ADDIS ABABA UNIVERSITY, COLLEGE OF HEALTH SCIENCES, SCHOOL OF PUBLIC HEALTH, DEPARTMENT OF HEALTH SYSTEM MANAGEMENT AND POLICY.

ASSESSMENT OF UTILIZATION OF ROUTINE HEALTH INFORMATION FOR PHARMACEUTICAL PROCUREMENT AND ASSOCIATED FACTORS IN PUBLIC HOSPITALS IN GAMO AND GOFA ZONE, SNNPR, ETHIOPIA.

By Bereket Bassa (Bsc in public health)

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Addis Ababa, ETHIOPIA

February, 2021

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THIS RESEARCH THESISSUBMITTED TO ADDIS ABABA UNIVERSITY, COLLEGE OF HEALTH SCIENCES, SCHOOL OF PUBLIC HEALTH, FOR PARTIAL FULFILLMENT MPH DEGREE IN HEALTH SYSTEM MANAGEMENT AND POLICY.

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Approved by the examining board

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Addis Ababa, ETHIOPIA

November, 2020

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List of acronyms

AOR	Adjusted Odds Ratio
COR	Crude Odds Ratio
EPSA	Ethiopia Pharmaceutical Supply Agency
ETBirr	Ethiopia Birr
FMHACA	Food, Medicine and Healthcare Administration and Control Authority
HIT	Health information technician
RHI	Routine Health Information
SNNRP	South, Nation, Nationalities and Peoples' Regional
SPSS	Statistical Package for Social Sciences

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Acknowledgments

First of all, I would like to thank the almighty God for his support of this work. Secondly, I would like to acknowledge my advisors Dr. Mesfin Addissie and Mr. Werissaw H/Selassie for their constructive comments and guidance. I would also like to express my deepest gratitude to Addis Ababa University, College of health sciences, and school of public health for giving me this opportunity and my esteemed respondents.

Abstract

Background: Availability of pharmaceuticals is a major issue in health care logistics as they play a critical role in improving delivery of health care services as well as gaining trust of clients. Utilizing routine health information is a mechanism that helps to achieve universal healthcare coverage by ensuring availability of essential pharmaceuticals by avoiding wastage and shortages.

Objective: To assess utilization of routine health information for pharmaceutical procurement and associated factors in public hospitals in Gamo and Gofa zone, SNNPR, Ethiopia, 2020.

Methods: Institution based cross-section study design using quantitative method was conducted in Gamo and Gofa zone public hospitals. By using simple random sampling method, 272 respondents were selected from simple randomly selected five public hospitals (two general and three district) and one Ethiopia pharmaceutical supply agency Arba Minch branch. Structured self-administered questionnaire was used after giving training for data collectors. The supervisor and data collectors were trained health information technician in each hospital. The collected data were checked for its completeness and consistency, then entered in to Epi.Data 3.1 and exported to SPSS version 20 for further analysis.

Result: Among the respondents, 192 (72.2%) were males and 112 (42.1%) respondents were pharmacy professionals. 186 (66.9%) were claimed to utilize routine health information and among those using routine health information, 130(69.9%) were uses the information for pharmaceutical procurement. In binary logistic regression analysis of utilization of routine health information for pharmaceutical procurement is statistically significant with variables (p-value <0.05, CI 95% and 0.05 margin of error) monitoring pharmaceutical procurement process, evaluation of pharmaceutical procurement, pharmaceutical procurement based on Ethiopia essential drug list, provision of training for pharmaceutical procurement committee and suppliers deliver right pharmaceutical at right time.

Conclusion and recommendation

The study revealed that 69.9% used routine health information for pharmaceutical procurement, 70.7% pharmaceutical procurement were transparent and 51% of the reason for stock out was lack of integration of routine health information unit with pharmacy unit. Routine health information utilization for pharmaceutical procurement affected by different factors, 31.6% were lack motivation, 39.1% of procurement were not according to standards and regulation of federal minister of health. Federal minister of health, regional health bureau, and zonal health department strengthen monitoring and evaluating routine health information utilization for pharmaceutical procurement. The public hospitals encourage sock rotation and inventory management.

Key words; routine health information utilization, pharmaceutical procurement, Gamo and Gofa zone.

CHAPTER ONE

INTRODUCTION

1.1 Background

Pharmaceutical is a drug and medical supplies/equipment which are used to provide healthcare service in different types of health facilities. Pharmaceuticals play a critical role in the improvement of healthcare service as well as trust in healthcare facility when the pharmaceutical procurement process is based on routine health information which is generated within the health facilities (1, 2).

Procurement is an acquisition of goods and/or services at the best possible total cost of ownership, in the right quality and quantity, at the right time, in the right place(3) and from the right source for the direct benefit or use. Pharmaceutical procurement takes a large part of the countries budget to provide quality healthcare service from primary to tertiary health care level though the quality , quantity and time of delivery (lead time) are the main challenges(4).

The compliance with public procurement principles includes integrity, transparency, fair competition, equal treatment, best value for money and organizational objectives for both purchasing and donating pharmaceuticals and continuous availability of pharmaceuticals very important to ensure quality healthcare provision(5).

Quality assurance is wide-ranging concept which covers all matters that individually or collectively influence the quality of a product. It is the totality of the arrangements made to ensure that pharmaceutical products are of the quality required for their intended use and Pharmaceutical products should be purchased with the aim of procuring effective, good-quality medicines at the lowest possible cost(6).

The health information utilization is the backbone to provide evidence based health care service and the underpinnings for evidence based decision-making and scientifically sounded health information system is not only used for efficient and effective clinical service but it also for nonclinical (administrative) service(7).

1.2 Statement of problem

In Africa, the awareness of using routine health information for different purpose among health professionals on health care facilities are 87.9 % (8) and 73% (9) which encourages wastage and shortage of pharmaceuticals, is most common problem. Lack of utilization of routine health information for pharmaceutical procurement leads to inequity in health care utilization (10) and it could be source of financial crisis for health care sector organization and clients/patients.

In lower and middle income countries, including Ethiopia because of lack of use of routine health information, therefore patients/clients forced to buy drugs from private health facility and affected by financial crisis and World Health Organization (WHO) estimate that 20-40% wasted due to poor quality service (11). Procurement is not based on evidence and collaborative effort during planning and preparing in advance for approval , this increase lead time and results shortage of pharmaceuticals in public hospitals (12), hence it is cause for antimicrobial resistance which is nowadays one of the world`s most important public health threats because of high prevalence of irrational drug uses. The routine health information uses among health professionals or workers 45.8% with different determinants (11, 12).

The Pharmaceutical logistic system study conducted in Addis Ababa on the availability of essential drug show that the stock out and overstock of no program drugs 75 % and 37.5 % respectively (13), hence this leads to patient/client purchase alternative drugs or below the prescribed dose and pharmaceutical procurement planning is simply based on classical system. The health facility generates routine health information to report higher officials though the utilization below, study conducted in Hadiya zone (14), SNNPR found that routine health information utilization was 69.3%, hence organizational culture for utilization of routine health information is not very well. There is lack of routine health information data management knowledge and practice among health professionals, the study conducted in Gamo Gofa zone found that, the health management information data management knowledge and practice among health extension workers show that 58.2 % and 74.3% respectively (15, 16).

Therefore; this study addressed the utilization of routine health information which are generated within public hospitals for pharmaceutical procurement which decrease direct financial cost that are unnecessary purchasing cost which leads to overstock or understock, pharmaceutical disposal cost and indirect cost that are perdium cost, transportation cost, time cost and this study also

include the managers and supportive staff respondents. There are no comprehensive studies in Ethiopia that shows the utilization of routine health information specifically for pharmaceutical procurement. The factors which affects routine health information for pharmaceutical procurement are technical, organizational and behavioral, without integration of health management information unit and pharmacy unit.

1.3 Significance of the study

The benefits of this study, improve the trust of clients/patient on healthcare service and health care service providers that is a backbone to improve health care service quality through accessibility and affordability. The pharmaceutical manufacturer and drug and medical equipment/supply wholesaler benefited from this study and it reduce financial and material expenditure (saves the resource wastage and shortage) for the government at different level and client. Using routine health information for pharmaceutical procurement, which is generated within public hospitals increase equity of resource distribution and reduce unnecessary expenditure.

As a large budget allocation for pharmaceuticals procurement in Ethiopia, the outcome of the study is input for evidence based policy making for policy makers, as teaching material for academicians, further conducting researches for researchers and as a baseline for monitoring and evaluating pharmaceutical procurement at managerial levels.

CHAPTER TWO

LITERATURE REVIEW

2.1. Pharmaceutical procurement

In Ethiopia, Food, Medicine and Health Care Administration and Control Authority (FMHACA) is mandated to regulate and control the pharmaceutical quality and procurement procedures according to the Proclamation 661/2009(1). The main objective of pharmaceutical procurement is to ensure the availability of essential drug at health facilities at all time, but priority lifesaving drug availability of under five year children was only 34.1% , unused antibiotic drug rate 36.4% and wastage rate 11.2%(1,2).

