2016

An Integrated Health Management Information System a Missing block in achieving universal health coverage in Cameroon?

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An Integrated Health Management Information System a Missing block in achieving universal health coverage in Cameroon?

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Abstract. An integrated Health Management Information systems (HMIS) is said to be the panacea to achieving Universal Health Coverage. Low and Medium Income countries (LMICs) is often weak; fragmented, hence data collected cannot be used for decision-making. Using institutional logics, we examined the state of HMIS in Cameroon in relations to the characteristics of HMIS of UHC. Data collection was done through interviews conducted with officials of CNIS[1]-MoPH and UHC in Yaoundé, December 2015, January and July 2016. Document review and observations were used as secondary method of data collection. Multiple logics were identified that might increase risk of HMIS failure. We argue that though integrated HMIS is essential, it is a far-fetch reality to LMICs. HMIS for UHC being a fairly new area, the aim of this paper is to help stimulate more active discussions on this issues as debate on this could shed more light on the issue.

Keywords**: Universal Health Coverage, Cameroon, Health Information Systems, Integrated Health Information systems, institutional logics**

1. Introduction

The world's political agenda for the next 15 years (2015 – 2030) on health system strengthening is focused on achieving equitable and sustainable health outcomes for all, through the achievements of Sustainable Development Goals (SDGs) in general, and UHC in particular. UHC, the focus of is paper, promotes equity in health by ensuring that all people obtain the health services they need without suffering financial hardship when paying for them (WHO 2010, Sachs 2012, IHP 2016). By improving people's health, will lead to a healthy workforce that will work, earn income and pay for their children's education, thus preventing people from being pushed into poverty (Kieny & Evans 2013). Thus, governments are under pressure to accelerate reforms to implement national health insurance schemes so that everyone can have access to quality health services (Rabovskaja 2012, WHO 2015). To achieve UHC through financial risks protection, it is argued that HMIS must be integrated. That is, being able to capture, process and analyse a broad range of data sets; both patient and aggregate, from public and private health facilities, and across different health programmes to be used by policy-makers, healthcare providers for planning, resource allocation and for decision-making purposes. It must support the extraction and processing of information on health indicators, health systems performance and health status of the population. In addition, HMIS should communicate with multiple other information systems; Civil Registration and Vital Statistics (CRVS), Unique Identifier (UID), and Community Health Information Systems (WHO 2010, MA4Health 2015).

Regrettably, LMICs do not integrated HMIS. The state of HMIS are described as weak and under-performing because they are fragmented, poorly coordinated, duplicated data collecting processes, thus, data collected is not of good quality and cannot be used (Chilundo & Aanestad 2005; Braa et al. 2007). This has been attributed to issues of social realities caused by the multiplicity of actors in HMIS. Mosse (2004) describes, HMIS, especially in developing countries as often complex; multiple hierarchical administrative partners (district, regional, national), different kinds of participants involved, with multiple actors and different interests at play. For example, the HMIS domain, on one hand is characterised by centralized decision-making, bureaucratic decision-making and on the other hand, there is the donor agencies developing vertical information systems and instituting parallel data collection system to collect programme specific data to satisfy their own interests. In this regard, researchers (Chilundo & Aanestad 2005, Reay & Hinings 2009) emphasis that understanding the multiple interests that guide the different participants is a requirement for successfully implementing HMIS, and a step towards developing strategies to reduce failure rate.

[1] Cellular National d'Informations Sanitaires

Cameroon like other LMICs, has fragmented HMIS. Since the introduction of UHC in 2015, international and national agencies, researchers alike are called to conduct assessments and to develop appropriate models and strategies that best suit their county's needs and also to identify different challenges that might hinder its implementation. In the numerous case studies, discussions and policy papers, little or no direction has been provided to counties with fragmented HMIS (Sahay & Sundararaman 2015). Noting that HMIS is a domain susceptible to many actors and multiple interest at play, there is a need to identify these different logics and provide recommendations as to how to resolve them. Based on the above, the follow research questions were identified:

- What is the state of HMIS in Cameroon in relation to developing an integrated HMIS for UHC?
- What are the logics at play?

We applied the concept of institutional logics to understand the organizational context of HMIS in Cameroon in relation to the key characteristics of HMIS of UHC. Given the unexplored domain of UHC for HMIS, the goal of this paper is to help stimulate more active discussions of HMIS for UHC. This could help shed more light on the debate and discussion around the topic.

