

Coordination between Federal, State and District Levels in Managing Health Systems and Policy Implementation in North Darfur State, Sudan

Abdallah I. A. Yagub¹ and Khondlo Mtshali²

¹*Policy and Development Studies, ²International and Public Affairs, School of Social Sciences, University of KwaZulu-Natal, South Africa*

Telephone: ¹<+27 (0) 33-260-5841>, ²<+27 (0) 33-260-5892>

E-mail: ¹<ebinibrahim@gmail.com>, ²<khondlo@hotmail.com>

KEYWORDS Decentralization. Coordination. Health System Management. Policy Implementation. North Darfur State. Sudan

ABSTRACT This study examines the policy implications of decentralization of the health system in North Darfur State, Sudan. This study used documentary material collected from government offices and medical organizations. This study also relied on interviews with government and NGO representatives. This paper argues that coordination among the federal, state and district levels to manage and implement a health policy has been very weak, especially at the district level. This weakness is primarily due to security issues, a lack of trust and lack of human and financial capacity. While the curative health system in North Darfur State is formally decentralized, in practice, the federal government has centralized control, leaving little autonomy and resources to the state government in North Darfur State and even less to the districts. The state and district levels in North Darfur do not have the capacity, capability and infrastructure to implement health policy and to provide quality curative health services.

INTRODUCTION

Federal systems of government are a common arrangement, especially in large countries with scattered and diverse populations (World Bank 2003). In some countries, a Ministry of Health is responsible for policy formulation and implementation, while in others implementation of health services is a responsibility of the state, provincial, district or local governments (Siddiqi et al. 2009). Sudan's health system is structured on a federal basis. The National Health Policy of 2007 specifies that the Federal Ministry of Health is responsible for formulating national policy and setting national priorities, the State Ministry of Health is responsible for financing public health services, and the district level implements health programs by providing, managing and assessing health services (World Bank 2003).

Usually, decentralized health policies have two objectives, namely, to increase the responsibilities and capacity of lower levels of government, and to transfer authority for facilities such as hospitals and clinics (Mills 1998; Faguet 2014). Makinde (2005) and Sow and Razafimahefa (2015) suggest that the links between federal, state, district, and community levels are critical to facilitate the implementation of health policy by,

for example, information flowing upwards from communities to federal government and resources flowing downwards to where they are needed. Where there is a need to address horizontal imbalances or differences between regions, national governments might be able to distribute equalization grants. This is important because the poorest regions usually have the greatest need for social services, yet have the weakest ability to pay for them (Morse and Struyk 2006; Sow and Razafimahefa 2015).

Sudan, like many developing countries, has introduced a decentralized health system. Consequently, the tasks of carrying out health policy have shifted from federal level to state and district levels. The case study for this research is North Darfur State¹, a poor state in Sudan, which has been affected by the conflict that started in 2003. In this new decentralized system, attempts to implement health policies have been hampered by lack of coordination among the three levels of government, namely, federal, state and district. The impact of this lack of coordination has been affecting the "delivery of curative health services to the poor and conflict-affected people" (Yagub and Mtshali 2015). Many factors have contributed to weakened coordination among the three levels of government. These factors include the system of decentralization

itself, conflict, distance and communication, transfer of funds and lack of trust. These factors will be investigated in this study.

METHODS

This research used Rondenelli et al.'s (1989) political economy approach and qualitative research method to achieve its purpose. Documentary data, which includes published and unpublished reports in Sudan and North Darfur State, were collected from government and NGOs. To further source its primary data, this research also relied on consultative meetings and in-depth interviews with government and NGO representatives. In addition, this research also used questionnaires to acquire additional data. From November 2010 until January 2011 one of the researchers conducted numerous formal and informal interviews with health professionals and administrators working in the health sector at federal, state and district levels (N=60). At federal level, 10 health administrators were interviewed, and at state level 22 employees (8 health professionals and 14 administrators) were interviewed. At district level 28 workers (20 health professionals and 8 administrators) were interviewed. After data gathering had been completed, the data were transcribed, coded and analyzed, assembling all the evidence and presenting a synthesis of the findings of the study. The following section will discuss the health system and policy responsibilities of different levels of government.

POLICY AND THE STRUCTURE OF THE HEALTH SYSTEM AT FEDERAL, STATE AND DISTRICT LEVELS IN SUDAN

According to a WHO report (2006), the management and delivery of health services in Sudan operate in a decentralized environment. The 1993 Sudanese Federal Government Act, which was revised in 2007, allocates the following responsibilities to the three levels of government:

- a. The Federal Ministry of Health is tasked with "formulating national policies, international relations, human resource development, health legislation and the control of epidemics".
- b. The State Ministry of Health is assigned the role of "planning, administration and

financing of health services within the framework of national health policies".

- c. The Health Area System is accountable for "for the planning and implementing health programs at the district level".

