on the numbers depending on the population served)
- Identifying the clinical pathway of the populations
- Putting into perspective the populations' needs and the health care delivery capacity
- Modeling the players' economic equations (CSCOMs, practices/private hospitals, pharmacies, private mutual insurance)—integrating their projected evolution path
- Identifying the regulatory framework and the factors affecting the ease of conducting business in the health sector.

This work drew on existing studies, databases provided by the administration and the different councils, interviews with health professionals, as well as complementary analyses of the clinical pathway of populations through an opinion survey of 1,050 households.

The systemic dimension of the whole sector was been identified, and the approach was been structured to take into account the reciprocal impact of each component. (For example, the impact of health insurance on the utilization rate and the viability of primary health care providers were considered).

Stakeholder Engagement Work Stream

The stakeholder engagement phase started at the beginning of the project, in order to identify all players working within or for the health sector. This work included three seminars.

- *Seminar 1, August 13–14, 2009*. Objectives were to
  - reinforce understanding among the players (stakes/resources/constraint sessions)
  - share early findings and first leads
  - ensure the participation of all in the project
- *Seminar 2, October 26–28, 2009.* Objectives were to
  - share and refine the diagnosis
  - elaborate, together with the stakeholders, on the improvement axes and prioritize them
  - agree on the first implementation modalities
- *Seminar 3, March 15, 2010.* Objectives were to finalize and validate the action plans.

In addition, almost 100 stakeholders were interviewed in Bamako and the regions, in order to go in-depth in the analyses with the players, sketch out leads for improvements, and confirm the potential impact. Appendix F lists the main institutions and personalities involved in the interviews, working groups, and seminars led by BCG.

Appendix C. Terms of Reference of the Steering Committee

Ministry of Health
Republic of Mali
General Secretariat
Planning and Statistics Unit

TERMS OF REFERENCE OF THE STEERING COMMITTEE
Study on the Private Health Sector in Mali

Context

In the framework of the Health Initiative in Africa, the Department of the conditions favorable to the investment of the World Bank (CIC), in close cooperation with the Health and Education Department of the International Finance Corporation (IFC) and the Malian government (the Ministry of Health) hired international consulting firm The Boston Consulting Group (BCG) to conduct an assessment of the private health sector in Mali. The main objective of BCG's mission has been to work in close collaboration with the Malian government in order to formulate recommendations about a program of reforms, to reinforce the general political framework that defines the interface between the public and private health sectors, and to improve the organization of health-related goods and services for the whole population.

The objectives of the study consist of:

- Determining very precisely the role that the private sector currently plays in achieving health results in the country;
- Diagnosing the nature and efficacy of the interface between the public and private sectors in Mali, as well as the general framework of the economic activity and the investment, and the adaptation possibly required to promote the private health sector in order to reach health objectives;
- Helping the government and the political managers concerned to initiate a dialogue with health system stakeholders—in particular with private sector stakeholders—in order to mobilize additional resources for health care and improve access and coverage; and
- Facilitating, in partnership with the Ministry of Health, the formulation of the detailed recommendations to provide an environment favorable to the development of the private sector and of the public-private partnership in order to reach together the public health objectives.

In this framework, BCG will specifically have to:

1. Design the analytical framework of the study
2. Collect and analyze data
3. Involve the stakeholders
4. Lead at least three workshops for the stakeholders
5. Facilitate the formulation of the recommendations for a reform program

To help the concrete realization of this work, the Malian Government established a Steering Committee that would support, direct, and supervise the course of the work on the field. The present terms of reference detail the objectives, the mandate, the composition, and the operating mode of the Committee.

Objective

The objective of the Steering Committee is (i) to make the work of diagnosis progress by ensuring/facilitating a strategic leadership and an orientation of the assessment work in Mali; (ii) to serve as an adviser, to ratify strategic decisions, and to facilitate the process underway. As such, the Steering Committee will supervise and monitor the implementation of all the components of the study, in particular the "analytical section," the "mobilization/involvement section," and the "recommendation section."

