Student's Journal of Health Research Africa
Vol. 4 No. 6 (2023): June 2023 Issue
https://doi.org/10.51168/sjhrafrica.v4i6.477
Original article

PREPAREDNESS OF PUBLIC HOSPITALS AHEAD OF THE PROPOSED NATIONAL HEALTH INSURANCE SCHEME IN UGANDA: A DESCRIPTIVE STUDY FOCUS ON REGIONAL REFERRAL HOSPITALS.

Donatus Kimera*

Faculty of Health Sciences, University of Kisubi.

Lubaga Hospital Training School.

Abstract

Background:

The Ugandan government plans to go ahead with mandatory health insurance for all Ugandans by 2025. This research investigated the preparedness of Public Hospitals, focusing on Regional Referral Hospitals (RRHs) ahead of the proposed National Health Insurance Scheme (NHIS) in Uganda. The specific objectives that guided the study were: to assess the availability of human resources for health in these RRHs, hospital infrastructure, and whether their services can currently fulfill NHIS accreditation standards.

Methodology:

The study took both qualitative and quantitative research perspectives. It was a descriptive cross-sectional study with the study population constituting Regional Referral Hospitals in Uganda. A quota sample of four hospitals conveniently selected from each geographical region, was studied. Document review and observation with inventory taking were the data collection methods and checklists were the tools used in research.

Results:

The study revealed that the human resources for health and hospital infrastructure were sufficiently available and hence prepared for the proposed NHIS with preparedness percentages of 76% and 92%, respectively. However, the findings showed that the RRHs are currently not eligible for accreditation by NHIS to provide healthcare because of a lack of adequate required health service standards at only a 59% preparedness percentage.

Conclusion:

This study concluded that the RRHs are prepared for NHIS in terms of infrastructure and human resources for health, but the preparedness in terms of the quality of services given the NHIS accreditation standards needs to be concretized.

Recommendations:

The study hence suggests that management in RRH should expand and improve health services to meet NHIS accreditation standards. The study recommends the implementation of NHIS in Uganda.

Keywords: Preparedness, Regional Referral Hospitals, Proposed National Health Insurance Scheme,
Submitted: 2023-06-15 Accepted: 2023-06-19

Student's Journal of Health Research Africa
Vol. 4 No. 6 (2023): June 2023 Issue
https://doi.org/10.51168/sjhrafrica.v4i6.477
Original article

1. Background to the Study:

In a way to achieve healthcare coverage for their population, technocrats daily look at possible innovations in health financing which give assurances to the citizens based on the ten principles: Focus on improving health, universal and unified, publicly administered, free at the point of access, equitable, centered on care, responsive to health needs, rewarding quality, cost-effective and accountable and one of the most common financial mechanisms frequently thought to be reliable today to complement sources of financing the health sector and to improve access to health care for the majority population is that of National Health Insurance Scheme (Rudiger, 2009; Okinyemi, et al., 2021).

National Health Insurance Scheme (NHIS) is a healthcare financing approach that involves sharing and pooling health cost risks to enable all the population to have access to appropriate healthcare when needed (WHO, 2003; Namyalo, et al., 2023). Despite its pivotal role in health care, National Health Insurance has received notably less global attention from academics and researchers (Saltman, *et al.*, 2004; Hanson, 2022). In 1911, the National Insurance Act was passed by the British, in which Health Insurance was made compulsory and nationalized type of insurance; this trend was adopted by many European nations and beyond (Campbell, 2012). At present, there is a need to explore the potential of the National Health Insurance Scheme to increase access to the affordability of health care in Africa, which Ghana has embraced with successful levels (Witter and Garshong, 2009).

We all appreciate that access to quality healthcare remains a big challenge for many Ugandans, especially in rural areas and the urban poor; many Ugandans are struggling with high out-of-pocket health expenditures, which have forced some people to sell their properties to pay for healthcare (Insurance Regulatory Authority, 2022; Kaddunabbi, 2022).

In Uganda, there is an intention to implement a mandatory health insurance scheme for all Ugandans by the year 2025 (Basaza, 2013; Bukenya, 2021). This proposed scheme has been designed in such a way that initially, it will target the public sector, then the formal private sector, the organized informal sector, and subsequently national coverage. The scheme is to be administered by a parastatal body: The Uganda Health Insurance Corporation with a mandate to collect the compulsory contributions from the employer and employees. The contribution proposed is at 8% with 4% from the employee and 4% from the employer. The National Health Insurance Scheme, according to Maliama (2009), will be run by a body corporate, independent of the Ministry of Health, with perpetual succession with power to sue and be sued just like the National Social Security Fund (NSSF). The Scheme will also be financed from member and employer contributions, but also supplemented by gifts, grants, donations, loans, and possibly other credible sources. The funds would be subject to all rules applicable to public funds, audited by the Auditor General, and reported to Parliament. The Board of Directors will submit the audited accounts to the Ministry of Health, and the reports and accounts will be presented to the Cabinet.

The study was carried out in Uganda among four Regional Referral Hospitals (RRHs), mainly to assess the preparedness of the RRHs ahead of the proposed NHIS in Uganda to contribute to the awareness which can aid the pre, inter-implementation, and post-implementation management of this scheme.

2. Methodology

2.1. Research Deign:

Qualitative and quantitative research paradigms were used. Qualitative data collection procedures were used in this research and these are Document Review to collect data about assessing the preparedness of RRH human resources for health, while Observation was used to collect data about assessing the availability of infrastructure and whether the hospital services

* Corresponding author.
Email address: kimempaka@gmail.com (Donatus Kimera)

can meet the standards of accreditation by NHIS. Although only qualitative data-collecting procedures were used, the data collected, however, was mainly quantitative and it was analyzed quantitatively. The qualitative data collection design procedures were selected because they are more useful in getting multiple realities on the research objects in the field (Amin, 2005). Quantitative analysis was used to empirically quantify and determine the level of preparedness. The study was cross-sectional because data needed from the selected hospitals were collected once and for all.

2.2. Study Setting:

The study covered four regional referral hospitals, randomly selected from each of the four geographical regions of Uganda, namely: Central, Western, Northern, and Eastern. Masaka RRH was selected from Buganda in the Central region, Fort Portal RRH from Tooro in the Western region, Lira from Lango in the Northern region, and Jinja from Busoga in the Eastern region. In Uganda, RRHs serve sub-regions as catchment areas to offer specialist clinical services such as psychiatry, Ear, Nose, and Throat (ENT), ophthalmology, higher-level surgical and medical services, and ancillary services (laboratory, medical imaging, and pathology). They are also involved in teaching and research on healthcare. Data was carefully collected between June and September 2013.

2.3. Study Population:

The parent or target population was the RRHs in Uganda. These hospitals are twelve and they were the units of analysis in the study. The RRHs were suitable for the study because all other lower-level units in the region refer patients to them. Against this background, they are at the forefront of health care provision in Uganda and are likely to be pivotal in the implementation of the proposed NHIS in Uganda.