Federal Ministry of Health

The Federal Ministry of Health works together with the 15 state ministries of health. The Undersecretary Council leads the different directorates, departments and programs of the Federal Ministry of Health. The Councils are under the Federal Ministry of Health, which convenes regular meetings with policymakers at federal and state levels. It also sets "standards, norms, protocols and guidelines" for the federal level and for states, and develops checklists for supervision, monitoring and evaluation (WHO 2006). The Federal Ministry of Health is "responsible for developing national health policies, human resources planning and development, strategic planning, health legislation, response to epidemics, international health relations and coordination". It "is also responsible for the management of the National Health Information System, in addition to the monitoring and evaluation of all health activities and interventions in the country" (WHO 2006).

State Ministry of Health

A State Ministry of Health is mainly responsible for the management of the health system and the supervision and monitoring of health policy implementation in a particular state. This ministry is primarily responsible for implementing national health policy and for coordination between federal and district levels, with more direct control over the provision of health services. A State Ministry of Health is also tasked with managing and implementing health systems and health policy, and this ministry achieves this by holding regular meetings with district representatives (State Ministry of Health Survey Report 2008). Each state has a Minister of Health who ensures that the Ministry's policy is implemented through cooperation with the state governors and their administration staff. The State Ministry staff are responsible for monitoring and supervising the health service delivery work of the districts' health Services. At state level, there is a committee of health, which consists of the

Minister of Health, and representatives from the State Governor, health professionals, civil society, the private sector, and representatives of health committees from each district. The Minister of Health presides over this committee, which holds meetings four times a year in order to discuss issues of health services delivery. Thus, at the higher level of North Darfur's health system is a State Ministry of Health with a general manager. The latter official is responsible for administration of emergency and humanitarian work, which became necessary due to the civil conflict. In collaboration with the State Ministry of Health, the large numbers of NGOs work to provide healthcare to Internally Displaced Persons (IDPs) and the affected population.

District Level

A district is the organizational level that implements health services and disease control. According to the structure of the health system of Sudan, there are 134 districts in total in Sudan. Formally, there are 15 districts in North Darfur State but in reality there are 14 districts, because El Waha district is a district for nomads with its administration office in El Fasher, the capital of North Darfur State (Ministry of Cabinet Affairs Secretariat General 2008). At the helm of each district is a District Governor who is responsible for health system management in the districts. Reporting to the Governor is the Executive Director who is responsible for the implementation of health programs at district level. The District Health Council is responsible for providing financial and material support to the health sector in a district, through contact with the State Ministry Health, the Governor of the State and the Federal Ministry of Health. The Department of Health Affairs is responsible for the management of the Departments of Primary Health, Preventive Medicine and Curative Medicine.

Using National Health Policy guidelines, the districts are responsible for local implementation of health policies. Each district has a director of health service who is appointed by the State Ministry of Health. Each director has wide powers to manage the health institutions' buildings, budgets, staff, appliances and equipment. However, not all health institutions within districts are the responsibility of district authorities. For example, although teaching hospitals and specialist hospitals are included in a dis-

trict, the director is not responsible for the activities of these hospitals, and the latter have their own administrative head, working directly with the State Ministry of Health. The director is responsible only for rural hospitals, health centers and Basic Health Units.

This section has discussed the health system and policy responsibilities of the different levels of government. The following section will discuss factors that affect the implementation of health policies at these different levels of government.

FEDERAL, STATE AND DISTRICT GOVERNMENTS' RESPONSIBILITIES

Through interviews with government officials, one of the researchers gathered information about the decentralization of health services in North Darfur State. This information is shown in Table 1.

As shown in Table 1, most responsibilities for health services delivery, system management and policy implementation have been assumed by the federal and state levels, while the actual provider of health services and the implementer of health policy is the district level. The main responsibility of health financing is shared between the federal and state levels, and the district level plays a minimal role in financing. With regard to human resources, the federal government has substantial responsibility for staffing, salaries and benefits, and training, the state has substantial responsibility for contracts, and the district government does not have any responsibility for human resources. With regard to service delivery management and policy implementation, the federal government has wide responsibilities for setting standards and regulations, managing insurance schemes, managing contracts with health providers, managing payment systems, providing services for targeted people and policy design. The state and federal governments share wide responsibility for policy supervision and evaluation. The state government has substantial responsibility for providing services to targeted people. The district government has substantial responsibility for policy implementation. The state government has substantial responsibility for maintenance of health facilities, health infrastructure, vehicles, equipment, and communication tools. With regard to information management, the federal

government has substantial responsibility for health information system design, while the state government has substantial responsibility for data collection, and information sharing.

SOCIO-ECONOMIC AND POLITICAL FACTORS AFFECTING POLICY IMPLEMENTATION IN NORTH DARFUR STATE

Political Factors

Rondenelli et al. (1989) argue that *political factors* play an important role in the success or failure of decentralization. This claim is supported by Athanasiadis et al. (2015), Maharani et al. (2015) and Sow and Razafimahefa (2015). One of the most important factors in North Darfur is the conflict that started in 2003. The conflict in North Darfur State has resulted in massive population displacement and widespread insecurity. The conflict in North Darfur, like the conflicts in other parts of the world (Gaber and Patel 2013), has led to further deterioration of the already underdeveloped state health system and infrastructure (WHO 2007). The fragile health service system in Darfur was unprepared for the large influx of people requiring healthcare. The need for health services infrastructure became obvious as only primary healthcare facilities were established in IDPs camps and in some small towns. State and local rural hospitals in Darfur were unable to sustain their programs to provide free treatment to IDPs and conflict-affected people (WHO 2007a).