Mandate

The Steering Committee has the roles/missions of:

1. Ensuring the follow-up of the work according to the planning, which will be defined, and the success indicators contained in the TDRs of the study;
2. Facilitating as much as possible the realization of the consultant's work;
3. Facilitating the common understanding of the assessment work and monitoring the working program for its implementation;
4. Examining and validating the reports produced by the consultant (BCG) at each step, and ensuring the internal review process of these reports;
5. Discussing the operational conclusions likely to be drawn from the studies and the assessment achieved, and ensuring the national public-private partnership strategy is updated;
6. Ensuring the circulation of information about this study and its potential consequences inside and outside the Ministry of Health.

Composition and Functioning

The chair of the Steering Committee is the Director of the CPS (Planning and Statistics Unit of the Ministry of Health). The committee will be limited to a maximum of 11 members, two representatives from the Ministry of Health (including one member of the PRODESS steering committee—representative from the CPS—and the second member representing the DNS), two representatives from the World Bank Group (WB/IFC), two representatives from the consulting firm (BCG), one representative from the other Technical and Financial Partners (PTF) providing their support to the health sector in Mali, one representative from constituted medical entities (council of pharmacists and/or council of physicians), one representative from the Ministry of Finance, and one representative from the Institute of Statistics (ex. DNSI). It is imperative that the members of the Steering Committee are able to represent their institutions at a senior level, due to the importance and the sensitivity of the issues addressed and in order to perform advising and orientation tasks and to ensure quick and efficient decision making.

The Steering Committee meets once every 15 days, and as needed, upon request from its President. The Steering Committee will meet, in person or through means of audio (conference call) or video (videoconference).

The CPS will ensure the secretariat of the Steering Committee meetings. The summary of each meeting will be established and shared with all the partners involved.

Appendix D. Malian Household Survey Questionnaire on Health Behavior

A. Identification

A.1. Nr. of questionnaire	**A.6. Region**	**A.10. Person surveyed** Man ☐ Woman ☐
A.2. Surveyor	**A.7. Circle/Town**	**A.11. Size of the household**
A.3. Checkers	**A.8. Village**	**A.12. Scale of household revenues**
A.4. Nr. Computing agent	**A.9. Nr. households in the group**	
A.5. Date Day/month/2009		**A.13. Implantation area**

Less than 1 year	Children 1-5 years old	Children 5-18 years old	Adult	Total

1. Less than 500,000 per year ☐
2. Less than 1 million per year ☐
3. Between 1 and 2 million per year ☐
4. Between 2 and 3 million per year ☐
5. Between 3 and 4 million per year ☐
6. More than 5 million per year ☐
98. Don't know ☐

1. Urban ☐
2. Rural ☐

B. Clinical pathway

B.1. Within the last twelve months, have you or a member of your family been sick?

1.	Yes
2	No *(End of the interview)*

B.1.1. If yes, which among the following sicknesses happened to you and the members of your household? (Put the number of occurrences per age bracket)

		Children 0-1 yr (A)	Children 1-5 yr (B)	Children 5-18 yr (C)	Adults (D)
1. Pathologies/event					
1.1	Fever/malaria				
1.2	Diarrhea				
1.3	Back/limb/articulation pain				
1.4	Cough				
1.5	Skin problem				
1.6	Eye problem				
1.7	Tooth problem				
1.8	Injury/fracture/sprain				
1.9	Blood pressure/diabetes				
97	Other (to be specified)				
2. Mother care					
2.1	Pre-birth consultation				
2.2	Deliveries				
2.3	Post-birth consultation				

B.1.2. Do you have an idea of how much you have spent in total for health in your household during the last 12 months?

1.	Yes (Go to question B.1.3.
2.	No *(Go to question B.1.4)*

B.1.3. If yes, in which cost area would you place your household? (Circle a code)

1. Less than 5,000 CFA F
2. 5,000 and 10,000 CFA F
3. 10,000 and 20,000 CFA F
4. 20,000 and 30,000 CFA F
5. 30,000 and 40,000 CFA F
6. 50,000 and 100,000 CFA F
7. 100,000 and 200,000 CFA F
8. More than 500,000 CFA F

We will choose three diseases among the ones you have listed about which we will ask the following questions

List of selected diseases

Pathologies/event

1				2				3				4				5				6				7				8				9			
A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D

Mother care

10		11		12	
C	D	C	D	C	D

B.1.4. First disease selected (put the code:)

Information is collected about the last episode in case there have been several episodes of the same disease.

