
Practical Research Report

**Overall Structure and Functions of the Syrian Health System
Prior to the Syrian Conflict**

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Abstract

To better understand and strengthen health systems, the World Health Organization approved a conceptual framework, which consists of six main building blocks: health workforce; information; medical products, vaccines, and technologies; financing; leadership and governance; and service delivery. This study was carried out prior to the civil war in Syria to investigate the characteristics of health districts in the overall structure of the national health system and to assess the management capacity of health districts. Assessment was conducted between February and April 2010, during the implementation of a project to improve reproductive health, which was sponsored by the Japan International Cooperation Agency. Among the project areas, two health districts in Aleppo Governorate in northern Syria were chosen for study. Organizing the collected information into the six building blocks, we found that the health district offices could improve their management capacity by making an appropriate action plan and reallocating personnel and medical commodities based on the results of information analysis. This study became one of a few reports to document Japanese efforts to strengthen the health system in pre-civil war Syria.

Key words

Six building blocks of Health System, Health System Strengthening, Syrian Arab Republic

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要 旨

世界保健機関は各国の保健医療システムを強化するため、保健人材、情報、医療機材と技術、資金、リーダーシップとガバナンス、サービス供給の6つの構成ブロックから成る概念的枠組みを承認した。本研究では、内戦前のシリアにおいて、保健システムの全体構造の中で、郡保健事務所はどのような役割を担っているか、どのように運営管理されているのかについて調査した。2010年2月～4月に、日本の国際協力機構によるシリア・リプロダクティブヘルス技術協力事業の実施にあわせて現地調査を行った。介入地域のシリア北部アレッポ県から、2つの保健管区を調査対象地とした。6つの構成ブロックに整理して分析した結果、行動計画を策定し、情報分析に基づいて保健人材や医療機材・ワクチンを再配置することで、郡保健行政の運営管理が改善されることが示された。内戦前シリアにおいて、シリアの人々が日本の技術協力により保健システムを改善しようと取り組む姿を記録した貴重な資料となった。

キーワード

保健システムのための6つの構成ブロック、保健システム強化、シリア・アラブ共和国

1. Introduction

Since the publication of the World Health Organization's (WHO) World Health Report 2000 titled "Health Systems: Improving Performance" (WHO, 2000), there has been growing worldwide concern regarding the issue of Health System Strengthening (HSS). The health systems implemented in many low- and middle-income countries were established based on a global strategy of Primary Health Care (PHC), which was first adopted in the 1978 Declaration of Alma-Ata (WHO, 1978). However, in the 1980s and '90s, this strategy faced challenges such as economic recession, severe debt crises, concomitant structural adjustment programs, and increasing regional conflicts after a post-cold war era (Yuasa et al., 2010). Additionally, the HIV/AIDS and tuberculosis pandemics and health professional drainage occurring in developing nations under globalization resulted in heavy burdens on existing health care systems. Subsequently, global health leaders and experts have focused attention on HSS (Reich et al., 2008).

To better understand health systems overall, WHO approved a conceptual framework of the health system in 2007. The framework illustrates that a health system consists of six main building blocks: health workforce; information; medical products, vaccines, and technologies; financing; leadership and governance; and service delivery (WHO, 2007). Management, coming under leadership and governance, is of great importance to allocate and arrange resources to deliver quality and equitable health services to ultimately improve the health of all people.

Low- and middle-income countries have especially strived to strengthen the status of their health districts. A health district is an administrative sub-division in which basic resources are available. As a consistent input of resources into these districts is likely to ensure equitable health services, the most crucial component for a HSS strategy should be sound management at the district level.

Since April 2011, Syria has been experiencing an unprecedented national peril: civil war. Under such circumstances, the health system has suffered irre-

deemable harm (Lancet, 2017). This study was carried out prior to the war in Syria to investigate the characteristics of health districts in the overall structure of the national health system and to assess the management capacity of health districts for HSS.

2. Methods

To grasp the overall structure of Syria's health system, relevant official documents were requested and collected from the Syrian Ministry of Health (MOH) officials in-person, after careful review of WHO documentation and published research.

