Special Initiatives
Report No. 37

Morocco: National Health Accounts 1997/98

March 2001

Partnerships for Health Reform
PHR

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Funded by:
U.S. Agency for International Development

Partnerships for Health Reform

PHR

Mission

The Partnerships for Health Reform (PHR) Project seeks to improve people's health in low- and middle-income countries by supporting health sector reforms that ensure equitable access to efficient, sustainable, quality health care services. In partnership with local stakeholders, PHR promotes an integrated approach to health reform and builds capacity in the following key areas:

- *better informed and more participatory policy processes in health sector reform;*
- *more equitable and sustainable health financing systems;*
- *improved incentives within health systems to encourage agents to use and deliver efficient and quality health services; and*
- *enhanced organization and management of health care systems and institutions to support specific health sector reforms.*

PHR advances knowledge and methodologies to develop, implement, and monitor health reforms and their impact, and promotes the exchange of information on critical health reform issues.

March 2001

Recommended Citation

Partnerships for Health Reform. March 2001. *Morocco: National Health Accounts 1997/98.* Special Initiatives Report No. 37. Bethesda, MD: Morocco Ministry of Health/Health Economics Unit

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Contract No.: HRN-C-00-95-00024
Project No.: 936-5974.13

Submitted to: USAID/Rabat

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Acronyms

AMO	Assurance Medical Obligatoire
CERED	Centre des Etudes et des Recherches Démographiques (Demographic Studies and Research Center)
CHI	Compulsory Health Insurance
CHP	Collective Health Prevention
CHU	Centre Hospitalier Universitaire
CMIM	Caisse Marocaine Interprofessionnelle des Mutuelles (Moroccan Interprofessional Mutual Fund)
CNOPS	Caisse Nationale d'Organismes de Prévoyance Sociale (National Fund of Social Thrift Organizations)
CNPAC	Comité National de Prévention des Accidents de la Circulation (National Highway Accident Prevention Commission)
CNRP	Centre National de Radio Protection (National Radiation Protection Center)
CNSS	Caisse Nationale de Sécurité Sociale (National Social Security Fund)
CNTS	Centre National de Transfusion Sanguine (National Blood Transfusion Center)
CRM	Croissant Rouge Marocain (Red Crescent of Morocco)
CRTS	Centre Régional de Transfusion Sanguine (Regional Blood Transfusion Center)
DH	Dirham (US$ 1 ≅ 9.8 DH in 1997/98)
DPRF	Direction de la Planification et des Ressources Financières (Planning and Financial Resources Division)
DRC	Direction de la Réglementation et du Contentieux (Regulations and Disputes Division)
ENNVM	Enquête Nationale sur le Niveau de Vie des Ménages (National Living Standards Measurement Survey on Household Income)
FHMAR	Fédération Marocaine des Sociétés d'Assurance et de Réassurance (Moroccan Federation of Insurance and Reinsurance Companies)
GDP	Gross Domestic Product
ILN	Instituts et Laboratories Nationaux (National Institutes and Laboratories)
INH	Institut National d'Hygiène (National Hygiene Institute)
IPM	Institut Pasteur du Maroc (Pasteur Institute of Morocco)
LG	Local Governments
LNCHMP	Laboratoire National de Contrôle des Spécialités Pharmaceutiques (Pharmaceutical Specialties National Control Laboratory)

MCH	Mother and Child Health
Medicaid	Medical coverage for the poor in the USA
Medicare	Medical coverage for senior citizens in the USA
MENA	Middle East and North Africa
MHO	Municipal Health Office
MI	Medical Items
MOH	Ministry of Health
MW	Minimum Wage
NGO	Non-Governmental Organizations
NHA	National Health Accounts
OCP	Office Chérifien des Phosphates (Moroccan Phosphates Board)
ODEP	Office d'Exploitation des Ports (Port Operations Board)
ONCF	Office National des Chemins de Fer (National Railroads)
ONE	Office National de l'Electricité (National Electricity Board)
ONEP	Office National de l'Eau Potable (National Drinking Water Board)
PCC	Public Companies and Corporations
PHR	Partnerships for Health Reform
RAM	Royal Air Maroc (Moroccan airline)
RAM	Régime d'Assistance Médicale aux Economiquement Faibles (Medical Assistance Plan for the Economically Disadvantaged)
RSSB	Réseau de Soins de Santé de Base (Basic Health Care Network)
SEGMA	Service d'Etat Géré de Manière Autonome (Autonomous State Service)
SES	Service de l'Economie Sanitaire (Health Economy Service)
SIAAP	Services des Infrastructure et des Actions Ambulatoires Prefectorales (Prefectorial Infrastructure and Ambulatory Care Services)
SSERF	Service de Suivi et de l'Evaluation des Ressources Financières (Financial Resources Monitoring and Evaluation Unit)
UNDP	United Nations Development Program
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
WCA	Women of childbearing age
WHO	World Health Organization

Acknowledgments

The officials of the Health Economics Unit wish to sincerely thank the following institutions and people; the work could not have been done without them:

- The senior officials from the Ministry of Health (MOH) and, in particular, the Director of Planning and Financial Resources for their ongoing physical, technical and moral support;
- United States Agency for International Development (USAID)/Partnerships for Health Reform for technical, logistical and financial support;
- The World Health Organization (WHO) for its material support;
- The officials and technicians of the MOH (in charge of central administration, delegates, administrators, statisticians, head physicians of hospitals and the SIAAPs, technicians, officials of the ILNs, etc.) for the detailed information they provided;
- The officials and officers of the partner institutions: ministerial departments, Statistics Department, Public Companies and Corporations, the CNPAC, CNOPS, CNSS, FHMAR, CMIM, UNFPA, USAID, WHO, UNDP, the embassies of France, Spain, China, Germany and Japan, and the European Union delegation for the data they gave the working team.

Executive Summary

Extent of Funding for Health

Total spending on health amounted to slightly over 15 billion DH in 1997/98, in other words, almost 550 DH per inhabitant: US $56 at the current exchange rate in 1997/98 or US $135 in terms of buying power parity. That amounts to a scant 4.5% of gross domestic product (GDP). This is a rather considerable difference compared with countries that have a similar level of economic development; total spending on health amounts to 5.6% of GDP in Tunisia, 5.8% in Iran, 9.4% in Jordan and 9.8% in Lebanon.

Medical consumption reached almost 13.5 billion DH during the same period, amounting to less than 500 DH per inhabitant and per year. The low medical consumption level is due to the high cost of care and drugs. For example:

- The average cost of a medical prescription is nearly 250 DH, or the equivalent of four days of work at the minimum wage, or 2% of per capita GDP.
- The average cost of a visit to a specialist is 150 DH, or the equivalent of 2.5 days of work at minimum wage, or 1.2% of per capita GDP.

This means that quantities (use of care and access to medical products), as opposed to prices, are low and are the underlying reason for the low levels of medical consumption and total health spending.

Sources of Funding for Health

An analysis of funding sources highlights the inequity of funding for health in Morocco due to the high percentage of direct payments by households. These payments amount to 54% of total health spending (and practically 60% of medical consumption). Hence, the costs of Morocco's health system are not distributed according to individuals' ability to pay through a risk or national solidarity mutualization mechanism, but instead according to the risk of illness, borne essentially by direct payments from households.[1] This type of fragmented funding also generates control, regulatory and management issues for the national health system.

Sources of funding by type of institution

The main sources of funding come from the households and the State. Households account for 59% of spending: 54% by direct net payments from insurance and mutual reimbursements and 5% from health insurance contributions as employees. To a lesser extent, the State's intervention in funding for health is rather high, but it is limited to 26% of total health spending.

The other sources of funding are much less significant, namely: 5% for private businesses, 5% as well for Public Companies and Corporations (PCCs) and 1% for local authorities and for international cooperation.

[1] In the section on "Equity of the financial contribution to health systems," the WHO gives Morocco a poor ranking (126th) (WHO 2000).

Sources by type of funding

An analysis of the structure of funding sources for the national health system by type of funding shows that the largest percentage is still direct household payments (54%), whereas national and local tax sources amount to only one-fourth of total health spending. Medical coverage only amounts to 16%. This means that collective health funding through solidarity mechanisms (loosely defined) amounts to only 41% of total health spending. The other sources of funding are marginal: 4% for employers (excluding the State and local authorities) and 1% for international cooperation.

Functional Classification of Spending by Providers

A functional analysis of spending by providers of medical goods and services generates the following comments:

- Regardless of the type of analysis or classification, Pharmacy is still the largest category. The national health system spends more than 37% of its budget on purchases of drugs and medical products as items for which the patient is the end-user and not as an input used by health professionals for care. (There is other spending on drugs that is included in hospital and outpatient care.)
- Outpatient care amounts to almost 31% of national health system spending, whereas hospital care is only 20%. Nevertheless, it should be mentioned that these percentages assume that outpatient tests and appointments, as well as emergencies, are considered to be outpatient care. If these services are added to hospital care, the respective weight of these two types of care is reversed (20% for outpatient care and 31% for hospital care).
- The weight of system management through its administration is only 7%.
- Collective health prevention continues to be neglected due to the fact that it is a small portion of spending on health, whereas needs at this level are considerable, especially among the poor. Collective spending on preventive care per inhabitant amounted only to 14 DH per year (1997/98).
- Training, research and teaching amount to only 1% of health spending (the same percentage as for traditional medicine). If the salaries paid by the Higher Education Ministry to those teaching in the university hospital centers (CHUs) and the Paramedical Training Institute of the Ministry of Health (MOH) are subtracted, the amount remaining would be negligible, 0.1%.

Sector Analysis

The Ministry of Health's budget is quantitatively insufficient:

- It amounts to almost 5% of the State's general budget versus 7% in the 1960s;
- It is 175 DH per inhabitant versus over 300 DH in countries with a similar level of economic development;
- It represents almost 1% of GDP versus 1.7% in the 1960s, versus an average of more than 2% for most countries with the same level of economic development.

However, a review of changes in the MOH's budget per capita and in constant DH shows that over the past three years, the State has made efforts in this sector. However, these efforts mainly

benefited the wage bill at the expense of the operating budget excluding employees[2] and the per capita and volume level fell between 1982 and 2000. This has harmed and weakened the benefits from increases in investment funds[3] over these past years. This is corroborated by a change in the structure of the budget for health over the past thirty years. An analysis of the growth indices of the large components of the budget shows a huge difference between the index of the investment budget and that of the operating budget excluding employees. This situation may well exacerbate the maintenance, repair, cleaning and supervision problems that MOH health facilities are currently experiencing.

Structure of MOH spending by level

Of all the budget funds allocated (and spending) by the MOH, 47% goes to the hospitals (15% to the CHUs and 32% to all the other hospitals) versus 38% to the basic health care network (*Réseau de Soins de Santé de Base*, RSSB). The National Institutes and Laboratories (*Instituts et Laboratories Nationaux*), which essentially carry out RSSB support and training activities, only receive 2% of these allocations, which are six times lower than the national and local authorities (12%). It is true that this percentage is rather high. However, it should be noted that in health programs and programs for monitoring care and preventive activities, support at both the national and local levels (administration of health programs, infrastructure and provincial outpatient care project units) continues to be considerable.

Inequities and problems of allocating financial resources

The analysis of total MOH spending (excluding CHUs and the National Institutes and Laboratories) per capita and per region points out rather considerable disparities. As the Health Sector Strategy shows, the breakdown of funding among the various provinces and the different MOH facilities and units has always been influenced by historical considerations and balances of power more than by relevant and objective criteria.

The same finding can be made for spending on Mother and Child Health services (MCH)[4] relative to the target population (women of childbearing age and children under five years of age). These disparities are difficult to justify, not only because of their quantitative importance, but also even more because of the disparities compared to key indicators such as the infant mortality rate.

Funding for mother and child health

Funding for MCH by the Ministry of Health

Spending on Mother and Child Health (MCH) activities amounts to nearly 533 million DH. This is 19 DH per inhabitant and 55 DH per target person (women of childbearing age and children under five years of age). This spending is still slightly over 16% of the Ministry of Health's total spending, including the CHUs.

The main component of this spending continues to be public health programs, amounting to 52% versus 25% for maternity wards and 23% for pediatrics wards.

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[2] In the 1960s and 1970s, the share of wages paid from the MOH's budget was between 39% and 52%. Today, that figure is almost two-thirds.

[3] The very positive variations in the Investment Budget over these past years (from 1996 to 2000) are instead funded by loans and budgeted donations. During the first decade, their percentages (in the investment budget) were an average of 40.2% for loans from the World Bank, 9.9% for loans from the African Development Bank, and 2.1% budgeted donations from the European Union, the weight of which was 12.9% in 1999/2000.

[4] Morocco has one of the highest MCH-related mortality rates of all the countries in the Middle East/North Africa region.

The joint portion of spending by maternity and pediatrics wards (14.6%) is exceeded by that of overhead for hospitals (16.9%). However, this difference is more accentuated in the CHUs, where spending by these two wards only amounts to 15.4% versus 22.2% for overhead.

The weight of MCH-related programs is almost 62% of all spending on all public health programs. This is a rather high percentage, especially since programs such as Sexually Transmitted Illness control and AIDS control projects, not to mention health education projects, are not included in MCH activities.

Coverage of MCH expenses by insurance organizations

Members of mutuals for civil servants (and their dependents) are penalized by significant distortions between the reimbursement prices and market prices for outpatient care. Hence there is a negative impact on the use of preventive and curative care in the field of MCH. This is exacerbated by reimbursement time frames that in general are from twelve to twenty-four months long.

The private mutuals (the Moroccan Interprofessional Mutual Fund [*Caisse Marocaine Interprofessionnelle des Mutuelles*, CMIM] and *Caisse des Etablissements et Entreprises Publiques*) are the opposite of that of the mutuals for civil servants. In general, coverage is quite good.

The situation of private insurance companies is rather disparate. But in general, coverage of MCH-related expenses is modest.

Role of international cooperation in the funding of MCH activities

Generally speaking, international organizations and donor countries place great importance on MCH, because they spend almost 93.4 DH on it, which amounts to an average of nearly 62.1% of their aid to the health system (150.4 million DH). This funding is almost the equivalent of one-fifth the amount the MOH spends on MCH, including the CHUs.

Funding of medical coverage by health insurance

Population covered

Health insurance is optional in Morocco. It only covers 16.4% of Morocco's population (see table below), the vast majority of those covered are city dwellers. More than two-thirds of the population covered is civil servants or the like and their dependents.

Health insurance is run by several institutions:

- Mutuals for civil servants and the like. There are nine of these: (Royal Armed Forces, Post Office, Education, Public Administration, Local Authorities, Auxiliary Forces, Police, Port Authority and Customs), which are under the purview of the National Fund of Social Thrift Organizations (*Caisse Nationale des Organismes de Prévoyance Sociale*, CNOPS). This organization manages the common sector's health insurance for them. (It also collects contributions from employers, third-party payers, and social welfare agencies, and signs agreements with service providers.) These mutuals cover wage earners and retired people as well as their dependents. Coverage rates for insured services are quite high. However, distortions between the reimbursement rates and market prices allow these mutuals to cover an average of only 50% of the actual cost of the services that are covered.
- Financing for coverage comes primarily from contributions: almost 6% for employees (2.5% is paid for by the employees) and 1.7% for retired people.
- In-house mutuals (in-house plans) are health insurance plans offered and run by Public Companies and Corporations (OCP, ONCF, CNSS, RAM, Tobacco Authority, Bank Al

Maghrib, Banque Populaire, etc.) for their employees. Fees vary from one entity to the next. But in general, the employers contribute more than the employees. Some employees contribute nothing, such as OCP employees. Reimbursement rates vary as well. Generally, coverage is much more generous than that of mutuals in the public sector.

> The CMIM mainly covers the employees of the 256 firms in the banking and hydrocarbons sectors. Contributions are shared evenly by employers and employees. Coverage of insured services is high—the highest at the national level.

> Private insurance companies cover the employees of a few private firms, with slightly over 3,000 units. This coverage is in the context of group health insurance contracted by the companies. Premiums vary based on the coverage selected and are determined as a percentage of the wage bill using fixed rates. Generally, the employer's share is similar to the employee's share. Reimbursement rates for insured services fall between those of public and private sector mutuals (CMIM).