B.1.4.1. When you or a member of your household was affected by the disease, what did you do?

1.	You did nothing	(if yes, go to the 2nd disease)
2	You treated yourself alone	(*if yes,* answer question *B.1.4.2)*
3	You consulted someone/took advice	(*if yes,* answer question *B.1.4.3)*

(Answers 2 and 3 are not exclusive; if you circle both, you must answer both questions and the rest of the questions about the first disease. If you only circled answer 2, you answer only question B.1.4.2)

B.1.4.2. When you treated yourself alone for the last time:

a) What did you do?

1	Bought herbs	
2	Looked for herbs	
3	Used drugs from the illegal pharmacy market	
4	Used drugs from a pharmacy	
97	Other (Specify)	

Answers are not exclusive.

b) How many times did you do it? (put the number in the cell below)

c) How much did it cost you on average? (put the amount in the cell below)

B.1.4.3. Last time you or a member of your family went to consult someone/looked for advice, where did you go?

Code	Entity consulted
1	A member of your family
2	A traditional practitioner
3	A traveling healer
4	A medical practice
5	A CSCOM
6	A CSREF
7	A private hospital
8	A hospital
97	Other (Specify)

(Circle the appropriate codes)

B.1.4.4. Classify the consultations according to their order of occurrence

1st Consult	2nd Consult	3rd Consult	4th Consult	5th Consult	6th Consult	7th Consult	8th Consult	9th Consult

B.1.4.5. How much time elapsed between consultations?

1st Consult	2nd Consult	3rd Consult	4th Consult	5th Consult	6th Consult	7th Consult	8th Consult	9th Consult

For the 1st consultation = duration between the appearance of the disease/accident and the 1st time episode of seeking care for it.

B.1.4.6. Who made the decision to consult someone outside the household?

Code	Answers	1st Consult	2nd Consult	3rd Consult	4th Consult	5th Consult	6th Consult	7th Consult	8th Consult	9th Consult
1	Yourself									
2	The head of the family									
3	A relative									
4	A neighbor									
97	Other (Specify)									

B.1.4.7. Who took charge of the expenses related to the care provided by the different consultations?

Code	Answers	1st Consult	2nd Consult	3rd Consult	4th Consult	5th Consult	6th Consult	7th Consult	8th Consult	9th Consult
1	Yourself									
2	Family									
3	Village									
4	Mutual insurance									
5	NGO/association									
6	Friends									
7	Visitors									
97	Other (Specify)									

B.1.4.8. How much did the consultation, the drugs prescribed, and transportation to care cost?

Code	Answers	1st Consult	2nd Consult	3rd Consult	4th Consult	5th Consult	6th Consult	7th Consult	8th Consult	9th Consult
1	Consultation									
2	Drugs									
3	Transport									
4	Total amount									
98	Don't know									

B.1.4.9. How long did you wait to get the treatment?

Code	Answers	1st Consult	2nd Consult	3rd Consult	4th Consult	5th Consult	6th Consult	7th Consult	8th Consult	9th Consult
1	Less than one hour									
2	2 hours									
3	More than 2 hours									
4	The whole morning									
5	The whole day									
97	Other (Specify)									
98	Don't know									

B.1.4.10. How did you choose that provider?

Code	Answers	1st Consult	2nd Consult	3rd Consult	4th Consult	5th Consult	6th Consult	7th Consult	8th Consult	9th Consult
1	Trust									
2	Proximity									
3	Affordable cost									
4	Medical expertise									
97	Other (Specify)									

B.1.5. First disease selected (insert the code: example 2D)

Information is collected about the last episode in case there have been several episodes of the same disease.

B.1.5.1. When you or a member of your household were affected by disease 2D, what did you do?

1	You did nothing	(if yes, go to the 2nd disease)
2	You treated yourself alone	(*if yes,* answer question *B.1.4.2)*
3	You consulted someone/took advice	(*if yes,* answer question *B.1.4.3)*

(Answers 2 and 3 are not exclusive. If you circle both, you must answer both questions and the rest of the questions about the first disease. If you only circled answer 2, you answer only question B.1.5.2.

B.1.5.2. When you treated yourself alone the last time:

a) What did you do?