Pharmaceutical procurement process began after selection of essential medicine through either directs procurement model or competitive procurement model based on routine health information utilization is till the main challenges and influence of pharmaceutical companies (3). The health care service quality positively related with patient satisfaction and trust depends on availability and affordability of quality pharmaceuticals (4,5).

The pharmaceutical procurement procedure is recommended by World Health Organization pharmaceutical procurement policy guidelines, but the application is limited in public health facility likes procurement plan is not prepare in advance and sent to appropriate body and the buying process also not start on time based on schedule, the selected procurement method is not approved by officials in advance and emergency/ rush order needs are present to procurement department and majority of the respondent agreed that the supplier can't deliver items based on bid floating period and there is a delay (5–7).

The health facilities procure non program pharmaceutical from the wholesaler using their own budget, the stock out rate and overstock rate show that 75% and 37.5% respectively, which leads to frequent pharmaceutical procurement and rising visible and invisible cost expenditure (8).

2.2. Routine health information utilization

The Declaration of Alma – Ata in 1978 stated that, most developing countries to implement health sector reforms among which the utilization of routine health information became very

important for reference and evidence to plan all healthcare service activities (8–11). The health information data management knowledge and practice the beginning of health information utilization for pharmaceutical procurement, knowledge and practice of routine health information is 58.2% and 74.3% respectively (12,13).

The routine health information utilization is a baseline for evidence based decision making and most essential for pharmaceutical procurement to balance stock out and overstock which is directly positive relation, 69.7% of economic results and 41.8% of the stock out rate of tracer drug(14,15). Health information utilization is very important to prevent stock out rate, but health facilities reports show that at least 60.5% of antiretroviral and anti-tuberculosis commodities stock out and only 54% of health facilities uses Bin card and Stock card which are very important to follow pharmaceutical flow(16–18).

The performance of pharmaceutical procurement is highly related with the provision of healthcare service improvement but routine health information system utilization for pharmaceutical procurement is 85% even though the stock out rate of BCG 42 %and OPV 32% (19–21). The overall health information system utilization was only 51.3% in primary healthcare units and leads to increase the delay and cost of pharmaceutical procurement(22,23).

The Ethiopian health sector transformation plan (HSTP) strategies aimed that health information system generate the health data and utilized within but 45.8% the health care providers utilizes the next plan, monitor and evaluate the performance (23,24). Pharmaceuticals are the main input for good and quality outcome of healthcare service, hence health information system utilization is main components to answer the questions like, for whom the pharmaceutical bought, cost effectiveness and budget reconciliation (24–26).

Patient satisfaction is indicator of quality health care service provision main depends on the availability of pharmaceuticals; hence health information utilization improves pharmaceutical availability and decrease lead times (time interval between pharmaceutical request to receive and available for use) to overcome unexpected expenditure (25,27). In obstetrics and gynecological health care service, oxytocin and misoprostol are essential drugs to prevent, preventable maternal and child death but the availability of oxytocin and misoprostol is 96.2 %and 38.5% respectively

(28). The pharmaceutical availability and reliable healthcare system directly related to improve health sector organization manager and policy maker decision making process is through the utilization of health information system after generating within health facilities (11,29,30).

Almost all health facilities generate and report health information to concerned/higher level, till the main problem is utilizing the generated health Information within the health facilities, the overall health information utilization is 38.4% (31,32). In the health centers, the responsible health professional report in differently, 33% to health center coordinator, 20% to health management information system focal person and 47% to case team coordinator but health information utilization for different purpose is 69.3%(32_34).

2.3. Conceptual framework of routine health information utilization for pharmaceutical procurement[1].

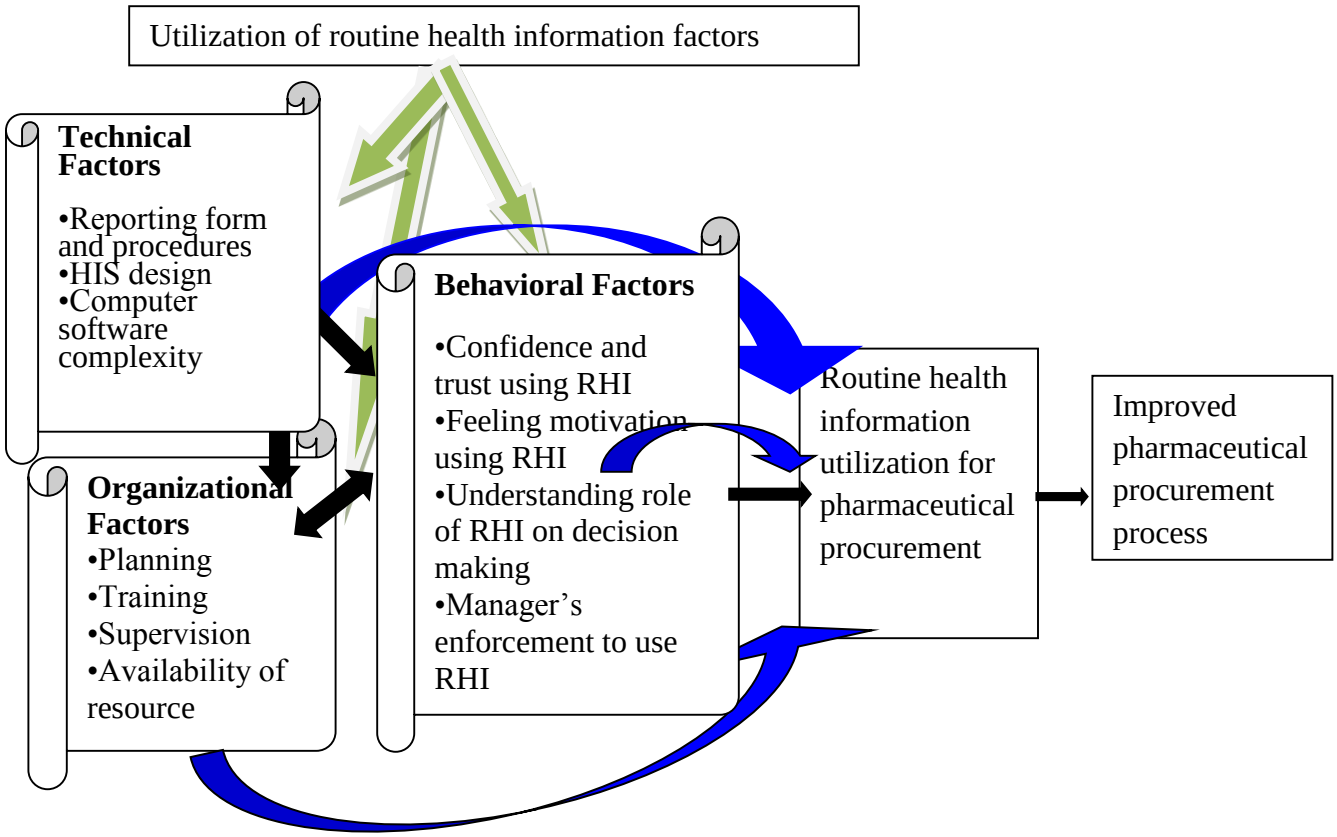

Figure 1 Conceptual framework of utilization of routine health information for pharmaceutical procurement, 2020.

[1] *Adapted from, performance of routine health information system management (PRISM) framework evaluation 2005.*

CHAPTER THREE

OBJECTIVE

General objective

- To assess utilization of routine health information for pharmaceutical procurement and associated factors in public hospitals in Gamo and Gofa zone, SNNRP, Ethiopia, 2020.

Specific objectives

- To assess utilization of routine health information for pharmaceutical procurement in public hospitals in Gamo and Gofa zone, SNNRP, Ethiopia, 2020.
- To identify technical factors of utilization of routine health information in public hospitals in Gamo and Gofa zone, SNNRP, Ethiopia, 2020.
- To identify organizational factors of utilization of routine health information in public hospitals in Gamo and Gofa zone, SNNRP, Ethiopia, 2020.
- To identify behavioral factors of utilization of routine health information in public hospitals in Gamo and Gofa zone, SNNRP, Ethiopia, 2020.

CHAPTER FOUR

METHODS AND MATERIALS

4.1. Study area and period: Gamo and Gofa zones which are located in SNNRP, are found 505and 521 km from Addis Ababa capital city of Ethiopia and 273 and 295km from Hawassa capital city of SNNRP respectively. The total population of Gamo and Gofa zone is 2.15 million with two general hospitals, five district hospitals, 78 health centers and 304 health posts. One Ethiopia pharmaceutical supply agency (EPSA) Arba Minch branch/hub is located in Arba Minch town which provide the service for surrounding public and private health facilities. The data was collected from March 01 to 30/2020.