Size of the Population Covered by the Various Optional Health Insurance Plans, 1997/98

Institutions	Members	Dependents	Beneficiaries	Percentage share
CNOPS	996,000	2,099,900	3,095,900	68.6
CMIM	18,800	41,200	60,000	1.3
In-house plans	120,000	424,000	544,000	12.0
Insurance companies	234,300	580,800	815,100	18.1
Total	**1,369,100**	**3,145,900**	**4,515,000**	**100**

Level of services covered by the different optional health insurance plans

The portion of drugs and medical products in total expenses (excluding overhead) for optional health insurance is almost 32%. These are followed by hospitalization, at 29% of these expenses. Outpatient care and services together amount to 39%: 15.% for office visits; 12.1% for analyses and tests in radiology practices and medical analysis laboratories; 11.2% for dental care.

Conclusion

The national health system, in which many players coexist, is complex. Financing is quite often inextricable and an analysis is an arduous task.

Total health spending is low, on the one hand, in a context of costly health care and medical products relative to limited and stagnant buying power and, on the other hand, little health insurance coverage, since only 16.4% of the population has a policy.

Funding for this spending is highly fragmented and distribution is uneven. Direct payment by households (net of reimbursements from insurance companies and mutuals) is the main source of funding for the system, whereas collective funding (taxes and contributions) barely exceeds 41% of total funding[5] (25% for taxes and 16% for the contribution system, in other words, health insurance). This situation is totally inappropriate for funding a sector in which spending by individuals is

[5] Even in the United States, one of the world's most laissez-faire system in which 41 million people are not covered (Health Care Financing Administration, 2000), nearly 46% of funding is public (health budget, Medicaid and Medicare). Private medical coverage provides almost 31% of funding for the system. Total collective funding for health is 77%.

generally unpredictable and sometimes catastrophic. Moreover, thousands of families go into considerable debt and must use all their cash to be able to pay for the care that one or more family members require when they suffer from chronic illnesses. Obviously, this situation is even worse among the poorest people.

Resources mobilized by the national health system are spent in large part on drugs. The rather inconsequential weight of outpatient care is exacerbated by the low weight of collective preventive health care even though expectations in this regard are high.

Inequities are not solely the result of funding, but also of access to public health care services. These services, particularly in hospitals, are sometimes used more by relatively wealthy people at the expense of the poorest of the poor. In addition, hospital services that are totally free of charge are used more by the wealthy than the poor.

These inequities are the normal result of low funding from the public sector combined with funding and operating procedures that are inappropriate since there is no accounting and no quality or performance standards.

All of these conclusions argue in favor of accelerating the reforms undertaken by the MOH. They involve extending health insurance by making it compulsory under the AMO (*Assurance Medical Obligatoire*) project, setting up an institutional solidarity mechanism for mutual assistance (RAM), improving hospital management and revisiting its organization.

1. Introduction

1.1 Socio-Economic Context

In the 1990s[6], the growth of Morocco's economy could be termed weak, with a rate of only 1.9%. The economy was erratic and vulnerable as well, due to uncertainties in the economic environment, such as the exchange rate for influential currencies, the price of hydrocarbons, etc. There was essentially no real growth since population growth averaged 1.8% over the same period.

The level of wealth creation continues to be limited, since the GDP per inhabitant was only 12,300 DH in 1999, or just under US$ 1,300.

Above and beyond the economic sector considerations, the weakness in growth is also due to insufficient savings and investment. The share of GDP devoted to fixed capital formation, which has been nearly stagnant for several years, is roughly 22%, slightly higher than gross national savings.

The fact that Morocco's economy did not grow made it impossible:

- To create enough jobs to mitigate the dual imbalances in the labor market: 1) between the supply and demand for jobs and, 2) between distributed income and the monetary requirements of households for consumption;
- To reverse the drop in buying power, in particular for the poorest of the poor;
- To lower the poverty rate.

Hence, indicators such as the unemployment and poverty rates have worsened over the past few years:

- Unemployment rose to 22% in 1999 in urban areas (the rural rate is insignificant because it is underestimated due to underemployment and the highly informal nature of the job market in rural areas);
- Poverty increased from 13% in 1990/91 to 19% of the population in 1998/99. It should also be mentioned that the vulnerability rate (people who are likely to fall into poverty due to economic difficulties) rose to 43% of the population in 1998/99.

This context had a negative impact on the government's budget, the breakdown and allocation of which remain static and only somewhat responsive to the country's real priorities. Debt, both domestic and foreign, only worsened the situation since more than 25% of the Public Treasury's spending goes toward servicing the debt. This debt problem has existed since the 1980s. Today, although the foreign debt issue is less acute than in the 1990s, the same cannot be said for the domestic debt, which climbed from less than 15% of GDP in 1980 to almost 40% in the late 1990s. The effect of this net increase has been to dangerously lower the leeway the government has. In fact,

[6] There are many sources of data for this section: Directorate of Statistics (different years), Ministry of Finance (different years), various Bank Al Maghrib reports and all the national documentation on the 2000-2004 Five-Year Plan.

if certain economic factors deteriorate (such as lower income from privatization, a higher US dollar), this could raise the budget deficit from the current rate of less than 3% of GDP to much higher rates.

Foreign balances show shortfalls, both for the trade balance and the balance of payments. The rate at which imports are covered by exports is still less than 70%, which amounts to a deficit in the trade balance approaching 10% of GDP. The current account balance is also negative relative to GDP but by a smaller order of magnitude (1% of GDP).

It is in this macroeconomic context that the national health system is funded. There is a scissors effect: on the one hand, budget restrictions caused by the austerity measures and stagnant buying power; on the other hand, higher costs due primarily to a demographic and epidemiological transition, the advent of technologies and new and costly treatments, as well as the people's higher expectations (DPRF and DRC / MOH, 1999).

1.2 Methodology

The issue of health care funding has become a major concern, not only in industrialized countries, but in developing nations as well. In this regard, the National Health Accounts (NHA) are a useful and practicable approach, even in countries where the information system is not highly developed. They are an important tool for controlling and managing the national health system in terms of planning and assisting in decision-making. These accounts may be used as a diagnostic instrument in order to identify resource allocation issues, to suggest solutions, and to evaluate the degree of progress toward a determined objective.

Since 1998, the Ministry of Health (MOH) has been working on NHA and has used the following sources in its efforts:

> **Background literature**: The works of Abel-Smith, which were documented in a World Health Organization (WHO) publication in 1984 on financial resources planning in the health sector (Mach and Abel-Smith, 1983).

> **NHA models**: The simplified NHA model developed by Harvard University: it has the advantage of creating a separation between funding sources and funding intermediaries (see the definitions at the end of this introduction) and proposing a rather appropriate methodology for countries whose information systems are not as developed as those of the OECD countries (Rannan-Eliya and Berman, 1993; Berman, 1996)

> **Definitions**: Some French NHA definitions that are relevant and appropriate for the Moroccan context were used. Definitions were sought for terms such as: medical consumption, medical products and collective health prevention.

Despite this eclectic approach, the model that Morocco has developed is similar to those in the countries of the Middle East and North Africa region. Regional NHA workshops, organized by the the WHO, the World Bank and the Partnerships for Health Reform (PHR) Project from 1998 to 2000, made the work models somewhat more consistent with the configuration of NHA in various countries, such as Tunisia, Egypt, Djibouti, Yemen, Lebanon, Iran and Jordan.

However, above and beyond the more or less standard results of NHA, the Moroccan model also provides a basis for asking questions about the priorities within the health sector (Zine Eddine El Idrissi and Dmytraczenko, 1999). This establishes a connection between the issues that justify the reforms on the one hand and the configuration of NHA as a tool for evaluating these reforms and also diagnosing funding problems. As an illustration, the detailed analysis of spending on mother and

Therefore, it was necessary to develop an additional variable in order to isolate the people covered by the CNSS (which is not a health insurance organization) and those that have medical coverage through health insurance (National Fund of Social Thrift Organizations [*Caisse Nationale des Organismes de Prévoyance Social*, CNOPS], domestic plans and private insurance companies).

The actual analysis approach chosen entailed using spending[7] to arrive at the sources of funding and then perform an analysis of spending according to levels of the health system in order to determine the share of each type of activity (hospital care, outpatient care, administration, etc.). Household spending was processed in connection with the health insurance data in order to determine the share of direct payments, that of third-party payers and of reimbursements by category of service and provider type. For the other institutions, the use of the data was adjusted to the requirements of filling in the matrices on funding sources (Tables 4 and 5), the distribution of resources raised among the groups of providers (Table 6), and the functional classification of health system spending (Table 7).

It should be noted that the spending amounts that pertain to the public sector, and those of the MOH in particular, are expenses and not budget appropriations. Investment spending was taken into consideration because, given the current state of the public information system, it is very difficult to quantify depreciation. Moreover, for the economic classification, expenses for line items in the investment budget that were used for recurrent expenses were considered as operating expenses.

For these first national health accounts, it was not possible to obtain data for the Royal Armed Forces or Civil Protection. In addition, the small number of replies received from Non-Governmental Organizations (NGOs), businesses (for the occupational medicine portion) and welfare agencies of

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[7] The work on the National Health Accounts in Morocco analyzes funding through supply (mainly public) and demand. It is different than the approach used for developing the satellite accounts based on supply, as is the case in France. This second approach was adopted in 1989 when the first (and only) study on funding for Morocco's national health system was conducted (Ministry of Health/Icône-Cedes, 1989). This difference in methodology makes it difficult to compare the results of the two studies.

outpatient). This latter category of care is provided as ambulatory care.

Hospitals or their equivalents are defined as follows:

- The Ministry of Health's public hospitals (excluding local hospitals, which are part of the basic health care network (*Réseau de Soins de Santé de Base*, RSSB), in other words, the general public health clinics, prefecture, provincial and regional hospitals, whether they have one or more specialties, and the CHUs;
- Military hospitals;
- Mutual clinics;
- Agency clinics;
- General Clinics of the National Social Security Fund;
- Private clinics;
- NGO clinics.

Ambulatory Care

This type of care is provided outside the hospitals, except for the services listed above, by the following providers:

- The Ministry of Health's basic health care network, including health checks at borders, health coverage of *moussems*, health coverage of sporting events, etc.;
- Military infirmaries;

[8] It was impossible to quantify donations made by individual donors, either directly or indirectly.

- Infirmaries and social centers of the ministries' social agencies;
- Infirmaries of the agencies and private firms;
- Professional practices, including general practitioners, specialists and paramedics;
- Medical analysis laboratories;
- Radiology offices;
- NGO care rooms.

Some services, such as workplace, prison and school and university health services, provided in the MOH's National Institutes and Laboratories (IPM, CNTS/CRTS and INH), are also included.

In the public sector, two types of ambulatory care can be distinguished: preventive and curative. Preventive care is generally related to health programs (public health activities), such as the National Immunization Program, Family Planning Program, and Tuberculosis Control Program. (All programs other than those indicated in the complete list of "collective health prevention
care is comprised of all other activities outside health programs. It is true that curative care includes individual preventive activities, but the current state of the information system is unable to separate them.

Collective Health Prevention

Collective health prevention includes all activities whose purpose is to improve the health condition of the population in order to prevent disease and accidents, without being able to individually identify the beneficiaries. In other words, these services are intended for the entire community taken as a single whole, and not for specific individuals. These include in particular:

- Health inspections of crops and animals, slaughterhouses and foodstuffs by the Agriculture Ministry;
- Information, education and communication campaigns or programs related to health in the workplace. These programs are carried out by the Social Development Ministry;
- Highway prevention programs of the Transportation Ministry (National Highway Accident Prevention Committee);
- Quality control of drinking water by the National Drinking Water Board (*Office National de l'Eau Potable*, ONEP);
- Principal activities of the Municipal Hygiene Agencies;
- Prevention activities of the National Institutes and Laboratories (INH, LNCHMP, CNRP, IPM);
- Hygiene programs of the Ministry of Health, namely:
  - Basic sanitation program;
  - Food hygiene program;
  - Vector control program;

- Environment safety program;

- MOH programs for:

  - Health education;
  - Water-related disease control;
  - Epidemiological monitoring.

Fixed Assets

This is all the spending for purchasing and renovating various long-term assets, such as land, buildings and equipment (transportation, computers, technical). Real estate studies are also included in this category.

Depreciation is not included.

Medical Assets

Drugs, medical consumables, optical glasses, orthopedics and devices for the handicapped are the items that constitute the medical assets.

Medical Research

This work is difficult to isolate because it is carried out in CHUs along with other activities. The only activities included here would be those of units or services whose main function is medical research.

Training/Education

Training/education covers basic training activities (for the paramedics) and continuing education by the Ministry of Health. Training for practitioners, which the hospitals provide (CHUs and military hospitals), is carried out by caring for the patients, so that this component cannot be isolated. Only gross wages paid to teachers by the Higher Education Ministry are included here.

Traditional Medicine

Traditional medicine is a series of services provided by the *Qablats* (traditional birth attendants), *Aâchabas* (herbalists), and other *Fquihs*, etc. This medicine is not based on any regulations and cannot be controlled. The Ministry of Health's involvement in these areas is currently limited to training and providing equipment for some traditional birth attendants in regions where access is difficult. The purpose is to improve delivery conditions in the home and, in the event of complications, to refer women who are about to give birth to the closest care institutions.

Administration

Administration includes the administrative management of organizations and institutions that are directly involved with health and that do not overlap onto other activities. Hence, only the administrative expenses of the following institutions are included:

- Ministry of Health: national government, local government (delegation), hospital administration, administration of the National Institutes and Laboratories;

- Other ministries: administration of organizations whose entire work is part of health, such as collective health care and prevention;

- Local governments: administration of the Municipal Hygiene Agencies.

- Agencies in charge of health insurance: administration of insurers (only for medical coverage activities) and mutuals.

Source of Funding/Intermediate Funding Institutions

The source of funding is the principal origin of resources obtained for the national health system, whereas an intermediary funding institution is in charge of managing these resources. For example, insurers and mutuals are not sources of funding; instead, they are funding intermediaries. The main source of resources at this level is households and employers through their respective contributions. Thus, the households and employers (private businesses, local governments, the State and its agencies) are the sources of funding at this level.

Medical Consumption/Total Health Spending

Medical consumption, which comprises of hospital and ambulatory care, medical items and traditional care, is one of the components of total health spending. Increasingly, this covers collective health prevention, general system administration, training, education and research as defined above.

National Health System

The definition of the national health system is important because it impacts its scope. The methodological approach and choice of institutions surveyed in the context of developing the National Health Accounts corresponds precisely[9] to the following definitions:

- WHO definition (WHO, 2000): "A health system includes all activities [people and programs] whose main purpose is to promote, restore or maintain health."

- Definition of the bill on the national health system and the supply of care – Health Card … the national health system is defined as all the human, physical and financial resources, and all the institutions and activities intended to promote, protect, restore and rehabilitate the health of the people."

[9] This adaptation is limited only by the inability to partially or totally access data on the institutions that are involved in the national health system.

2. Health Issues and Levels in Morocco

At this time, and over the coming years, the Moroccan national health system is and will be confronted not only with the health issues inherent to developing countries, but also with those that affect industrialized countries. Despite the drop in contagious diseases over the past decade, these diseases still account for a relatively heavy burden in terms of programs, prevention and control (DPRF/MOH, 1999). Next, non-contagious diseases, accidents and trauma also weigh heavily on the health care system, particularly for the hospitals, since these cases are usually treated by hospitals (Laaziri M., 1998). A study performed on the burden of total morbidity based on causes of death reported in 1992 found that the years of life lost due to premature death are primarily the result of perinatal affections, infectious and parasitic diseases, respiratory illnesses, trauma and malignant tumors. (Laaziri M. and Azelmat M., 2000).

Moreover, mother and child health issues in Morocco continue to be of concern despite improvements over the past few years. The indicators in Table 1 below measure the extent of these problems.

This table also highlights the major discrepancies that continue between the urban and rural areas. These differences may be explained in part by the inequities of supply and access to care, which are still very blatant. Despite the MOH's efforts, people in rural areas continue to have difficulty finding access to care institutions.