1	Bought herbs	
2	Looked for herbs	
3.	Used drugs from the illegal pharmacy market	
4	Used drugs from a pharmacy	
97	Other (Specify)	

Answers are not exclusive

b) How many times did you do this? (put the number in the cell below)

c) How much did it cost you on average? (put the amount in the cell below)

B.1.5.3. The last time you or a member of your family consulted someone/sought advice, where did you go?

Code	Consultation
1	A member of your family
2	A traditional practitioner
3	A traveling healer
4	A medical practice
5	A CSCOM
6	A CSREF
7	A private hospital
8	A hospital
97	Other (Specify)

(Circle the consultation codes)

B.1.5.4. Classify the consultation according to order of occurrence

1st Consult	2nd Consult	3rd Consult	4th Consult	5th Consult	6th Consult	7th Consult	8th Consult	9th Consult

B.1.5.5. How much time elapsed between consultations?

1st Consult	2nd Consult	3rd Consult	4th Consult	5th Consult	6th Consult	7th Consult	8th Consult	9th Consult

For the 1st consultation = duration between the appearance of the disease/accident and the 1st episode of seeking care

B.1.5.6. Who made the decision to consult someone outside the household?

Code	Answers	1st Consult	2nd Consult	3rd Consult	4th Consult	5th Consult	6th Consult	7th Consult	8th Consult	9th Consult
1	Yourself									
2	The head of the family									
3	A relative									
4	A neighbor									
97	Other (Specify)									

B.1.5.7. Who took charge of the expenses related to the care provides by the various consultations?

Code	Answers	1st Consult	2nd Consult	3rd Consult	4th Consult	5th Consult	6th Consult	7th Consult	8th Consult	9th Consult
1	Yourself									
2	Family									
3	Village									
4	Mutual insurance									
5	NGO/association									
6	Friends									
7	Visitors									
97	Other (Specify)									

B.1.5.8. How much did the consultation, drugs prescribed, and transportation cost?

Code	Answers	1st Consult	2nd Consult	3rd Consult	4th Consult	5th Consult	6th Consult	7th Consult	8th Consult	9th Consult
1	Consultation									
2	Drugs									
3	Transport									
4	Total amount									
98	Don't know									

B.1.5.9. How long did you wait to get the treatment?

Code	Answers	1st Consult	2nd Consult	3rd Consult	4th Consult	5th Consult	6th Consult	7th Consult	8th Consult	9th Consult
1	Less than one hour									
2	2 hours									
3	More than 2 hours									
4	The whole morning									
5	The whole day									
97	Other (Specify)									
98	Don't know									

B.1.5.10. How did you choose that provider?

Code	Answers	1st Consult	2nd Consult	3rd Consult	4th Consult	5th Consult	6th Consult	7th Consult	8th Consult	9th Consult
1	Trust									
2	Proximity									
3	Affordable cost									
4	Medical expertise									
97	Other (Specify)									

B.1.6. Third disease selected (put the code: example 10D)

Information is collected about the last episode in case there have been several episodes of the same disease.

B.1.6.1. When you or a member of your household were affected by disease 10D, what did you do?

1	You did nothing	(if yes, go to the 2nd disease)
2	You treated yourself alone	(*if yes,* answer to question *B.1.4.2)*
3	You consulted someone/took advice	(*if yes,* answer question *B.1.4.3)*

(Answers 2 and 3 are not exclusive. If you circle both, you must answer both questions and the rest of the questions about the first disease. If you only circled answer 2, you answer only question B.1.6.2)

B.1.6.2. When you treated yourself alone for the last time:

a) What did you do?

1	Bought herbs	
2	Looked for herbs	
3	Used drugs from the illegal pharmacy market	
4	Used drugs from a pharmacy	
97	Other (Specify)	

Answers are not exclusive

b) How many times did you do this? (put the number in the cell below)

c) How much did it cost you on average? (put the amount in the cell below)

B.1.6.3. The last time you or a member of your family went to consult someone/sought advice, where did you go?

Code	Consultation
1	A member of your family
2	A traditional practitioner
3	A traveling healer
4	A medical practice
5	A CSCOM
6	A CSREF
7	A private hospital
8	A hospital
97	Other (Specify)

(Circle the consultation codes)

B.1.6.4. Classify the consultation according to order of occurrence

1st Consult	2nd Consult	3rd Consult	4th Consult	5th Consult	6th Consult	7th Consult	8th Consult	9th Consult

B.1.6.5. How much time elapsed between consultations?