In this regard, eighty-nine percent of interviewees at federal and state level, and ninety-five percent at district level, disclosed that the conflict weakened the infrastructure of health services in North Darfur State. Most of them indicated that this caused the marginalization of the Darfur region from national government. This is confirmed by the Federal Ministry of Health Report (2007) and the State Ministry of Health Survey Report (2010).

The conflict resulted in the destruction of rural hospitals and clinics, shortage of health-care providers at these health facilities, unavailability of health commodities and difficulties in conducting supervision and monitoring visits by state health officers at district level (State Ministry of Health Survey Report 2010). In August 2015, Radio Dabanga, a Sudanese based

radio station, confirmed the persistence of these negative factors. These factors have all impacted health policy implementation in the State. This was confirmed by ninety-five percent of interviewees, at all levels of government. According to an interviewee (1-1, 11 January 2011, El Fasher²) working in the State Ministry of Health:

"The conflict, which exploded in North Darfur State, has affected health policy implementation. This is because health policy is designed at the federal level and needs to be monitored and implemented at district level. We don't have enough funds or enough qualified administration health staff to send them to the districts to evaluate the situation there and even if we send teams from the state level they cannot reach the health centers and basic health units at district level, due to the insecurity."

Brinkerhoff (2008) pointed out that sustainable health service delivery capacity, and efficient management systems and policy, along with effective policymaking and health governance, are necessary for conflict-affected states to establish the sustainable development of their health sectors. According to another interviewee (2-1, 05 January 2011, El Fasher), working in the State Ministry of Health:

"The conflict in North Darfur State affected every aspect of the health service delivery system in the State, such as limiting the human, material and financial resources for the implementation of health services policy. In the long-term, the government should take the responsibility to improve and reform its health system and policy, so as to provide quality free medical treatment to all people in need of health services. In the short-term, quality health services delivery to the population needs strong collaboration and coordination between all stakeholders, the Federal Ministry of Health, the State Ministry of Health, NGOs, and the community."

The position of this interviewee is supported by Gaber and Patel (2013), who emphasize the role of the central governments in reassessing the entire healthcare system.

Organizational Factors

Among *organizational factors* that can facilitate decentralization, Rondenelli et al. (1989) list "appropriate allocation of planning and administrative functions among levels of govern-

ment and local organizations with each set of functions suited to the decision-making capabilities of each level of organization". They further suggest that there must be "laws, regulations and directives that clearly outline the relationships among different levels of government and administration, the allocation of functions among organizational units, the roles and duties of officials at each level". Rondenelli et al.'s views are supported by Athanasiadis et al. (2015), Lee and McKee (2015), Maharani et al. (2015) and Sow and Razafimahefa (2015).

As shown in Table 1, the state and district levels of government are responsible for both, managing health institutions and facilities and monitoring service providers. Responsibility for contracts with health providers, payment mechanisms and regulations, providing services for targeted people and providing medicines and supplies are mainly transfers from federal government, but in reality these are left to state and district levels to deal with. As one interviewee, (2-2, 23 December 2010, El Fasher), working in the Federal Ministry of Health elaborates:

"The federal level has a right to sign contracts with international NGOs and donors to provide health services, especially in conflict-affected areas such as North Darfur State and this do not cost the government any money. Problems arise when the federal level is responsible for payment mechanisms and regulations and is not able to activate this task. As a result, some state administrators receive their salaries very late and sometimes the transfer of health equipment from federal to state to district level takes months."

Table 1 shows that the federal government is responsible for policy design. Supervision and evaluation are shared between federal and state levels, while districts are mainly responsible for implementing policies. Expressing a view similar to that of Lee and McKee (2015), an interviewee (2-3, 3 February 2011, Khartoum), working in the Federal Ministry of Health points to the contradictory aspects of decentralization:

"Sudan applied decentralized administrative procedures to the lower levels but it is still strengthening central control over policy design and budgetary activities. Decentralization is very sensitive in that it is concerned with the distribution of power and the allocations of resources. The implementation of national health policy in a decentralized system requires

strong political commitment to achieve a good result. In North Darfur State, the State Ministry of Health is unwilling to implement national health policy effectively because state and district authorities have been reluctant to accept their new responsibilities of power without resources."

One interviewee, (2-4, 22 December, El Fasher), working in the State Ministry of Health points to the implications of the federal and state government failure in their human resources responsibilities:

"Poor states, such as North Darfur State do not have enough resources to meet their responsibilities regarding implementation of successful health policies. This is due to insecurity regarding financing of health services and a lack of sufficient well-trained administration staff. Since 2002, the federal government has not provided any budget for the development of the health sector and therefore, they have been unable to manage and implement health systems and policies."

According to an interviewee (1-2, 26 December 2010, El Fasher), working in El Towasha district hospital:

"There is no administrative staff to control health policy implementation. As a doctor and administrator, he is busy treating patients and does not have time to manage health policy as well. Also, those responsible for implementing health policy are not consulted by state level authorities, who design these policies."