A study to assess management capacity at the health district level was conducted using observational research during the implementation of a project to strengthen reproductive health, which was sponsored by the Japan International Cooperation Agency (JICA). The project aimed to improve reproductive health services at Health Centers (HCs) by strengthening the health district system. Among the various project target areas, we chose two health districts: Manbej and Al Bab in Aleppo Governorate in northern Syria.

Between February and April 2010, we conducted a health facilities survey to obtain demographic and basic data regarding the current situation relating to medical equipment and health personnel in all HCs in the target districts. We also conducted in-depth individual interviews to assess the management capacity of the Health District Offices (HDOs) and HCs using a narrative research approach. Ten key informants were selected among the directors and midwife supervisors working at the HDOs and HCs. Relevant information was compiled and categorized for analysis under each building block of the WHO's health system framework.

In this paper, we assumed that management at the health district level would include general management examples as follows:

A) Decision making (e.g., ordinances, regulations,

and planning) ;

B) Oversight and guidance (e.g., supervision, monitoring, evaluation, feedback, reflection, and audits) ;

C) Administration (e.g., reports and notification, institutional management, financial management, payment of money due, personnel management, motivation and incentive, instrumental management, infrastructure management, risk management, and crisis preparedness) ;

D) Social relationships (e.g., collaboration and partnership) ;

E) Information manipulation (e.g., collection, analysis, data banks, application of soft information, hardware management, advocacy, and press releases and publication) ; and

F) Human rights protection

Policy making, political commitment, legislation, distribution of subsidies and other resources, accreditation and licenses, promotion of deconcentration, devolution, delegation, and privatization were excluded from our analysis because those components were assumed only applicable at a national level. Thus, management capacity was assessed focusing on the above categories.

The study was subject to the Declaration of Helsinki. Informed oral consent was obtained from the interviewees before the interviews to maintain their privacy. The corresponding author states that there is no conflict of interest to declare.

3. Results

3.1. Overview of the Syrian national health system

Sixty-seven national hospitals were under the supervision of the MOH, while as of 2010, 12 university hospitals, two police hospitals, and 18 military hospitals were under the Ministry of Higher Education (MOHE), Ministry of the Interior (MOI), and Ministry of Defense (MOD), respectively. According

to the Eleventh National Health Five-year Plan issued in February 2010, a MOH strategy for HSS aimed to improve universal access, particularly for poorer populations in remote areas, by constructing new mid-level hospitals (30–120 beds) and HCs in peripheral regions. A priority strategy of the MOH was to gradually upgrade all national hospitals into autonomous units with financial and administrative independence. Accreditation and ISO certification were introduced to maintain the quality of the health services in some public and private hospitals.

3. 2. Leadership and governance

At a central level, the MOH and the Ministry of Local Administration (MOLA) are currently responsible for executing and providing primary health care services (see Figure 1). Since 1990, Health Directorates have been the responsible body for local health

and medical services and reported to MOLA. Technical and financial support and supervision have been simultaneously provided by the MOH. The fact that the relevant authorities fall under two ministries has made it somewhat difficult to properly understand the workings of the national health system.

The Health Directorates have the authority (and flexibility) to carry out health programs within the scope of the national health strategy. HDOs exist under the supervision and control of the Health Directorate, as do district hospitals and non-autonomous national hospitals. Each HDO also supervises and controls HCs. As the study aimed to assess the management capacity of HDOs in the two target districts, we found a system that indicates a relationship within the HDOs between management and four other health system building blocks, and also a linkage between HDO and HC service delivery. Based on this