1st Consult	2nd Consult	3rd Consult	4th Consult	5th Consult	6th Consult	7th Consult	8th Consult	9th Consult

***For the 1st consultation = duration between the appearance of the disease/accident and the 1st episode of seeking care**

B.1.6.6. Who made the decision to consult someone outside the household?

Code	Answers	1st Consult	2nd Consult	3rd Consult	4th Consult	5th Consult	6th Consult	7th Consult	8th Consult	9th Consult
1	Yourself									
2	The head of the family									
3	A relative									
4	A neighbor									
97	Other (Specify)									

B.1.6.7. Who took charge of the expenses related to the care provided by the various consultations?

Code	Answers	1st Consult	2nd Consult	3rd Consult	4th Consult	5th Consult	6th Consult	7th Consult	8th Consult	9th Consult
1	Yourself									
2	Family									
3	Village									
4	Mutual insurance									
5	NGO/association									
6	Friends									
7	Visitors									
97	Other (Specify)									

B.1.6.8. How much did the consultation, drugs prescribed, and transportation cost?

Code	Answers	1st Consult	2nd Consult	3rd Consult	4th Consult	5th Consult	6th Consult	7th Consult	8th Consult	9th Consult
1	Consultation									
2	Drugs									
3	Transport									
4	Total amount									
98	Don't know									

B.1.6.9. How long did you wait to get the treatment?

Code	Answers	1st Consult	2nd Consult	3rd Consult	4th Consult	5th Consult	6th Consult	7th Consult	8th Consult	9th Consult
1	Less than one hour									
2	2 hours									
3	More than 2 hours									
4	The whole morning									
5	The whole day									
97	Other (Specify)									
98	Don't know									

B.1.6.10. How did you choose that provider?

Code	Answers	1st Consult	2nd Consult	3rd Consult	4th Consult	5th Consult	6th Consult	7th Consult	8th Consult	9th Consult
1	Trust									
2	Proximity									
3	Affordable cost									
4	Medical expertise									
97	Other (Specify)									

C. Feedback about health care providers

C.1. Rank in order of importance the different evaluation criteria of health care providers:

Code	Evaluation criterion	Order of importance
1	Efficacy of the cure	
2	Adequate distance	
3	Adequate consultation price	
4	Adequate prescription price	
5	Drug availability	
6	Competence of the personnel	
7	Quality of welcome/listening	
8	Cleanliness of premises	
9	Quality of the equipment	

(Two criteria cannot have the same importance)

C.2. Which mark would you give to the health care providers according to the descriptions below?

(1: very insufficient; 2: insufficient; 3: average; 4: good; 5: very good; 6: outstanding)

Criteria	Traditional practitioner	Traveling healer	Medical practice	CSCOM	CSREF	Private hospital	Hospital
Efficacy of the cure							
Adequate distance							
Adequate consultation price							
Adequate prescription price							
Drug availability							
Competence of the personnel							
Ethics of the personnel							
Cleanliness of premises							
Quality of the equipment							

Put the mark given by the participant for each provider. In case no mark is given, put "Don't know" or 99

We thank you for your participation.

Appendix E. Sampling Method for the Malian Household Survey of Health Behavior

Survey Base

The populations of four Regions were used by statistics services to determine the size of the sample. Thus, the Regions of Kayes, Sikasso, Gao, and the District of Bamako have already been selected according to a reasoned choice. According to such a choice, the areas with urban towns have been selected in each of the four Regions. These areas are Kayes and Kita in the Region of Kayes, Bougouni and Sikasso in the Region of Sikasso, Gao and Ansogo in the Region of Gao, and the towns of the District of Bamako.

The definitive list of the towns surveyed is in the table below.