As Table 1 indicates, operational maintenance of health facilities and infrastructure, provision of vehicles, equipment, and communication tools, is mainly the responsibility of the State government. One of the interviewees, (2-5, 20 December 2010, El Fasher) who works in the State Ministry of Health, noted that lack of natural, human and economic resources as well as conflict, impaired North Darfur's health facilities infrastructure. This interviewee observed that, *"Health facilities, especially in rural areas, were looted and destroyed and other health infrastructure issues still beleaguer the existing health facilities, including inadequate and/or complete lack of medical equipment, transport and communication equipment, water and energy, all of which are required for the health infrastructure to be fully functional."*

Designing information systems for the health sector is very much the responsibility of the fed-

eral government, whereas operating the systems, that is, collecting, analyzing and disseminating the data, is left mainly to the state level. This division of roles is indicated in Table 1, but in practice, there seems to be confusion and uncertainty. According to an interviewee (2-6, 05 January 2011, El Fasher), working in the State Ministry of Health:

“The state does not have any kind of effective health information system. Weak communication across all levels is characterized by inadequate and inconsistent reporting, information gathering and feedback, resulting in a lack of clarity among health staff of key health policies, poor information sharing, and inadequate use of evidence to support planning and decision-making. This undermines the health system and policy development, stakeholder engagement and policy implementation on the ground.”

In general, ninety percent of interviewees at the federal, state and district level said that the decentralized systems in Sudan and the effectiveness of health system management and policy implementation face many challenges. Among these challenges are shortages of trained human resources, a high turnover of existing qualified staff, inadequate office facilities, and limited financial resources within the State Ministry of Health and within health institutions at district level. Overall, data collection, reporting, use and storage were serious constraints hindering proper monitoring and evaluation of the implementation of the decentralization strategy at state and district levels.

This confirms recent research by El-Saharty et al. (2009), which revealed that the decentralization policy in Sudan “created opportunities for local governments to be responsive to local challenges, but also created a major challenge in

Table 1: The responsibilities of the three levels of government for the functioning of the North Darfur State health system

Health system functions	Level of government		
	Federal	North	Darfur State District
<i>Financing</i>			
Income generation and sources	****	***	**
Budgeting, revenue allocation	****	****	*
Expenditure management and accounting	***	****	**
Financial audit	****	****	**
<i>Human Resources</i>			
Staffing (planning, hiring and evaluation)	****	**	*
Contracts	*	****	*
Salaries and benefits	****	**	*
Training	****	**	*
<i>Service Delivery Management and Policy Implementation</i>			
Health institutions and facilities management	*	****	***
Setting standards and regulation	****	*	*
Monitoring of service providers	*	****	***
Managing insurance schemes	****	*	*
Contracts with health providers	****	**	*
Payment mechanisms and regulations	****	*	*
Providing services for targeted people	****	***	*
Providing medicines and supplies	**	*	*
Policy design responsibility	****	*	*
Policy implementation responsibility	*	**	****
Policy supervision and evaluation responsibility	****	****	*
<i>Operational Maintenance</i>			
Health facilities and infrastructure	*	****	**
Vehicles, equipment and communication tools	*	****	*
Information Management			
Health information systems design	****	*	*
Data collection and analysis	*	****	**
Information sharing with other partners	**	****	*

*= Not responsible; **= Limited responsibility; *** = Substantial responsibility; **** = Wide responsibility
Source: interviews, December 2010.

ensuring that national priorities were adequately funded in regional” and district plans. These researchers further point out that weak “management capacity, in particular at [district] level stood out as a key constraint to governance in the health sector. Rapid staff turnover affected health sector management at all levels and was arguably the most common and serious bottleneck. The key lesson learned was the need to strengthen planning and management capacity at all levels”.

The size of a country is likely to strongly influence the type of decentralization chosen and the degree of decision that peripheral agencies may exercise. The larger the country, the more difficult it is to ensure efficient management from the center (Mills 1990). In a large country such as Sudan, it is difficult to ensure efficient health system management from the center. For example, the distance between Khartoum, where the Federal Ministry of Health is located, and El Fasher, where the State Health Ministry is located, is 809 km. Equally, North Darfur State itself is very large, covering an area of 296,420 square kilometers, with 15 districts. Some of these districts are very far from El Fasher, the State capital. For example, El Tina is 300 km to the west, El Malha is 200 km to the north, and El Liyit is 185 km to the east. Ninety five percent of health professionals and administrators working at district level disclosed that due to the distance between some districts and El Fasher, they are unable to manage and implement curative health policy effectively. Interviewees informed the researcher that there are times when they do not communicate with the state capital for two or three weeks.

This is corroborated by an interviewee, (1-3, 19 January 2011, El Fasher), working in El Tina rural hospital:

“Due to the distance between El Fasher and El Tina on the Chad Republic border (300 kilometers), sometimes we run out of necessities such as trauma drugs and oxygen for two or three weeks. Due to the insecurity situation, we usually receive our healthcare needs through the African Union/United Nation Hybrid Operation in Darfur (UNIMED) helicopters.”