2. Theoretical Framework – Institutional logics

In choosing this perspective, much thought has been given to the research aim; which is to have a better understanding of the institutional nature of HMIS and the underlying logics that may be involved if it were to integrate HMIS for UHC. Based on the sociological nature of this perspective, the researcher was able to gain insight into the organisational context of HMIS (Kling 1993, Avgerou 2000). Institutional logics has been hailed as one of the leading organisational theories used to understand the complexities of the social world of IS with focus on aspects of multiplicity and conflicts of logics at work (Grisot 2008). Institutional logics has the power to unpack and break down into components; multiplicity and conflicts embedded in power and identity from an institutional logics perspective. It can also show how organisations respond to, and manage competing institutional logics (Pache & Santos 2010), some of the aspects discussed in this paper.

Institutional logics originates from sociology and organisational sciences. In the field of Information Systems (IS), it has been widely used to examine the social, cultural and organisational features with particular focus on Information Technology (IT) development and use (Orlikowski & Barley 2001). Institutional logics are "belief systems, values and associated practices" that predominate in an organisation field (Thornton & Ocasio 1999). Logics are the "rules of the game" and therefore shape beliefs and behaviour, and actors can inform and influence these rules (Scott *et al*. 2000). Greenwood *et al* (2010) explain that "logics underpin the appropriateness of organisational practices in given settings at particular historical moment". Research on this topic has focused on the ways institutional logics can guide the attention of decision-makers (Ocasio 1997), and paid attention to shifts in dominant logics in organizational fields (Thornton & Ocasio 1999). Thornton *et al* (2012) state that individuals and organizations are aware of the differences in cultural norms of different institutional orders and incorporate this diversity in their thoughts and decision making.

Often organizations experience multiple institutional logics (Thornton & Ocasio 2008). Research on this area shows how organizations respond to and manage them (Pache & Santos 2010). Pache & Santos (2010) explain that organizations in organizational fields that are centralized and fragmented are most likely to experience multiple institutional logics. This field appears to be centralized because of dual authority structure; public authorities as central actors, regional, district levels, and donor agencies; leading to multiple institutional logics (Pache & Santos 2010). The health care sector is an example of a public organisational field where multiple values and demands are at play (Scott *et al* 2000, Reay & Hinings 2009). Greenwood et al (2011) explain that multiple institutional logics often are competing causing institutional complexity. Currie & Guah (2007) found that the National Health Service was rooted with multiple institutional logics, hindering changes in the governance system and working patterns of health professionals. Similarly, Hayes & Rajao (2011) on the implementation of GIS application in Brazilian Amazon explain the essence of understanding multiple institutional logics in the process of integrating information system. In organisations where one institutional logic is dominant, that affect decision-making; i.e. the attention of decision-makers is directed towards issues and practices consistent with this logic. Here, the concerns is what would happen when an organisation experiences multiple logics (Thornton 2002) and are incompatible (Greenwood *et al.*, 2011)? This could result in tension, contradictions and ambiguities because different organizational stakeholders will be influenced by different logics (Thornton 2002). It is recommended that multiple logics can coexist (Scott *et al*., 2000,

Reay & Hinings 2009). Goodrick & Reay 2011 explain they can be combined with organisational practice; a strategy referred to as "hybrid". Hybrid is when different institutional logics are combined within one practice (Battilana & Dorado 2010). Kirkpatrick et al., (2009) describe that hybrid could be an innovative practice in the health care context. Innovation as "adoption of an internal introduction and application within a role, group of organisation, processes, policy, and program new to the relevant unit of adoption, designed to significantly benefit the individual, the group or wider society, and process (Damanpour 1991, Lansisalmi et al., 2006)

2. Research Settings and Methodology

This is drawn from interpretative stance (Walsham, 1995), in order to understand the state of HMIS in Cameroon from the experience of those who are directly involved (Cavaye 1996). In IS, interpretive research is useful in helping researchers understand the problem in the contextual nature (Klein & Myers 1999). To unpack the complexity around IS in relation to HMIS for UHC, we adopted a case study (Creswell 2003). Case study is a powerful approach in studying complex phenomena like the one presented in this study (Yin 1989).

Maximum variation sampling was used to select the interviewees. Maximum variation is a purposive sampling technique used to capture a wide range of perspectives relating to the subject matter (Patton 1990). Maximum variation sampling is a search for difference in perspectives, ranging from those conditions that are viewed to be typical through, to those that are more extreme in nature (Patton 2002, Palinkas *et al* 2014). The interviewees were selected because of their experiences in HMIS in Cameroon.