Table 1: Health Indicators in 1997

INDICATORS	URBAN	RURAL	NATIONAL
Life expectancy at birth (2)	72.2	65.9	68.8
Total fertility rate (1)	2.3	4.1	3.1
Birth rate (per thousand) (2)	20.7	26.9	23.6
Mortality rate (per thousand) (2)	5.1	8.1	6.5
Rate of natural increase (per hundred) (2)	1.6	1.9	1.7
Adjusted infant mortality rate (per thousand) (1)	23.8	46.1	36.6
Adjusted child mortality rate (per thousand) (1)	6.1	15.1	9.8
Adjusted infant-child mortality rate (per thousand) (1)	29.9	61.1	45.8
Neonatal mortality rate (per thousand) (1)	15.1	22.1	19.7
Maternal mortality rate, per 100,000 live births (1)	125	307	228

(1) Ministry of Health (1998), National Mother and Child Health Survey, Rabat

(2) Division of Statistics (no date), Social demographic profile of the people of Morocco, Rabat

The difficulty that people in rural areas have accessing care continues to be a major deficiency in the system. The data on coverage for people in rural areas by the Basic Health Care Institutions, evaluated by radius in kilometers, show that distances between the people and health centers are considerable. In 1996, nearly 31% of these people were located more than 10 kilometers from a health institution. Those in remote areas are supposed to be covered by a mobile system that was established to supplement coverage using the non-mobile method. However, mobile performance in terms of coverage and contribution to the supply of health coverage is low, to the point that it can be said that a high percentage of people in rural areas have only very little access to care (DPRF / MOH, 1999).

Furthermore, rural populations have more difficulty accessing hospital care; they consume only one-fourth of nights spent in public hospitals. This situation is partially the result of the meager development of General Public Clinic-type intermediary hospitals. The access issue is all the more acute in that the MOH is essentially the only care provider in rural areas. In fact, the gap between numbers of private consultation practices in urban and rural areas (1 practice per 95,418 inhabitants in rural areas versus 1 per 4,354 in urban areas[10]) is the reason for a significant imbalance between the two areas in terms of overall medical services. This is in addition to the problem of access to drugs due to the fact that there are not enough pharmacies or drug depots in rural areas (1 depot per 46,000 habitants) (DPRF / MOH, 1999).

The level of the morbidity burden and inequities caused by access to care generate a rather considerable loss in terms of disability. Thus, in terms of disability adjusted life expectancy, the most recent WHO report (WHO, 2000) ranks Morocco 110th (out of a total of 191 countries). The rank drops to 111th for inequality of health measured by differences between the classes of income between rural and city dwellers.

In addition, the WHO report looked at the national health system's ability to react and terms it weak. Here Morocco ranks 152nd (out of 191). There are many reasons for this ranking. However, two should be mentioned here:

- The extreme complexity of the national health system, with its multitude of players (see Table 2), which do not coordinate or harmonize their activities.

- Financing that is quantitatively low and fragmented (see section 3 for more detail).

[10] Some centers considered to be urban by the statutory census of the population are actually rural centers. That is why these ratios must be used with the utmost caution.

Table 2: Care and Prevention System in Morocco

Sectors	Provider	Capacity/Number	Principal Activities
Public:			
Ministry of Health	Basic health care network (RSSB): (Mobile teams; Dispensaries; Health centers; Support structures; Local hospitals, etc.)	Number of BHC establishments: 2,138 Number of physicians: 2,294 Number of paramedics: 10,081	Curative and preventive ambulatory care + Collective health prevention
	Hospital network: (General Public Health Clinics, Single-specialty hospitals, Semi-autonomous hospital centers, University hospital centers)	Number of hospitals: 112 Number of beds: 25,265 Number of physicians: 3,709 Number of paramedics: 13,204	Full and partial hospital care + Research + Training
	National Institutes and Laboratories		Prevention, Research and expertise
Defense	Establishments of the Royal Armed Forces		Hosp. & amb. care + Training
Other departments	Units that specialize in: Collective health prevention Transportation for accident victims and patients Prison medicine	……	
Local governments	Municipal Health Offices (MHO)	Number of MHO physicians: 327	Collective Health Prevention
Private non-profit	Clinics and Mutual practices CNSS clinics Agency establishments Moroccan Red Crescent Establishments League and Foundation Establishments	Total number (excl. Moroccan Red Crescent, leagues or foundations): 26 Number of beds: 1,726	Ambulatory and hospital care
Private for-profit	Private practices: Medical care Dental care Paramedical care	Number of private practices: 4,703	Urban care (ambulatory)
	Laboratories	Number of laboratories: 227	Laboratory analyses
	Private clinics	Num. of private clinics: 183 (4,135 beds)	Hospital care
	Pharmacies	Num. of pharmacies and depots: 4,500	Drugs and other medical products
	Suppliers of other medical products		Radiology exams and analyses
	Radiology practices	Number of radiology practices: 127	

Sources: SCS/DPRF/MOH, January 2000

3. Extent of Health Funding and Financial Flows among Institutions

3.1 Level of Health Spending

Total health spending was slightly higher than 15 billion DH in 1997/98. This amounts to almost 550 DH per inhabitant (US$ 56 at the 1997/98 current exchange rate, or US$ 135 in terms of the parity of buying power), a scant 4.5% of GDP. This is a rather sizeable difference compared to countries with similar economic development levels (see Table 3).

Table 3: Total Health Spending Level: Comparisons with Countries with Similar Economic Development Levels (1997/98)

Country	GDP per capita in US$ (1998)	Health spending per capita in US$ (at the current exchange rate)	Health spending compared to GDP (%)
Morocco	1,260	56	4.5
Jordan	1,520	134	9.4
Iran	1,780	103	5.8
Tunisia	2,110	118	5.6
Lebanon	2,660	398	9.8

Sources: National presentations at the Regional Workshop (MENA) on the National Health Accounts, Amman, May 2000

The level of consumption of medical goods and services amounted to almost 13.5 billion DH over the same period. This is less than 500 DH per inhabitant per year.

Assuming that medical consumption equals the sum of the products between the prices and corresponding quantities:

$$S \; Pi \times Qi$$

(In which P = price, Q = quantities and i is all services and items consumed)

The cost of health care is low if the prices and/or quantities are low. Yet, upon examining prices in relative terms compared with income and GDP, the ratios are high. For example:

- The average cost of having a prescription filled was almost 250 DH, which is the equivalent of four days of work paid at the minimum wage, or 2% of per capita GDP.
- The average cost of a consultation with a specialist physician is 150 DH. This is the equivalent of two and a half days of work paid at the minimum wage, or 1.2% of per capita GDP.

This means that the quantities (use of care and access to medical products) are low and that they are one reason for the low level of medical consumption and total spending on health.

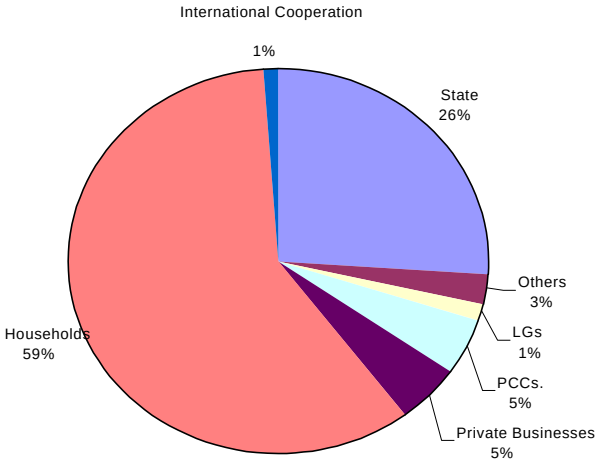
3.2 Sources of Health Financing

Sources of funding are analyzed using two approaches. The first looks at the institutions that originate the financing, while the second emphasizes the type of financing. Both point out the inequity of health care funding in Morocco due to the high percentage of direct payments by households, which fund 45% of total health spending (and practically 60% of medical consumption). Therefore, the costs of Morocco's health system are not based on an individual's ability to pay through a risk-mutualization system or a national solidarity system, but through the risk of disease, and direct payments made by individual households.[11] In addition to questions about equity, this fragmented funding also generates issues of control, regulation and management of the national health system.

3.2.1 Sources of Funding by Type of Institution

According to this approach (see Figure 1 and Table 4), the main source of funding is households, which account for 59% of the spending: 54% is through direct net payments from reimbursements by insurance companies and mutuals, and 5% through contributions to medical insurance coverage as employees. The State, through its budget, finances just 26% of total health spending (the ministries receive 23.5% and 2.5% comes from employer contributions and the medical coverage of their employees). The respective portions of Private Companies and Corporations (PCCs) are equal and remain less than 5%. Local governments and international cooperation are just above 1% respectively.

Figure 1: Sources of Funding by Type of Institution, 1997/1998



[11] In the section on the "equity of the financial contribution to health systems," the WHO rates Morocco low (126th).

Table 4: Sources of Health Funding by Type of Institution, in Current Dirhams, 1997/98

Intermediary Institutions	Sources of Financing							TOTAL
	State	Households	Local Governments	Public Companies & Corporations	Private Businesses	International cooperation	Others	
Ministry of Health	3,279,940,394					61,609,272		3,341,549,666
Other Ministries	273,260,840	8,782,293		4,752	17,898,106	4,991,000	2,083,002	307,019,993
Local Governments			155,086,124					155,086,124
Public Companies and Corporations				154,537,559				154,537,559
Households		8,075,631,490						8,075,631,490
Insurance Companies and Mutuals	383,895,000	849,775,496	32,975,000	577,275,686	325,108,500		271,869,041	2,440,898,724
CNSS					384,098,329			384,098,329
International Cooperation						87,381,103		87,381,103
Others							102,634,603	102,634,603
TOTAL	3,937,096,234	8,934,189,279	188,061,124	731,817,998	727,104,935	153,981,375	376,586,647	15,048,837,591
	26.16%	59.37%	1.25%	4.86%	4.83%	1.02%	2.50%	

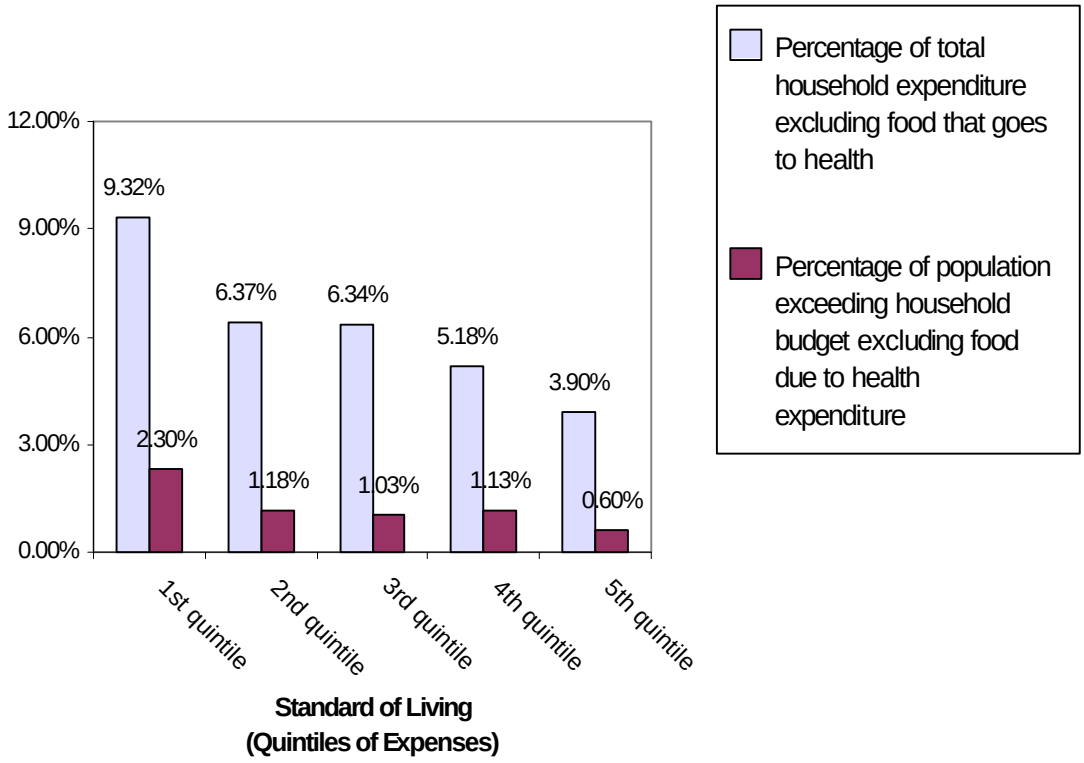
Examples of Inequities in the Distribution of Household Funding for Health

The analysis of funding for health through contributions made by households, as shown in the Moroccan National Living Standards Measurement Survey on Household Income *(Enquête Nationale sur le Niveau de Vie* , ENNVM) (1998/99), points out inequalities between the relative weight of each category of population according to standard of living.

The share of household spending allocated to health care (excluding food[12]) is 6.5% nationally. This percentage is higher among the poorest 20% of the population (1st income quintile) who allocate more than 9% of their spending to health (excluding food), versus 3.9% among the wealthiest 20%, who belong to the 5th quintile (see Figure 2).

More specifically, 1.3% of the population has spent all its money or even gone into debt in order to obtain health care. Again, as Figure 2 shows, this percentage is higher among the patient population that belongs to the 1st quintile, 2.3% of whom exceed their household budget (excluding food) because of health care expenditures, in contrast to 0.6% for the wealthiest patients (5th quintile).

Figure 2: Weight of Health Spending by Households in the Budget, Excluding Food, and Structure of the Population that Spend More than this Budget According to Standard of Living



[12] It is considered that food spending is essential spending for all households. The budget, excluding food, thus appears to be the available portion of income spent on other items, such as health, education, housing and clothing.

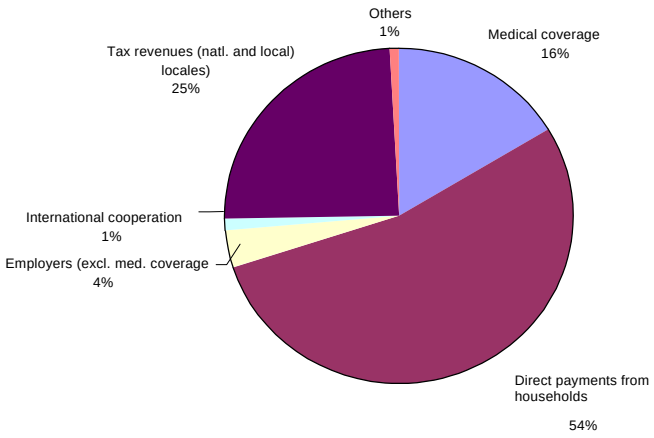
3.2.2 Sources by Type of Funding

The second approach (see Table 5 and Figure 3) also shows that the largest portion of health care funding is from direct payments by households (54%). National and local tax resources provide only one-fourth of total health spending, and medical insurance coverage amounts to just 16%. This means that collective financing for health, through solidarity schemes (in the broad sense) is used for only 41% of total health spending. Other funding sources continue to be marginal: 4% for employers (excluding state and local governments) and 1% for international cooperation.

Table 5: Sources by Type of Funding, 1997/98

		In current Dirhams	In %
Tax sources (Budget)		3,553,201,234	23.61%
Contributions to funding insurance coverage	Total	2,467,579,123	16.40%
	Household	*849,775,496*	*5.65%*
	State	*410,575,399*	*2.73%*
	Public companies and corporations	*577,275,686*	*3.84%*
	Private businesses	*325,108,500*	*2.16%*
	Local governments	*32,975,000*	*0.22%*
	Others	*271,869,041*	*1.81%*
Local governments		155,086,124	1.03%
Employers		538,640,640	3.58%
International cooperation		153,981,375	1.02%
Households		8,075,631,490	53.66%
Others		104,717,605	0.70%
Total		**15,048,837,591**	**100.00%**

Figure 3: Sources by Type of Financing, 1997/1998



3.3 Breakdown of Financial Resources among Service Providers in the National Health System

As seen above, the national health system raised 15 billion Dh in 1997/98. How were these resources distributed among the service providers?