To some extent, adequate means of communication can overcome the challenges of distance. Clear communication channels provide direction and certainty for all actors and con-

tribute to effective policy implementation. Eighty eight percent of interviewees at all levels, eighty-three percent at state level and ninety-five percent of interviewees at district level, indicated that health system management and policy implementation have been facing difficulties of poor communications tools among all levels in North Darfur State. This study thus confirms Khan (2006) and Nowak et al. (2015), whose study stated that the implementation process suffers from communication gaps between health professionals, civil servants and administrators at the different levels.

The implementation process was characterized by inadequate and inconsistent reporting, information gathering and feedback. Interviewees stated that health information in North Darfur State is not produced on a regular basis. Even limited statistics on the health sector are not made publicly available, partly due to conflict and considerable reluctance to reveal information on government performance. These deficiencies resulted in a lack of clarity among health staff regarding key health policies, poor information sharing, inadequate use of evidence to support decision-making and insufficient staff support. Distance and bad communications facilities undermined health policy development, stakeholder engagement and ownership and health policy implementation on the ground. Health management teams cannot effectively fulfill their supervisory roles, nor effectively manage and implement health policy.

Financial and Human Resources

For Rondenelli et al. (1989) financial and human resources conducive for decentralization “include granting sufficient authority for local units of administration or government, cooperative and private organizations to obtain adequate financial resources to acquire the equipment, supplies, personnel and facilities needed to fulfill decentralized responsibilities”.

Table 1 indicates that the main responsibility of health financing is shared between the federal and state levels. According to an interviewee (2-7, 23 December 2010, El Fasher) in the State Ministry of Health finance division:

“Due to the decentralization of the health system in Sudan, the state governments are primarily responsible for the funding and delivery of health services. Yet, the amount and type of

public financing is jointly determined by both the central and state governments. However, the state government bears a large proportion of total government health expenditure, with the federal government accounting for only a small proportion.”

Table 2 shows the contribution of different stakeholders in the health budget of North Darfur State. The federal government's contribution to the health budget in North Darfur State is much greater than that of the state government, that is, 40.3 percent as opposed to 7.7 percent in 2003, leading to 26.5 percent compared with 7.4 percent in 2009. Although in 2006, the State's share rose to 12.5 percent. The North Darfur State government is thus very reliant on federal support. It is also noticeable, however, that the federal government's contribution has declined significantly since 2003. This is partly accounted for by the conflict, which has resulted in the diversion of resources to security issues. The conflict has also resulted in reduced revenue.

What is listed as “other external support” in the State Ministry of Health statistics is user fees. These have also declined over the years, from 21.4 percent in 2003, to 18.7 percent in 2006, to 13.2 percent in 2009. Again, the source of payments in monetary value has remained fairly constant throughout. What is more telling is the indication in 2009, for example, that revenue from user fees was nearly twice as much as the contribution from state government and fifty percent of the federal government's provision. Table 2 shows that external financial support for healthcare in North Darfur State is substantial and it has become increasingly so, from 30.6 percent in 2003 and 31.3 percent in 2006, growing even more to 52.9 percent in 2009. The State is therefore greatly dependent on the role of NGOs. This raises concerns of overreliance on external funding, which according to Gaber and Patel (2013), tends to focus on short-term projects.

Table 3: Relative financial contributions by NGOs to health services in North Darfur State in 2009

Organization names	NGOs contributions (%)
World Health Organization	34.4
UNICEF	48.2
United Nation Population Fund	7.1
Others NGOs	11.3
Total	100

Source: State Ministry of Health Financial Report, 2009.

As shown in the Table 3, the main financial support from NGOs for health services in North Darfur State comes from WHO and UNICEF, which contribute 34.4 percent and 48.2 percent of total health expenditure, respectively. The statistical portrait of sources of financing on health was confirmed in most of the interviews. Thus, one interviewee, (2-8, 15 January 2011, El Fasher), in the finance division in the State Ministry of Health, stated:

“The State Ministry of Health faces big challenges to finance health services in the State. Most people are not able to access health services by paying. In the meantime, the government is not able to provide free health services in the public sector because of financial problems. Therefore, since the conflict started, the State Ministry of Health is depending completely on donors and international NGOs to support it.”

Ten of the eleven interviewees disclosed that the financial situation of health services in the State is very bad and that the government is not able to provide enough funding to finance curative health services. Without support from donors and international NGOs, the government cannot provide curative health services to IDPs and all the poor affected by the conflict. Only one interviewee stated that although there is a scarcity of funds to finance curative health ser-

Table 2: Health funding in North Darfur State, 2003 - 2009

Year	Total budget for health in millions of Sudanese pounds	Federal contribution (%)	State contribution (%)	NGO contribution (%)	Other external support (%)
2003	327	40.3	7.7	30.6	21.4
2006	480	37.5	12.5	31.3	18.7
2009	1 134	26.5	7.4	52.9	13.2

Source: State Ministry of Health Financial reports 2006 and 2009

vices in the State, the government has been making a considerable effort and that the situation is now better than when the conflict started in 2003.