4.2. Study design: Institution based cross sectional study design using quantitative method was conducted.

4.3. Source population: -All person who were engaged in pharmaceutical procurement process/procedure and health information technicians randomly selected public hospitals and Ethiopia pharmaceutical supply agency located in Gamo and Gofa zone.

4.4. Study population: Simple randomly selected eligible respondents in selected public hospitals in Gamo and Gofa zone, who were recruited more than one year in the public hospitals.

4.5. Inclusion criteria

Those employee who were managing health data in randomly selected public hospitals and engaged in pharmaceutical procurement process.

4.6. Exclusion criteria

Selected respondents who were recruited less than one year in a hospital.

4.7. Sampling procedure

In Gamo and Gofa zone, two general and five district public hospitals which are found in south nation nationalities peoples' regional. Among those public hospitals which are found in Gamo and Gofa zone, five public hospitals and one Ethiopia pharmaceutical supply agency branch were included in this study by simple random sampling methods, then proportionally allocated each

public hospitals and Ethiopia pharmaceutical supply agency branch. Those who were engaged in pharmaceutical procurement were selected after listing eligible from each selected public hospitals and Ethiopia pharmaceutical agency branch. By using simple random sampling method, 272 respondents were included in this study, then structured self-administered questionnaire were proportionally distributed.

4.8. Sample size: The sample size was determined by using single population proportion formula from routine health information utilization of 78.5% (14) with a margin of error of 0.05 at the 95% confidence level. The total sample was 272 including 5% of non-response rate.

$$n = \frac{\left(Z_{\alpha/2}\right)^2 p(1-p)}{d^2}$$

4.9. Sampling technique

Simple random sampling method was conducted to select who were engaged in pharmaceutical procurement and managing health data, selected respondents from each public hospitals who were engaged in pharmaceutical procurement (planning and purchasing pharmaceuticals), managing health data and Ethiopia pharmaceutical supply agency.

4.10. Sampling procedures representation diagram

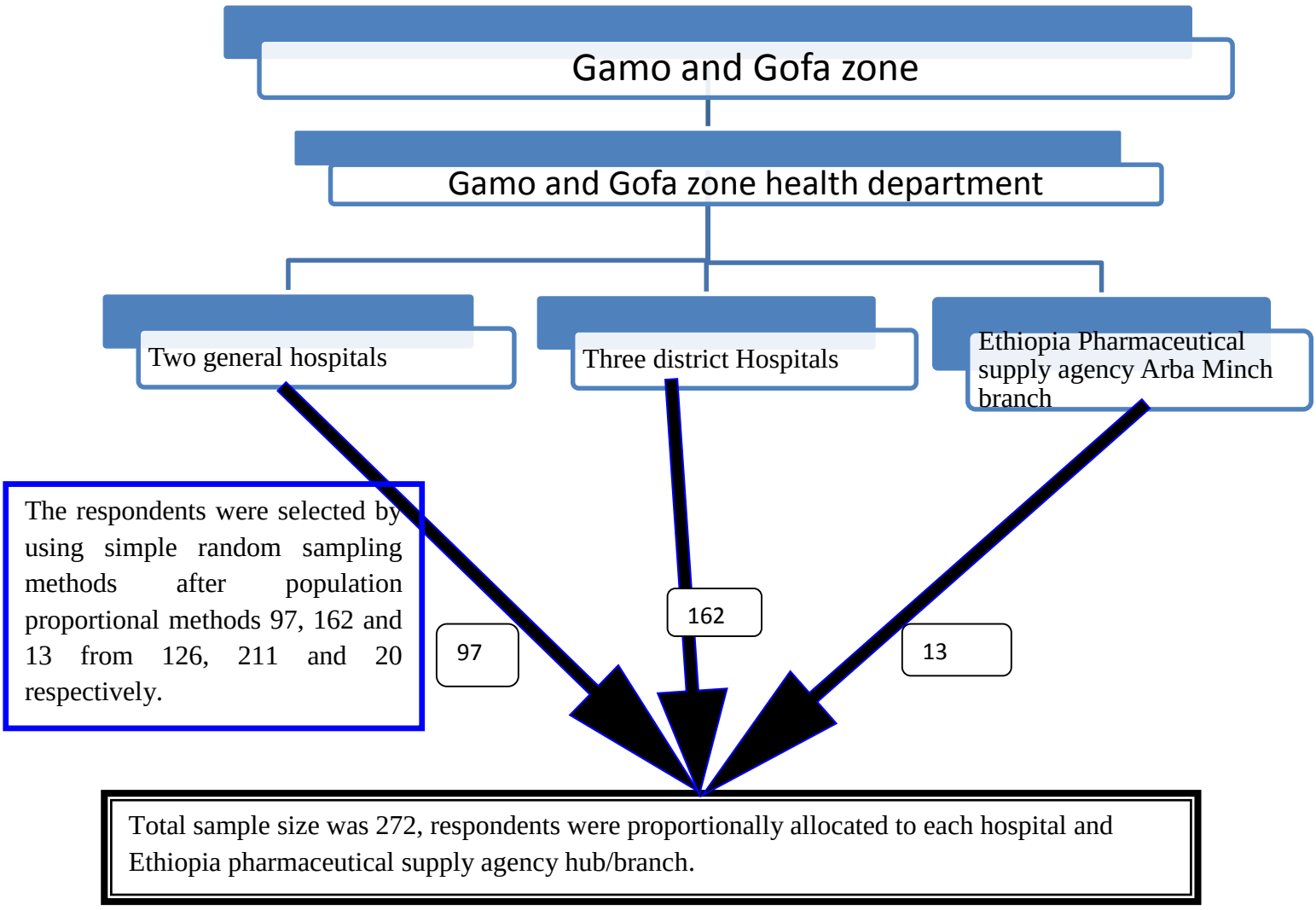

Figure 2. Sampling procedure Gamo and Gofa zone public hospitals, 2020.

4.11. Data collection procedures

Data was collected using structured self-administered questionnaire after obtaining verbal consent from those simple randomly selected participants.

The questionnaire was prepared based on Ethiopia procurement manual 2011, Ethiopia drug policy 2005, proclamation the Ethiopian federal government procurement and property administration proclamation no. 649/2009, global Standard for procurement and supply 2015 and Performance of routine Information systems Management (PRISM) Tools.

The data quality was controlled by providing training for supervisors and data collectors (selected from health information technician from each hospital). The completeness, readability and consistence of the questionnaire were checked immediately after completion and then the questionnaire was coded.

4.12 Study variables:

4.12.1 Dependent variable: Utilization of routine health information for pharmaceutical procurement

4.12.2. Independent variables:

Technical factors: complexity of routine health information system report formats, complexity of reporting procedure, complexity of reporting design, computer software complexity.

Organizational factors: pharmaceutical procurement planning, providing training on routine health information utilization, supervising lower level staff, availability of resources (human, financial and material).

Behavioral factors: Confidence and trust using routine health information, feeling motivation using routine health information, understanding role of routine health information on decision making and Manager's enforcement to use routine health information.

4.13. Operational definitions

- **Routine Health information utilization**: - uses of generated health information in selected health facility used within the health facility.
- **Health information utilization for pharmaceutical procurement**: pharmaceutical procurement based on generated health information from the previous year.

- **Pharmaceutical procurement:** procuring or purchasing drugs, supplies and diagnostic reagents other than receiving through donation.

4.14. Data Analysis procedures

Collected data was entered into Epi.Data 3.1version and exported to the Statistical Package for Social Sciences (SPSS) version 20 for further analysis. Descriptive statistics, including frequencies statistics of frequency and proportion table, bar charts and pie charts of the variables were analyzed. Analytical analysis of binary logistic regression was conducted and Variables with a p-value of less than 0.05 with 95% confidence interval was estimated to show the statistically significant. Finally, a p-value of less than 0.25 in the binary logistic regression analysis was subjected to multivariate logistic regression analysis to identify variables p-value <0.05 were statistically significantly with the utilization of routine health information for pharmaceutical procurement.

4.15. Data quality management: Training was offered for health information technician from each of simple randomly selected public hospitals and Ethiopia pharmaceutical supply agency. Questionnaire categorized in to three major parts and routine health information utilization was assessed using forty (40) question. Collected data were checked for its completeness and consistency, then entered in to Epi.Data 3.1 version software and data stored separately from other data and was locked to keep confidentiality.

4.16. Ethical consideration: The study was conducted after obtained of ethical clearance form letter (approval) of Addis Ababa University, School of Public health research review committee. After official letter obtained from school of public, then it was submitted to Gamo and Gofa zone health department to obtain support letter for those selected public hospitals. Finally, verbal consent was obtained from hospital managers and selected participants.