Multiple data collection sources were used (Flybjerg 2006); interviews, participant observation, and document analysis. Five interviews were conducted in Yaoundé; three with head of programs and two with District Health Information Systems (DHIS) team all at the Ministry of Public Health (MoPH) in Yaoundé. Interviews were conducted from December 2015 - January 2016, and in July 2016. Based on the characteristics of integrated HMIS for UHC, I developed an interview guide with broad themes around HMIS in Cameroon. Interviews were conducted at the offices of the interviewees. Depending on the responses received, I followed-up with probing questions. The principle of data saturation was applied; i.e. when I realized that further interviews were not adding new information. Interviews lasted between 30-45 minutes. I obtained permission from interviewees to record interviews. Interviews were transcribed.

Data analysis was driven by interpretive process. Descriptive approach with content analysis was used (Elo & Kyngas 2008). Once the interviews were transcribed verbatim, I read through the interview transcripts identifying themes. This process was governed by the process relating to the theoretical concepts to understand the dynamics involved in HMIS in Cameroon.

3. Presentation of the Results

The findings are represented in two sections. First, we presented the key characteristics of HMIS for UHC. This is then followed by analysis of HMIS in Cameroon.

a) Key characteristics of HMIS for UHC

An integrated HMIS is a system that has the ability to interact, to use and share, send and receive data from one or multiple systems, adhering to common standards with a focus on Use. The provision use of data and information at all levels of the health services to support decision-making. Data sets and data collection tools will be developed through a harmonized approach that is based on need and usefulness. Integrated HMIS eliminates issues of overlapping data collection forms, inconsistent data definitions and improve data quality (Braa & Sahay 2012).

The content of information, HMIS for UHC was outlined in the WHO Health Report (WHR) of 2010 and these strategies were further expanded by (Sahay et al 2014, Sahay & Sundararaman 2015). The key concepts of this strategies are:

Information content - To collect, process and analyse real time data from patient management to the management of health facilities, from all levels of the health systems. Data should include diagnosis, procedures, laboratory tests and results on individual clients and on a wide range of diseases; non-communicable diseases (NCDs), mental health,

healthcare provision, financing, morbidity and mortality data. Need census data, medical records, financial information, information on civil registration and vital statistics, UID and human resources.

Information characteristics – Information should include the provision of names, encounter-based data to enable continuity of care. Aggregate data to be able to calculate population-based statistics. Data to follow-up on NCDs, from private healthcare providers, also schools and communities.

Periodicity – Daily data collection or whenever an encounter takes place

Users of information – Multi-level flows including upwards (referrals), downwards (continuity of care), and horizontal that is across programs.

Technology – An integrated platform with flexible standards that are able to balance both needs, global and national circumstances and allow for generalization to other context. Technology that will interact with multiple systems and other technologies, like mobile devices. That which is able to communicate with other computer-based systems such as census, and financial systems, CRVS and UID.

Management of HIS – Management of the system will involve multiplicity of shareholders, including private, public and other ministries. In addition, the system should establish and maintain multi-sectorial governance models (WHR 2010, Sahay & Sundararaman 2015).

The institutional logics that promote HMIS for UHC are; decentralized planning and control of HMIS, Information for action, and standardized data collection tools.

b) Presentation of the HMIS in Cameroon

On examining the landscape of HMIS in Cameroon in relation to the key characteristics of HMIS of UHC as outlined above, we discovered the following:

Cameroon is situated in sub-Saharan Africa (SSA) region. Sub-Saharan Africa is regarded as one of the most poverty-stricken regions in the world (Chen and Ravallion 2004). Like in other parts of the region, basic public and social amenities for the most vulnerable; either absent or inadequate. As a result, it is experiencing frequent outbreaks such as cholera and other water-related diseases affecting thousands of individuals (UNICEF 2015).The deteriorating state of public health systems are alarming, resulting in high mortality and morbidity deaths especially in rural communities. See Table below.

Table one: Excerpt of Cameroon's performance in relation to the region

	Region	Cameroon
Maternal deaths	546/100,000 live births (66%)	690/100,000 live births
Under 5 mortality	81/1000 live births	148 /1,000 live births

Table one: Source: (UNICEF 2015)

The HMIS in Cameroon is managed by the Department named "Cellular National d'Informations Sanitaires" (CNIS) situated in the Ministry of Public Health. It is charged with the responsibilities to manage data within the health care system; national, provincial, and district levels, for decision-making. CNIS main responsibilities are to gather, capture, process, analyse and disseminate data and information within the health systems.