Given the context of the decentralized system in Sudan and the desired linkages between the various levels of government, the federal government should fulfill its obligations to provide financial transfers to the state level. The state level, in turn, should transfer finances to the district level smoothly and without delay. Ninety percent of interviewees at all levels and ninety-five percent of interviewees at district level suggested that the transfer of funds from the federal level to the state, and from the state to the districts, is not working effectively.

This seriously compromises the delivery of health services throughout North Darfur State. According to an interviewee (2-9, 08 January 2011, El Fasher), working in the finance division:

"In the State Ministry of Health, fund transfers from federal government are usually received around the 5th to the 10th of the month and this interrupts their health services delivery and policy implementation. Transfers of funds from the federal level play a crucial part in increasing the amount of, reducing the inequality in, and enhancing the efficiency of health expenditure in North Darfur State."

According to an interviewee (2-10, 03 February 2011, Khartoum), working in the Federal Ministry of Health:

"The national government has struggled with both the amount and mechanisms of transferring funds to state level. Delays occur, and some funds are transferred directly for the improvement of facilities and priority programed for the control of specific diseases. Often states accept the central funds but are unable to allocate additional balancing funds according to national health policy guidelines and objectives."

As seen in Table 1, the federal government is mainly responsible for offering salaries, benefits and training, while the state government is in charge of contracts. The district government has no responsibility for human resources. However, one interviewee who worked at State Ministry of Health (2-11, 23 December 2010, El Fasher) points out that both the federal and state level of government failed in their responsibilities. This interviewee suggests that:

"Since the conflict in 2003 there has been a severe shortage of qualified health staff as this

is no longer a priority. Most of government's budget is directed towards stability of security. Therefore, many hospitals and health centers in districts such as Kalamondo and El Waha districts are without doctors and the majority of the existing health workforce lacks adequate technical capacity to deliver quality health services, address priority health problems or activate health system functions."

The ratio of medical doctors and medical assistants in North Darfur State is far below the World Health Organization (WHO) norm. While WHO recommends a minimum of ten doctors per 100,000 people, Sudan had a ratio of twenty to 100,000 people and North Darfur had five doctors per 100,000. While WHO suggests a norm of 12 nurses per 100,000, Sudan had 4.9 nurses per 100,000, and North Darfur had 2.8 nurses per 100,000 (WHO 2006; Logie et al. 2008). The information that was gathered by the researcher in North Darfur was confirmed by the State Ministry of Health survey report (2010), which stated that most health workers are not trained, eighty-five percent of administrators have no training in their field, sixty-six percent of nurses were not trained after graduation, and sixty-five percent of general doctors do not receive training after graduation.

Appropriate Behavioral and Psychological Conditions

Finally, Rondenelli et al. (1989) believe that there are appropriate behavioral and psychological conditions are conducive to decentralization. Among these conditions they include that a "minimum level of trust and respect must be created between local organizations and government officials, and a mutual recognition that each is capable of performing certain functions and participating effectively in various aspects of financing and management". Rondenelli et al.'s claim is supported by Makinde (2005) and Nowak et al. (2015).

According to Walker and Gilson (2004), the gap between policy "objectives and outcomes is a demonstration of how policy is recreated through the process of implementation, rather than an implementation failure". They further suggest, "Developing interpersonal competence and trust within organizations is necessary to strengthen [policy] implementation". Strong relationships and high levels of trust among all levels of government are needed to produce a

good quality health system. However, eighty eight percent of interviewees at all levels and ninety-five percent of interviewees at district level pointed out that there is a lack of trust between the authorities at the federal, state and district levels regarding their responsibilities in managing and implementing health systems and policy. This is clearest at district level, where all but one interviewee indicated that the authorities at federal and state level do not trust the abilities of district officials to manage and implement health systems and policy.

According to an interviewee (2-12, 23 January 2011, El Fasher) working in the State Ministry of Health:

“Central officers do not trust the state officers’ technical skills of managing and implementing health systems and policy. Federal Ministry of Health officials feel that their role of initiating guidelines for technical programs can be done without consulting unqualified state authorities that can, if necessary, be summoned to headquarters in Khartoum.”

This same interviewee believes that the state has little to contribute to the health policy process at central level. This, in turn, results in a lack of participation and lack of ownership of policies by the people in state government responsible for their actual implementation. Finalized policy guidelines have not always been effectively distributed to the implementers. Many complaints, mainly concerning the lack of interaction in technical support, were heard about extensive interference in the operation of technical programs in the State by the central level. The weak relationship between central and state levels, particularly with regard to technical programs on managing and implementing health policy effectively, was observed at the state level. This lack of trust blocks fruitful collaboration between the federal government and North Darfur State.

According to an interviewee (1-4, 19 January 2011, El Fasher), who is a bureaucrat in Mallit district rural hospital,

“We don’t have administrative health staff but a specialist in health system management and policy implementation and he is a doctor. He knows that health system management is very important, especially at district level, because the districts assumed the responsibility of health policy implementation.”