2.4. Sample Size:

A sample of four regional referral hospitals was studied. The selected sample of the four RRHs of Lira, Masaka, Fort Portal, and Jinja was determined based on the principle of in-depth study of a small proportion to represent the would-be-required sample (Amin, 2005). Against this background, one hospital from every geographical region of Uganda was studied.

2.5. Sampling Techniques:

Stratified Random Sampling was used to determine the sample out of the population of twelve RRHs in Uganda. The four geographical regions of the country were the strata from which the researcher randomly chose a study unit. This technique was selected because all regions would be represented in the study.

2.6. Data Collection Methods and Instruments:

To assess the availability of human resources for health, the method of document review was used and the hospital staff inventory was the document to review. A checklist developed from the MOH Staffing Structure and Norms for respective RRHs was used as the tool to collect data. Document review was selected because more reliable information about human resources for health would be got from documents than relying on interviews and questionnaires.

To assess the availability of hospital infrastructure, the method of Observation by inventory taking was used, where a detailed checklist modified from the MOH Standard Equipment List for RRHs was used as a tool in collecting data. The method of observation with inventory taking was used because it is very credible and empirical than relying on only the interview of respondents who may lack some updates on the hospital infrastructure.

To assess the quality of RRH services, Observation was used as a method of data collection, in which an observation checklist was the tool that collected data. The hospital service survey checklist developed to collect data on this variable was modified from the Hospital Service Survey Questionnaire by NHIS of Tanzania. Each section of a Survey Questionnaire for each hospital under

study was filled by the researcher after observation and in consultation with the Heads or In-Charges of hospital service departments.

2.7. Quality Control Methods:

Data was collected using checklists. These data collection tools were pre-tested by a method of test-retest to assess and ensure their valid- ity and reliability before using them in the ac- tual research. These tools were also presented to research peers and academic supervisors for scrutiny before data collection. Collected data was properly examined before leaving the hospital premises.

2.8. Data Processing and Presentation:

The quantitative data about the availability of human resources for health, hospital infrastructure, and quality of hospital services was got from the filled checklists. It was then edited, coded, and entered into the computer for analysis using the Microsoft Excel software and finally, it was presented using statistical tables and graphs.

2.9. Data Analysis:

The processed quantitative data in the form of tables and graphs were used to make meaningful interpretations. Before the analysis of results, the researcher had developed a model of two prior assumptions to measure the three parameters of preparedness. According to this model, below 60% availability of a dimension would mean that the RRHs are not prepared for the proposed NHIS; while above 60% would mean preparedness. Descriptive statistics were used in the analysis of the findings.

Finally, all the findings were recorded and then compared with the study objectives and other researchers, after which conclusions and recommendations were made. The findings finally answered the research questions and a research report was prepared.

2.10. Ethical Considerations:

The permission to collect data was sought from the management of the four RRHs which were the study units for consent before data collection describing clearly the purpose of the study and how the information was to be used. Later, the management of these selected hospitals officially gave the researcher approval to proceed and collect only the relevant data to the study from the said hospitals. The information received was treated with confidentiality. Feedback was given to the RRHs through their management.

2.11. Study Variables:

The study was uni-variate; it was a one-variable-centered study. It is uni-variate in nature because the cardinal purpose of this research is only to assess the preparedness of RRHs for the proposed NHIS in Uganda. However, there are different dimensions that were measured to determine this preparedness. The following subsections show such dimensions and how they were measured.

Availability of Human Resources for Health was measured by the percentage of the staffing Norms fulfilled. The indicator was the available number of staff in different categories of human resources for health in the RRHs

Availability of Hospital Infrastructure was determined by the percentage of the infrastructure checklist fulfilled. The indicators were the available area or rooms in OPD, MCH, laboratory, blood bank dental department, radiology department, gynaecology department, physiology department, operating theatre department, ophthalmology department, ear-nose-throat department, psychiatry department, maternity department, wards, sterilization department, pharmacy department mortuary department, administration department, laundry department, generator, wet area, and maintenance unit.

The quality of RRH services was determined by the percentage of the quality of hospital services according to the NHIS accreditation standard requirements (developed by NHIS of Tanzania). The indicators were the number of hospital services provided, whether the basic pieces of equipment are in perfect working order, whether the radiology department performs different procedures daily, whether the pharmacy is stocked

with adequate supplies, whether the laboratory performs different procedures daily, whether the hospital has an adequate supply of basic items, whether the operating theatre performs different procedures daily, whether the hospital dental unit performs different procedures daily, whether the hospital intensive care unit has equipment in perfect working order.

3. Results:

3.1. Availability of Human Resources for Health currently in RRHs:

There are different staff requirements in RRHs and the staffing norms of the respective RRHs were the documents reviewed to assess the availability of human resources for health. During the document review, the number of staff required in each category of staff was compared with the number available to assess the availability of human resources for health in the RRHs. The following were the findings;

3.1.1. Doctors

Findings presented by Table 1 show that Jinja RRH has 22 Doctors out of 36(61%), Fort Portal has18 out of 41(44%), Masaka has 13 out of 36(36%) and Lira has 10 out of 38(26%). Jinja RRH has more Doctors, followed by Fort Portal RRH, Masaka RRH, and Lira RRH, respectively. Such findings, therefore, indicate that there is a general lack of Doctors in the RRHs in Uganda, which should be a concern for the planners, proponents, and future implementers of the proposed NHIS.

3.1.2. Clinical Officers

Findings from Table 2 show that Masaka RRH has all the required number of Clinical Officers, Jinja has 92%, Fort Portal RRH has 85% and Lira has 78% of its required number of Clinical Officers. Masaka RRH has the highest number of Clinical Officers, followed by Jinja, Fort Portal, and Lira, respectively. The findings, therefore, paint a picture that the Clinical Officers are almost adequate in the RRHs in Uganda; hence, the services of this category of staff are assured even if the NHIS is implemented today.

3.1.3. Nurses

According to Table 3, Masaka RRH has more Nurses than it requires. Lira RRH has the least number but is still well staffed with 75% of its norm requirements. The impression of such findings are that the RRHs are generally well-staffed with Nurses; therefore, upon the implementation of the proposed NHIS in Uganda, the availability of this category of staff will not be a challenge.

3.1.4. Orthopedic Staff

Table 4 informs that Jinja RRH has more than enough orthopedic staff, Masaka RRH has all the required, Fort Portal RRH has 69%, and Lira RRH has 58% of the required orthopedic staff. This implies that while some RRHs have enough staff in this category, others instead are lacking; there is poor distribution of staff in this category, which requires homework ahead of the implementation of the proposed NHIS in Uganda.

3.1.5. Physiotherapy Staff

Table 5 shows that it is only Lira RRH that has less than the required number of Physiotherapy staff. This is indicative of Uganda having enough physiotherapy staff, but they are congested in some RRHs, causing a deficiency in others. This ought to be sorted out before the implementation of the NHIS.

3.1.6. Occupational Therapy Staff

Table 6 illustrates that Jinja RRH has all the required number of occupational therapy staff. Lira RRH has a small shortage, Fort Portal RRH has a big shortage and Masaka RRH has none in terms of the required number. This is suggestive of a general deficit of occupational therapy staff in Uganda and the few we have are concentrated in very few RRHs like Jinja. This awareness should be registered by the proponents and future implementers of the NHIS in Uganda.