4.17. Dissemination of results: The result will be presented and submitted to Addis Ababa University, College of Health Sciences, School of Public Health, Gamo zone health department, Gofa zone health department and Ethiopia pharmaceutical supply agency Arba Minch branch/ hub.

Chapter five

Results

5.1. Socio demographic characteristics of the respondents

Two hundred sixty six respondents who were engaged/participated in the pharmaceutical procurement process (97.4% response rate) were participated. The socio demographics finding of this study show that, 192(72.2%) were males and age of 156 (58.6%) of the respondents were between from 25 to 32 followed by 54 (20.3%) from 18 to 25 year with the mean and standard deviation 29.85 and 5.23 respectively, 126 (47.4%) were orthodox religion followers and 156 (58.6%) were Gamo in their ethnicity.

Concerning the educational status, 154 (57.9%) were first degree followed by 100 (37.6%) were diploma holders, 112 (42.1%) were pharmacy professionals and 46 (17.3%) were either economists or accountants. Concerning job responsibilities of the respondents 160 (60.2%) were professionals assigned in service deliver point followed by service unit coordinators 70 (26.3%). Concerning work experiences, 192 (72.18%) were less than five year and the mean and standard deviation were 4.5 and 4.3 respectively.

Table 1 Socio demographic characteristics of the respondents among public hospitals in Gamo and Gofa zone, 2020.

Respondent	Responses	Frequency (n=266)	Percent (%)
Sex	Male	192	72.2
	Female	74	27.8
	Total	266	100.0
Age	18_25	54	20.3
	25_32	156	58.6
	32_39	38	14.3
	39_46	16	6.0
	≥46	2	0.8
Religion	Protestant	126	47.4
	Orthodox	124	46.6
	Muslim	10	3.8
	Other	6	2.3
	Total	266	100.0
Ethnicity	Gamo	156	58.6
	Gofa	36	13.5
	Amhara	30	11.3

	Oromo	10	3.8
	Wolaita	6	2.3
	Other	28	10.5
	Total	266	100.0
Educational status	Certificate	6	2.3
	Diploma	100	37.6
	Degree	154	57.9
	Master and above	6	2.3
	Total	266	100.0
Educational background	Pharmacy	112	42.1
	Medical Doctor	28	10.5
	Health officer	22	8.3
	Nurses	42	15.8
	Economist or accountant	46	17.3
	Health information technician	16	6.0
	Total	266	100.0
Assigned department	Pharmacy	150	56.4
	HIT	59	9.8
	Purchasing, finance and management	45	21.2
	Other	12	4.5
	Total	266	100.0
Work experience	Less than 5 year	192	72.2
	5-10 year	48	18.0
	10-15 year	22	8.3
	15-20 year	2	0.8
	Greater than 20 year	2	0.8
	Total	266	100.0

5.2. Routine health information utilization for pharmaceutical procurement

Among the respondents, 210 (78.9%) of the respondents knew the process of pharmaceutical procurement, 220 (82.7%) know who carried out pharmaceutical procurement, a little greater than half know annual pharmaceutical budget (53.4%) and 188 (70.7%) of the respondents said that pharmaceutical procurement process/ procedure was transparent.

Concerning the uses of routine health information 186 (66.2%) were using routine health information from those using routine health information 130 (69.9%) were using the information for pharmaceutical procurement, 148 (55.6%) and 128 (48.1%) were monitored and evaluated procurement process respectively. Among the respondents 218 (82 %) knew essential drug list and the prevalence of pharmaceutical stock out were higher than 3/4th (85.7%).

Table 2. Pharmaceutical procurement in Gamo and Gofa zone, 2020.

Variables		Frequency(n=266)	Percent (%)
Do you know pharmaceutical procurement process/procedure?	Yes	210	78.9
	No	56	21.1
	Total	266	100
Do you use routine health information?	Yes	186	66.2
	No	90	33.8
	Total	266	100
Do you routine health information for pharmaceutical procurement? (n=186)	Yes	130	69.9
	No	56	30.1
	Total	186	100
Do you know who carried out pharmaceutical procurement?	Yes	220	82.7
	No	46	17.3
	total	266	100
Do you know annual pharmaceutical budget?	Yes	142	53.4
	No	124	46.6
	total	266	100
Is pharmaceutical procurement process transparent?	Yes	188	70.7
	No	78	29.3
	Total	266	100
Is pharmaceutical procurement monitored during process?	Yes	148	55.6
	No	118	44.4
	Total	266	100.0
Is pharmaceutical procurement evaluated after procurement?	Yes	128	48.1
	No	138	51.9
	Total	266	100.0
Do you know the existence of essential drug list?	Yes	218	82.0
	No	48	18.0

	Total	266	100.0
Is pharmaceuticals stock out in your hospitals?	Yes	228	85.7
	No	38	14.3
	Total	266	100.0
Are supplier deliver right goods at right times?	Yes	96	36.1
	No	170	63.9
	Total	266	100.0
Is there delay in the pharmaceutical Procurement process?	Yes	198	74.4
	No	68	25.6
	Total	266	100.0

Regarding the reason for pharmaceutical stock out in public hospitals, greater than half because of lack of integration between pharmacy and health management information system units.

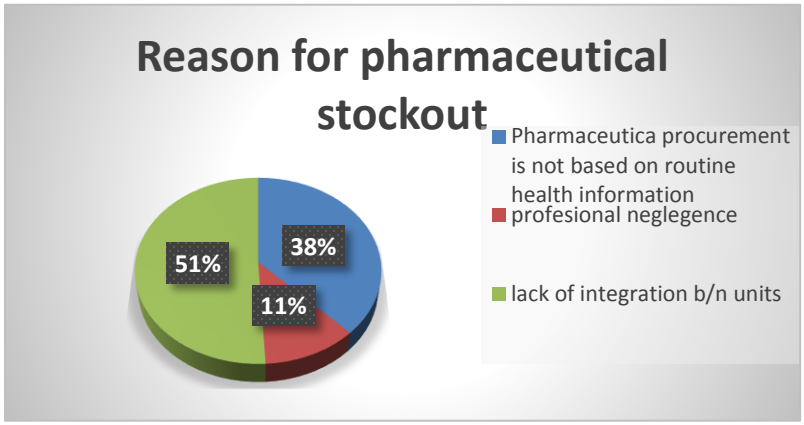

Figure 3 Reason for pharmaceutical stock out in Gamo and Gofa zone public hospitals, 2020.

The reason why routine health information not used at public hospitals are lack of motivation (31.56%) followed by professional negligence (25.56%) in the hospitals.

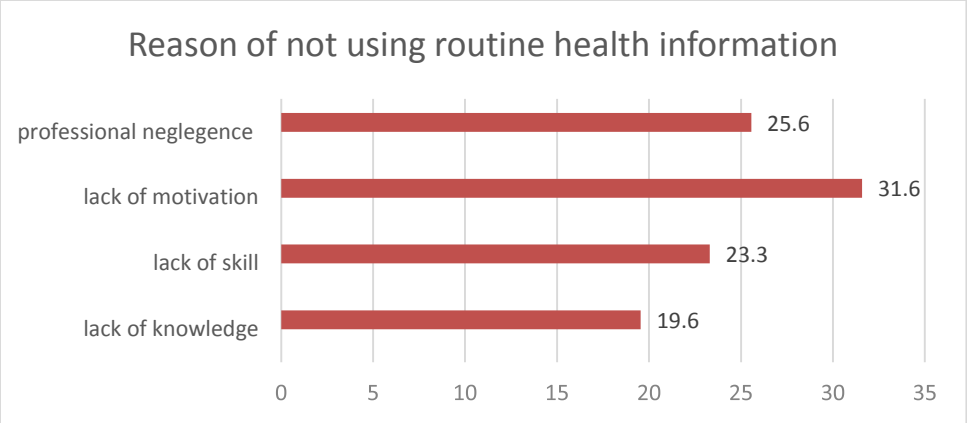

Figure 4. Reason of not using routine health information in public hospitals in Gamo and Gofa zone, 2020.

Concerning the use of standard and regulation of pharmaceutical procurement, 162 (60.9%) of the respondents claimed that pharmaceutical procurement is done according to standards and regulation of Federal Minister of health and similarly 162 (60.9%) stated that their hospitals have established procurement committee and among 194 (72.9%) who know about the essential drug list of Ethiopia of 204 (93.6%) stated that pharmaceutical procurement is based on essential drug list.

Regarding the expiry date of pharmaceutical, 160(60.2%) respondents were claimed that less than one year expiry date pharmaceutical was procured and more than half of pharmaceuticals source 140 (52.6%) was from governmental whole suppliers (Ethiopia Pharmaceutical Supply Agency (EPSA).