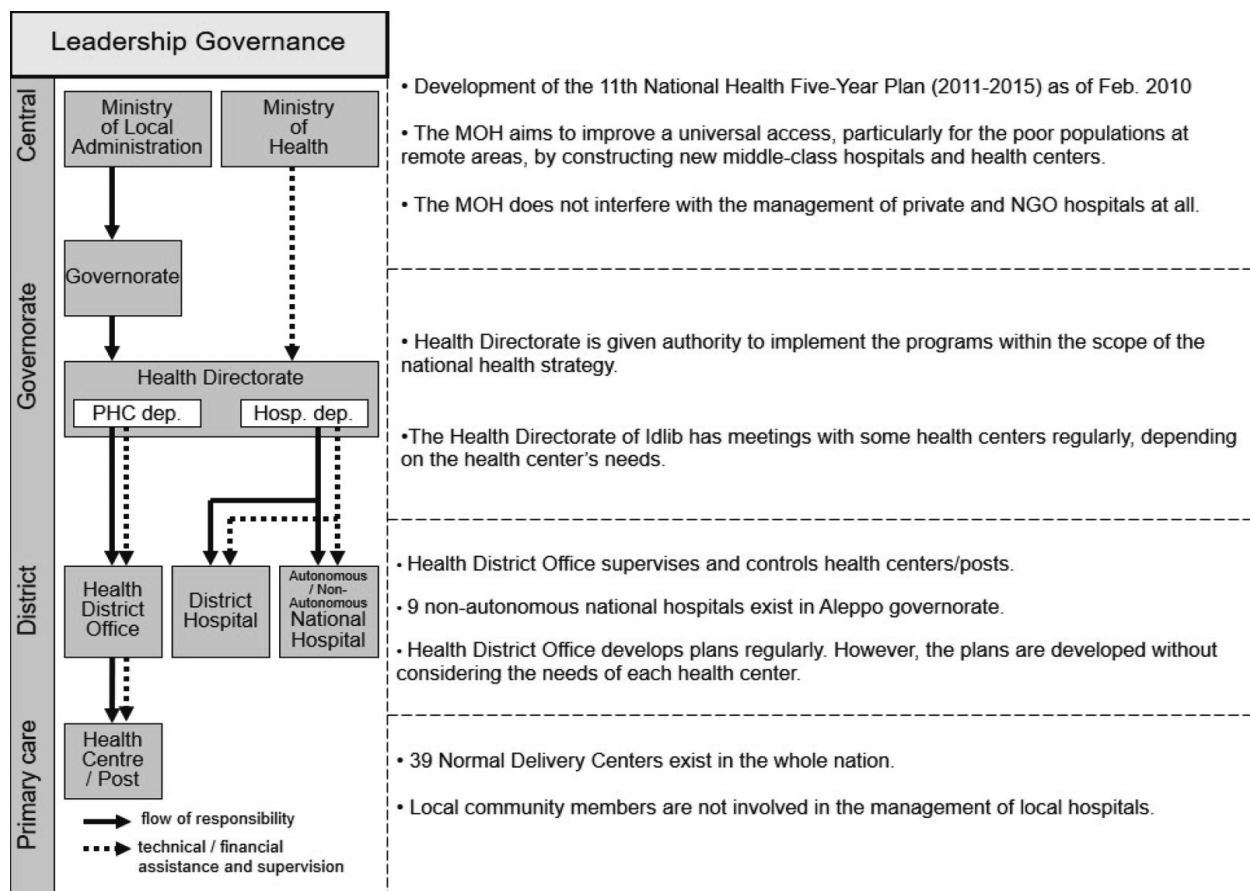


Figure 1: Leadership and Governance

system, we will analyze by each block of the health system framework.

3.3. Health workforce

Between 2002 and 2004 the number of physicians rose by 14%, but the majority of them chose to specialize (a 26% increase), while the number of general practitioners only increased by 4.5% (see Figure 2). This situation resulted in the growth of the private sector without addressing the needs of the public sector. The directors of the Health Directorates are appointed directly by the MOH. The MOH also appoints the head doctor and administrator for autonomous national hospitals, based on nominations provided by the Health Directorate. Head doctors are presently obliged to attain a diploma in hospital management before their assignment, attained via a 3-month training course provided by the MOH.

In 2012, Aleppo Governorate stated that it would provide for an extra 250 nursing students. Public hospitals have residency programs for medical graduates, whereas no such program exists in private hospitals. The Health Directorate conducted training programs to enhance personnel capabilities in management, planning, and evaluation, especially focusing on the management capabilities of HDOs and district hospital directors. However, the impact and result of such training programs have not yet been evaluated.