3.1.7. Opthalmic Staff

According to Table 7, Jinja RRH is overstaffed in terms of opthalmic staff, Lira RRH is adequately staffed, and Masaka RRH is fairly staffed

Table 1: Availability of Doctors currently in the RRHs

Hospital	No. Required	No. Available	% Available
Jinja	36	22	61
Fort Portal	41	18	44
Masaka	36	13	36
Lira	38	10	26
Mean %			**42**

Source: Staffing Norms of those RRHs

Table 2: Availability of Clinical Officers currently in RRHs

Hospital	No. Required	No. Available	% Available
Masaka	12	12	100
Jinja	12	11	92
Fort Portal	26	22	85
Lira	27	21	78
Mean %			**89**

Source: Staffing Norms of those RRHs

Table 3: Availability of Nurses currently in RRHs

Hospital	No. Required	No. Available	% Available
Masaka	114	128	112
Jinja	209	204	98
Lira	130	111	85
Fort Portal	152	114	75
Mean %			**93**

Source: Staffing Norms of those RRHs

Table 4: Availability of Orthopaedic Staff currently in RRHs

Hospital	No. Required	No. Available	% Available
Jinja	7	8	114
Masaka	8	8	100
Fort Portal	13	9	69
Lira	12	7	58
Mean %			**85**

Source: Staffing Norms of those RRHs

Table 5: Availability of Physiotherapy Staff currently in RRHs

Hospital	No. Required	No. Available	% Available
Masaka	3	4	133
Fort Portal	4	4	100
Jinja	4	4	100
Lira	4	2	50
Mean %			**96**

Source: Staffing Norms of those RRHs

Table 6: Availability of Occupational Therapy Staff currently in RRHs

Hospital	No. Required	No. Available	% Available
Jinja	1	1	100
Lira	4	3	75
Fort Portal	3	1	33
Masaka	1	0	0
Mean %			**52**

Source: Staffing Norms of those RRHs

Table 7: Availability of Opthalmic Staff currently in RRHs

Hospital	No. Required	No. Available	% Available
Jinja	3	7	233
Lira	4	3	75
Masaka	4	2	50
Fort Portal	5	2	40
Mean %			**100**

Source: Staffing Norms of those RRHs

but Fort Portal is understaffed with only 40% of its norm requirements. This means that there is poor distribution of ophthalmic staff in Uganda to the extent of overstaffing some RRHs and almost forgetting some.

3.1.8. Radiography Staff

Table 8 presents Jinja RRH having an excess number of radiography staff, Fort Portal RRH as having slightly less than the required, Masaka RRH as having a middle-of-the-road number, and Lira RRH as inadequately staffed with only 33% of the required. This suggests that most RRHs are suffering a mild inadequacy of radiography staff yet in very few RRHs like Jinja there is excess; the staff in this category therefore can embrace the proposed NHIS in Uganda.

3.1.9. Laboratory Staff

Table 9 demonstrates that all the RRHs have less than the required number of laboratory staff but are sufficiently staffed, with Masaka RRH leading, followed by Jinja RRH, Fort Portal RRH, and Lira RRH, respectively. This trend validates thinking that the laboratory staff are almost enough in all the RRHs to even manage an increase in the number of patients, given the implementation of the proposed NHIS in Uganda.

3.1.10. Dental Staff

Table 10 exhibits Masaka RRH having the expected number of dental staff with the other

Table 8: Availability of Radiography Staff currently in RRHs

Hospital	No. Required	No. Available	% Available
Jinja	3	4	133
Fort Portal	4	3	75
Masaka	4	2	50
Lira	6	2	33
Mean %			**73**

Source: Staffing Norms of those RRHs

Table 9: Availability of Laboratory Staff currently in RRHs

Hospital	No. Required	No. Available	% Available
Masaka	11	9	82
Jinja	10	8	80
Fort Portal	14	11	79
Lira	14	10	71

Source: Staffing Norms of those RRHs

Table 10: Availability of Dental Staff currently in RRHs

Hospital	No. Required	No. Available	% Available
Masaka	6	6	100
Jinja	7	6	86
Fort Portal	7	5	71
Lira	6	4	67
Mean %			**81**

Source: Staffing Norms of those RRHs

RRHs having less than the required number, but Lira RRH displaying the least. The findings mean that RRHs have a small deficit in the number of dental staff, but the number currently available is enough to provide adequate services upon the implementation of the proposed NHIS in Uganda.

3.1.11. Pharmacy Staff

Table 11 is indicative that all the RRHs are falling short of the expected number of pharmacy staff with Lira RRH displaying the biggest number of pharmacy staff, followed by Jinja RRH, Fort Portal RRH, and Masaka RRH, respectively. However, Masaka RRH is far below the required, scoring only 43% of the required number. This depiction portrays a moderate lack of pharmacy staff in the RRHs; the number of staff in this category is not satisfactory for the proper implementation of the proposed NHIS in Uganda.

3.1.12. Nutrition Staff

Table 12 presents a severe deficiency in nutrition staff, with only Fort Portal RRH having all the required numbers, Jinja RRH moderately lacking, but Lira RRH and Masaka RRH having no nutrition staff at all. Such findings imply that staff in this category is badly needed in the RRHs before the implementation of the proposed NHIS in Uganda.

3.1.13. Medical Social Workers

Table 13 shows Jinja, Fort Portal, and Masaka RRHs have the needed number of medical social workers, but Lira RRH has a shortage. This tells

Table 11: Availability of Pharmacy Staff currently in RRHs

Hospital	No. Required	No. Available	% Available
Lira	8	6	75
Jinja	7	5	71
Fort Portal	9	5	56
masaka	7	3	43
mean %			61

Source: Staffing Norms of those RRHs

Table 12: Availability of Nutrition Staff currently in RRHs

Hospital	No. Required	No. Available	% Available
Fort Portal	2	2	100
Jinja	2	1	50
Lira	2	0	0
Masaka	1	0	0
Mean %			**38**

Source: Staffing Norms of those RRHs

Table 13: Availability of Medical Social Workers currently in RRHs

Hospital	No. Required	No. Available	% Available
Jinja	1	2	200
Fort Portal	1	1	100
masaka	2	2	100
lira	3	1	33
mean %			108

Source: Staffing Norms of those RRHs

you that the medical social workers in the RRHs are sufficient and able to embrace the proposed NHIS in Uganda.

3.1.14. Theatre Staff

In Table 14, Jinja and Lira RRHs have the required number of theatre staff, with Masaka RRH posting slightly less than the required, and unfortunately Fort Portal RRH with a bigger deficiency in this staff category. This denotes that theatre staff is adequate in some RRHs and inadequate in others; but when the average score is considered, this category of staff is prepared for the proposed NHIS in Uganda.