Table 3. Pharmaceutical procurement in public hospitals in Gamo and Gofa zone, 2020

Variables		Frequency(n=266)	Percent (%)
Is pharmaceutical procured according to standard or regulation of FMOH?	Yes	162	60.9
	No	104	39.1
	Total	266	100.0
Do you have pharmaceutical procurement committee formed in your hospital?	Yes	194	72.9
	No	72	27.1
	total	266	100

Do you know pharmaceutical procurement based on essential drug list (n=218 those who know essential drug list)?	Yes	204	93.6
	No	14	6.4
	total	218	100
Is pharmaceuticals procured with less than one year expiry date?	Yes	160	60.2
	No	106	39.8
	Total	266	100
Is the pharmaceuticals expired in your hospitals?	Yes	216	81.2
	No	50	18.8
	Total	266	100
Where pharmaceuticals procured?	EPSA	140	52.6
	Private	16	6.0
	Both	110	41.4
	Total	266	100

Evidence based pharmaceutical procurement saves unnecessary financial expenditure and encourage clients/patients satisfaction and also healthcare service quality. Regarding pharmaceutical procurement, 33.08% and 32.33% responded that the procurement is performed as needed and by pharmacy department request respectively.

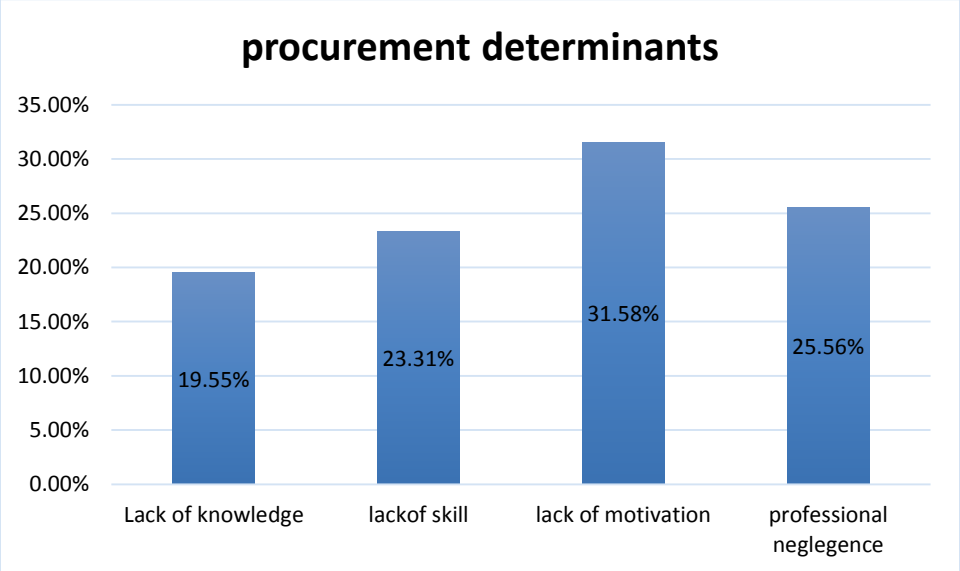

Figure 5. Pharmaceutical procurement determination of public hospitals in Gamo and Gofa zone, 2020.

Organization uses different type of tender (procurement methods) to purchase pharmaceuticals based on their available resources like financial, time etc. Regarding the types of pharmaceutical procurement method, 130(49%) responded that it is direct procurement (purchased direct from Ethiopia pharmaceutical supply agency) followed by 106 (40%) stated that it is a Performa method.

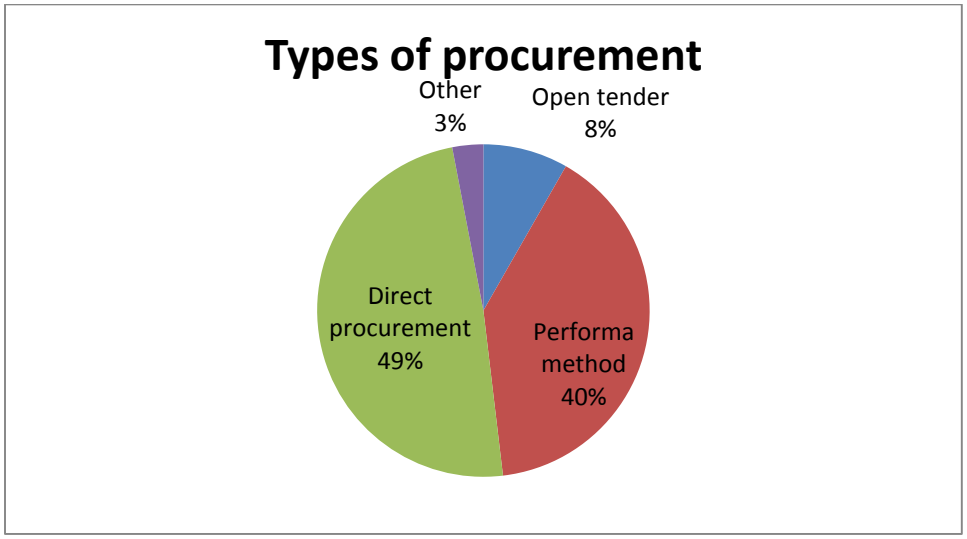

Figure 6. Type of pharmaceutical procurement method among public hospitals in Gamo and Gofa zone, 2020.

In pharmaceutical stock management, stock rotation is very important method to overcome wastages and shortages in health care facility. Among the pharmaceutical rotation more than half (59.40%) were issued First Expiry First out (FEFO) followed by 22.56% were don't know pharmaceutical stock rotation.

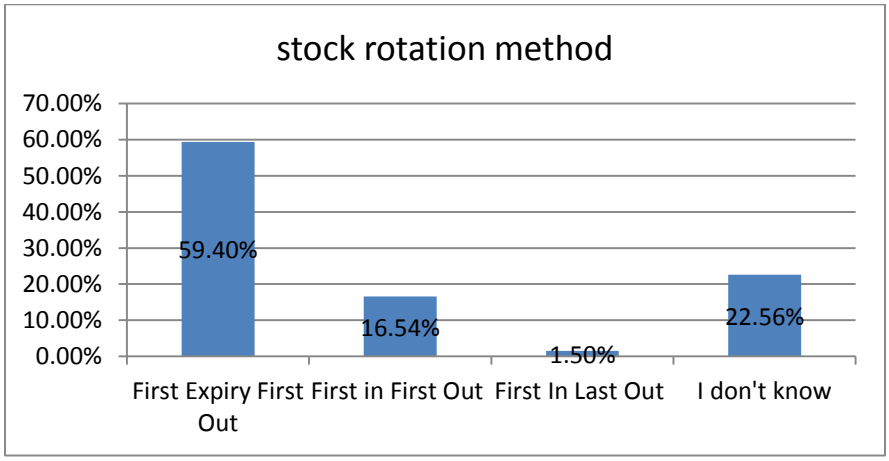

Figure 7. Pharmaceutical stock rotation in Gamo and Gofa zone, 2020.

Among public hospitals in the study area the level of expiration of pharmaceuticals, those claimed that expired rarely and sometimes were 36.8 % and 35.3% respectively.

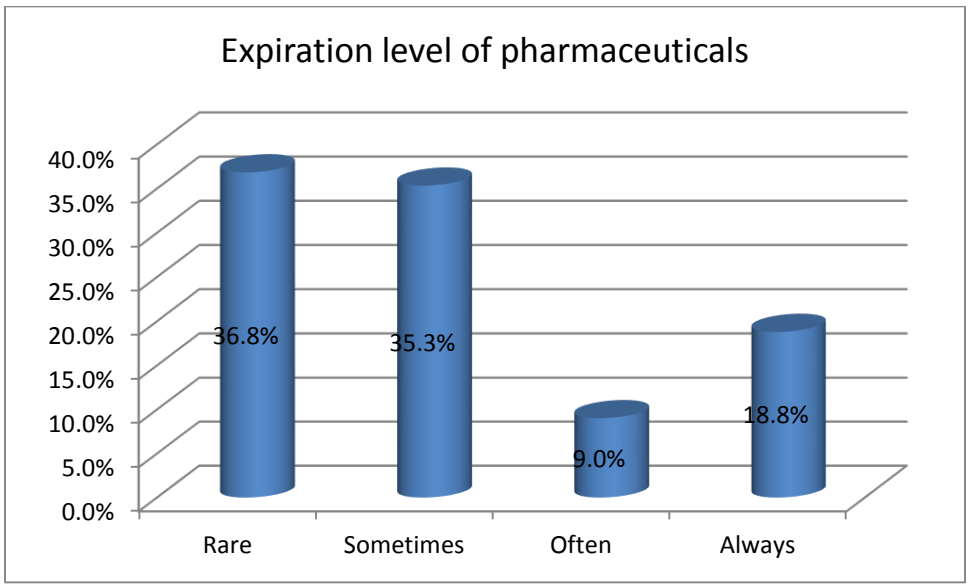

Figure 8. Pharmaceutical expiration rate level in Gamo and Gofa zone, 2020

Pharmaceutical stock out in health care facility challenges health care providers and clients/patient on quality service. Regarding the pharmaceutical stock out level, 32.46% was rarely followed by 28.07% sometimes.