An interviewee, (1-5, 22 January 2011, El Fasher), who is a bureaucrat in Mallit district rural hospital pointed out that it is only doctors that send monthly reports to the state health department about the situation of health delivery and the difficulties facing them. This interviewee suggested that the State Department of Health does not trust the local officials’ money management skills and abilities to implement policies. However, this interviewee argued that failure of policy implementation was partly a result of a lack of consultation. Makinde (2005) argues that the success of a policy “will depend on how the implementers see the policies as affecting their organizational and personal interests”. In the case of North Darfur, district officials felt that they were not acknowledged by their counterparts at the Federal and State levels.

CONCLUSION

Sudan has a decentralized health system, however, the state and district levels, especially in North Darfur State, do not have the capacity, capability and infrastructure to implement health policy and to provide quality curative health services. Many factors have widely affected and complicated the decentralization system and made the three levels of government unable to cooperate properly in order to manage and implement health systems and policy in North Darfur State. These factors have been aggravated by the effects of violent conflict and instability, which began in 2003.

Coordination among the three levels of government in North Darfur State is made more difficult by the long distances, which have to be travelled, over poor roads, in dangerous conditions, between the districts and El Fasher, the capital. Communication, whether by telephone or over the Internet, is also weak. There is also lack of trust between the federal government and the lower levels of health services and administration. These weaknesses in coordination highlight the collapse of health system management among the three levels of government in North Darfur State. These weaknesses also point to the health system management and policy implementation that is at serious risk.

RECOMMENDATIONS

From a long-term perspective, the resolution of the conflict in North Darfur requires the Sudanese government to embark on a sustain-

able conflict transformation path. The Sudanese government also needs to embark on a sustainable development path that will diversify its economy, increase employment and thus increase the revenue sources for all levels of government. Economic growth and economic development will further enable a larger segment of the Sudanese population to finance their own health-care needs. In the short-term, the three levels of government need to improve their communications. There also needs to be coordination of roles of the three levels of government, that is, each level should play its assigned role. It is only when each of the three levels are playing their roles that trust will be cultivated.

ACKNOWLEDGEMENTS

The researchers wish to thank all those who agreed to be inter-viewed. Without their patience and cooperation, they could not have completed this study.

NOTES

1. North Darfur State is located in western Sudan and is divided into 15 districts and inhabited by 2,260,262 people, according to information gathered from the census of 2008 (Central Bureau of Statistics, 2008)
2. The interviewees and interviews are coded as follows: 1= professional (doctor), 2= administrator. Thus 1-1 indicates an interview with the first professional, 1-2 with the second professional, and so on.

REFERENCES

- Athanasiadis A, Kostopoulou S, Philalithis A 2015. Regional decentralization in the Greek. Health care System: Rhetoric and Reality. *Global Journal of Health Science*, 7(6):55-67.
- Brinkerhoff WD 2008. From humanitarian and post-conflict assistance to health system bureaucrats in South Africa. *Social Science and Medicine*, 59: 1251-1261.
- Central Bureau of Statistics 2008. Fifth Population and Housing Census, Khartoum, Sudan.
- Cox HS, Daniels, JF, Muller O, Nicol MP, Cox V, van Cutsem G, Moyo S, De Azevedo V, Hughes J 2015. Impact of Decentralized Care and the Xpert MTB/RIF Test on Rifampicin-Resistant Tuberculosis treatment Initiation in Khayalitsha, South Africa. From <<http://ofid.oxfordjournals.org/content/2/1/ofv014.abstract>> (Retrieved November 09, 2015).
- El-Saharty S, Kebede S, Dubusho P, Siadat B 2009. Ethiopia: Improving Health Service Delivery. Health, Nutrition and Population Discussion Paper. World Bank. From <[http://siteresources.worldbank.org/HEALTHNUTRITIONANDPOPULATION/Re-sources/281627-1095698140167/Ethiopia Health SystemDelivery.pdf](http://siteresources.worldbank.org/HEALTHNUTRITIONANDPOPULATION/Re-sources/281627-1095698140167/Ethiopia%20Health%20SystemDelivery.pdf)> (Retrieved on 23 August 2009).
- Faguet J 2014. Decentralization and governance. *World Development*, 53: 2-13.
- Federal Ministry of Health 2007. National Health Policy, 2007 of Sudan. From <<http://www.fmoh.gov.sd/English/Health-policy/doc/Sudan%20National%20%20Health%20Policy%2011.6.07.pdf>> (Retrieved on 15 February 2010).
- Gaber S, Patel P 2013. Tracing health system challenges in post-conflict Côte d'Ivoire from 1893 to 2013. *Global Public Health*, 8(6): 698-712.
- Health care system: Rhetoric and reality. *Global Journal of Health Services*, 7(6): 55-67.
- Health, North Darfur State. El Fasher. From <<http://www.cbs.gov.sd/Tiedadat/Tiedadat%205th%20E.htm>> (Retrieved on 11 April 2009).
- Khan MM 2006. Health Policy Analysis: The Case of Pakistan. PhD Thesis, Published. Pakistan: University of Groningen. From <<http://dissertations.ub.rug.nl/FILES/faculties/medicine/2006/m.m.khan/thesis.pdf>> (Retrieved on 23 April 2010).
- Lee T, McKee D 2015. An empirical evaluation of devolving administrative control to Costa Rican hospital and clinic directors. *International Journal of Health Services*, 45(2): 378-397.
- Logie D, Rowson M, Ndagije F 2008. Innovations in Rwanda's health system: Looking to the future. *Public Health*, 372: 256-261.
- Maharani A, Femina D, Tampubolon G 2015. Decentralization in Indonesia: Lessons from cost recovery rate of district hospitals. *Health Policy and Planning*, 30:718-727.
- Makinde T 2005: Problems of policy implementation in developing nations: The Nigerian experience. *Journal of Social Science*, 11(1): 63-69.
- Mills A 1990. Decentralization concepts and issues: A review. In: A Mills, JP Vaughan, DL Smith, I Tabibzadeh (Eds.): *Health System Decentralization: Concepts, Issues and Country Experience*. Geneva: WHO, pp. 11-42.
- Mills A 1998. Health policy reforms and their impact on the practice of tropical medicine. *British Medical Bulletin*, 54(2): 503-513.
- Ministry of Cabinet Affairs Secretariat General in Sudan 2008. Basic Information of the Country. Khartoum. From <http://www.sudan.gov.sd/en/index.php?option=com_content&view=article&id=80:2008-07-22-21-57-13&catid=43:2008-06-06-15-24-59&Itemid=71> (Retrieved on 23 March 2011).
- Morse K, Struyk R 2006. *Policy Analysis for Effective Development: Strengthening Transition Economics*. Boulder, London: Lynne Rienner.
- Nowak SJM, Molema CCM, Baan CA 2015. Decentralization of long-term care in the Netherlands: The case of day care at green care farm for people with dementia. *Age and Society*, 35(4): 704-724.
- Public Service Delivery, Working Paper, 5. International Monetary Fund WP/15/59. From <<https://www.imf.org/external/pubs/ft/wp/2015/wp1559.pdf>> (Retrieved on 29 October 2015).
- Public Service Delivery, Working Paper, 5. International Monetary Fund WP/15/59. From <<https://www.imf.org/external/pubs/ft/wp/2015/wp1559.pdf>> (Retrieved on 29 October 2015).