3.1.15. Finance and Administration Staff

Table 15 presents a fair availability in the num- ber of finance and administration staff in the RRHs, Jinja RRH exhibits the biggest number, followed by Masaka RRH, Fort Portal RRH, and Lira RRH, in that order. This implies that there is a need to increase the number of staff in this category because, upon the implementation of the proposed NHIS in Uganda, more tasks in admin- istration and finance will be inevitable.

3.1.16. Support Staff

The data in table 16 presents that the availabil- ity of support staff in the RRHs is not a problem especially in Lira RRH. This is enough for this category. In any case, such staff is readily avail-

Table 14: Availability of Theatre Staff currently in RRHs

Hospital	No. Required	No. Available	% Available
Jinja	9	9	100
Lira	11	11	100
Masaka	9	7	78
Fort Portal	15	6	40
Mean %			**79**

Source: Staffing Norms of those RRHs

Table 15: Availability of Finance and Administration Staff currently in RRHs

Hospital	No. Required	No. Available	% Available
Jinja	25	19	76
Masaka	18	12	67
fort portal	32	18	56
lira	44	15	34
mean %			58

Source: Staffing Norms of those RRHs

Table 16: Availability of Support Staff currently in RRHs

Hospital	No. Required	No. Available	% Available
Lira	75	74	99
Fort Portal	107	97	91
Masaka	75	60	80
Jinja	75	55	73
Mean			**86**

Source: Staffing Norms of those RRHs

able as soon as they are needed, given the high rates of unemployment in Uganda.

4. Availability of Hospital Infrastructure

A detailed modified checklist developed from Uganda's MOH Standard Equipment List for RRHs was used as the tool to compare the available and the required hospital infrastructure in the RRHs.The availability of infrastructure was assessed by comparing the available and the required infrastructure in different hospital Departments or Units. The following were the findings;

4.1. OPD and MCH Departments' Infrastructure

According to a total of 17, only one RRH lacked a waiting room in the OPD and two RRHs lacked an MCH store. However, the general picture painted by findings indicates that the OPD and MCH departments of the RRHs in Uganda have enough infrastructure hence able to handle a bigger number of clients expected with the introduction of the NHIS in Uganda.

4.2. Laboratory Department, Blood Bank and Dental Units' Infrastructure.

According to Table 18, all the RRHs have the required laboratory, blood bank, and dental de-

Table 17: Availability of OPD and MCH Departments' infrastructure currently in RRHs

Department/ Unit	**Section**	**HOSPITAL**										
		Fort Portal		**Jinja**		**Lira**		**Masaka**				
OPD	Examination Room	**No. Required**	**No. Available**	**No. Required**	**No. Available**	**No. Required**	**No. Available**	**No. Required**	**No. Available**	**Total no Required**	**Total no Available**	**% Available**
		6	6	6	6	6	5	6	10	24	27	113
	Injection Room	1	1	1	1	1	1	1	1	4	4	100
	Waiting Room	1	1	1	1	1	0	1	1	4	3	75
	Mean %											**96**
MCH	MCH Room	1	1	1	1	1	1	1	1	4	4	100
	MCH Store	1	0	1	0	1	1	1	1	4	2	50
	Mean %75											

Source: Primary Data

partments' infrastructure. This, therefore, is suggestive that new infrastructure in the RRHs ahead of the proposed NHIS in Uganda is necessary for other departments other than those presented.

4.3. Radiology, Gynaecology and Physiotherapy Departments Infrastructure

Table 19 illustrates that generally there is inadequate infrastructure in the radiology departments of the RRHs; particularly the waiting rooms are insufficient. However, the gynaecology and physiotherapy departments have adequate infrastructure. Therefore it is only the radiology departments of the RRHs that require infrastructure if they are to be prepared for the proposed NHIS in Uganda.

4.4. Operating Theatre, Opthalmology, ENT and Psychiatry Department Infrastructure

Table 20 demonstrates that infrastructure in the operating theatre, opthalmology, ENT, and psychiatry departments are almost satisfactory. Therefore, the infrastructure in the above illus- trateddepartments are in good shape to embrace the proposed NHIS in Uganda.

4.5. Maternity Department Infrastructure

Table 21 reveals that the maternity department infrastructure is large enough and passable in the RRHs. However, cracks in the availability of infrastructure of this department are in the mid- wives' offices and the maternity stores. By prin- ciple, the infrastructure of the maternity depart- ments in the RRHs has the capacity to embrace the proposed NHIS.

Table 18: Availability of Laboratory Department, Blood Bank and Dental Units' Infrastructure currently in RRHs

Depart-ment/ Unit	**Section**	**HOSPITAL**										
		Fort Portal		**Jinja**		**Lira**		**Masaka**				
Laboratory	Major Lab	**No. Req.**	**No. Avail.**	**No. Req.**	**No. Avail.**	**No. Req**	**No. Avail**	**No. Req**	**No. Avail**	**To-tal no Req.**	**To-tal no Avail.**	**% Avail**
		1	1	1	1	1	1	1	1	4	4	100
	Lab Store	1	1	1	1	1	1	1	1	4	4	100
	Mean%	**100**										
Blood Bank	Blood Bank	1	1	1	1	1	1	1	1	4	4	100
	Mean %	**100**										
Dental	Treatment Room	1	1	1	1	1	1	1	1	4	4	100
	Mean %											**100**

Source: Primary Data

Student's Journal of Health Research Africa
Vol. 4 No. 6 (2023): June 2023 Issue
https://doi.org/10.51168/sjhrafrica.v4i6.477
Original article

Table 19: Availability of Radiology Department infrastructure currently in RRHs

Depart-ment/ Unit	**Section**	**HOSPITAL**										
		Fort Portal		**Jinja**		**Lira**		**Masaka**				
	Radiology Room	**No. Req.**	**No. Avail.**	**No. Req.**	**No. Avail.**	**No. Req.**	**No. Avail.**	**No. Req.**	**No. Avail.**	**Total no Req.**	**Total no Avail.**	**% Avail.**
Radiology		1	1	1	1	1	1	1	1	4	4	100
	Store	1	1	1	1	1	0	1	0	4	2	50
	Waiting Room	1	1	1	0	1	0	1	0	4	1	25
	Mean %	**58**										
Gynaecology	Treatment Room	1	1	1	1	1	1	1	1	4	4	100
	Mean %100											
Physiotherapy	Office	1	1	1	1	1	1	1	1	4	4	100
	Treatment Room	1	1	1	1	1	1	1	1	4	4	100
	Waiting Room	1	1	1	1	1	0	1	1	4	3	75
	Mean % 92											

Table 20: Availability of Operating theatre Department infrastructure currently in RRHs

Department/ Unit	**Section**	**HOSPITAL**										
		Fort Portal		**Jinja**		**Lira**		**Masaka**				
Operating Theatre	Changing Room	**No. Req.**	**No. Avail.**	**No. Req.**	**No. Avail.**	**No. Req.**	**No. Avail.**	**No. Req.**	**No. Avail.**	**Total no Req.**	**Total no Avail.**	**% Avail.**
		1	1	1	1	1	1	1	1	4	4	100
	Operating Theatre Rooms	4	4	2	4	4	4	3	4	3	16	12	75
	Mean %	**88**										
Opthalmology	Treatment Room	1	1	1	1	1	1	1	1	4	4	100
	Mean %	**100**										
ENT	Treatment Room	1	1	1	1	1	1	1	1	4	4	100
	Mean %	**100**										
Psychiatry	Treatment Room	1	1	1	0	1	1	1	1	4	3	75
	Mean %	**75**										