3.4. Health information

Although the private sector plays a crucial role in the Syrian health system, the MOH has never interfered with the private and non-governmental organization (NGO) sectors (see Figure 3). There was little information available at the time regarding the pri-

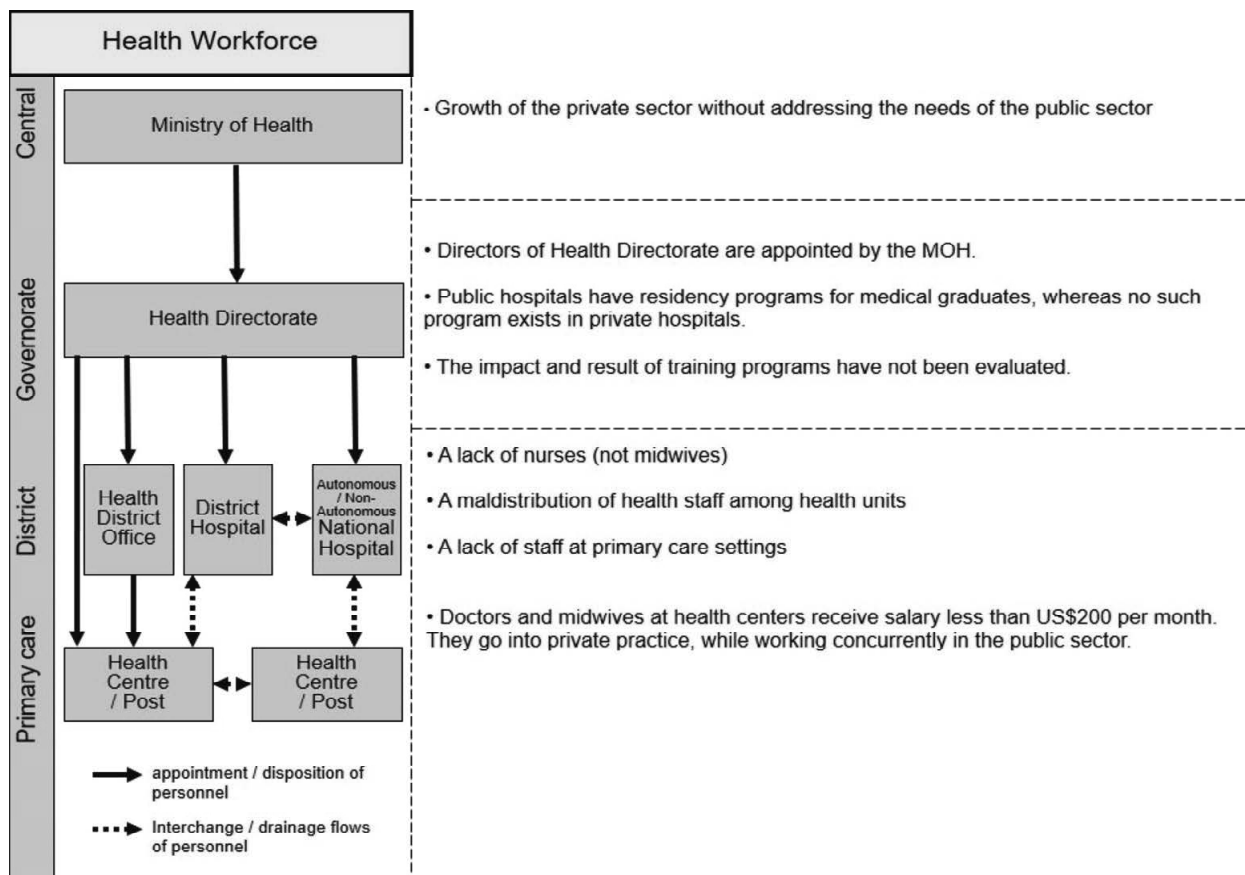


Figure 2: Health workforce

vate sector in Syria.

3.5. Medical products

Syria produces approximately 4,600 different drugs, covering 90% of its needs. Imported drugs were mainly limited to oncology medicines, vaccines, injected hormones, and anti-HIV drugs (see Figure 4). Some insulin was produced in Syria and some was imported. All manufacturers comply with the international standard of good manufacturing practices and are ISO certified. Drugs covered by national programs (e.g., vaccines, anti-TB, and family planning) and advanced equipment (e.g., X-ray and ECG machines) are procured and distributed by the MOH.