Regions	Areas	Urban towns	Rural towns
Kayes 13 towns	Kayes	Kayes	Sadiola
			Diamou
		Kouniakari	Ségala
			Bangassi
	Kita	Kita	Sébékoro
			Séfeto
			Kassaro
			Boudoufo
			Kita rural
			Djidian
D. Bamako 6 towns	Towns	Towns I, II, III, IV, V, et VI	
Sikasso 13 towns	Sikasso	Sikasso	Niéna
			Bliendio
			Farakala
			Kléla
			N'Kourala
	Bougouni	Bougouni	Kéléya
			Sido
			Zantiébougou
			Koumantou
			Faragaran
			Dogo
Gao 8 Towns	Gao	Gao	Gabero
			Soni Ali Ber
			Gounzoureye
	Ansongo	Ansongo	Bara
			Boura
			Ouattagouna
Total	**6 areas + the District of BKO**	**13**	**27**
40 towns			

Characteristics of the Sample

Sample Size

The survey used a sample composed of three regional capitals and the District of Bamako, eight areas, 40 towns. The sample included 1,050 households. The towns were structured in two layers—rural and urban. The sorting of the towns was made at random within the two layers. Thus, 13 towns were selected in the Region of Kayes, 13 in the Region of Sikasso, six in the District of Bamako, and eight in the region of Gao.

Process for Random Selection of Households

At the level of the main towns, a sample of 25 households was chosen at random from a list of total households, in compliance with the protocol below:

The households were selected at random by systematic drawing done independently in each town.

The heads of households were interviewed. To manage the questionnaire, the concession was located and then the selected household was identified.

Taking into account the configuration of the households, and to respect habits and customs, the team of surveyors and the supervisor visited the village head in order to:

- Inform the village head and his advisers about the objective of the survey
- Draw up a list of all households in the village (if the list was not available).

With the help of the village head, the selected households were easily identified. Twenty-five households were selected in each town.

Steps in Selection Procedure

The households in each town were selected in the following steps:
Step 1: Assign a number to each household in the list

Step 2: Determine the reason *"R"* (i.e., the selection pace) as follows:

$$R = \frac{\textit{total number of households in the town}}{25}$$

Step 3: Select a random number (α). For this, read at random in the table numbers with n figures (n being the number of figures in the whole part of R), a number between 1 and whole R. The random number (α) selected in order, in the survey basis of the first household.

Step 4: Selection of the other households:
Create an arithmetic progression of 25 numbers with α as base and for reason R (the selection pace), in the following way:

- α corresponds to the first household selected
- $\alpha + R$ corresponds to the second household selected
- $\alpha + 2R$ corresponds to the third household selected
- $\alpha + 3R$ corresponds to the fourth household selected
- $\alpha + (n\ 1)$R corresponds to the thirtieth household selected

Step 5: Survey number: Allocate a sequential number from 1 to 25 for all the households selected in the town.

Appendix F. Institutions and Individuals Associated with the Work on Stakeholder Engagement

The observations summarized in this report were shared with the 60 and more shareholders during the seminars held on August 13–14, 2009; October 26–28, 2009; and March 15, 2010; during the meetings of the project monitoring committee; and lastly during the meeting of the extended cabinet of November 16, 2009.

To those official meetings, we should add the numerous informal interactions that the BCG team had with the players in the Malian health care system during the project (more than 100 interviews).

Representatives from the Administration and Semi-public Organizations

GS—technical advisers to the minister (M. Bouaré)—IS—CPS—DNS—DPM—DAF—DRH—PPM—FMPOS—INFSS—INSTAT—INRSP—CNIECS—API

Ministry in charge of the promotion of women—Ministry in charge of higher education—Ministry in charge of employment and professional training—Ministry in charge of social development (DNPSS)—Ministry of the administration and territorial communities

Representatives from the Civil Community and the Private Sector

CNOM—CNOP—CNOSF—AMLM—GPSP—Association of private schools—Association of the midwives—Association of the young pharmacists—SYNAPO—Association of nurses—Laborex—Africalab—AMC—Santé Sud—UTM—FENASCOM—FEMATH—Aga Khan Foundation—CCIM—Kafo Jiginew—APBEF—Clinique Pasteur—Hôpital Luxembourg Mère enfant—Centre Mérieux

Representatives from Technical and Financial Partners

WHO—FNUAP—UNICEF—Netherlands—France (SCAC and AFD)—USAID—Canada

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Note: In the course of the project, the Boston Consulting Group made trips to Ségou and its surroundings, in the Kayes, Mopti, and Gao regions.

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