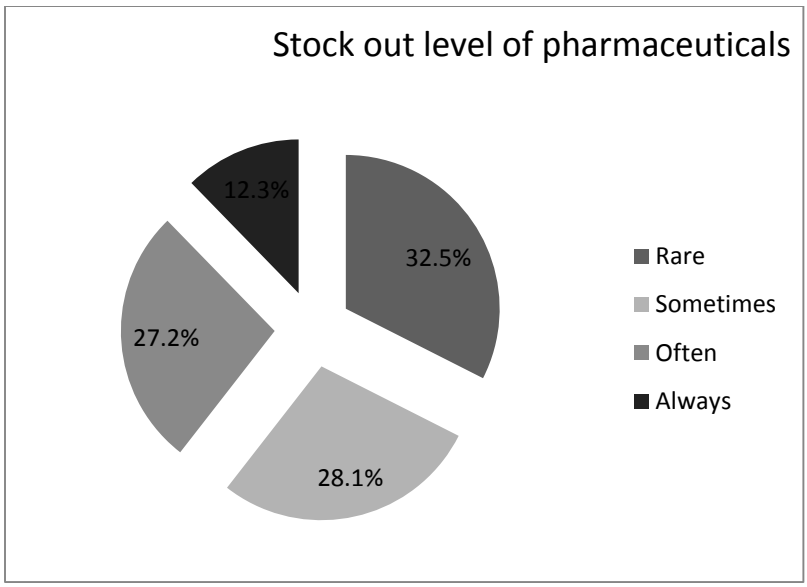

Figure 9. Pharmaceutical stock out level in public hospitals in Gamo and Gofa zone, 2020.

Concerning the lack of use of routine health information for procurement of pharmaceuticals, respondents were mentioned different reason and they claimed that 31.58% were lack of motivation followed by 25.56% were professional negligence.

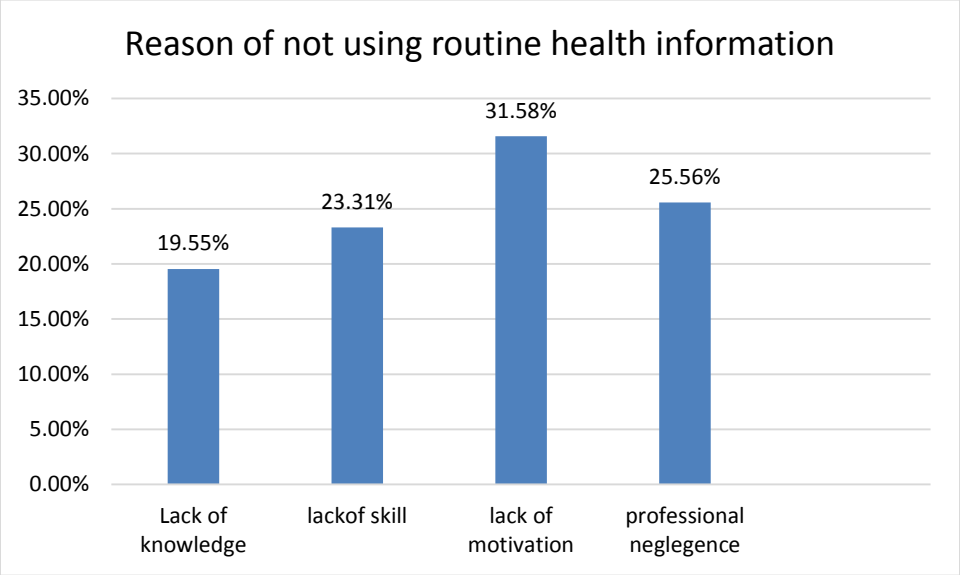

Figure 10. Reason of not using routine health information in public hospitals in Gamo and Gofa zone, 2020.

5.3. Associated factors of utilization of routine health information for pharmaceutical procurement.

Among the technical factors of routine health information utilization for pharmaceutical procurement as listed Likert item with scale strongly disagree and disagree 15.04 % and 24.64% respectively and also agree and strongly agree 24.73 % and 8.35% respectively.

Regarding the organizational factors of routine health information utilization for pharmaceutical procurement, whose response for strongly disagree and disagree 15.16 % and 23.18% respectively. Agree and strongly agree 28.45 % and 6.77% respectively.

Among the Likert item with scale of behavioral factors of utilization of routine health information for pharmaceutical procurement strongly disagree and disagree, 16.62 % and 22.14% respectively. Agree and strongly agree, 28.24 % and 11.19 % respectively.

Table 4. Associated factors of routine health information utilization for pharmaceutical procurement of public hospitals in Gamo and Gofa zone, 2020.

Variables		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Technical factor						
1	Good knowledge to effectively use routine health data-information	30	58	94	62	22
2	Good information technology skills to effectively use	32	58	108	56	12
3	The system design used in data management is user friendly	36	54	66	86	24
4	The complexity of routine health information systems makes it easy for health workers	36	44	52	102	32
5	Pharmacy unit and other units have strong integration on routine health information utilization	36	80	72	50	28
6	Routine health information data easily accessible to health professionals	36	54	64	86	26
7	Feedback from hospital managers	52	76	60	60	18
8	Health professionals have skills on Data analysis and Data use	46	74	80	46	20
9	Staff are oriented on the use of data collection tools	56	92	56	44	18
Total		360	590	652	592	200
Percent (%)		15.04	24.64	27.23	24.73	8.35
Organizational factors						
1	Strong supportive supervision on routine health information uses	42	66	74	64	20
2	Timely reporting to higher officials	34	48	50	106	28
3	Timely feedback on routine health information from higher officials	46	70	68	68	14
4	Routine health information utilization as a culture in hospital	56	76	76	44	14
5	Hospital officials gives emphasize on data quality in regular reports	34	66	68	82	16
6	Staff are aware of their responsibilities pharmaceutical procurement with routine health information evidence	40	66	70	76	14

7	Staff are trained in data management and use	38	46	100	66	16
8	Rely on data for planning, setting targets and monitoring	36	48	66	102	14
9	Hospital officials check data quality at the facility regularly	38	60	76	76	16
10	Hospital officials gives regular feedback to staff on regular health	36	72	76	68	14
11	Committee Use routine health information data for pharmaceutical procurement	44	64	68	68	22
12	Encouraging pharmaceutical procurement based on routine health information as a culture	40	58	52	88	28
Total		484	740	844	908	216
Percent (%)		15.16	23.18	26.44	28.45	6.77
Behavioral factors						
1	Officials have confidence to use the generated routine health information for pharmaceutical procurement	46	60	60	76	24
2	Staff have confidence on routine health information uses for pharmaceutical procurement	38	50	70	80	28
3	Motivating staff to use routine health information for pharmaceutical procurement	40	82	76	44	24
4	Enforcing officials to use routine health information for pharmaceutical procurement	58	62	60	58	28
5	Gives me feeling for planning and monitoring pharmaceutical procurement performance	42	50	64	80	30
6	PP committee uses routine health information	36	70	58	82	20
7	Understand the roles and responsibilities of uses of routine health information for pharmaceutical procurement during decision making	46	52	48	84	36
8	Pharmaceutical procurement decision made based on annual pharmaceutical budget	48	56	36	82	44
9	Managerial enforcement for pharmaceutical procurement based on routine health information	44	48	50	90	34
Total		398	530	522	676	268
Percent (%)		16.62	22.14	21.80	28.24	11.19

Reliability test of Likert scale of utilization of routine health information and associated factors for pharmaceutical procurement. The reliability test for those associated factors of routine health information utilization for pharmaceutical procurement; technical factors reliability test *(cronbach's alpha 0.890),* organizational factors reliability test *(Cronbach's Alpha 0.929) and*

behavioral factors (Cronbach's Alpha 0.908) which means it has strong internal consistency among Likert items in technical factors, organizational factors and behavioral factors of utilization of routine health information and associated factors in public hospitals.

In bivariate binary logistic regression analysis of utilization of routine health information for pharmaceutical procurement statistically significant variables (p-value <0.25) are knowledge of pharmaceutical procurement, establishment of pharmaceutical procurement committee, transparency of procurement process, monitoring of pharmaceutical procurement process, evaluation of pharmaceutical procurement, procurement based on Ethiopia essential drug list, monitoring of expiry date and stock out and provision of training for pharmaceutical procurement committee. Those variables in bivariate binary logistic regression were subjected to be analyzed in multivariate logistic regression, which a variables were monitoring of pharmaceutical procurement process (AOR=43.818; 95% CI; 13.614,141.031), evaluation of pharmaceutical procurement (AOR=4.528; 95% CI; 1.428, 14.357), procurement based on Ethiopia essential drug list (AOR=52.225; 95% CI; 5.49,496.75), provision of training for pharmaceutical procurement committee (AOR=9.30; 95% CI; 1.971,45.16) and supplier deliver right goods at right time (AOR=3.098; 95% CI; 1.082,8.875).