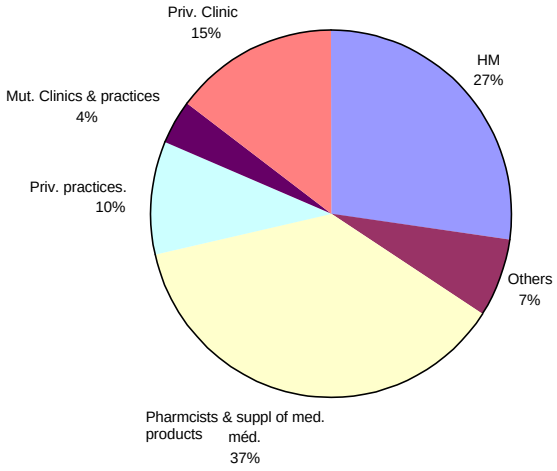
First, the largest share (37%) goes to pharmacists and suppliers of medical products due to the high price of drugs (relative to the population's average buying power), the high amount of self-medication in Morocco[13] and the custom of having service providers prescribe drugs.

Second, the MOH receives only 27% of all resources raised, even though it easily is the largest provider of care and other health services nationally. Obviously, the main source of funding is the state budget (see section 4.1 for more details).

Third, the private sector as a whole (both profit and non-profit) received more than 30% of resources, as follows: 15% for private clinics, 10% for private practices, 4% for mutual clinics and practices (including the CNSS general clinics), 1% for traditional medicine workers and 0.1% for NGOs. The major sources of funding for this sector are direct payments by households and/or medical coverage, except for the CNSS general clinics and NGOs. The former are funded mostly by a portion of the surplus from family allowances; the latter by transfers and aid from the MOH, the communes and international cooperation.

Fourth, the share of the other institutions taken as a whole (local governments, other ministerial departments, and PCCs) is small, no more than 6%.

Figure 4: Breakdown of Resources Mobilized among Service Providers, 1997/98



[13] One-eighth of drug purchases are without a medical prescription.

The analysis of financial flows between funding intermediaries and service providers (see Table 6) may be made more complete by a detailed examination of the flows coming from medical coverage, households and international cooperation:

- Medical coverage resources (2.44 billion DH) go mainly to the pharmaceutical sector (31%) and the private care sector (30% to private clinics, 17% to private practices and 6% to mutual clinics and practices). Just less than 7% is spent on mutual and insurance company administration. Public hospitals, which account for more than 80% of national bed capacity, receive less than 5% of these resources.

- Net and direct payments from households (more than 8 billion DH) are made mainly for the purchase of drugs and other medical products (60%) for the reasons indicated above (self-medication, prices and prescription customs), but exacerbated by the low rate of coverage for the population of Morocco by health insurance. Other considerable payments are made to private service providers: 18% to private clinics, 14% to private practices and 2% to traditional medicine workers. Moreover, when care is provided in the public network (mainly the hospitals but including the basic health care network), the households pay both the formal costs (which appear in the accounting books of care establishments) and informal costs that amount to more than 3% of all their net and direct payments.

- Of the resources that are raised from international cooperation (149 million DH), 90% go to the MOH (46% for the RSSB, 22% for the hospital network, 20% for local and national administration and 2% for the National Institutes and Laboratories). Other than the NGOs, which receive 7% of international resources, the aid provided to the other sectors continues to be marginal: 2% for the other ministries, 1% for the local governments and 1% for the private sector (training for private physicians under the USAID-funded Family Planning Program).

Table 6: Financial Flows Between Intermediary Funding Institutions and Service Providers, in Constant Dirhams, 1997/98

Service providers	Intermediary institutions									
	Ministry of Health	Other Ministries	Local Governments	Pub. Cos. & Corps.	Households	Insurance cos. & Mutuals	CNSS	Intl. cooperation	Others	TOTAL
Ministry of Health	3,323,807,326	149,795,082	26,208,332	0	302,090,397	111,451,674	0	72,507,924	102,634,603	4,088,495,338
Hospitals (including CHUs)	*1,571,484,436*	*145,862,050*	*14,524,343*		*256,909,472*	*111,256,562*		*33,249,477*	*58,682,996*	*2,191,969,336*
National institutes and laboratories	*82,997,411*	*2,978,400*			*29,652,526*	*195,113*		*2,869,300*	*43,951,607*	*162,644,358*
RSSB	*1,263,338,417*	*743,706*	*7,932,988*		*15,528,398*			*6,620,343*		*1,294,163,852*
National and local government	*405,987,062*	*210,926*	*3,751,002*					*29,768,803*		*439,717,793*
Other ministries	999,957	156,693,126	0	0	0	0	0	2,192,145	0	159,885,228
Service providers	*999,957*	*117,074,391*						*2,042,145*		*120, 116,492*
Government		*39,618,735*						*150,000*		*39,768,735*
Adm. of insurance cos. & mutuals						167,586,576				167,586,576
Local governments	9,821,055	531,785	125,617,226					1,433,992		137,404,058
Agencies and public companies				154,537,559						154,537,559
Private clinics					1,458,578,804	743,056,520				2,201,635,324
Mutual clinics and practices (incl. CNSS general clinics)					40,972,840	153,623,438	384,098,329			578,694,607
Private practices (incl. Lab and Rad.)					1,123,045,004	416,728,616		1,552,000		1,541,325,619
Pharmacies and suppliers of medical products					4,843,035,199	756,948,709				5,599,983,908
Traditional medicine workers					183,418,014					183,418,014
NGOs	6,560,673		3,260,565					9,695,042		19,516,280
Other providers	360,657				124,491,232	91,503,191				216,355,080
TOTAL	3,341,549,667	307,019,993	155,086,124	154,537,559	8,075,631,490	2,440,898,724	384,098,329	87,381,103	102,634,603	15,048,837,592

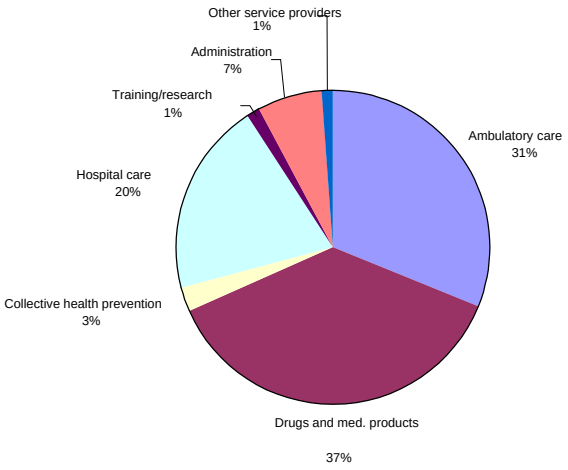
3.4 Spending Rankings by Service Providers according to Function

The data in Figure 5 (and in more detail in Table 7) bring out the following observations:

> Regardless of the type of analysis or ranking, Pharmacy is the largest health care expenditure. The national health system spends more than 37% on drugs and medical products as final consumer products by the patient and not as an input used by health professionals in the context of care. (There is other spending on drugs that is included in hospital and ambulatory care.)

> Ambulatory care accounts for almost 31% of national health system expenditures, whereas hospital care is only 20%. Nevertheless, it should be noted that these rates consider outpatient tests and appointments, as well as emergencies, to be ambulatory care. If these services are included in hospital care, the respective weight of the two types of care is reversed (20% for ambulatory care and 31% for hospital care).

Figure 5: Functional Ranking of Health Spending 1997/1998



> System administration does not exceed 7%.

> Preventive health programs are still neglected, as reflected by its low share (only 14 DH per capita per year 1997/98) of total spending on health, even though the needs at this level are considerable, especially for the poor.

> Training, research and education account for only 1% of health spending (the same percentage as traditional medicine). If the salaries the Ministry of Higher Education pays to teachers who practice in the CHUs and the expenses of the MOH's Health Career Training Institutes (*Instituts de Formation aux Carrières de Santé*, IFCS) are subtracted, only a negligible amount is left (0.1%).

Table 7: Spending Rankings by Service Providers according to Function, 1997/98, in Millions of Current DH

	Providers																		
	Ministry of Health					Other ministries			Adm. of ins. & mut.	Local governments	PCCs	Private clinics	Mut. Clin. & practs. (incl. CNSS)	Priv. Practs. (incl. Lab & Rad.)	Pharm. & med. Prod. suppliers	Trad. Med. workers	NGO	Other provs.	Total
	Hosp. Incl. CHUs	National Institutions and Laboratories	RSSB	Natl. & prov. Govts.	Total	Provs.	Admi.	Total											
Medical consumption	1,747	30	1,218		2,995	33		33		28	91	2,202	579	1,540	5,600	183	10	215	13,476
Hospital care	*1,451*				*1,451*						*51*	*962*	*444*				*8*	*96*	*3,011*
Ambulatory care	*296*	*30*	*1,218*		*1,544*	*33*		*33*		*28*	*41*	*1,240*	*135*	*1,540*			*2*	*119*	*4,681*
Pharmacy															*5,435*				*5,435*
Medical products															*165*				*165*
Traditional medicine																*183*			*183*
Collective health prevention		76	64		140	85		85		80	63						10		378
Training/ Research/ Education	149	36	10		195	3		3						2					199
Administration	296	21	1	440	758		40	40	168	29									994
Others																		2	2
TOTAL	2,192	163	1,294		4,088	120	40	160		137	155	2,202	579		5,600	183	20	217	15,049

4. Sector Analysis

In this short version of the report on the National Health Accounts, only two sectors will be discussed: the Ministry of Health and the medical insurance coverage system.

4.1 Ministry of Health Funding

The study of the Ministry of Health's financing is very important due to its weight in the national health system. Not only is it the guarantor of health in Morocco, but it is also the largest provider of care (81% of national bed capacity) and collective health prevention services.

This brief study will be conducted by analyzing the MOH's budget, sources funding its spending, economic and functional ranking of the same spending, and by a cursory review of the inequities between regions in terms of total expenses and those related to mother and infant health. The inequities of financing and the use of public care services by households will also be examined.

4.1.1 MOH Budget

4.1.1.1 Level of MOH Budget

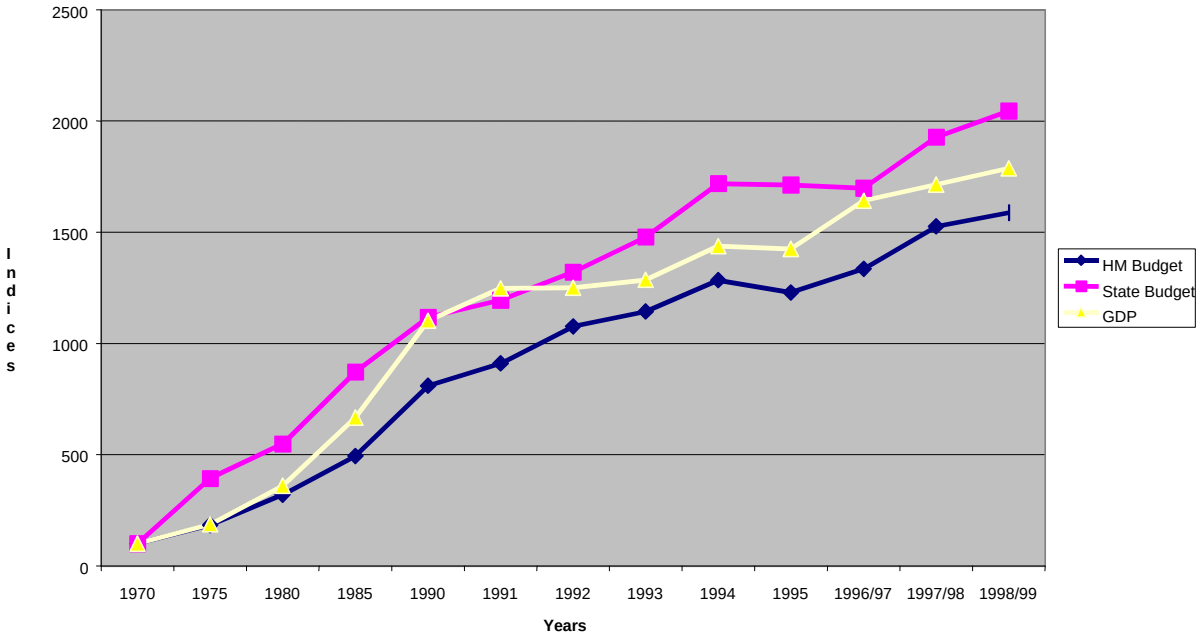
The Ministry of Health budget is insufficient. The points listed below prove that efforts must be made to remedy this situation. This budget:

- Currently accounts for almost 5% of the State's general budget versus 7% in the 1960s,
- Does not exceed 175 DH per inhabitant versus more than 300 DH in countries with similar economic development levels,
- Represents nearly 1% of GDP versus 1.7 % in the 1960s in Morocco and an average greater than 2% in the majority of countries with the same economic development level.

4.1.1.2 Change in the MOH Budget

Health is not a true priority for the State. Despite the considerable population growth and needs in care and in health prevention, the changes in budget allocated to the health department has not kept pace with the State's general budget and the GDP. Figure 6 shows the ongoing disparity between the respective increases of indices with three variables. Over the past thirty years, the curve of the GDP index, has almost always been below that of the State's general budget and above that of the Ministry

Figure 6: Change in MOH Budget Indices, State Budget Indices and GDP (1970-1999)



However, the examination of the changes in the Ministry of Health's budget per capita and in constant DH shows that, during the past three years, the State has made efforts in this sector (see Table 8). However, these efforts have primarily been of benefit to the salaries and benefits at the expense of the rest of the operating budget,[14] the per capita and volume levels of which fell between 1982 and 2000; this mitigates and weakens the benefits of increases in investment funding[15] of these past years. This is corroborated by the change in the health structure's budget over the past thirty years. The analysis of the growth indices of the major budget components (see Figure 7) shows a tremendous gap between the investment budget curve and that of the operating budget excluding employee salaries and benefits. This situation could exacerbate problems of maintenance, repair, cleaning and supervision that the health structures of the health department are currently facing.

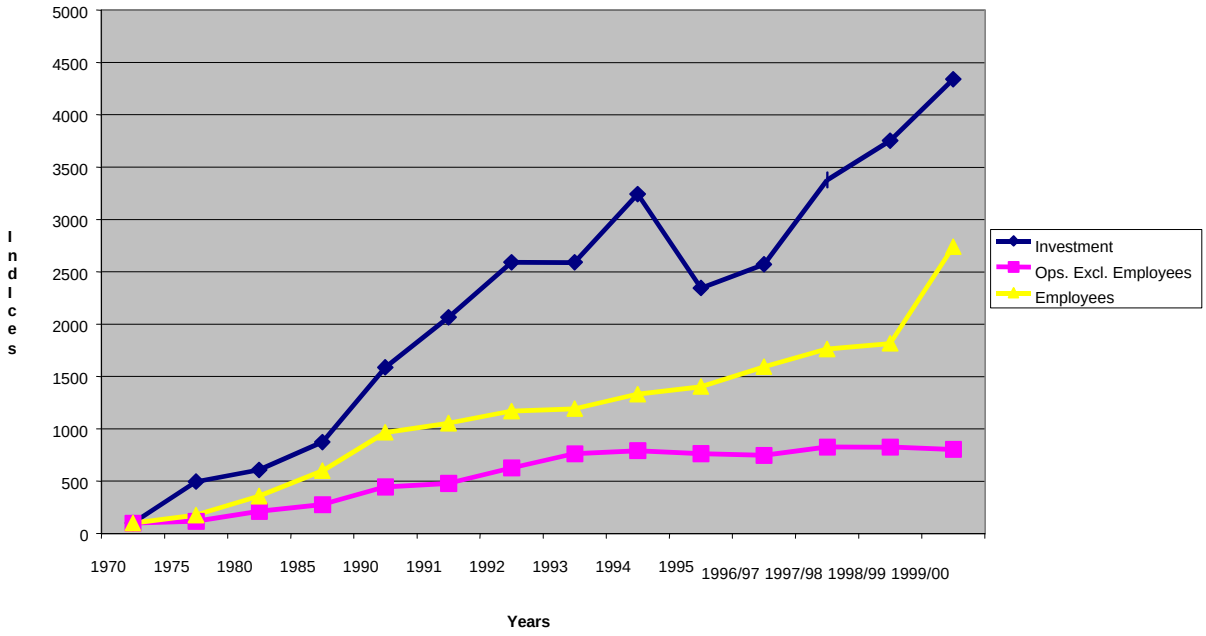
[14] In the 1960s and 1970s, the portion of wage remuneration in the MOH budget oscillated between 39% and 52%. Today, the figure is approaching two-thirds.