In 2014, DHIS was nationally accepted as the platform for the management of health information within the health care system. Presently, there are two instances of DHIS (MoPH & NACP) running in parallel, and managed separately. NACP-DHIS is the National Aids Control Program situated at the MoPH. This instance of DHIS manages HIV and AIDS data only. It is sponsored by USAID and PEPFAR. While the other instance; DHIS-MoPH is managed by CNIS (the focus of this paper), mainly supported by the MoPH. Due to the power struggle between the two units, I observed that the staff members working in these two departments do not communicate. This is as a result of disagreement between the two HoDs as to who should manage DHIS (Yaoundé July 2016).

DHIS-MoPH has been primarily involved in importing legacy data from the fragmented health programs. As of July 2016, out of nine health programs, two has been integrated; Disease Surveillance and Maternal, New-born & Child

Mortality. (Interview 2: Yaoundé July 2016). DHIS-MoPH is not linked to any other information system. Other systems are Performance-Based financing system, UID though computerized, but managed by the Ministry of Police and National Security. The CRVS is not yet computerized, also managed Ministry of Local Administration (AllAfrica Global Media 2015).

Data within the system flows in a hierarchy manner (bottom-up), i.e. information obtained from all levels of the health system flows from the lowest levels; health facilities up to the National level. The process of data collection is thus: Health facilities nationwide have daily registers for standard-based health data collection. At health facilities, daily registers are used to record activities from various units of the healthcare; Outpatient, Antenatal unit, Labor and Delivery, Immunization and In-patient units. Data in the registers is manually summarized in the Monthly Reporting Activity (MRA). Health facilities aggregate the forms and sent to the respective health districts. At the district level, data is aggregated and captured electronically on DHIS and also on a "Health Mask". The Health Mask is an excel spread containing all the health programs. This excel spreadsheet is then forwarded to the regional level. At the regional level, data is aggregated and synchronized to get the profile of the entire region then it is forwarded to the National level, where data analyses is data. It was observed that Data Managers at district offices prefer using "Health Mask" to synchronized data because the MRA does not include some of the data elements they are expected to report on (July 2016).

Information content & Characteristics: Aggregated data is collected. Data collected is often incomplete. Thus, does not give a true reflection of the health situation. For example, causes of deaths is not frequently recorded and are not classified according to the ICD codes. Also, Population data is usually not available thus, it is not possible to calculate even the simplest indicators that require population data (Interview 1: Yaoundé July 2016).

User of information: Information is mostly used at the national level to generate quarterly and annual reports. The quarterly and annual reports are fragmented as they report on specific indicators only (Interview 1 July 2016). In terms of information disseminating and use. Reports generated from the system are sent to specific departments, e.g. the Cabinet of the Minister of Health and also to partners who often financially supports CNIS. High cost of printings and inefficient postal services are reasons for not printing large quantities of reports. As indicated by one of the staff,

"*…due to poor and inadequate postal services, it is difficult to disseminate hard copy reports. Alternatively a staff member has to walk from one office to another to physically deliver these reports and CNIS is understaffed*" (Interview 1: Yaoundé July 2016).

When suggested to disseminate reports in soft copy, that is electronically instead of printing hard copy reports, the response was "*…here our internet is unstable and weak. Besides, who will read such reports? People are interested to read issues that will bring more money and not government reports"* (Interview 1: Yaoundé July 2016).

Access to the database is restricted. In January 2016, during the period data for this study was collected, we realized that there are 326 registered users of the database of this, 253 have been inactive for the last 6 months (January 2016).

Limited access to the database is another. Most users are restricted as Data capturers. During a DHIS national workshop in July during, I realized that registered users to the database being it at the district of hospital has been given access as a Data Capturer. As Data Capturers, they only interact with the system only when they want to submit data at the end of the month (DHIS Training in Douala, July 2016). Limited access to the database was also highlighted as reason for lesser interaction with the database. As quoted by one of the staff member

"*… I am based here in Central office. I have a back ground in Computer Science, but I have been given access as a Data Capturer. Being Data Capturer at the national level, what can I do? I have complaint to the person in-charge of the database until I am tired. Even the director is aware of this yet he has done nothing*" (Interview 3: Yaoundé July 2016).