Just 6% of the Syrian government budget was allocated to the health sector in 2006, which was lower than in other Arabic countries (e.g., Egypt: 7.3%,

Jordan: 9.5%, and Lebanon: 11.3%) (see Figure 5). The MOH budget includes salaries and wages, general administration expenditure including the procurement of medical commodities covered by national programs, maintenance of advanced equipment and training, and investments in construction and equipment for advanced health services. In terms of investment, the MOH discusses this issue with the State Planning Committee, which is the main regulator of major investments. MOLA financed and subsidized salaries and wages, as well as general administration expenditure, which includes the procurement of drugs not covered by national programs and the maintenance of basic equipment. MOLA is also responsible for construction costs and standard equipment. The Governorate and Health Directorate prepared these budgets as one lump sum for all hospitals and HCs and there are no established procedures for

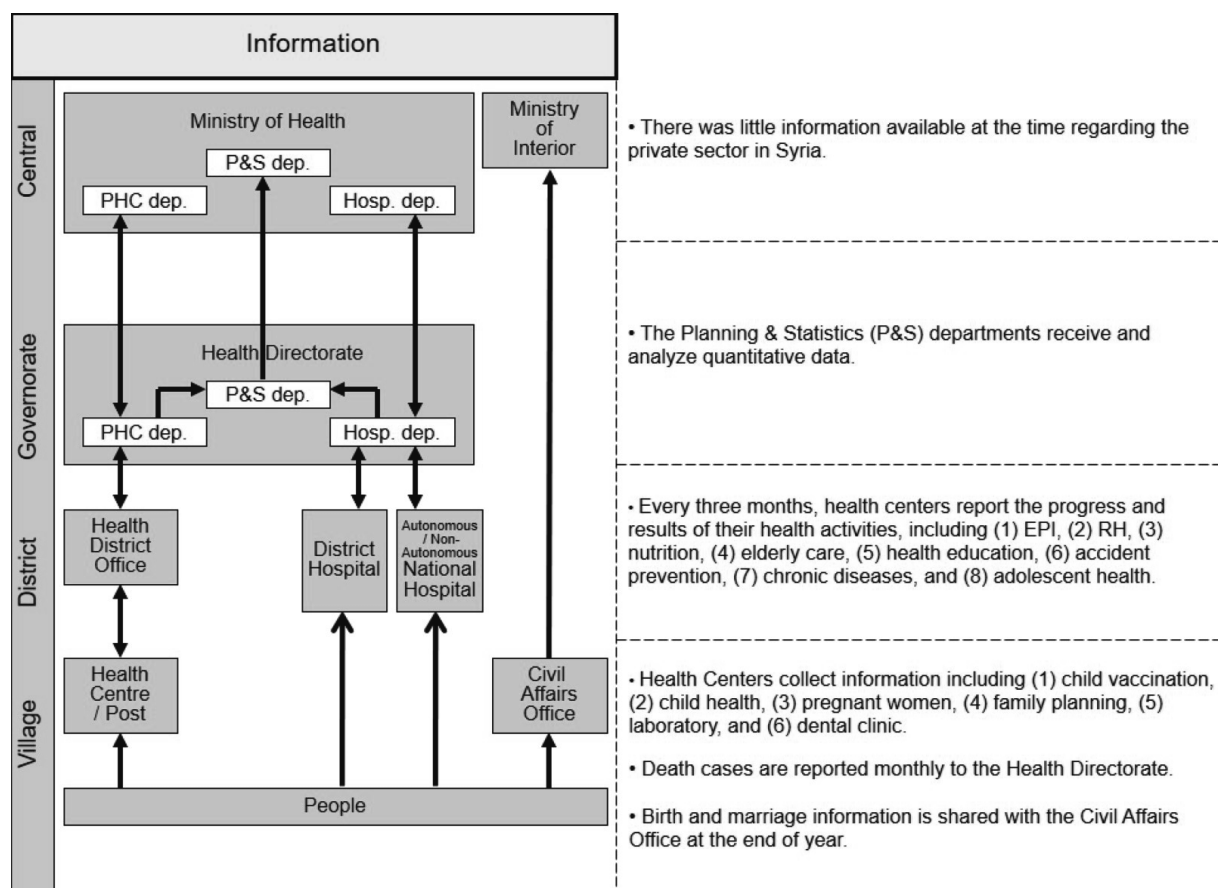


Figure 3: Health information

consultation with operational departments. In summary, the Syrian health financing process is neither fully transparent nor understood.