Table 5. Bivariate binary logistic regression analysis of routine health information utilization for pharmaceutical procurement in public hospitals in Gamo and Gofa zone, 2020.

Variables	Responses		95% C.I	
			COR	AOR
monitoring pharmaceutical procurement process	Yes (%)	148 (55.6	49.576(7.312,51.981)	43.818 (13.61,141.03) *
	No (%)	118(44.4)		
evaluation of pharmaceutical procurement	Yes (%)	128 (48.1)	8.416(0.365,0.714)	4.528(1.428, 14.357) *
	No (%)	138 (51.9)		
Pharmaceutical procurement based on essential drug list	Yes (%)	218 (82)	36.951(17.351,49.43)	52.225 (5.49,496.75) *
	No (%)	48 (18)		
	Yes (%)	58 (21.8)	12.491(3.671,27.647)	9.30 (1.971,45.16) *

provision of training for pharmaceutical procurement committee	No (%)	208 (72.2)		
supplier deliver right good at right time	Yes (%)	96 (36.1)	14.538(1.951,15.617)	3.098(1.082,8.875) *
	No (%)	170 (63.9)		
* Statistically significant at the 0.05 level				

Bivariate correlation analysis of associated factors of technical, organizational and behavioral factors were conducted after computing the mean of its (Likert item with scale) for analysis of their relationship. The factors of routine health information utilization for pharmaceutical procurement such that technical factors, organization factors and behavioral factors have strongly positive relationship and statistically significant and among those factors, technical factors more strong positive relationship than organizational factors and behavioral factors (see table below).

Table 6. Factors of utilization of routine health information for pharmaceutical procurement in public hospitals in Gamo and Gofa zone, 2020.

Correlations					
		Technical factors	Organizational factors	Behavioral factors	Utilization of routine health information
Technical factors	Pearson Correlation	1	0.814	0.510	0.155
	Sig.		0.000	0.000	0.011
	N	266	266	266	266
Organizational factors	Pearson Correlation	0.814	1	0.649	0.242
	Sig.	0.000		0.000	0.000
	N	266	266	266	266
Behavioral factors	Pearson Correlation	0.510	0.649	1	0.132
	Sig.	0.000	0.000		0.031
	N	266	266	266	266
Utilization of routine health information	Pearson Correlation	0.155	0.242	0.132	1
	Sig.	0.011	0.000	0.031	
	N	266	266	266	266

CHAPTER SIX

Discussion

The study revealed that, routine health information utilization differs in different health care facility level and areas. The study conducted in the Western part of Amhara Region, East Gojjam Zone, Northwest Ethiopia were 38.4 % and 45.8 %(15,21) respectively lower than this study 66.17 % of routine health information utilization for pharmaceutical procurement, the variation might be because of respondents and participants, issues which were addressed that, their study show overall routine health information utilization but in this study, utilization of health information focused and specific to utilization of health information for pharmaceutical procurement.

Strengthen the health management information system and integration of the service deliver unit in health care facility for evidence based pharmaceutical procurement and also minimizing wastage improves quality of health care service. The study conducted in the Northern Gondar zone and Hadiya zone in South Nation Nationalities Regional state show routine health information utilization was 85 % and 69.3%(14,24) respectively which is higher than my study, which routine health information utilization was 66.17%, therefore, the variation is due to this study specific and focused to utilization of routine health information for pharmaceutical procurements and also study participant variation, in their study, respondents were all health professionals but in this study the respondents medical/health professionals who engaged in the process of pharmaceutical planning and purchasing.

The essential drug list is list of drug for a given country based on their disease prevalence and type and also different in different country, therefore Ethiopia essential drug list is based on our country pharmaceutical needs. The study conducted in Narok County Referral Hospital (NCRH) is located in Narok North County shows the pharmaceutical procurement based on essential drug list was 34.11%(33) lower than this study 93.6 % conducted in different level of public hospitals (district and general hospitals), also the variation is because of their study conducted only in a single health facility.

In healthcare facility, inventory management is very important in balancing pharmaceutical movement. The stock out prevalence and pharmaceutical procurement 75 % and 80 % (23,34)

respectively in selected health centers in Addis Ababa which is lower than in this study that stock out prevalence and pharmaceutical procurement based on essential drug list 85.7 % and 93.6 % respectively, in this study result were higher than my study, the variation might be of type of health facility which is that this study on the public hospitals.

The routine health information utilization improved through providing training for health care facility and health sector staff after need assessed. The study conducted North Godar provision of training for health professional in public health institution claimed that no training was on routine health information uses was 87.9% and 92.4%, which is higher than the finding this study 72.2%, and also pharmaceutical procurement based on the uses of routine health information 85%(14,15) but in this study was 69.9%, the variation might sample size determination such that in this design effect.

Strength

- Minimal response rate
- Cooperation of public hospitals

Limitation

- Inadequate published article in related with utilization of routine health information for pharmaceutical procurement
- Current situation (covid 19)

CHAPTER SEVEN

Conclusion and recommendation

Conclusion

Among the public hospitals and in Ethiopia pharmaceutical supply agency, 266 (97.4%) were participated in this study. Routine health information utilization 66.2%, among those uses routine health information 66.9% were used for pharmaceutical procurement. The existence of Ethiopia essential drug list help procurement based on the list, 82.0 % were know the existence, 93.6% of pharmaceutical procurement based on Ethiopia essential drug list. Pharmaceutical procurement performed using different type methods, 49% were direct purchasing from Ethiopia pharmaceutical supply agency and stock rotation is important mechanism to avoid wastage of pharmaceutical in store management, 59.4% were issue first expiry first out from their store. There are different types of associated factors that affects routine health information utilization for pharmaceutical procurement assessed by using Likert items, 8.35% were strongly agree on technical factors, 6.77% were strongly agree on organizational factors and 11.19% were strongly agree on behavioral factors. Monitoring pharmaceutical procurement process, evaluating the process after procured, procured based on essential drug list, provision of training and supplier deliver right goods at right time were statistically significant variables.

Recommendation

- Federal minister of health and Ethiopia pharmaceutical supply agency.
    - enforce to develop separate pharmaceutical procurement regulation and standards
    - monitoring and evaluating the utilization of routine health information for pharmaceutical procurement
- Regional health bureau and zonal health department
    - Monitoring and evaluating of utilization of routine health information for pharmaceutical procurement.
    - Provision of training on pharmaceutical procurement
    - Integrating between routine health information unit and pharmacy unit.

- Public hospitals and professionals
    - Monitor and evaluate the pharmaceutical procurement process/procedure.
- Researchers and academia
    - Economic evaluation routine health information utilization on pharmaceutical shortage and wastage.

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Annex 1 questionnaire English version

Dear respondent, I am one of the student of Addis Ababa University (AAU), College of health sciences, School of public health that conducting study on the **utilization routine health information for pharmaceutical procurement in public hospitals** for award of Master in Public Health in the specialty of Health System Management and policy.

The purpose of this study is toassessUtilizationof Routine of health information for pharmaceutical procurement in Public hospitals in both Gamo and Gofa zone. Dear respondent, you are selected randomly from your colloquies by using lottery method. The information you will give is purely for academic purposes and will be treated with confidentiality and the maximum duration of participation in the process will be 15 minute. You are benefited from the research finding as a nation and colloquies of the hospital by identifying barriers and opportunities of utilizing routine health information for pharmaceutical procurement. Your participation is purely voluntarily and has no monetary value and the report produced will be intended mainly for academic purposes and input for policy makers and others. You can contact principal investigator if you have any question and it is possible to withdrawal in the middle of interviewing when feeling any discomfort.

Are you willing to participate? Yes ☐ No ☐

Thanks you for your participation and giving right information.