- Radio Dabanga 2015. Poor Health Services in West and North Darfur. From <<https://www.dabangasudan.org/en/all-news/article/poor-health-services-in-west-and-north-darfur>> (Retrieved on 11 November 2015).
- Rondinelli AD, McCullough SJ, Johnson WR 1989. Analysing decentralization policies in developing countries: A political-economy framework. *Development and Change*, 20: 57-87.
- Siddiqi S, Masud IT, Nishtar S, Peters HD, Sabri B, Bile MK, Jama AM 2009. Framework for assessing governance of the health system in developing countries: Gateway to good governance. *Health Policy*, 90: 13-25.
- Sow M, Razafimahefa FI 2015. Fiscal Decentralization and the Efficiency of Public Service Delivery, International Monetary Fund working paper, Fiscal Affairs Department. From <<https://www.imf.org/external/pubs/ft/wp/2015/wp1559.pdf>> (Retrieved on 12 October 2015).
- State Ministry of Health Financial Report. 2006. *The Final Financial Report of Ministry of Health*. El Fasher, North Darfur State.
- State Ministry of Health Financial Report. 2009. *The Final Financial Report of Ministry of Health*. El Fasher, North Darfur State.
- State Ministry of Health Survey Report. 2008. *The Final Survey Report for Health Facilities in the State and District, May-August 2008*. El Fasher, North Darfur State.
- State Ministry of Health Survey Report. 2010. *The Final Health Facilities and Human Resources Survey Report in the State and Districts, December 2010*. El Fasher, North Darfur State.
- Walker L, Gilson, L. 2004. We are bitter but we are satisfied: Nurses as street-level bureaucrats in South Africa. *Social Science and Medicine*, 59: 1251-1261.
- World Bank 2003. Sudan Health Status Report, World Bank/AFTH3. Draft Version 1, 2003. From <<http://www.emro.who.int/sudan/pdf/Sudan%20Health%20Status%20Report%20August%202003.pdf>> (Retrieved on 27 April 2010).
- World Health Organization 2006. Health Systems Profile- Sudan, Regional Health Systems Observatory, Egypt. From <<http://gis.emro.who.int/HealthSystemObservatory/PDF/Sudan/Full%20Profile.pdf>> (Retrieved on 22 February 2010).
- World Health Organization 2007. Together for Better Health. A Report on World Health Organization Collaborative Programmes with the Government of Sudan and Partners 2006 – 2007. From <http://www.emro.who.int/sudan/pdf/annualreport_07.pdf> (Retrieved on 9 May 2010).
- World Health Organization 2007a. Federal Ministry of Health and WHO Emphasize Commitment to Advance Health Services, RD Visits Sudan, a Quarterly Newsletter of the WHO Representative Office in Sudan, Vol1, No 2. From <http://www.emro.who.int/Sudan/pdf/newsletter_vol1_2_07.pdf> (Retrieved on 5 May 2010).
- Yagub AIA, Mtshali K 2015. The role of non-governmental organizations in providing curative health services in North Darfur State, Sudan. *African Health Sciences*, 15(2): 1049-1055.