Source: Primary Data

Student's Journal of Health Research Africa
Vol. 4 No. 6 (2023): June 2023 Issue
https://doi.org/10.51168/sjhrafrica.v4i6.477
Original article

Table 21: Availability of Maternity Department infrastructure currently in RRHs

Depart-ment/ Unit	Section	HOSPITAL Fort Portal		Jinja		Lira		Masaka				
		No.	No.	No.	No.	No.	No.	No.	No.	Total no	Total no	%
Maternity		Req.	Avail.	Req.	Avail.	Req.	Avail.	Req.	Avail.	Req.	Avail.	Avail.
	Delivery Unit	1	1	1	1	1	1	1	1	4	4	100
	Premature Room	1	1	1	1	1	1	1	1	4	4	100
	Midwives Office	1	1	1	0	1	1	1	1	4	3	75
	Store	1	1	1	0	1	1	1	1	4	3	75
	Mean %											**88**

4.6. Wards Infrastructure

Findings in Table 22 clearly affirm that the number of general wards, nurse duty station rooms, ward stores, and private wards is very adequate. However, in most RRHs, the wards were small, old, and congested by in-patients. Therefore, much as the wards' infrastructure in the RRHs satisfied the numerical requirements, the quality of these wards lives a lot to be desired. For the proposed NHIS in Uganda to be implemented, the quality of these wards in the RRHs needs to be improved first.

4.7. Central Sterilization, Pharmacy and Mortuary Department Infrastructure

Based on Table 23, the entire required infrastructure in the central sterilization units and the pharmacy departments is available in the RRHs. However, the mortuary units in these hospitals lack adequate offices and stores. This points out that those mortuaries in the RRHs lack the necessary infrastructure; hence this part of infrastructure needs to be worked upon for the proper implementation of the proposed NHIS in Uganda.

4.8. Administration and Finance Department Infrastructure

The inference from Table 24 is that the administration and finance department infrastructure in the RRHs is pleasing and agreeable. However, most RRHs in Uganda lack stores on their administration blocks as required. The findings, therefore, communicate that the administration and finance department infrastructure in the RRHs is prepared for the proposed NHIS.

4.9. Laundry Area and Generator Room Infrastructure

Table 25 reveals that the required laundries and generator rooms in the RRHs are available. However, by observation, it was noted that laundry areas were small; some were not connected to power and water sources. This generally poses a need to furnish them in preparation for the proposed NHIS if it is to be implemented.

4.10. *Determining whether the RRH Services are of the Quality Required by NHIS Accredita- tion Standards*

4.11. Functioning of Hospital Service

Discoveries in Table 26 tell that the basic hospital services required by NHIS are functioning in most RRHs (83%). However, almost all the RRHs lack refrigerated mortuaries and isolation wards, yet they are vital services required for the accreditation of any hospital to be a provider of healthcare under the NHIS.

4.12. Functioning of Hospital Equipmen

Results expressed in Table 27 highlight that in most RRHs, the functioning of basic hospital equipment is not dependable (50%). The ultrasound scan is the only hospital equipment available and functioning in all the RRHs. All the RRHs lack the cardiac arrest trolley and the CT scan, yet the two are basic hospital equipment required by the accreditation of a hospital to provide healthcare under the NHIS. Such findings, therefore, suggest that the RRHs need to ensure that the basic hospital equipment is functional ahead of the proposed NHIS if they are to be accredited for providing healthcare.

4.13. Functioning of the Radiology Department.

Table 28 depicts that generally, the radiology departments in the RRHs do not perform the required procedures daily as mandated by the NHIS standards. All the RRHs however, can only perform the ultrasound scan procedure daily. Findings therefore propose that the ability of the RRH radiology departments to perform the required procedures daily is only 36%, which insinuates the unpreparedness of these departments for the proposed NHIS.

4.14. Functioning of the Pharmacy Department

Revelations in Table 29 point out that oral hypertensive drugs and insulin are the only basic drugs that are always not readily available in the RRHs. The results above therefore confirm

Table 22: Availability of Wards' infrastructure currently in RRHs

Department	**Section**	**HOSPITAL**										
		Fort Portal		**Jinja**		**Lira**		**Masaka**				
	Nurse Duty	**No.**	**No.**	**No.**	**No.**	**No.**	**No.**	**No.**	**No.**	**Total no**	**Total no**	**%**
	Station	**Req.**	**Avail.**	**Req.**	**Avail.**	**Req.**	**Avail.**	**Req.**	**Avail.**	**Req.**	**Avail.**	**Avail.**
Wards	Rooms	6	10	6	8	6	6	6	10	24	34	142
	General Wards	11	10	11	11	11	11	11	14	44	46	105
	Ward Stores	11	10	11	11	11	11	11	14	44	46	105
	Private Ward	1	0	1	1	1	1	1	1	4	3	75
	Mean %107											

Source: Primary Data

Table 23: Availability of Central Sterilization, Pharmacy and Mortuary Department infrastructure currently in RRHs

Department/ Unit	**Section**	**HOSPITAL**										
		Fort Portal		**Jinja**		**Lira**		**Masaka**				
Central Sterilization		**No.**	**No.**	**No.**	**No.**	**No.**	**No.**	**No.**	**No.**	**To-tal no**	**To-tal no**	**%**
		Req.	**Avail.**	**Req.**	**Avail.**	**Req.**	**Avail.**	**Req.**	**Avail.**	**Req.**	**Avail.**	**Avail.**
	Sterilization Room	1	1	1	1	1	1	1	1	4	4	100
	Mean %100											
Pharmacy	Pharmacy	1	1	1	1	1	1	1	2	4	5	125
	Dispensary Store	1	0	1	1	1	1	1	2	4	4	100
	Mean % 113											
Mortuary	Mortuary	1	1	1	1	1	1	1	1	4	4	100
	Office	1	1	1	0	1	0	1	1	4	2	50
	Store	1	1	1	0	1	0	1	1	4	2	50
	Mean % 67											

Source: Primary Data

Table 24: Availability of Administration and Finance Department infrastructure currently in RRHs

Department/ Unit	**Section**	**HOSPITAL**										
		Fort Portal		**Jinja**		**Lira**		**Masaka**				
		No.	**No.**	**No.**	**No.**	**No.**	**No.**	**No.**	**No.**	**To-tal no**	**To-tal no**	**%**
Admin. and		**Req.**	**Avail.**	**Req.**	**Avail.**	**Req.**	**Avail.**	**Req.**	**Avail.**	**Req.**	**Avail.**	**Avail.**
Finance	Conference Room	1	1	1	1	1	1	1	1	4	4	100
	Accoun-tant's Office	1	1	1	1	1	1	1	1	4	4	100
	Administra-tor's Office	1	1	1	1	1	1	1	1	4	4	100
	PNO's Office	1	1	1	1	1	1	1	1	4	4	100
	Secretary's Office	1	1	1	1	1	1	1	1	4	4	100
	Store	1	0	1	0	1	0	1	1	4	1	25
	Mean %											**88**