[15] The very positive changes in the Investment Budget over these past years (between 1996 and 2000) are financed mainly through loans and budgeted donations. During the last decade, their shares (in the investment budget) were an average of 40.2% for World Bank loans, 9.9% for African Development Bank loans, and 2.1% for budgeted donations from the European Union, which stood at 12.9% in 1999/2000.

Table 8: Change in the MOH Budget per Capita, in Constant DH (Base Year 1989)

	Employees	Operations excl. employees	Investment	Total
1982	42	18	22	82
1987	46	16	19	81
1992	45	20	18	83
1993	43	22	17	83
1994	45	22	20	87
1995	44	20	13	77
1996/97	47	18	14	79
97/98	50	19	17	86
98/99	50	18	18	87
99/00	72	17	20	110
(2^{nd} half of 2000) x 2	58	17	22	97

Figure 7: Change in the Structure of the MOH Budget (1970-2000)



4.1.1.3 Level of Spending of Funding Allocated to the MOH

During the second half of the 1990s, the actual budget allocated to the MOH was never less than 99.3% (SSERF/DPRF/MOH, 2000). It was 99.8% in 1999/2000. However, the department does not use its investment funding sufficiently. During the past five fiscal years, the MOH has underspent its budget by 292.2 million DH. On average, that is 58 million DH per fiscal year. The most significant loss is for FY 1999/2000, during which the MOH failed to use nearly 111 million DH.

During the same period (1995-2000), the issue rate of payment credits from the investment budget (carryovers and new) oscillated between 32.6% and 51.9%. This is a rather weak performance.

4.1.2 Sources of Funding for MOH Spending

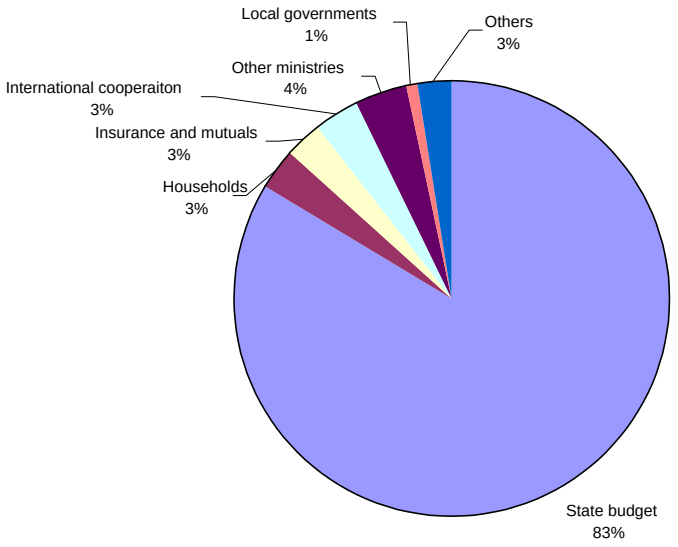
The main source of funding for MOH spending is easily the State budget, which amounts to nearly 83% of all spending.

The share of the other ministries in funding MOH activities is limited to 4%. That share is mainly the wage bill paid by the Ministry of Higher Education to teachers who teach in the CHUs.

Local governments participate in funding the health department's activities (the reverse is also true as Table 6 shows) in the amount of 1%. This is the smallest share.

Other sources of funding (households, insurance companies and mutuals, and international cooperation) provide more or less the same share, or 3% of MOH spending. However, it should be mentioned that, for households, the amount used in the calculations differs from the amount shown in Table 6 (more than 302 million DH). The amount in the table comes from statements made by households, whereas the amount used to calculate the above percentages (only 120 million DH) is reported by the providers themselves (SEGMA and CHU hospitals). This very probably means that the difference (almost 183 million DH) is used for informal systems and obviously does not appear in the accounts of the hospitals, which in no way benefit from it.

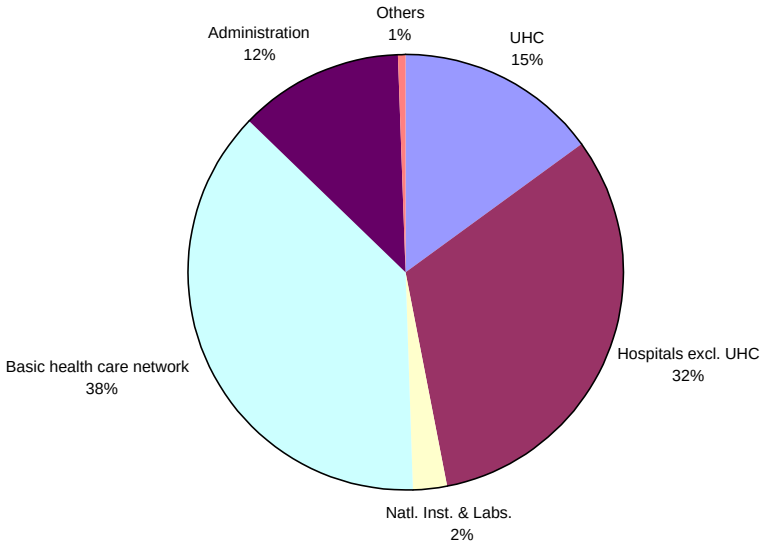
Figure 8: Sources of Funding for MOH Spending, 1997/98



4.1.3 Structure of MOH Spending by Level

Of all the budget funds allocated (and spent) by the MOH, 47% is used for hospitals (15% for the CHUs and 32% for the other hospitals), versus 38% for the basic health care network. The National Institutes and Laboratories, which basically work to support the RSSB and provide training, receive only 2% of these allocations, or one-sixth of the National and Local Governments (12%). It is true that this percentage is fairly high. However, it should be stated that, in the context of health programs and monitoring health care and prevention activities, support at both the national and local levels (administration of health programs, infrastructure services and provincial ambulatory programs) continues to be substantial.

Figure 9: Funding Allocated by the MOH and Spending per Level, 1997/98



4.1.4 Ranking of MOH Spending

4.1.4.1 Economic Ranking

A ranking of all the MOH expenses per category of spending (Figure 10) shows the following results:

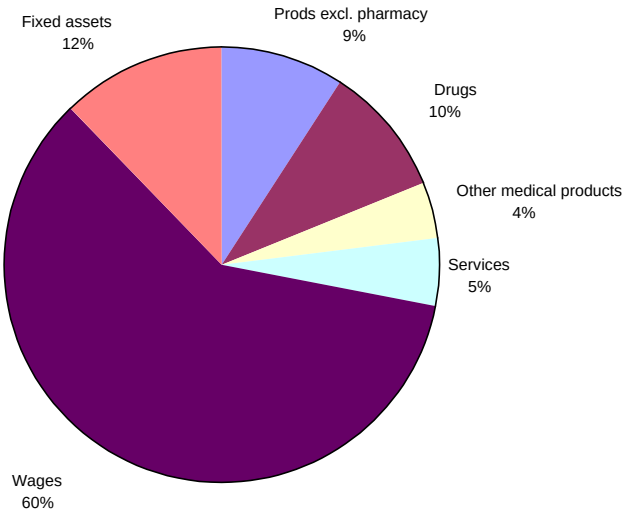
> The share of the budget going to salaries was very high in 1997/98 (nearly 60%). After MOH employees receive a raise, this percentage will rise dramatically and reach nearly two-thirds of the department's funding in 1999/2000.

> The MOH spent almost 12% of its resources to buy various fixed assets, including land, buildings and equipment. Due to its aging assets, this percentage seems rather modest.

> The remaining 28% is shared by the products and services the department bought in 1997/98. However, the lion's share of this (23%) is spending to purchase products. Most of the 23% is for drugs (10%) and, to a lesser extent, other medical products (4%). Other items — primarily foodstuffs, energy products and medical gases — account for only 9% of MOH spending.

> As a corollary, the spending on services — maintenance, repairs, travel and communication — which are essential for the MOH's services to run properly and for the longevity of the department's fixed assets, is just 5% of MOH resources. Maintenance and repair accounts for only 1.7% of these resources, in other words, just what is necessary for standard maintenance of assets with a service life less than or equal to three years.

Figure 10: Economic Ranking of MOH Spending, 1997/98



4.1.4.2 Operational Ranking

The functional analysis of MOH spending (Figure 11), that is, budget spending and other contributions from the outside including equity resources, transfers from international cooperation and other ministerial departments, allows us to observe that:

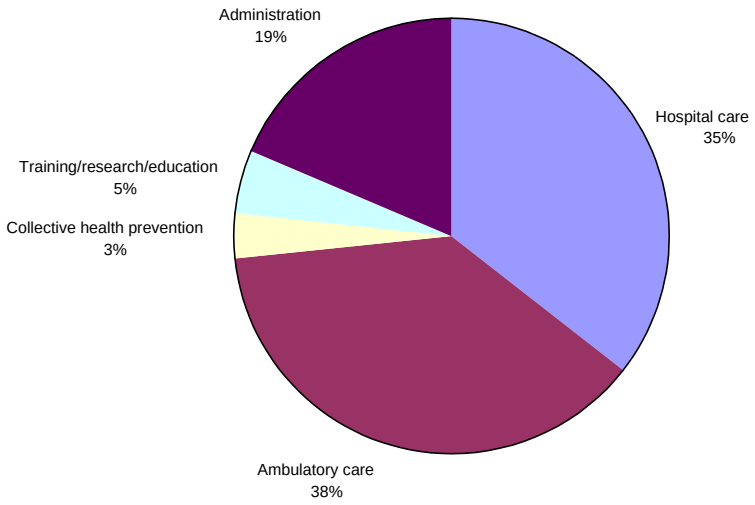
> The Administration enjoys a very high portion (19%), due to the integration of provider administrations such as the hospitals and the National Institutes and Laboratories. Also, much of the contribution from the MOH's partners is used to provide for the department's health activities.

> Ambulatory care (in the broad sense) has an estimated share of 38% versus 35% for hospital care. These percentages would be 31% for the former and 43% for the latter if all ambulatory hospital services had been apportioned to hospital care.

> The share of ambulatory care, regardless of how it is defined, can be considered insufficient on the one hand, due to the serious quantitative weakness of additional activities such as collective health prevention, whose share is just 3%, and on the other hand, the current needs of Moroccan society in terms of services related to environmental hygiene, mother and infant health, and the treatment of communicable diseases.

> Training, research and educational activities receive 5% of the resources the MOH mobilizes. This amount is mostly wages for teachers and trainers in the Health Career Training Institutes and the CHUs.

Figure 11: Operational Ranking of MOH Spending (Including Non-budget Contributions)



4.1.5 Inequities and Problems of Allocating Financial Resources

Analyses show inequity at several levels, primarily affecting the use of MOH care services, funding for these services for households, and the distribution of the department's resources.

4.1.5.1 Use of Care and Funding for Care Services in the MOH by Households

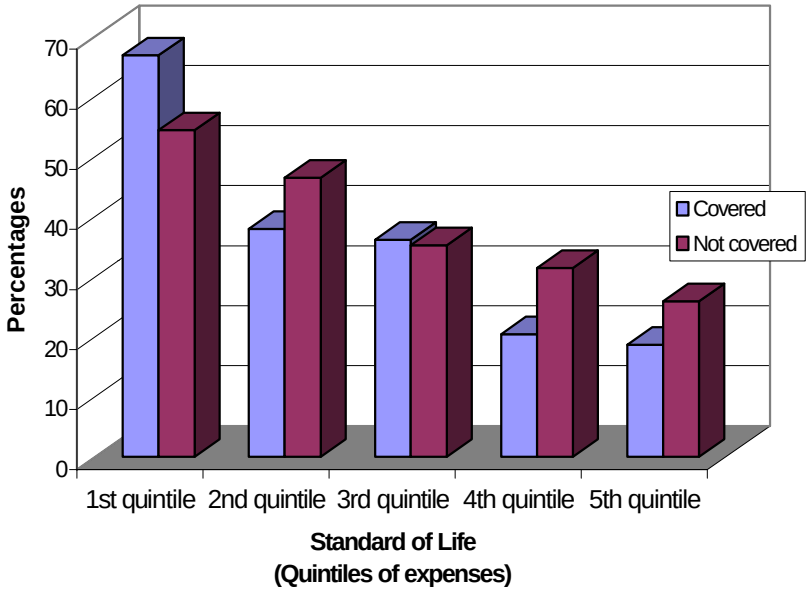
Before addressing the use of MOH health services, it can be noted that, at the national level, the rate of use by persons who are reported ill was 65.5% according to the ENNVM in 1998/99. More than one-third of patients do not seek care. A more in-depth analysis brings out major disparities among the different population classes. These are caused, among other things, by financial and/or physical accessibility problems. Unmet demand is in fact 2.4 times higher among the poorest patients (54.9%) than among the richest (23.1%) (Table 9).

Table 9: Non-use of Care according to Residence Area, Standard of Living, and Medical Coverage, 1998/99

	Residence area		Standard of living (Spending quintiles)					Medical coverage	
	Urban	Rural	1st quintile (poorest 20%)	2nd quintile	3rd quintile	4th quintile	5th quintile (richest 20%)	Covered	Not covered
Rate of non-use	28.63	44.01	54.93	46.16	35.3	29.34	23.06	21.67	37.26

While the difference between the use rate among those covered and those not covered by health insurance is low, the discrepancy between the poorest and the richest income quintiles (Figure 12) is greater.

Figure 12: Non-use Rate according to Medical Coverage and Standard of Living

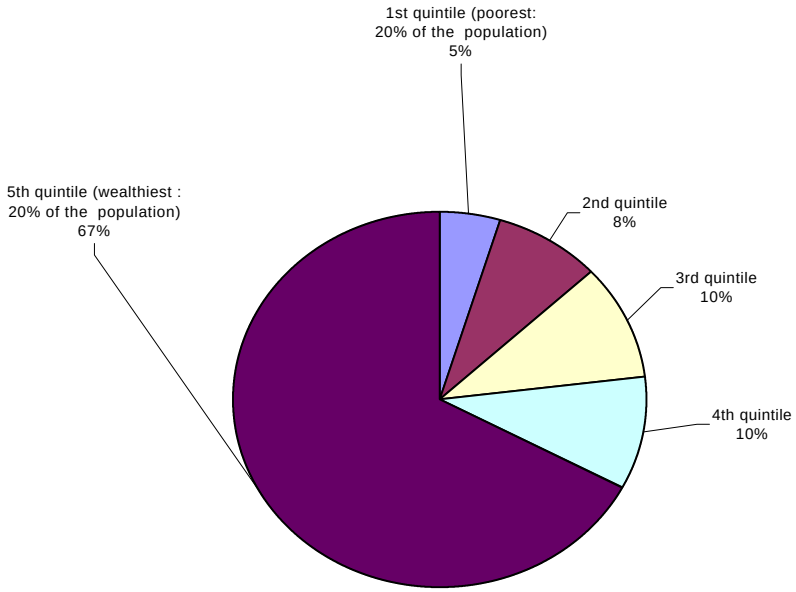


The difference is rather large also between use by patients in rural and urban areas. Rural patients use health care services (56%) less than urban patients (71.4%). Furthermore, in order to obtain care, rural patients must travel three times farther than their urban counterparts. This difference is high for MOH care units, such as dispensaries, health centers and public hospitals, since the distance between the homes of patients and these health units is four to six times greater in rural areas than in urban areas.

The 1998/99 results of the ENNVM establish that the wealthiest people use public hospital health care services, especially if patients not covered by health insurance, whose spending is not reimbursed, are taken into account (see Figure 13). Sixty-seven percent of services provided free of charge by public hospitals to people not covered go to wealthy individuals (5^{th} quintile), versus just 4.8% for the poorest (1^{st} quintile).

Elsewhere, health care provided in basic health care establishments is theoretically free, especially for low-income people. However, the poorest 20% of the population spends an average of approximately 28 DH for each consultation. This spending rises as the standard of living rises and reaches just over 100 DH for the highest quintile.