Furthermore, 90% of private hospital revenue is acquired from patients and the remainder from donations. Private insurance is not available in Syria. A 2002 Private Health Expenditure Survey shows that Syrians spend on average 1605SP (approximately US\$32) for health care per person per year.

3.6. Service Delivery

A referral system was established in 2007, but it was not functioning as of February 2010. According to official documents and the results of the 2002 Family Health Survey, more than 95% of the rural populations had access to the PHC service and 70% had access to secondary care services. However, for 25% of the rural population, they had to travel more than 5 km to access a HC. Although HCs provide all

their health services free of charge, 75% of pregnant women used private hospitals or clinics for their antenatal care and delivery.

Many people considered that HCs provided a low level of service and that staff has poor attitudes. HDOs were in charge of planning and evaluation; supervising HCs focusing on staff attendance and performance of programs; distribution of drugs, vaccines, and equipment; and environmental health including water safety, restricting use of pesticides, and food poisoning.

HCs were supposed to provide a wide range PHC services including immunization, oral rehydration therapy, child growth monitoring, reproductive health care, control of communicable and non-communicable diseases, tobacco control, nutrition advice, oral health, and health promotion. In rural settings, however, not all of these services were available. Some HCs implemented outreach activi-

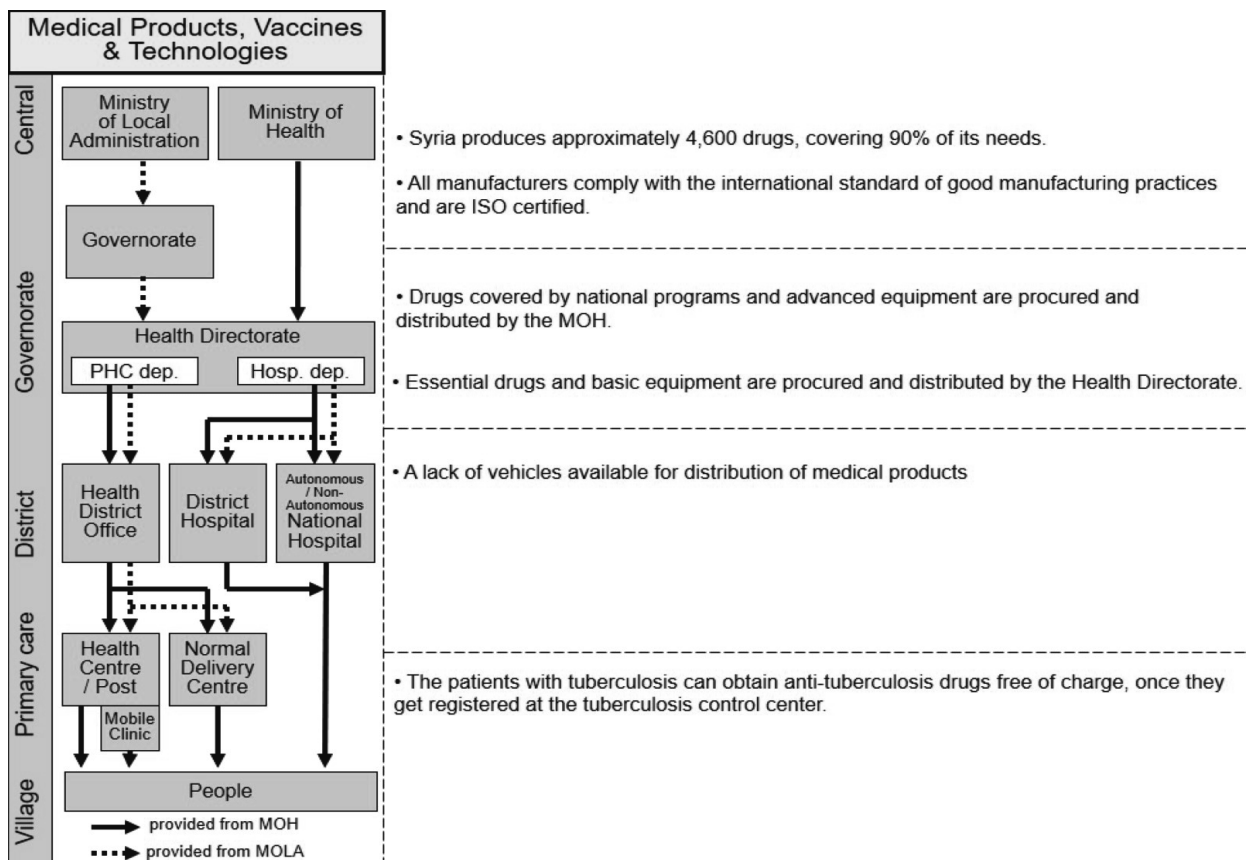


Figure 4: Medical products

ties in the villages, schools, and religious gathering sites though.

4. Discussion

In general, health district authorities, like HDOs in Syria, would undertake the following routine management tasks:

- A) Periodical planning and evaluation of HC health services;
- B) Sustainable supervision to facilitate staff attendance and better performance;
- C) Appropriate allocation of health professionals, and the assessment and procedures for the distribution of drugs, vaccines and equipment to HCs;
- D) Promotion of partnership with broad social resources; and

E) Relevant advocacy and health education

These components should be applied depending on the governance context of the target health system.

In the case of Syrian HDOs, a plan that includes the allocation of resources, supervision, and feedback, instrument and infrastructure maintenance, collaboration and partnership, and the collection and utilization of analyzed data and information should be emphasized to enhance their management capacity. Unfortunately, according to our findings based on our observations and key-informant interviews, no HDO undertook the above management tasks.

We identified five critical points that are essential to improve management capacity without needing any additional budget or system reform.