Source: Primary Data

Student's Journal of Health Research Africa
Vol. 4 No. 6 (2023): June 2023 Issue
https://doi.org/10.51168/sjhrafrica.v4i6.477
Original article

Table 25: Availability of Laundry Area and Generator Room currently in RRHs

Depart-ment/ Unit	**Section**	**HOSPITAL**										
		Fort Portal		**Jinja**		**Lira**		**Masaka**				
Laundry		**No. Req.**	**No. Avail.**	**No. Req.**	**No. Avail.**	**No. Req.**	**No. Avail.**	**No. Req.**	**No. Avail.**	**Total no Req.**	**Total no Avail.**	**% Avail.**
	Laundry Area	1	1	1	1	1	1	1	1	4	4	100
	Mean %100											
Generator Room	Generator Room	1	1	1	1	1	1	1	1	4	4	100
	Mean %100											

Source: Primary Data

Table 26: Whether the RRHs have functioning Services

HOSPITAL SERVICES	HOSPITAL Fort Portal	Jinja	Lira	Masaka	Total No. With	Total No. Without	% With
Operating theatre	1	1	1	1	4	0	100
Laboratory	1	1	1	1	4	0	100
Radiology	1	1	1	1	4	0	100
Blood bank	1	1	1	1	4	0	100
Physiotherapy services	1	1	1	1	4	0	100
Occupational therapy	1	1	1	1	4	0	100
Dental unit	1	1	1	1	4	0	100
Eye unit	1	1	1	1	4	0	100
Sterile preparation unit	1	1	1	1	4	0	100
Ambulance	1	1	1	1	4	0	100
Private ward	1	1	-	1	3	1	75
Sick baby nursery	1	1	-	1	3	1	75
Intensive care unit	-	1	1	-	2	2	50
Refrigerated mortuary	1	-	-	-	1	3	25
Isolation ward	-	1	-	-	1	3	25
Mean %							**83**

Source: Primary Data

Table 27: Whether the Hospital Equipment in RRHs is functioning

HOSPITAL EQUIPMENT	HOSPITAL Fort Portal	Jinja	Lira	Masaka	Total No. Func-tioning	Total No. Not Func-tioning	% Func-tioning
Ultrasound scan	1	1	1	1	4	0	100
Portable x-ray machine	1	-	1	1	3	1	75
ECG/EKG machine (cardiac)	-	-	1	1	2	2	50
EEG machine (brain waves)	-	-	1	1	2	2	50
Backup electrical generator	-	-	1	1	2	2	50
Cardiac Arrest Trolley (with emergency drugs)	-	-	-	1	1	3	25
CT scan	-	-	-	-	0	4	0
Mean %							**50**

Source: Primary Data

Table 28: Whether the Radiology Department performs the required Procedures on a Daily Basis in RRHs

	HOSPITAL						
RADIOLOGY PROCEDURES	**Fort Portal**	**Jinja**	**Lira**	**Masaka**	**Total No. Per-formed**	**Total No. Not Performed**	**% Per-formed**
Ultrasound scan	1	1	1	1	4	0	100
Plain films (chest x- ray, abdominal, ankle)	1	1	-	1	3	1	75
Contrast studies	1	-	1	1	3	1	75
CT scan	-	-	-	-	0	4	0
Nuclear medicine (Gamma Camera)	-	-	-	-	0	4	0
Radiotherapy	-	-	-	-	0	4	0
Magnetic Resonance Imaging	-	-	-	-	0	4	0
Mean %							**36**

Source: Primary Data

Table 29: Whether the Pharmacy Department currently has adequate supply of drugs

BASIC DRUGS	**HOSPITAL**						
	Fort Portal	**Jinja**	**Lira**	**Masaka**	**Total No. Avail-able**	**Total No. Not Available**	**% Avail-able**
Oral analgesics, antipyretics	1	1	1	1	4	0	100
Injectable narcotic analgesics	1	1	1	1	4	0	100
Anti-malarials	1	1	1	1	4	0	100
Basic oral antibiotics	1	1	1	1	4	0	100
Gentamycin or comparable aminoglycoside injectable	1	1	1	1	4	0	100
Oral rehydration salts	1	1	1	1	4	0	100
Anticonvulsants	1	1	1	1	4	0	100
Antibiotic eye ointment	1	-	1	1	3	1	75
Oral hypertensive drugs	-	1	-	1	2	2	50
Insulin	-	-	1	-	1	3	25
Mean %							**85**

Source: Primary Data

that the pharmacies of the RRHs are always adequately stocked with most basic medicines mandated by the NHIS hospital quality standards. Against the background shown, the RRH pharmacies in Uganda are 85% prepared for the proposed NHIS.

4.15. Functioning of the Laboratory Department

The information condensed by Table 30 above suggests that most of the RRH laboratories can perform the required tests daily. The only laboratory tests that are not usually performed daily in these RRHs are culture and sensitivity; and histology. Based on such findings, one can therefore assert that the RRH laboratories are 84% prepared for the NHIS.

4.16. Availability of Key Hospital Items

Table 31 summarizes the availability of key hospital items in the RRHs. Results displayed show a general inadequacy of key hospital items in the RRHs especially blood for transfusions and laboratory reagents. This overwhelmingly implies that the RRHs need to increase the supply and availability of such items if such hospitals are to be deemed duly prepared for the proposed NHIS.

4.17. Functioning of the Operating Theatre Department.

Table 32 displays that the RRHs are largely unable to perform the required theatre procedures by NHIS standards daily. Findings, therefore, indicate that the ability of the RRHs to perform the mandated theatre procedures daily is only 32%. It is still difficult for these RRHs to achieve and manage the daily performance of the basic theatre procedures, especially craniotomy. They have what they call 'theatre days' for particular procedures, meaning that such theatres are not prepared to properly embrace the NHIS.

4.18. Functioning of the Dental Department

Based on Table 33, the dental departments in the RRHs can only perform the procedure of extractions daily; and Lira RRH is the only hospital that can perform all the dental procedures daily. The ability of the dental departments in the RRHs to perform the required dental procedures by NHIS is 50%. This gives a general picture that the dental departments in the RRHs in Uganda are not properly prepared to embrace the proposed NHIS.

5. Discussion of Findings:

5.1. Availability of human resources for health in the RRHs:

Among the study objectives of this research, the first one was to assess the availability of human resources for health in the RRHs. The study found that the proportion of the human resources for health available in the RRHs is 76%. The medical social workers and the ophthalmic staff were the most available, while the nutrition staff and the doctors were the least available.