Figure 13: Structure of the Patient Population Not Covered by Health Insurance that Used Free Public Hospital Care



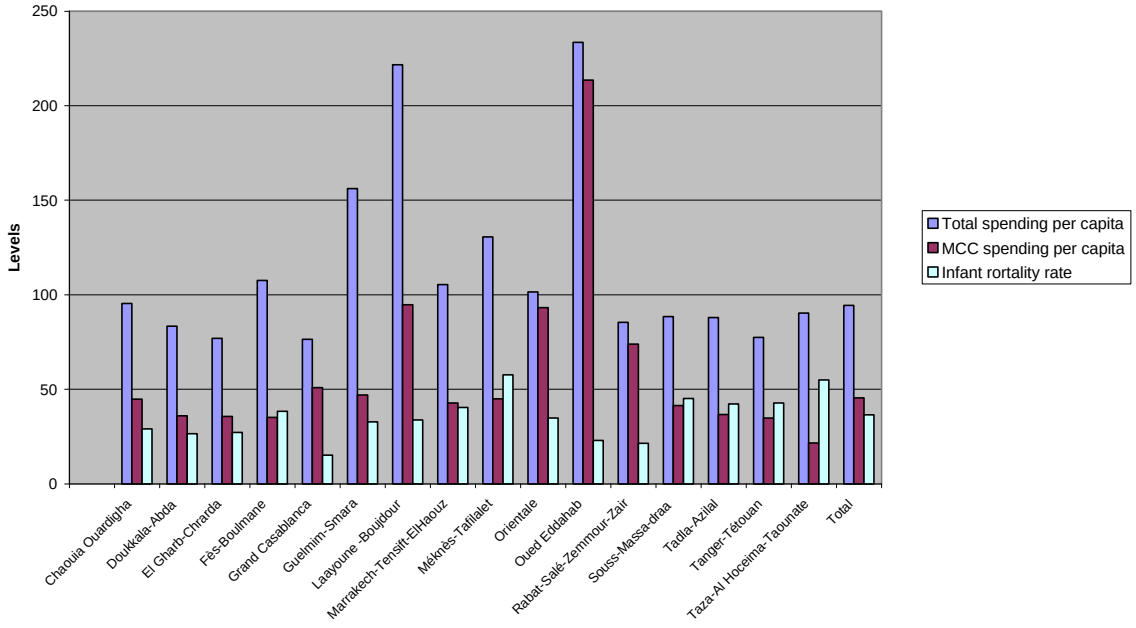
4.1.5.2 Issues of Financial Resource Distribution

As Figure 14 shows, total MOH spending (excluding CHUs and National Institutes and Laboratories) per capita and per region shows significant disparities. Even if there is no significant concentration of spending (the Gini coefficient[16] is 10%) due to low population density in the relatively wealthy provinces and prefectures (mainly the regions in the far South), the problem of distributing financial resources still exists. As the Sector Health Strategy notes (DPRF, 1999), "…the distribution of funds among the different provinces and various establishments and services of the MOH has always been more influenced by historical considerations and balances of power than by relevant and objective criteria. The absence of such criteria has generated inequities, caused the poor to lose their motivation, and covered poor managers."

The same can be said of spending on Mother and Infant Health services[17] compared to the target populations (women of childbearing age and children under five years). However, at this level, the disparities are slightly greater and the Gini coefficient rises to 18%. These disparities are difficult to justify, not only because of their quantitative importance, but especially because of the difference between them and the key indicators, such as the infant mortality rate. A region such as Taza-Al Hoceima-Taounate, with a 54.9% infant mortality rate, receives 21.7 DH per target person, in contrast to 213.5 DH for the region of Oued Eddahab, which has a 22.9% infant mortality rate.

[16] The Gini coefficient measures the degree to which spending is concentrated. As spending becomes more concentrated, the Gini coefficient becomes closer to 1 or 100%.
[17] Morocco is one of the countries of the MENA region where MCH-related mortality rates are the highest.

Figure 14 : Total per Capita Spending on MCH and Infant Mortality Rate by Region, 1997/98



4.2 Status of Medical Insurance Coverage

Health insurance in Morocco is optional. It only covers 16.4% of the total population of Morocco (see Table 10), and the vast majority of those covered are city dwellers. Over two-thirds of those covered are civil servants or the equivalent, as well as their dependents.

4.2.1 Covered Population

Several institutions provide medical coverage (Table 10):

> There are nine public mutuals for civil servants and the equivalent (Royal Armed Forces, Post Office, Education, National Government, Local Governments, Auxiliary Forces, Police, Port Operation Board, and Customs). These mutuals cover the employees and retired persons as well as their dependents. They are run by the National Fund of Social Thrift Organizations, which manages the joint sector health insurance program for them. Financing for the program is mainly via premiums: nearly 6% for active workers (the employees finance 2.5%) and 1.7% for retired people. CNOPS also collects premiums from employers, third-party payers, welfare agencies, and those who sign agreements with the health care providers. The coverage rate for services provided is quite high. However, the distortions between the reimbursement rate and market prices allow the mutuals to cover only 50% of the actual cost of services provided.

> In-house mutuals (in-house plans) are health insurance programs offered and run by Public Companies and Corporations (OCP, ONCF, CNSS, RAM, Régie des Tabacs, Bank Al Maghrib, Banque Populaire, and others) for their employees. Dues vary from one establishment to another. Yet, in general, the employer's share is higher than that of the employees. Occasionally, employees do not pay dues at all, such as active employees of the OCP. Reimbursement rates also vary. Generally, coverage is much more generous than in

the public sector mutuals.

- The Moroccan Interprofessonal Mutual Fund (*Caisse Mutualiste Interprofessionnelle Marocaine,* CMIM) basically covers the employees of 256 companies who work in the banking and hydrocarbons sectors. Employers and employees pay the dues in equal amounts. Coverage of services provided is high—the highest in the country.

- Private insurance companies cover the employees of a few private companies (slightly more than 3,000 units). This coverage is in the context of group health insurance that the firms purchase. Premiums vary according to the coverage selected and are determined either as a percentage of the wage bill or using fixed rates. Generally, the employers pay more or less the same percentage as the employees. Reimbursement rates for services provided are between those of the public sector mutuals and those of the mutuals of public and private companies (CMIM).

Table 10: Size of the Population Covered by the Different Optional Health Insurance Plans, 1997/98

Institutions	Members	Dependents	Beneficiaries	Shares in %
CNOPS	996,000	2,099,900	3 095,900	68.6
CMIM	18,800	41,200	60,000	1.3
In-house plans	120,000	424,000	544,000	12.0
Insurance companies	234,300	580,800	815,100	18.1
Total	**1,369,100**	**3,145,900**	**4,515,000**	**100**

4.2.2 Medical Coverage Resources and Spending

Other than the CMIM, whose resources per beneficiary were 1,732 DH per year (versus 307 DH for the CNOPS, 1,102 DH for the in-house plans and 670 DH for insurance companies), all the plans are losing money (see Table 11). The CNOPS's financial balance is only artificial. Due to technical problems that arose in determining the CNOPS's actual spending, especially in terms of reimbursements during the year of the study, it was found that reimbursements are based on the collection of income. In reality, the CNOPS has a chronic deficit that prevents it from honoring its commitments in rather short time frames. The debts to the public sector and private providers are very high, several hundred million DH, and it takes several months and sometimes even more than one year to reimburse members.

In-house plans have a slight shortfall between income and expenses. Generally, this is covered by an additional contribution from the employer.

Insurance companies have income that amounts to barely 71% of all their expenses. These losses on the "health insurance" product are offset by positive results on the other products, such as labor accidents and occupational illnesses, casualty insurance, etc., These are part of the package the insurance companies offer their customers. In fact, health insurance plays the role as the loss leader for this sector.

Table 11: Resources and expenses of the different optional health insurance plans, 1997/98

Institutions	Resources in DH	Expenses in DH			Resources per beneficiary	Services per beneficiary	Expenses per beneficiary
		Services	Administration	Total			
CNOPS*	950,794,000	907,919,000	42,875,000	950,79, 000	307	293	307
CMIM	103,949,000	97,313,000	6,178,000	103,491,000	1,732	1,622	1,725
In-house plans	599,344,683	604,418,090	9,251,576	613,669,666	1,102	1,111	1,128
Insurance companies	546,410,000	663,662,058	109,282,000	772,944,058	670	814	948
Total	**2,200,497,683**	**2,273,312,148**	**167,586,576**	**2,440 898,724**	**487**	**504**	**541**

* The financial balance of the CNOPS is artificial.

4.2.3 Expenses of Medical Coverage

This section analyzes payments that the various optional health insurance plans make under the third-party payer system, as well as the structure of total expenses these plans have other than administrative costs. These expenses are comprised of direct payments (third-party payers) and reimbursements to members.

4.2.3.1 Direct Payments from Providers (Third-Party Payers)

In the context of the third-party payer system, the private hospitals benefit from the largest flows (nearly two-thirds). This is particularly true of private clinics, which receive almost 51% of all payments (Table 12 and Figure 15).

Despite the minimal participation of CNOPS, the share of private practices is quite high. These are mainly radiology practices and analysis laboratories that sign contracts with the different health insurance plans.

Public hospitals receive just 6.2% of all direct payments from organizations that manage the various health insurance plans.

Each plan's priorities and their own contracts with the providers support the share of providers in direct payments under this plan:

- The CNOPS has few contracts with private practices (5.5%). Its payments mainly go to private clinics (54.2%) and, to a lesser extent, to mutual clinics and practices (13.3%) and public hospitals (10.3%); 7.8% goes to CHUs and 2.4% to the MOH's other hospitals.

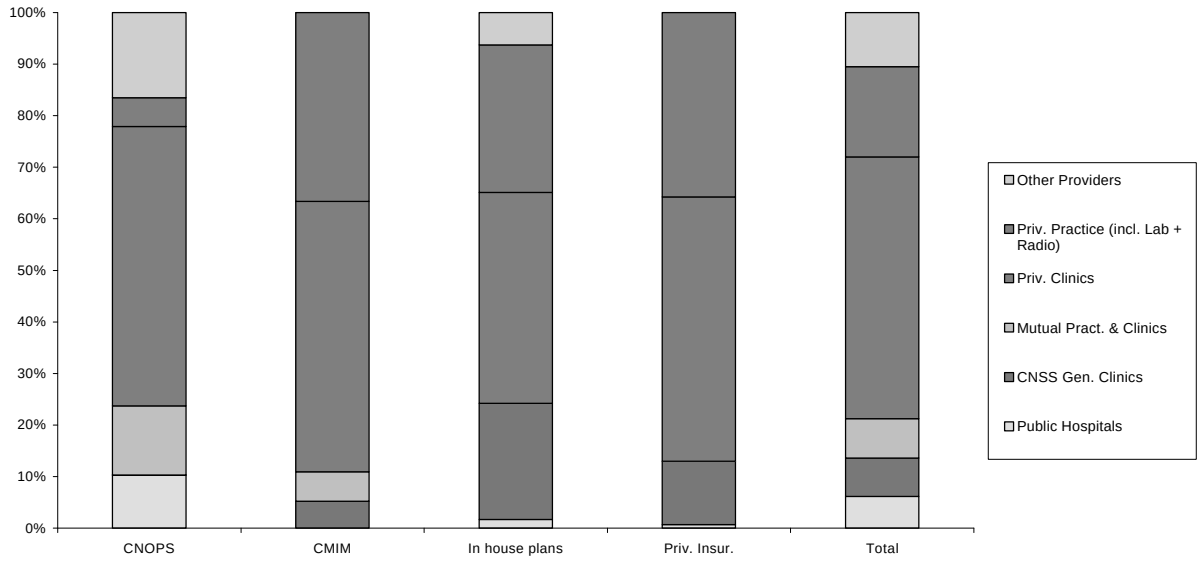
- The other plans place more emphasis on ambulatory care. Most of the private practices range from 28.6% (in-house plans) to 36.6% (CMIM and insurance companies). The public hospital share is minute, if that (the CMIM has no contracts with the public hospitals).

Table 12: Payments from Providers Under the Third-party Payer System, 1997/98

Service providers	Amounts in DH					%
	CNOPS	CMIM	In-house plans	Priv. Ins.	Total	
Public hospitals	48 321 600	0	3,070,265	1,144,740	52,536,605	**6.2%**
CHUs	*36,967,600*	*0*	ND	ND	*36,967,600*	
Other hospitals	*11,354,000*	*0*	ND	ND	*11,354,000*	
National Institutes and Labs.	ND	ND	3,936	ND	3,936	**0.0%**
CNSS general clinics	473,100	1,686,946	40,009 873	20,469,697	62,639,615	**7.4%**
Mutual clinics and practices	62,805,100	1,825,000	13,248	0	64,643,348	**7.6%**
Private and other clinics	255,259,800	16,871,054	72,582,923	85,031,805	429,745,582	**50.7%**
Private practices (inc. radiology and Lab.)	26,092,500	11,775,000	50,887,546	59,347,182	148,102,228	**17.5%**
Other service providers	77,994,800	0	11,144,078	0	89,138,878	**10.5%**
Total	**470,946,900**	**32,158,000**	**177,711,869**	**165,993,424**	**846,810,193**	**100%**

ND: The information system for these institutions is unable to show payments made to the National Institutes and Laboratories and does not differentiate between CHU and MOH hospitals.

Figure 15: Shares of Providers in the Third-party Payer System, 1997/98



4.2.3.2 Levels of Services Covered by the Different Optional Health Insurance Plans

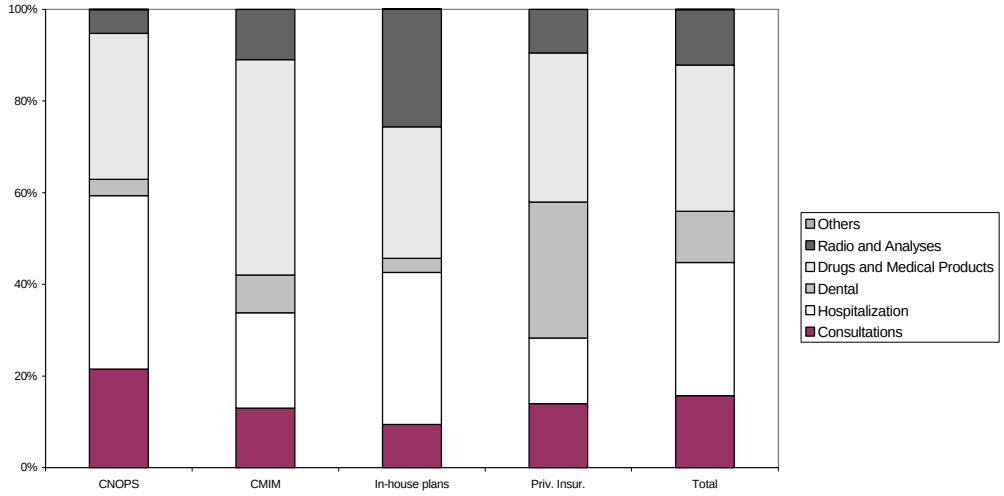
The share of drugs and medical products in total expenses (excluding administration) of medical coverage is almost 32% (Table 13). Next is hospitalization, whose share is 29% of these costs. Together, ambulatory care and services amount to 39%: 15.7% for consultations; 12.1% for analyses and examinations in radiology practices and medical analysis laboratories; and 11.2% for dental care.