First, the decision-making capacity of an HDO

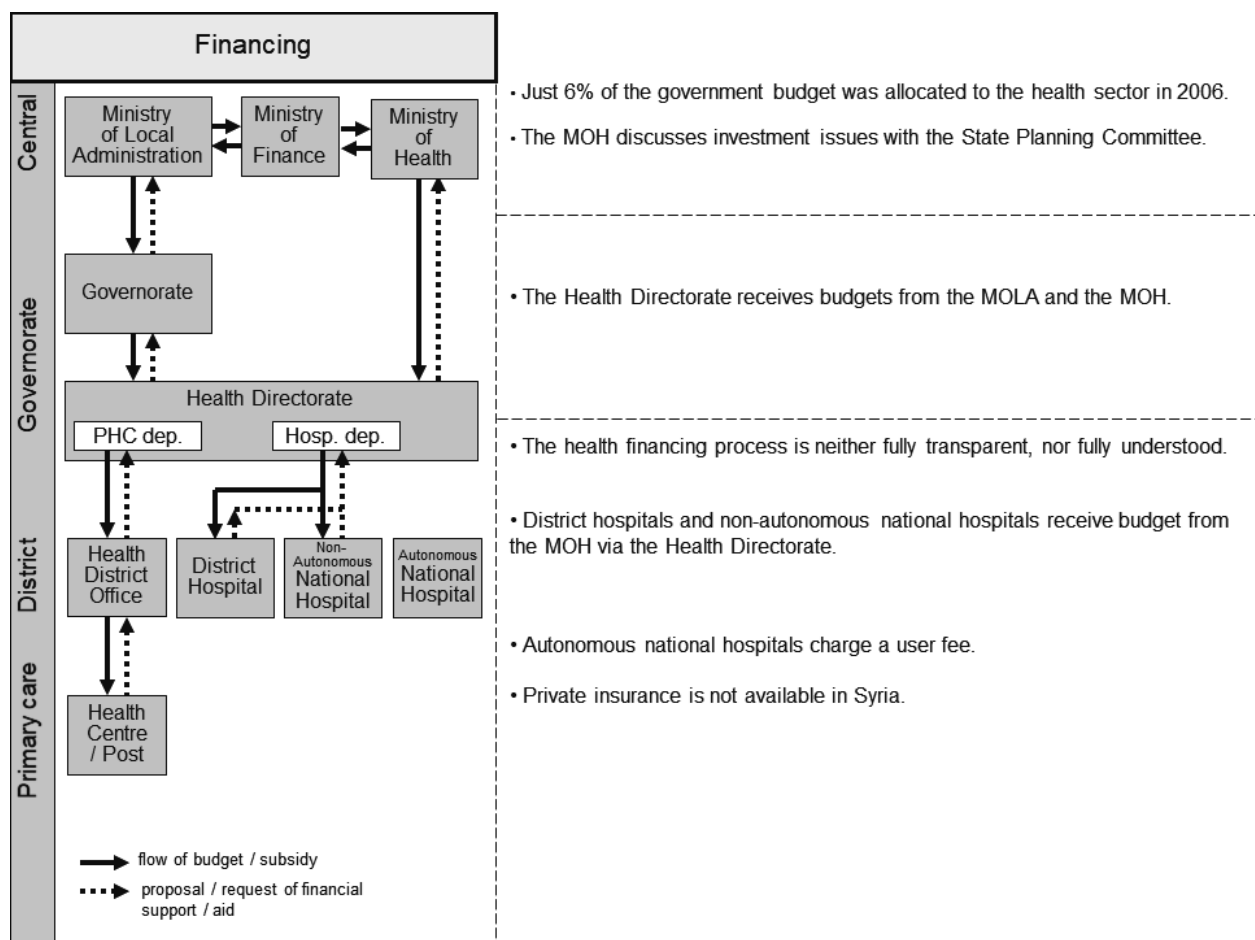


Figure 5: Financing

may be developed through the periodical elaboration of a health district plan that includes not only an action plan for service delivery but also one to manage resources such as a health workforce, information, medical products and technologies, and finance to ensure the delivery of good-quality health services.

Second, the sound establishment of supervision by the HDO may improve not only HC performance but also the management capacity of the HDO. As mentioned above, the JICA project supported the implementation of HC supervision by the HDO supervision teams. The director of the Reproductive Health division of the Aleppo Health Directorate holds a regular monthly meeting with midwife supervisors from each district, allowing them to make their own action plans based on the findings of their supervision.

Third, as a tangible and primary improvement of administration capacity, medical commodities such as drugs and vaccines should be distributed based on the results of data analysis. Although quantities varied according to season and the observation of Ramadan, requested quantities were not based on past consumption. Such inappropriate estimations of medical commodities cause either a shortage or an excess of drugs and vaccines. It would be more efficient for management capacity development to request medical commodities in compliance with recorded historical demand.

Fourth, the appropriate disposition of health personnel may be a crucial issue to feasibly improve administration capacity development. Indeed, unless staff agree to workplace transfers, it is very difficult for HDO heads to compel staff to move. Thus, the proportionate allocation of personnel is a longstanding challenge for management capability.

Lastly, broad resource mobilization should be further promoted as a key principle of the primary health care strategy. The HDOs in the target area have made little effort to create relationships with other social

resources such as NGOs and non-profit organizations.

5. Conclusion