The inadequacy of doctors in all the RRHs in Uganda as revealed by this research poses a big hindrance in the provision of quality healthcare ahead of the proposed NHIS, since doctors are a very important category of staff in healthcare. Such findings revealing the inadequacy of doctors in all the RRHs in Uganda conform with Bhat and Maheshwari (2005); Lutwama, Roos, and Dolamo (2012) who contend that health service facilities, particularly in rural areas, are still challenged by a lack of adequate personnel required to ensure access to health care services hence impairing the attainment of health-related MDGs. Thus, such confirmed research findings may help the policymakers in the health sector to look for a timely strategy to increase the number of doctors and other categories of staff that are not adequate in the RRHs before the implementation of the proposed NHIS in Uganda.

The general picture of the availability of human resources for health in all the RRHs in Uganda is that: they are enough for the implementation of the proposed NHIS. However, these findings do not properly agree with the World Health Report which ranked Uganda among the 57 countries critically lacking human resources for health. Nevertheless, one needs to note that this particular

Table 30: Whether the Laboratory Department performs the required Tests on a daily basis

TESTS PERFORMED	**HOSPITAL**						
	Fort Portal	**Jinja**	**Lira**	**Masaka**			
					Total No. Per-formed	**Total No. Not Performed**	**% Per-formed**
Sputum for TB	1	1	1	1	4	0	100
HIV screening	1	1	1	1	4	0	100
Blood glucose	1	1	1	1	4	0	100
Liver function tests	1	1	1	1	4	0	100
Blood grouping (ABO, Rh)	1	1	1	1	4	0	100
Pregnancy test (urine or serum)	1	1	1	1	4	0	100
Culture & sensitivity	-	-	1	1	2	2	50
Histology (routine tissue processing)	-	-	1	-	1	3	25
Mean %							**84**

Source: Primary Data

Table 31: Whether the Hospital has adequate Key Items

ITEMS	**HOSPITAL**						
	Fort Portal	**Jinja**	**Lira**	**Masaka**			
					Total No. Avail-able	**Total No. Not Available**	**% Avail-able**
Sterile gloves	-	1	1	1	3	1	75
Radiology film	1	1	-	1	3	1	75
Surgical dressings	1	1	-	1	3	1	75
I V Fluids	1	1	1	1	4	0	75
Blood for transfusions	-	-	-	-	0	4	0
Laboratory reagents	-	-	-	-	0	4	0
Mean %							**50**

Source: Primary Data

Table 32: Whether the Operating Theatre Department Performs the Required Procedures on a Daily Basis

PROCEDURES	**HOSPITAL**						
	Fort Portal	**Jinja**	**Lira**	**Masaka**			
					Total No. Per-formed	**Total No. Not Per-formed**	**% Per-formed**
Internal fixation/repair of fractures of the extremities	-	1	1	-	2	2	50
Ophthalmological surgery (cataracts, eye trauma)	-	1	1	-	2	2	50
Major gynecological (hysterectomy)	-	1	1	-	2	2	50
ENT procedures	-	1	-	-	1	3	25
Major male urology (prostate)	-	-	1	-	1	3	25
Renal procedures	-	1	-	-	1	3	25
Craniotomy	-	-	-	-	0	4	0
Mean %							**32**

Source: Primary Data

Table 33: Whether the Dental Department Performs the Required Procedures on a Daily Basis

PROCEDURES	**HOSPITAL**						
	Fort Portal	**Jinja**	**Lira**	**Masaka**			
					Total No. Per-formed	**Total No. Not Performed**	**% Per-formed**
Extractions	1	1	1	1	4	0	100
Fillings	-	-	1	-	1	3	25
Denture preparation	-	-	1	-	1	3	25
Mean %							**50**

Source: Primary Data

study was on the availability of human resources for health in the RRHs alone.

5.2. Availability of hospital infrastructure in the RRHs:

The second objective of this study was to assess the availability of hospital infrastructure in the RRHs. The research findings show that the

required infrastructure in the RRHs is adequately

available by a proportion of 92%, with phar- macies and wards having an excess of the required infrastructure in the RRHs. This standing implies that the hospital infrastructure in the RRHs is prepared for the proposed NHIS. Research, how- ever, revealed a few cracks in the availability of infrastructure in the radiology departments and

the mortuary units.

The research findings in this study sharply contradict and disagree with the report by Namutebi (2009), who reported that the health centers in Uganda were operating beyond their capacity which has led to poor service delivery. However, her report could be true because it was on the health centers in general, but not the RRHs in particular. Otherwise, according to the findings of this study, all the RRHs in Uganda have adequate infrastructure to embrace the proposed NHIS in Uganda.

5.3. Determining whether the quality of RRH services conforms to the requirements of NHIS accreditation standards:

Findings about this study objective indication that the quality of RRH services is only 59% of the required standard mandated by the NHIS, meaning that the current quality is poor and below average. The researcher had assumed that any score below 60% implies poor quality hospital services and hence the RRHs are unprepared for the proposed NHIS in Uganda.

Such findings concur with and underline numerous reports which have underlined the lack of drugs and other services even at referral hospitals, resulting in avoidable deaths among other problems (The Hurinet Blog, 2013). If the quality of the RRH services is limping, then one wonders: what is the situation in the lower health units such as the general hospitals and the health centers?! This suggests therefore that the results of this research are confirming the need for immediate improvement of the quality of all the country's RRH services before the implementation of the NHIS in Uganda.

The findings however disagree with Nabyonga-Orem et al, 2008, who report that the abolition of user fees in 2001 in Uganda brought a significant improvement in healthcare services.

Nevertheless, the reason for reporting a significant improvement after the abolition of user fees could have been that: the state quality of healthcare in Uganda was worse before 2001(even below 59%), hence, the quality score of 59% is an improvement.

6. Conclusions:

The general picture about the availability of human resources for health in the RRHs in Uganda is that: they are enough for the implementation of the proposed NHIS, the RRHs in Uganda have adequate infrastructure to embrace the proposed NHIS and the quality of RRH services is only 59% of the required standard mandated by the NHIS, meaning that the current quality is poor and below assumed average.

7. Recommendations:

Based on the overview of the study findings, the researcher recommends as thus:

To sustain a sufficient availability of human resources for health in the RRHs for the success of the proposed NHIS, the number of nutrition staff and doctors in the RRHs needs to be increased. Several ways of increasing the number of staff in these categories of staff include; allowing more people to train as nutrition staff or doctors especially those professional health workers who wish to upgrade. The brain drain of these categories of health workers should be mitigated by providing a worthwhile salary to them.

A proportion of the funds from MOH meant for the infrastructural development in the RRHs should be diverted or invested in the improvement of the hospital services of the RRHs such as; buying hospital equipment, increasing the number of doctors especially specialists, and availing enough basic hospital items mostly those needed in the laboratory and theatre. Therefore, the quality of hospital services should be worked on immediately if the proposed NHIS is to be implemented with success in Uganda.

Otherwise, the NHIS in Uganda should be implemented, with the RRHs as accredited healthcare providers. If the few indicators of unpreparedness revealed by this research are worked upon before and during implementation, success with the scheme will be registered. Perfect preparedness before implementing such a scheme

may not be possible for a country with many challenges like Uganda. This research therefore proposes that the RRHs are prepared for the proposed NHIS in Uganda; and upon its implementation approval, these hospitals should be the first healthcare providers to be accredited.