On the same issue, a District Data Manager at a Regional level expressed his dissatisfaction on the issue of limited access in the following except: "*look at in the Littoral Region, I am one of the district Data Manager, for example, look at what happened yesterday during the workshop, I do not have access to correct the log-in details of one of the Hospital Data Managers in my district. I have to call the Focal Person at the National level to do that. I seems as if they do not want us to use the system. I want to use this system but we are so restricted in terms of access given to us*" (DHIS Training in Douala, July 2016).

Culture of information sharing. There is a poor culture of information sharing between departments. When asked how information is shared, one of the Heads of Departments (HoDs) had this to say, "… *there exist a poor culture of information sharing between departments*. *Whenever one ask for information from that unit [SNIS], one will never get it. People withhold information and refuse to share with one another, it is as if one is coming to take their jobs."(*Interview 1: Yaoundé January 2016*).*

Computers and Internet connectivity *are* either not available or are faulty and could not be repaired due to lack of finance. As stated by one of the staff; "…*there are some computers others do not meet the required standards to be used over a network whiles others are faulty and cannot be repaired. The phrases "repairing of IT equipment" does not exist on the list of lexicon of MoPH"* (Interview 1: Yaoundé July 2016).

On lack of computer, hospital managers had this to say "…*there are so many computers in this hospital but I have to use my personal laptop to capture data. It seems as if the hospital director does not know the importance of data. And the Internet dongle supplied by ICAP is not functional. I have informed the district office. So far nothing has been done*" (Interview 3: Douala July 2016). Though Information and communication technologies (ICT) such as the internet has provided new and more efficient ways of accessing, communicating, and storing information. In Cameroon and most particularly in the public sector, the use of and access to the internet is still rudimentarily practised (Asah 2004). For example, during the period I was collecting data for this paper at CNIS's offices, I had to provide my internet access and paid for my printing.

Human resources: There is acute skill shortage at the MoPH due to civil servants low wages. Most professional prefer to work in the private sector and non-governmental organisations (NGOs) who offer both better working conditions and salary. There is a dire need for professionals such as; epidemiologist, demographers, and computer scientists and information management managers. When asked what is the plan to roll-out DHIS2 nationally, with 5 staff members? One of the staff member had this to say "…we *are in dire need of more staff; skilled IT technicians to assist in the integrating of DHIS2. As compared to the private sector, public servants are not well-paid, thus, public service is unable to attract qualified IT technician or programmer*. *The majority of staff in this office are IT and computer engineering students volunteering as interns"* (Interview 1: Yaoundé July 2016).

Management of DHIS is centralized and hierarchical; very common in Public organisations. Information flow from lower health facilities to districts, no feedback is given to those in the lower levels. The National office decides on the type of indicators and data elements to collect. They also decides on who is given access to the system and what type sort of access is should be given. There is little or no cooperation or interaction between those working and using DHIS at the national level and those at the lower levels.

Some of the existing institutional logics we identified are in HMIS in Cameroon are: central planning and control of DHIS database, vertical instances of DHIS, and centralized use of information.

The table below presents some of the logics identified in

UHC for HMIS	**HMIS in Cameroon**
Decentralized planning and control of HMIS	Centralized planning and control of HMIS
Standardized data collection tools	Vertical instance of DHIS
Information for action	Central use of Information

4. Discussion

From the findings after analysing HMIS in Cameroon we identified multiple logics which are competing. Thus, if Cameroon were to implement an integrated HMIS for UHC, with multiple logics in place, there might be some contradictory in policies and practices, that could hinder a successful implementation. These institutional logics (HMIS in Cameroon), are attributed to the hierarchical nature by which the healthcare system is being managed. This management style could be equated to the traditional style of management practiced by the colonial masters. According to them, decision making should be to those at the central level and much have power and access to information (Braa & Sahay 2012). It is unfortunate that this assumption has inspired the design and implementation

of early information systems, including HIS and unfortunately still exit in most public organisations 30 years after colonization (Braa & Sahay 2012).

The concept of power is central to understanding any society and power has played an important role in HIS development and integration of HMIS in particular. HMIS integration offers a potential conflict between the multiple actors and interests at play.

Power is "*a social force just as gravity is a physical force. In the same way that enables us to be physically attached to earth, power enables us to be embedded in society. Power is as such an inherent part of the society and the human condition*" (Avelino and Rotmans 2009).