Syria was considered to have the weakest health system among the countries in the WHO Regional Office for the Eastern Mediterranean. The country was often sidelined and did not gain much attention as one of the main players in the Arab–Israeli conflict or in the Iraq War. The general political and economic situations of Syria and its governmental structures, including the health system, were not well understood by international society. Since there exist only a few documents to describe the Syrian district healthcare system during the pre-civil war era, this study is one of few reports to document the efforts to analyze and strengthen the health system.

Organizing the collected information into the six building blocks, we found that the HDOs in Aleppo Governorate, Syria could improve their management capacity by making an appropriate action plan and reallocating personnel and medical commodities based on the results of information analysis.

Syrian health professionals, in collaboration with Japanese experts, analyzed the health system and organized the roles of HDOs and HCs successfully and developed action plans, ultimately to strengthen the health system of the country as a whole.

Japan and international society spotlighted Syria, only when Syria was about to fall into the worst on-going humanitarian catastrophe in its history, which may lead to the biggest loss of life of the 21st century. As a result of the severity of human and material damage caused in the conflict, international society was urgently pushed to announce humanitarian assistance plans for Syria, including Japan's plan worth 10 million US dollars.

Since the outbreak of the conflict, more than half of the health centers and medical facilities have been reported closed or disordered. Once the situation

normalizes, the health system of Syria needs to be reconstructed, hopefully better, stronger, and more efficient, based on past administrative experiences prior to the conflict. We hope the HSS methods and lessons we learned in our project would contribute to the reconstruction of district healthcare system in the area.

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