8. AREAS FOR FUTURE RESEARCH

Further research should be made in the following areas:

Prepared the Private Not For Profit hospitals for the proposed NHIS in Uganda; the financial capacity of the population in Uganda to uphold the NHIS and; the knowledge and willingness of Ugandans about the proposed NHIS. Information from such areas is vital before the implementation of the proposed NHIS in Uganda.

9. CONFLICT OF INTEREST

Two issues posed a threat to bias the findings of this research but were professionally managed. The study was carried out by a non-medical professional, yet some key data collected required the judgment of a healthcare-trained person. However, the researcher used the assistance of an experienced professional nurse Kabatsinguzi Flavia who filled this gap during the process of data collection.

Secondly, there is a time lag between actual research and the publication of findings. However, changes in public health facilities in Uganda take a long to be approved and effected because they are heavily influenced by policy and budget, among other factors. Fortunately, the researcher when preparing to publish this information, carried out visits to the studied RRHs to qualitatively validate the previous findings. Honestly, the findings in this study still carry a lot of relevance.

10. ACKNOWLEDGEMENTS

I would like to credit different people who have had a direct and indirect contribution towards preparing this research report. The first salute goes to my Research Adviser, Prof. John Francis Mugisha.

I am also grateful to the managers of Lira, Jinja, Masaka, and Fort Portal Regional Referral Hospitals for permitting me to carry out research in their hospitals. I can't also forget to thank my Research Assistants: Kabatsinguzi Flavia and Ssenkaayi Tom, for their contribution.

Most importantly, I thank my Lecturers at Makerere University and Uganda Martyrs University who mentored me in my research.

11. SOURCE OF FUNDING

Catholic Scholarship Program (CSP), funded this research, following a resolution that my research title was in line with the betterment of catholic leadership and management goals. A sum of 3,000,000 Uganda Shillings was availed to me to facilitate my research.

12. ACRONYMS

NHIS: National Health Insurance Scheme
RRH: Regional Referral Hospital

13. Publisher details:

Publisher: Student's Journal of Health Research (SJHR)
(ISSN 2709-9997) Online
Category: Non-Governmental & Non-profit Organization
Email: studentsjournal2020@gmail.com
WhatsApp: +256775434261
Location: Wisdom Centre, P.O.BOX. 148, Uganda, East Africa.

14. References:

1. Amin, E., 2005. *Social Science Research: Conception, Methodology and Analysis.* Makerere University: Makerere University Printery, Kampala, 2005.
2. Basaza,R. K., 2013. *Players and processes behind the national health insurance*. BioMed Central. 2013.
3. Bhat, R. and Maheshwari, S. K., 2005. Human Resource Issues: Implications for Health Sector.
4. *Sage Publications*. First published April 2005.
5. Bukenya, M. (2021, March 3). "Second Reading of the National Health Insurance Scheme Bill, 2019." Kampala, Uganda. Parlia- ment House. The Hansard of the Parlia- ment of Uganda. 10th Parliament. Retrieved from: https://www.parliament.go.ug/documents/5017/hansards-2021- March.
6. Campbell, P., 2012. How did Health Insurance begin? *eHow Health*: 2012.
7. Hanson, K., Brikci, N, Erlangga, D., Alebachew, A., Allegri, M. and Balabanova, D., 2022.*The Lancet Global Health Commission on financing primary health care: putting people at the Centre.* The Lancet Global Health Commissions| Volume 10, Issue 5, E715-E772, May.
8. Insurance Regulatory Authority, 2022. An Update on the National Health Insurance. *Regulatory Authority of Uganda: IRA, 2022.* https://ira.go.ug/an-update-on-the-national-health-insurance- scheme/
9. Kaddunabbi, L., 2022. *An Update on the National Health Insurance Scheme*. Insurance Regulatory Authority of Uganda: IRA, 2022
10. Lutwama, G. W., Roos, J. S. and Dolamo, B. L., 2012. *A descriptive study on health workforce performance after decentralization of health services in Uganda.* Human Resources for Health 2012, **10**:41. http://www.human-resources-health.com/content/10/1/41
11. Maliama, J., 2009. Is Uganda Ready for a National Health Insurance Scheme? Health rights advocate, 2009. https://healthrightsadvocate.blogspot.com/2009/05/is-uganda-ready-for- national-health.html
12. Mugadu, J., 2012. *Uganda is ready for health insurance.* Insurance institute of Uganda: 7th May 2012.
13. Nabatanzi, V., 2011. Govt to start Health insurance scheme. *New Vision.* 20 Sept 2011
14. Nabyonga-Orem, et al, 2008. Maintain- ing Quality of Health Services after the Abolition of User- Fees: A Uganda Case Study. *BMC Health Services Research,* 2008, 8:102: http://www.biomedcentral.com/1472-6963/8/102
15. Namutebi, J., 2009. Uganda: Hospital Facilities Appalling. *AllAfrica.com*. 4 Jun 2009.
16. Namyalo, P. K., Mutatina, B., Byakika, S., Walimbwa, A., Kato, R and Basaza, R. K., 2023. *The feasibility analysis of integrating community-based health insurance schemes into the national health insurance scheme in Uganda.* Plos One, 2023 https://doi.org/10.1371/journal.pone.02842460
17. kinyemi, O.O, Owopetu, O.F. and Ogbejule, I. O., 2021. *National Health Insur- ance Scheme: Perception and Participation of Federal Civil Servants In Ibadan.* Annals of Ibadan Postgraduate Medicene. 2021 Jun; 19(1): 49–55.
18. Orem, J. N. and Zikusooka C. M., 2010. *Health financing reform in Uganda: How equitable is the National Health Insurance Scheme:* International Journal for Equity in Health volume 9,Article number: 23 (2010).
19. Rudiger, A., 2009. Human Right to Health Program. *NESRI and NHeLP:* 90 John Street, Ste. 308, New York, NY 10038, 212.253.1710 ext. 305.
20. Tashobya, et al., 2006. *Health Systems Reform and Processes:* Institute of Pub- lic health Makerere University, Uganda and Health Systems Development Program: London School of Hygiene Tropical Medicine, UK, Ministry of Health, Uganda.
21. The Hurinet Blog. *The State of Regional Referral Hospitals in Uganda :* 5th February

2013 P.O.Box 21265 Plot 94 Old Kiira Road Ntinda

22. Wagstaff, A., 2009. *Social Health Insurance versus Tax Financed Health System:* World Bank Policy Research Working Paper No. 4821, January 2009.
23. WHO, 2003. *Social Health Insurance Report of a Regional Expert Group Meeting:* New Delhi, India, June 2003.
24. Witter and Garshong, 2009. Social Health Insurance in Ghana. *Bio Medical Cen- tral:* International Health and Human Rights, 2009, 9:20.

Author biography

Donatus Kimera is a Lecturer in the Unit of Health Policy Planning and Management, Faculty of Health Sciences, University of Kisubi. He is a Visiting Tutor at Lubaga Hospital Training School, where he teaches Health Services Management and Research. He holds a Master's Degree in Health Services Management.