Table 13: Amounts of Expenses (Third-party Payer and Reimbursements) Paid by Optional Health Insurance Plans, 1997/98

Service categories	Amounts in DH					%
	CNOPS	CMIM	In-house plans	Priv. Insurance	Total	
Consultations and other ambulatory services	195,202,585	12,644,851	56,652,209	92,406,423	**356,906,068**	**15.7%**
Hospitalization	343,193,382	20,241,104	200,635,590	95,370,974	**659,441,050**	**29.0%**
Dental	32,412,708	7,979,666	18,550,383	196,575,696	**255,518,454**	**11.2%**
Pharmacy	267,836,105	37,173,566	147,434,062	166,001,325	**618,445,058**	**27.2%**
Medical products excl. drugs	21,790,056	8,563,544	26,017,776	50,110,006	**106,481,381**	**4.7%**
Radio and analyses	46,303,869	10,704,430	155,008,352	63,144,472	**275,161,123**	**12.1%**
Others	1,180,295	5,839	119,718	53,163	**1,359,015**	**0.1%**
Total	**907,919,000**	**97,313,000**	**604,418,090**	**663,662,058**	**2,273,312,148**	**100.0%**

With the exception of pharmacy and medical products, which amount to less than one-fourth of costs for all plans, the share of services varies according to the organization that manages it (Figure 16). CNOPS (and public sector mutuals) and in-house plans use a sizeable percentage of their funds for hospitalization (37.8% and 33.2% respectively). Conversely, the largest item in insurance company spending, other than pharmacy and medical products, is dental care, with 29.6% of these costs. Elsewhere, it can be noted that the weight of radiology and medical analyses in the expenses of in-house plans (25.6%) is especially high.

Figure 16: Services Covered by the Different Optional Health Insurance Plans, 1997/98



5. Funding for Mother and Child Health

Other than non-health factors (education, drinking water, basic sanitation, roads, food, etc.), the problems caused by the scope and organization of the supply of care (reduced health coverage, poor distribution of supply, insufficient funding, referral issues, etc.) make it impossible to adequately monitor pregnancies and deliveries and to properly monitor children for medical purposes. This results in high mortality rates for both mothers and children.

Despite a rather considerable decrease in mother and child mortality (Table 14), rates in Morocco continue to be high compared with other countries at the same stage of economic development such as Tunisia, Jordan or Lebanon.[18]

Table 14: Trend in Mother and Child Mortality Rates

Period	Neonatal mortality rate	Post-neonatal mortality rate	Infant mortality rate	Child mortality rate	Maternal mortality (per 100,000 live births)
Early 80s	41.1‰	32.2‰	73.3‰	38.7‰	404
Early 90s	34‰	29.2‰	63.1‰	22.1‰	332
1997	19.7‰	16.9‰	36.6‰	9.8‰	228

Sources: ENPS I Surveys (SEIS/DPRF/MS, 1987), ENPS II (SEIS/DPRF/MS, 1992), ENSME (SEIS/DPRF/MS, 1997)

Given the importance of mother and child health, which is one of public health's priorities under the 2000-2004 Five-Year Plan, it was necessary to include these figures in the NHA as isolated activities. There are two reasons for doing so:

- To quantify—albeit very approximately—MCH spending in order to study its scope in absolute terms;

- To establish and determine an initial basis for comparison. The development of the next NHA at the end of the Current Five-Year Plan (2000-2004) will make it possible on the one hand to perform a comparative analysis between current data (1997/98) and future data (probably 2002/2003). On the other hand, NHA will also allow the MOH to study the relationship between the trend in MCH funding and MCH mortality indicators.

Thus, when the NHA methodology, questionnaires and basic tables were designed, this concern was taken into account. Outside the MOH, international donor organizations and health insurance organizations both responded to questions.

For both groups of institutions, the questions were simple and the answers rather easy. However, for the MOH, the task was not as easy. It was necessary to prepare special tables in order to isolate activities directly related to MCH. Furthermore, hospital spending other than salaries was broken down by department, care unit and spending (excluding salaries), or preventive outpatient care by

[18] The mortality rate in these three countries is as follows: 170 per 100,000 LB in Tunisia, 150 in Jordan and 104 in Lebanon. The adjusted infant mortality rate is 30 per thousand in Tunisia, 26 per thousand in Jordan and 29 per thousand in Lebanon (WHO, 1999)

program. This made it possible to separate MCH in the strict sense from the other activities. They were rearranged into a set comprising:

- Hospital services: Maternity and Pediatrics;

- Public health programs: National Immunization Program, Family Planning, Pregnancy and Delivery Monitoring Program, Diarrhea Illness Control Program, Deficiency Disease Control Program, and the Acute Respiratory Infections Control Program.

In addition to these expenses, there are the employees' wages, and they are broken down among the different units (for the hospital) and public health programs (for outpatient care) in proportion to recurring expenses. Thus, the amounts that will be mentioned below for the MOH include recurrent expenses, investment and wages.

In this chapter, four components will be examined: (1) funding for MCH activities in the Ministry of Health, (2) coverage of MCH expenses by health insurance organizations, (3) the role of foreign donors (international cooperation) in funding MCH activities and finally, (4) the behavior and spending of households on MCH.

5.1 Funding of MCH by the Ministry of Health

According to the definition above, spending on MCH activities amounted to almost 533 million DH. This is equal to 19 DH per person and 55 DH per target person (women of childbearing age and children under five years old). This spending represents slightly more than 16% of the Ministry of Health's total spending, including the university hospitals.

The main component in this spending continues to be public health programs, which amount to 52%, compared to 25% for maternity wards and 23% for pediatrics wards.

The share of the CHUs in MCH spending is considerable. Their share in the total expenses of the maternity wards is greater than 24%. This percentage doubles (48%) for all spending for the pediatrics wards, although this difference between the two shares is essentially explained by the size of the units. In the CHUs, the pediatrics wards have more than 39% of total bed capacity of all the pediatrics wards in the country. This rate is only 16.8% for maternity wards[19].

An analysis of the percentage of each component compared to total spending for the CHU and non-CHU services reveals the following:

- Spending in maternity and pediatrics wards amounts to 14.6% of all hospital spending (Table 15). This situation differs according to the hospital status: the percentage is 15.4% for the CHUs versus 14.2% for the other MOH hospitals.

- Combined spending on maternity and pediatrics wards (14.6%) is lower than hospital administration (16.9%). However, as Table 15 shows, this difference is more pronounced in CHUs in which expenses for these two wards are only 15.4% versus 22.2% for overhead.

[19] It should also be noted that the percentage of deliveries in UHCs is only 12% of all deliveries in hospitals.

Table 15: Spending on Maternity Wards and Pediatrics Wards as a Percentage of Total Spending for all Hospitals, in Current DH, 1997/98

	Hospital spending					
	CHU		Non CHU		Total	
	Values	%	Values	%	Values	%
Maternity wards (M)	32,267.225	5.4	100,014,927	8.6	132,282,152	7.6
Pediatrics wards (P)	59,069.121	10	64,264,479	5.5	123,333,600	7
Total (M+P)	91,336,346	15.4	164,279,406	14.2	255,615,752	14.6
Administration	131,251,314	22.2	164,842,502	14.2	296,093,816	16.9
Other services	368,832,162	62.4	830,392,743	71.6	1,199,224,905	68.5
Total	591,419,822	100	1,159,514,651	100	1,750,934,473	100

> MCH-related programs account for almost 62% of total spending for all public health programs. This is a rather significant percentage, especially since programs such as Sexually Transmitted Illness Control and AIDS, as well as health education, are not included in the definition used here for MCH activities.

5.2 Coverage of MCH Expenses by Health Insurance Organizations

Coverage of MCH expenses by the various optional health insurance plans in Morocco varies considerably between the plans and sometimes even within plans, depending on management structure.

For mutual health organizations for public sector employees, members and their beneficiaries are penalized by substantial distortions between the benchmark price (reimbursement rates) and market prices for outpatient care. This causes the negative impact on the use of preventive and curative care for MCH. It is exacerbated by delayed reimbursements, which, in general, can take from twelve to twenty-four months.

The private mutual health organizations (CMIM and *Caisse des Etablissements et Entreprises Publiques*) are at the opposite end of the mutual health organizations for public-sector employees. In general, insurance coverage is rather good. For example, the CMIM has an 80% to 85% reimbursement rate for vaccinations; for deliveries, both normal and C-section, the CMIM uses the third-party payer system and there is full coverage (100%).

The situation of private insurance companies is quite disparate. But, in general, coverage of MCH expenses is modest. To illustrate:

> Pre- and postnatal expenses are not routinely covered; when they are, they are limited to fixed payment for birthing (between 1,000 DH and 2,000 DH on the average).

> Miscarriages and incubator costs are not covered.

Other than the private mutual health organizations, optional health insurance in Morocco continues to be dominated by:

> The absence of a social health insurance mentality, which creates a disconnect between health insurance organizations and national health priorities The MOH has no regulatory authority over private insurance companies;

> The public mutual crisis that is linked to funding and the State's inertia over the decades.

These are the main reasons why coverage of MCH by health insurance organizations is poor in general. For example, it is why one-fourth of the women who have health insurance never see a physician or a nurse while they are pregnant.

5.3 Role of International Cooperation in Funding for MCH Activities

Generally speaking, international donor organizations place much greater emphasis on MCH by virtue of the fact that they spend almost 93.4 million DH on MCH care. This represents nearly 62.1% of their overall aid to the health system (150.4 million DH), and is almost equal to one-fifth of the MOH's spending on MCH (including CHUs).

Of course, the main beneficiary is the MOH, which receives 95.5% of the international cooperation MCH funds in contrast to the 1.5% that goes to the other ministries, 1.3% to the local authorities and 1.7% to physicians in private practice. Within the MOH, the basic health care network (RSSB) receives the largest share (69.5%), followed by the hospitals (24.4%), the CHUs (1%) and the National Institutes and Laboratories (0.5%).

An analysis of the functional structure of this funding shows that outpatient care receives a very high percentage, 55.4% (54.1% for preventive care and 1.3% for curative care). Hospital care receives 23.6%, whereas collective health prevention and training receive 10.9% and 10% of this aid respectively.

MCH financing through international cooperation focuses on drugs (and medical supplies) (37.6%) and equipment (36.3%). Other spending is much lower: services and technical assistance (12.5%), products other than drugs (9.4%), fixed assets other than equipment (4.2%).

5.4 Analysis of Household Behavior and Spending on MCH

This analysis attempts to uncover the principal results in terms of household behavior and spending on MCH by identifying the sources that distinguish them. The variables chosen were sex, location of residence, education level, medical coverage and standard of living, determined by the household's annual spending.

Toward this end, the data from the 1998/1999, Moroccan Living Standards Measurement Survey have been used. On the one hand, these data relate to the "Health" component for reproductive system illnesses, delivery in hospitals and vaccination of children at least 24 months of age and, on the other hand, to the "Fertility" component for maternal health and breastfeeding of their children. The survey that was conducted in 1990/1991 was also used for the purpose of determining trends in the indicators that were adopted if a comparison was possible.

5.4.1 Maternal Health

5.4.1.1 Illnesses of the Reproductive System

In this section, the data relate to morbidity linked to the reproductive system as perceived and reported, which causes the patient to use modern or traditional medical services. Thus, through the

office visit rate for people[20] who have reproductive system illnesses, it is impossible to evaluate the use of services and the factors that determine non-use of services (either modern or traditional).

a) Data on Office Visits

According to the 1998/99 ENNVM data, the percentage of women who saw a health professional for an illness of the reproductive system (84.2%) was five times higher than the number of men (15.8%). This proportion is valid regardless of whether they live in an urban or rural area.[21]

Among women who sought care, as can be expected, the percentage of women of childbearing age is dominant (77% versus 23% for the others). The percentage of office visits by women decreases with increasing age: 73.4% for women of childbearing age (WCA), 56.2% for women between 50 and 55 years of age, and 27% for women older than 55. (If the last two categories are combined, the percentage rises to 42.6%.)

In terms of the degree of severity of illness, it was found that all men who sought care were suffering from acute, short-term illnesses only, whereas 17.6% of the women who sought care were suffering from chronic illnesses.

b) Location of Office Visits

In general, there are five types of location for office visits. Most visits take place at the first three types:

- The MOH's basic health care network accounts for 13.6% of office visits. The characteristics of those who use this type of facility are as follows:
  - 7.3% are males from rural areas and have only acute illnesses[22].
  - 92.7% are females, 47.4% of whom are from urban areas. In urban areas, all the women in this category are of childbearing age and have a acute illness. In rural areas, WCAs represent 84.6%; of those, four out of ten have a chronic illness. All the others (15.4%) are women over 55 years of age with acute illnesses.
- The MOH's public hospitals: office visits at this level amount to almost 27.3% of the total. Public hospitals are frequented mainly by women (83.2%), 71.9% of whom are from urban areas. In this category, 86.7% are of childbearing age, versus 69.7% in rural areas. Approximately 22% of the women who use the public hospitals' services have chronic illnesses. Moreover, all the men who go to public hospitals are from urban areas.
- Private practices account for 56.9% of all office visits. Approximately 84% of their clients are women, and more than 78% of those women are from urban areas. Of male clients, 72.3% are urban. Among the 78% of women from urban areas 97.6% are WCA; in rural areas only 88.5% are WCA. Almost 16% of the women who sought care from private physicians suffer from chronic illnesses; all of these women were older than 55.

[20] We also considered illnesses of the reproductive system for men, which also have an effect on reproductive health.
[21] In absolute terms, individuals—regardless of gender—are twice as likely to seek care in urban areas than in rural areas. This probably reflects differences in perception of illness as well as accessibility to care in the two areas.
[22] In the ENNVM questionnaire, the terms acute or short-duration and chronic illnesses are specified.

All the clients who sought care at all the above-mentioned providers, regardless of sex and place of residence, were seen by physicians. In addtion:

- Healers and *fkih* account for 1.1% of office visits. The only clients who state that they visit these two categories of providers are WCA in rural areas with passing illnesses.

- At-home visits amounted to 1.1% of total provider visits, mostly to men in rural areas. Health professionals do not provide care for these people.

In summary, rural people use the basic health care network much more often; they have no other choice (besides traditional medicine), either because of the distance to hospitals or because of the presumed high cost of private sector care.

c) Financial Accessibility

Financial accessibility to health services can be greatly enhanced through adequate insurance coverage. This section compares utilization for individuals with and without health insurance coverage. Only 7.1% (56.4% of whom are women) of people covered by health insurance among the population stated that they sought care for an illness of the reproductive system. That is, the percentage of women with insurance coverage who sought reproductive health care is 4.4% of entire female population. (The percentage is 21.4% among men). Conversely, the percentage of women not covered (who sought care), amounted to 88.6%.

Nearly 100% of the men and 81.2% of the women without medical coverage sought care in the private sector (from both healers and *fkihs*).

An analysis of people not covered shows that a high percentage of poor people use the services of private practices (33.8% of men in the poorest quintile and 51.3% in the next poorest quintile; among women, the percentage climbs to 45.1% for the first quintile). This shows on the one hand the public sector's inability to properly care for this segment of the population. On the other hand, given the presumed higher cost of care in the private sector, it shows that economically poor households who have reproductive illnesses must pay a high cost for care (including services and travel).

5.4.1.2 Prenatal Office Visits

The prenatal office visit rate[23] improved slightly, from 43.7% to 54.9% between 1990/91 and 1998/99, which was an increase of 25.6% (an annual average of 2.9%). This improvement is much more striking in rural areas (44.9%) than in urban areas (20.9%). However, the disparity between the two areas remains. In 1990/91, the prenatal visit rate was 66.1% in cities and 25.4% in the country; in 1998/99, these rates were 79.9% and 36.8% respectively.

During the eight-year period, the prenatal office visit rate increased considerably regardless of the household's economic level (spending quintiles). However, the poorest two quintiles recorded the highest rates of increase (58.2% and 61.5% respectively for the first and second quintile versus 33%, 22.2% and 12.6% for the three wealthiest quintiles). Moreover, the difference between the richest and poorest quintile rates fell slightly from 56.6 points to 54.9 points.

The change in the prenatal visit rate based on level of education shows an increase at every level. Nevertheless, the greatest increases were seen among those with no schooling (28.9%) and women with vocational training (30.4%). The increase was just 17% and 8.6% for women with a university education and those who have reached the primary or secondary level respectively.

[23] The standard for prenatal care in Morocco is at least one visit per pregnancy.

There was a strong correlation between having a prenatal checkup and a having supervised delivery. If a specialist sees the woman, it is more likely that she will deliver in a supervised setting. Hence, it is logical to find that nearly two-thirds of the population that delivered at home are women who never had prenatal care.

Access to care for a prenatal checkup is obviously easier for those with medical coverage. Approximately 76% of women with insurance coverage visit a physician or paramedic during pregnancy versus 50.7% for those who have no coverage. Individuals without coverage seek care from paramedics more than those who are covered: 37.7% versus 18.1%.