Max (1978) say power is exercised in a society. To understand how power exercised, Foucault (1979) applied the internal relation approach which is described as "the identity dependency between the individual actors concerned, and the power of one actor is not reducible because of the power of the other". There are different type of powers but that of interest is power viewed as a network of relation. Faucault (1979) describe it as a situation whereby actors are tired to each other through the mechanism of power and could be transmitted to them by shaping their identities (Foucault 1979). This is the type of power I observed in HMIS process in Cameroon. Clegg (1989) framework on "circuits of power" explain that it is through how it is exercised and through its effect one can make a meaningful analysis. Hence the "circuits of power" framework has been used to assess institutionalism of IS. The author holds that the introduction of a new innovation require efforts and resources which might result to the use of power as many actors are involved. To improve such a situation, user participation has been recommended as a technique to increase workplace democracy (Bjerknes & Bratteteig 1995). The authors explain that by involving users in designing their own solutions will improve the knowledge upon which systems are built, will enable users to develop realistic expectations as well as reducing resistance to change, and finally help to increase workplace democracy by giving the members of the organisation the right to participate in decision that are likely to affect their work (Bjerknes & Bratteteig 1995, Bodker et al., 2000). The tradition has been to use HMIS to collect data to satisfy the needs of top management. Top managers are those to decide on the sort of data to collect. This highly gives power to top managers. Apparently, incorporating end users in decision making design of HMIS challenges power structure in HMIS (Bjerknes & Bratteteig 1995). Based on the idea of increasing workplace democracy in the implementation of an integrated HMIS, we suggest the following:

3. Suggestions on how to proceed to reconcile some of the issues before moving towards UHC

Integration of HMIS for UHC requires the participation of all those involved, hence encouraging workplace democracy. This approach should be align with the institution's policy on how to choose technology, regulation infrastructure, and people's aspirations; that is, the socio-technical heterogeneous networks, including culturally situated work practices, technical systems, and infrastructure (Sahay & Sundararaman 2015). These are discussed in-depth below:

Choice of technology - One common challenge in the health care sector is that IS are not connected to one another. It is often important to choose a technology that is balanced. That is, meeting global standards with locally situated circumstance while at the same time allowing generalization to other context (Gizaw et al., 2016). In addition, Braa & Sahay (2012) emphasize the need to choose technology with flexible standards with possibilities of supporting multiple networks, hence capable to interconnect with other IS. The authors add that flexible standards are the key in the development of infrastructures, where every level in the health hierarchy will need to comply with the information requirements of the levels above while having the freedom to add more data for their own level and below (Braa & Sahay 2012).

Culture of information use – Information is meant to be used. Use of information has been found to increase the quality of information (Heywood 2012). To initiate use of information, Kelly, *et al* (2013), emphasis on the need to initiate a "conversation around data". The authors explain that the conversation around data should involve different stakeholders and in the long run, could gradually raise awareness about the importance of information. In the long run, this could improve information culture, i.e. more people start talking about data, hence improve the quality of data and more use of information for decision-making (Heywood 2012).

Institution of governance – Governance is important in the implementation of HMIS for UHC. It relates to strategic policies and frameworks about HMIS. It is necessary that the institutional structures making decision around HMIS consider its multi-sectorial and flexible nature of the concept. In addition, when making policies, it is important to consider the voices of those at the lower levels; without which polices are bound to fail due to limited overlap between formal institutions and informal constraints that exist at the local sites (Piotti et al 2006).

4. Conclusion

HMIS is one of the building blocks to enhance health systems strengthening, hence achieving SDGs and UHC in particular. An integrated HMIS is been advocated by international organizations as the missing block to achieving UHC. Cameroon like many other LMICs have fragmented HMIS, thus data collected is not of good quality and cannot be used for decision-making. Using institutional theory as the lens, we examined the landscape of HMIS in Cameroon and compare the existing situation on the ground with the characteristics of an integrated HMIS for UHC.

The paper argues that though an integrated HMIS is pivotal to achieving UHC, HMIS in most LMICs are managed centrally; those at the higher levels (national) are those with the mandate to make-decision. Non-use of information and vertical instances of DHIS, are some of the aspects identified. These aspects might hinges on the notion of an integrated HMIS for UHC. Though an integrated HMIS is important, we argue that achieving this objective is far-fetch to LMICs because of the multiple institutional logics at play in the management of HMIS. HMIS for UHC being a fairly new area, this paper aims to help stimulate more active discussion on this issues as debate could help shed more light to these issue.

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