5.4.1.3 Deliveries

Before addressing the location of delivery and expenses incurred from the provision of delivery-related services, it should be noted that deliveries with complications[24] amounted to almost 27% of all deliveries in 1998/99, versus slightly more than one-third in 1990/91.

a) Place of Delivery

According to the 1998/99 ENNVM, 55% of women deliver at home (versus 64% in 1990/91), 38% in public hospitals (30% in 1990/91), 5% in private clinics (same percentage as in 1990/91) and 2% in the public outpatient network[25].

Delivery assistance (for all locations combined) occurs in descending order by traditional birth attendants known as *Kabla* (32.1%), midwives (20.6%), relatives (17.7%), physicians (11.3%), nurses excluding midwives (10.1%), trained birth attendants (5.6%), no one (1.6%) and others (1%).

Among women who give birth at home, this percentage structure changes, to the expense of modern health professionals. Assistance for women who deliver at home is provided mainly by the *Kablas* (58.3%) and relatives (31.7%). Assistance by physicians amounts to just 1%, midwives 1.8%, nurses 1.5%, trained birth attendants 2.7% and others 1.6%. It is important to note that 2.2% of women who give birth at home receive no assistance.

The majority of rural women deliver at home (78.7%). Those who do choose supervised delivery go more readily to hospitals (19.2%) than to other facilities, such as MOH RSSB (1.7%), private clinics (0.3%) and others (0.1%). Urban females select in descending order: public hospitals (60.2%), home (28%), private clinics (9.7%), MOH RSSB (1.8%) and others (0.3%).

Women not covered by health insurance deliver mostly in locations where the services are free or very inexpensive (60.7% at home, 35.3% in public hospitals and 1.8% at the RSSB). Only 2.1% of women not covered use private clinic services versus 17.7% for those who do have medical coverage. However, 26.7% of the latter category deliver at home. Is this a problem of the quality of medical coverage, a lack of confidence in care services (public and private), or simply a persistent tradition/habit?

An analysis of households based on standard of living indicates a clear correlation between the economic resources of women who deliver and the place of delivery. In fact, the higher the standard of living (measured by spending), the fewer deliveries there are at home (82.3% and 19.7% respectively for the poorest and richest quintiles). Use of private sector providers for deliveries is also strongly correlated with a household's standard of living. This correlation is still very strong for private clinics, which attend 0% of deliveries for the poorest quintile and 23.5% for the richest. Contrary to what one might believe, it is important to note here that it is mostly the wealthiest

[24] Deliveries with complications require three additional days of hospitalization.
[25] The ENNVM 1990/91 did not accept the public outpatient network as an option for an answer.

households that use obstetric services in public hospitals. Only 10.6% of women are in the poorest quintile and 19.7% in the next poorest deliver in public hospitals, whereas the last three quintiles rise to 23.2%, 24.5% and 22% respectively.

b) Spending on Deliveries in Hospitals

An analysis of spending on deliveries in hospitals shows that the portion of paid deliveries at this level increased from 66.7% to 73.4% between 1990/91 and 1998/99. This increase affected public hospitals (69.7% in 1998/99 versus 61.5% in 1990/91) much more than other private hospital facilities. Actually, a large percentage of public hospitals that adopted the SEGMA management method improved their collection systems for deliveries.

The share of paid deliveries in mutual clinics grew from 75% to 81.1% respectively in 1990/91 and 1998/99, and from 90% to 94.1% for private clinics. Nevertheless, deliveries in public hospitals are still less expensive, at 336 DH, than deliveries in private clinics, which cost 2,140 DH.[26]

Of the women giving birth in public hospitals, nearly 84% had no health insurance. Since the majority of hospital beds (80%) in Morocco are public hospital beds, it is likely that the percentage of uninsured giving birth in public hospitals reflects national figures for the overall uninsured population[27].

Again, with regard to spending per delivery in public hospitals, the poorest households spent 820 DH on average; this is much more than spending for the other quintiles (between 177 DH and 667 DH), whereas it should theoretically be the opposite.

5.4.2 Child Health

In this section the results of the nutritional condition and the status of vaccinations will be presented for children less than 24 months of age. The nutritional condition of children is evaluated using, among other data, information on breastfeeding practices. [28] These practices affect the child as well as the mother.[29]

5.4.2.1 Natural Breastfeeding of Children

The national breastfeeding rate for children under 24 months of age was 65.5% in 1998/99. However, rather significant disparities exist between rural and urban areas. In rural areas, more than three out of four children are breastfed (76.2%). In urban areas, only half of the children are breastfed (51.1%). However, this difference appears only in the fourth month. During the child's first three months, the breastfeeding rate is only slightly different between urban and rural areas (89.4 and 96.7% respectively). During this period, it is possible that working urban women are out on maternity leave, thereby making it possible for them to breastfeed their newborn without any major constraints.

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[26] Average spending per delivery in mutual clinics is 145 DH. However, this amount cannot be compared to spending in the other hospital facilities because of the special nature of the mutual clinics whose services are generally offered to beneficaries of mutual health organizations, who only pay the copayment.

[27] Slightly more than 15% of the population of Morocco has a health insurance plan.

[28] These may also be anthropometric measurements such as a child's weight and height are also used.

[29] This affects the mother through post-partum infertility which in turn influences the amount of time between births and consequently, the level of fertility and state of health of mothers.

Similar differences between rural and urban areas are found in the average breastfeeding period. Rural children on the average are breastfed for three more months than children living in cities. The national figure is 8 months, 7 in urban areas and nearly 10 in rural areas.

There are rural/urban differences in breastfeeding patterns. While on average only 28.3% of children under 24 months of age have been weaned, this rate is twice as high in urban households (39%) than in rural ones (19.8%).

Table 16: Average Breastfeeding Period for Children Less than 24 Months of Age according to the Household's Standard of Living and Urban/Rural Residence, 1998/99

	Average period of breastfeeding (in months)
Place of residence:	
Urban	6.9
Rural	9.7
Total	8.0
Spending (98/99 quintiles):	
Less than 3,404 DH	9.7
From 3,404 to less than 4,912 DH	8.8
From 4,912 to less than 6,805 DH	8.0
From 6,805 to less than 10,329 DH	7.8
10,329 DH and over	6.0

For Moroccan women, natural breastfeeding is still preferred; at the time of the 1998/99 survey, only 6.2% (9.2% in urban areas and 4% in rural areas) of children less than 24 months of age had never been breastfed. This compares to 6.5 % in 1990/91; 9.8% in urban areas and 3.8% in rural areas.

At this level, two main ideas should be raised, regardless of the mother's location of residence:

> A mother's milk being exhausted is the main reason for weaning (34% of respondents);

> The fact that a mother works is in no way an impediment to breastfeeding because "work only" accounts for 2.2% of all reasons for weaning.

5.4.2.2 Vaccination of Children

Taking into account the statements made by mothers and information found in the vaccination booklets, it was found that in 1998, 90.5% of children between the ages of 12 and 23 months were fully vaccinated against the six target diseases, namely tuberculosis, diphtheria, tetanus, whooping cough, polio and the measles.

It is also important to note that sex is in no way a discriminating factor in urban areas, since 95.8% of boys and 97% of girls are completely vaccinated. However, there is a slight difference in favor of boys in rural areas, where 89% of boys are fully vaccinated versus 82.3% of girls.

The disparities between the city and country and among socio-economic groups have almost been eliminated. In 1998, nearly 86% of rural children and 96% of urban children were fully vaccinated.

According to household standard of living, vaccination coverage is complete among the children of the wealthiest 20% of the population. For the middle classes (3^{rd} and 4^{th} quintiles), the vaccination

rate is higher than 92%. Conversely, the poorest children have the lowest vaccination coverage rate at 82%.

In general, almost 98% of vaccinated children less than 24 months of age obtain their vaccinations in public sector facilities. However, the children in the 2nd, 3rd and 4th spending quintiles and children without any medical coverage obtain their vaccinations in the public sector, with a percentage in excess of 99% for the first group and 98% for the second respectively. It is important to underscore that 3.7% of the children vaccinated that have health insurance were vaccinated in private facilities.

However, the percentage of children that obtain their vaccinations free of charge is higher in the less wealthy population categories (from the 1st to 3rd quintile). For the small percentage who pay, the average reported price paid is between 20 and 30 DH per vaccine. Elsewhere, 14.5% of the children vaccinated are in the 4th quintile and pay 56.5 DH per vaccine, and 24.4% of children vaccinated that belong to the 5th quintile pay 428.5 DH per vaccine.

5.5 Conclusion

In conclusion, according to the results of the 1998/99 ENNVM, individual MCH behavior works in different ways depending on whether the population is urban or rural, on the standard of living and on medical coverage. For the rate of prenatal visits, for example, inequalities between the two categories are very high (79.9% in urban areas and just 36.8% in rural areas).

Moreover, an analysis of the physical and financial accessibility of MCH care services shows that the private sector has over half the visits for illnesses of the reproductive system. These visits are primarily the result of people in the poorest spending quintiles with no medical coverage. The wealthiest households generally use public hospital services for deliveries.

On the other hand, although a vast majority (93%) of women not covered by health insurance deliver at home and in the public hospitals, slightly more than one-fourth (26.7%) of women with medical coverage deliver at home.

Moroccan attitudes regarding procreation are changing for the better, but the change is very slow. Only 54.6% of married women under 50 years of age use contraceptive methods—the main determinant of fertility level. Likewise, when a woman has three children, the usage rate for contraceptive methods falls below 50% and even down to 26% for women with four children.

The Ministry of Health's funding of MCH activities is insufficient, both at the hospital level and the preventive outpatient level. The fact that the MOH allocates almost 62% of spending on preventive outpatient care to MCH programs is an adequate response to a priority problem. However, to bolster the achievements (immunization) and to improve the status quo (acute problems in deficient micronutrients, diarrheal illnesses, etc.), allocations to these programs must be increased in absolute terms. Conversely, for hospital care, maternity and pediatrics wards suffer from a two-part problem. The total resources public hospitals have are already low and they are unevenly distributed among the wards. These wards receive budget allocations that are well below those of hospital administration, which in no way reflects the priority nature of MCH.

Above and beyond budget allocation issues, it should be noted that some geographical areas, particularly rural, still have no highway or health infrastructure, means of communication or transportation. This inevitably results in somewhat high rates of inaccessibility and non-use. This is accentuated by the "non-solvency" of a high majority of households due to low income (in absolute terms and relative to the cost of care and drugs) and health insurance, which is optional and covers only 16.4% of Morocco's population.

Moreover, the funding analysis of international cooperation shows the importance of donor funding for the promotion and growth of MCH activities. Yet, the end of USAID's FP/MCH Project (USAID is the largest donor/financier with 64.2% of MCH financing via international cooperation) may considerably lessen the extent of international cooperation at this level.

6. Conclusion

The Moroccan national health system, in which many players coexist, is complex. Financing is often inextricable and analysis is a daunting task.

Total spending on health is low, given the context of high costs for care and medical products compared to limited and stagnant buying power and only 16.4% of the population with medical coverage.

Financing for this spending is highly fragmented and distribution is uneven. Direct payments by households (net of reimbursements from insurance companies and mutuals) are the main source of funding for the system, whereas collective financing (taxes and contributions) is a mere 41% of total funding[30] (25% for taxes and 16% for the contribution system, in other words, medical insurance coverage). This situation is totally inappropriate for funding a sector in which the spending needs of an individual are generally unpredictable and sometimes catastrophic. Thousands of families go heavily into debt or spend all their money to be able to provide the care required by one or more family members with a chronic disease. Quite obviously, this situation is worst for the poorest people.

The national health system's resources are spent in large part on drugs. The low share of ambulatory care is exacerbated by the lack of funding for collective health prevention.

The inequities exist not only in terms of funding but in access to public care services as well. Wealthier classes sometimes use these services, and hospital services in particular, at the expense of the poorest of the poor. Even worse, hospital services are completely free of charge and are of greater benefit to the rich than the poor.

These inequities are the expected result of meager public sector financing, combined with accounting and financing systems that lack accountability and standards for quality and performance.

All of these conclusions argue in favor of accelerating the reforms the MOH has undertaken to extend medical coverage: by making it compulsory under the AMO (*Assurance Medical Obligatoire*) project, by establishing an institutional and solidarity-based medical assistance program, (*Régime d'Assistance Medical*, RAM), by improving the management of its hospitals, and by rethinking its organization[31].

These first National Health Accounts are useful for quantifying the analytical aggregates required for evaluating the national health system and for pointing out the major problems with distributing resources, financing and the use of health services in Morocco. However, this tool's contribution will be much greater after the second NHA have been prepared. At that point, it will be possible to make comparisons over time in order to evaluate the reforms in progress and to measure

[30] Even in the United States, one of the most laissez-faire system in the world, where 41 million Americans are not covered (HCFA, 2000), almost 46% of funding sources are public (health budget, Medicaid and Medicare). Private medical coverage accounts for nearly 31% of the system's funding. Hence, total collective financing for health is 77%.

[31] In order to agree at the national level on rules, regulations and strategic planning and, at the other levels, on regional and local planning, coordination, management and health program implementation, this new breakdown of tasks must be in sync with increased hospital autonomy. This is necessary in order to separate the role of funding from that of the provision of services. This autonomy is contingent on the implementation of hospital reform at the same time, as well as all new funding schemes, such as compulsory medical coverage and medical assistance.

the amount of progress the national health system is making in terms of the goals set by the 2000-2004 Five-Year Plan.

The NHA exercise has pointed out some deficiencies in the information systems of the various institutions involved in health. To begin with, we noted that the data on the MOH are not user-friendly and sometimes require adjustment for several reasons. First, there is often a discrepancy between the accounting entry and actual allocations or uses. For example, differences have been noted between what is declared by the hospitals as equity funds (excluding interest and sales) and the amounts mentioned in the collection and invoicing portion. Another example is that the total amounts of expenses the hospitals report are sometimes very different from the amount of expenses broken down by department or unit. Second, local officials often complain about the lack of information on unit prices of hundreds of products they receive from the national offices. Third, the department's structures seldom have paper trails or accounting entries for assistance provided in kind, such as that given by NGOs, benefactors, international cooperation and communes.

With just a few exceptions, the other public institutions suffer from more or less the same problems as the MOH.

Next, information on medical coverage is difficult to obtain (several PCCs failed to respond) and its configuration is more the result of in-house procedures and needs of the institutions involved (PCCs and private health insurance companies[32]) than for needs such as those of the National Health Accounts.

Moreover, the National Living Standards Measurement Survey, which was very useful for determining household spending and for studying problems of inequities, suffers from a few deficiencies. In particular, there is the social health coverage, in which the authors of the questionnaire combine medical coverage with the other social security systems. In addition, the survey, which addresses several sectors including health, education, employment and housing, does not allow for sufficient details. Its sample is too small to be representative at the regional level for the different services and places of consultation according to the diverse characteristics of the population (rural/urban, covered/not covered by health insurance, rich/poor, etc.).

Finally, a considerable portion of the national health system's resources and expenses were not included. The availability of information on funding for care provided by the Royal Armed Forces, Civil Protection, welfare agencies of the ministries and labor medicine would have made it possible to expand the scope and evaluation of the national health system.

Since this was a cumbersome exercise, and especially given the weaknesses of current information systems, it will not be possible to prepare the NHA on an annual basis. This exercise will be carried out less frequently based on the improvements the national health system may introduce, which may involve not just the public sector, but the private sector as well.

In this regard, several actions may be taken, namely:

> Introduce the financial and economic components into the MOH's health information system.

> Use the experience of the NHA to design the future public hospital information system.

> Accelerate the gradual introduction of general accounting and then systems accounting in these institutions.

[32] Even the report, published annually by the Insurance and Social Welfare Department/Ministry of the Economy and Finance, on the activities of insurance and reinsurance companies, does not provide specific information on medical coverage.

- Improve flows of information between the national and local levels.
- Fine-tune the National Survey on Household Standards of Living, mainly for medical coverage.
- To the extent possible, introduce a portion of the spending into the MOH's survey on health and the population.
- Accelerate the publication of the Health Card Act.
- Do a good job of designing the information connection between the MOH and the AMO and RAM) projects.

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