Investigator:

Name; Bereket Bassaphone number; +251913853648 e-mail; bekiman0948@gmail.com

Name of data collector: _____

Section one:			
S.no	Questions	Response	Remarks
Socio-demographic factors			
101	Sex of respondent 1. Male 2. Female		
102	How old are you? _____		
103	What is your religion? Orthodox Christian Protestant Muslim Catholic Other, specify_____		
04	What is your ethnicity? Gamo Gofa Wolaita Oromo Amhara Other		
105	What is your educational level? Certificate Diploma Degree Master and above		
106	What is your educational background? Pharmacist/pharmacy technician Medical doctor Health officer Nurses (clinical/midwifery) Accountant/economics/marketing management etc Health information technician		
107	For how long have you been at this facility (work experience)? _____in years		
108	What is your responsible department? Pharmacy		

	Health management information system (Medical recording, health information office) Purchasing and finance public good Others, specify_____			
109	What is your job position? Head (department, case team) Professional Focal person Hospital Manager Hospital Director			
Section two: pharmaceutical procurement				
201	Do you know pharmaceutical procurement process/procedure?	Yes	No	
202	Do you know who carried out pharmaceutical procurement procedure/process?	Yes	No	
203	Do you know annual pharmaceutical procurement budget?	Yes	No	If no skipQ205
204	If yes, how much? _____ETBirr			
205	Is the pharmaceutical procurement process transparent?	Yes	No	
206	Do you think pharmaceutical procurement performed according to standard or regulation of FMOH?	Yes	No	
207	How many times pharmaceutical procurement performed per a year? Once a year Twice a year Three and above times a year			
208	How is the frequency of pharmaceutical procurement determined? Based on schedule As needed Based on pharmacy department request Others, specify _____			
209	What types of procurement method do you use? Open bid Closed/restricted bid Performa direct procurement			

	If other, specify_____			
210	Is there any monitoring system in pharmaceutical procurement?	Yes	No	If no, skipQ211
211	If yes, how pharmaceutical procurement monitored? _____ _____			
212	Is there any evaluation system in pharmaceutical procurement?	Yes	No	If no, skipQ214
213	If yes, how pharmaceutical procurement evaluated? _____ _____			
214	Is there pharmaceutical procurement committee in your hospital?	Yes	No	If no, skipQ216
215	If yes, what is the mandate of this committee? _____ _____			
216	Do you know essential drug list?	Yes	No	If no, skipQ218
217	If yes, is the pharmaceutical procurement based on essential drug list?	Yes	No	
218	How do you prevent expiry of pharmaceuticals in your hospitals? First Expiry First Out First Expiry Last Out First In First Out I don't know			
219	Is the pharmaceuticals procured with less than one year shelf life?	Yes	No	
220	Is the pharmaceuticals expired in your hospitals?	Yes	No	If non skipQ222
221	If yes, how do you describe? _____ _____			
222	How do you rate expiration level in your hospital? Rare Sometimes Often always			

223	Is the pharmaceuticals stock out in your hospitals?	Yes	No	If no, skip toQ226
224	If yes, how do you stock out level in your hospital? Rare Sometimes Often always			
225	If yes Q223, what are the reasons? Pharmaceutical procurement is not based on routine health information Professional negligence Lack of integration between routine health information system unit with pharmacy unit			
226	Are suppliers delivering the right goods at the right time?	Yes	No	
227	Are There any Delays in the pharmaceutical Procurement?	Yes	No	
228	From where pharmaceuticals procured mostly in your hospitals? Government whole sellers (Agencies e.g. EPSA) Private sellers Both			
229	Did you participate in pharmaceutical procurement process training?	Yes	No	
230	Do you use routine health information in your hospitals?	Yes	No	
231	Do you use routine health information for pharmaceutical procurement in your hospital?	Yes	No	
232	If yes, for which decision making do you use routine health information? Top 10 and top 5 disease classification Planning pharmaceutical procurement Other _____			
233	If not use routine health information for pharmaceutical procurement, what is/are reason? Lack of knowledge Lack of skill Lack of motivation Professional negligence			

Section three :Routine health information utilization

Technical factors I would like to know your opinion how you agree with statements. There is no right or wrong answer only express your opinion using the Likert scale; **1-Strongly Disagree, 2 Disagree, 3-Neither Agree or Disagree, 4-Agree 5-Strongly agree.**							Remarks
	Have good knowledge to effectively use routine health data-information	1	2	3	4	5	
	Have good information technology skills to effectively use data –information in decision making						
	The system design used in data management is user friendly						
	The complexity of RHI systems makes it hard for health workers to utilize the system						
	Lack of coordination with poor system design						
	The needed health information data is not readily available for the targeted information products that respond to specific data users"						
	Provision of feedback to health information/record management team						
	Lack of skills among health workers in the following; Data analysis and Data use						
	Staff are not oriented through the use of data collection tools						
	What other technical challenges do face in trying to utilize routine health information in decision making in your hospital?_____ _____ _____ _____ _						
(II) Organizational factors:							

	Routine supportive supervision on routine health information	1	2	3	4	5	
2	Timely reporting to higher official body						
3	Timely feedback on routine health information						
4	The level of culture of information use of a health facility is very low to facility evidenced based decisions						
5	Hospital management body emphasize on routine health information data quality in regular reports						
6	Hospital management body promote routine health information use for pharmaceutical procurement as organizational culture						
7	Staff are aware of their responsibilities on Utilization of Routine health information for pharmaceutical procurement						
8	Staff are trained in data management and use						
9	Hospital management body rely on data for planning, setting targets and monitoring						
10	Hospital managers check data quality at the facility regularly						
	Higher officials and hospital managers provide regular feedback to the staff through regular report on evidence						
12	Drug and Therapeutic Committee or Pharmaceutical procurement committee use RHIS data for pharmaceutical procurement						
13	In your own opinion what other organizational factors influence the effective utilization of Routine health information in pharmaceutical procurement your hospitals_____ _____ _____						
14	How does hospital officials support having the necessary information to make evidence based pharmaceutical procurement? _____ _____						
15	How does your hospital support prioritization and use of health information in pharmaceutical procurement? _____ _____						

16	How does your hospital support staff in training in the use of information for decision making? _____ _____						
(iii) Behavioral factors:							
1	Higher officials confidence to use the generated health information for pharmaceutical procurement	1	2	3	4	5	
2	Staff trusted utilization of routine health information for pharmaceutical procurement						
3	Motivating(incentives) to staff routine health information utilization						
4	Routine health information utilization for saving unnecessary pharmaceutical expenditure						
5	Collecting data gives me feeling that it is for planning and monitoring pharmaceutical procurement performance						
6	Pharmaceutical procurement committee uses routine health information for pharmaceutical procurement						
7	Understand the roles and responsibilities of uses of routine health information for pharmaceutical decision making						
8	Mention other behavioral factors and how you think influence the effective utilization of Routine health information for pharmaceutical procurement? _____ _____						
9	Pharmaceutical procurement decision made based annual allocated pharmaceutical budget						
10	Managerial enforcement for pharmaceutical procurement based on routine health information						

1	Do you think pharmaceutical procurement is effective?	Yes	No	
2	If yes, how do you evaluate effectiveness? _____ _____			
3	Do you think pharmaceutical procurement is efficient?	Yes	No	
4	If no, describe the reasons _____ _____ _____			

Annex 2 questionnaire Amharic version

ውድተጠያቂ፤እኔበመንግስትሆስፕታሎችውስጥየመድኃኒትግዥንበተመለከተመደበኛየጤናመረጃአጠቃቀምንበተመለከተጥናት

የምሥራውየአዲስአበባዩኒቨርሲቲ (አአዩ)

፣የጤናሳይንስኮሌጅ፣የህብረተሰብጤናትምህርትክፍልተማሪነኝ፡፡የዚህጥናትዓላማበጋሞእናንፋዞንበመንግስትሆስፒታሎችውስ

ጥለሚገኙየመድኃኒትግዥዎችመደበኛየጤናመረጃአጠቃቀምተግዳሮቶችንእናመልካምአጋጣምዎችንመገምገምነው፡፡የሎተሪዘ

ዴንበመጠቀምበዘፈቀደከሚመረጡትከሆስፕታልአባላትተመርጠዋል፡፡የሚሰጡትመረጃለትምህርታዊዓላማዎችብቻየሚቀርብ

እናበሚስጢርይስተናገዳልእናበሂደቱውስጥየሚሳተፉበትከፍተኛውየጊዜቆይታ 15

ደቂቃይሆናል።ለመድኃኒትግዥዎችመደበኛየጤናመረጃንለመጠቀምእንቅፋቶችንእናእድሎችንበመለየትእንደዘጋእናየሆስፒታሎ

ዎአባልእንደመሆነዎጥምረትጥናትጥቅምያገኛሉ፡፡የእርስዎተሳትፎበንጹህበፍፁምእናየገንዘብዋጋየለውምእናየቀረበውሪፖርትበ

ዋነኝነትለትምህርታዊዓላማዎችእናለፖሊሲአውጭዎችእናለሌሎችግብዓትየታሰበነው።ማንኛውንምጥያቄካለዎትዋናተመራማሪ

ንማነጋገርናምንምዓይነትአለመመቻቸትበሚሰማዎትጊዜበቃለመጠይቁመሃልማቆምይችላሉ፡፡

ለመሳተፍፈቃደኛነዎት? አዎ_____ አይደለም----------

የተመራማሪስም _____¨አድራሳ +251913853648 email bekiman0948@gmail.com

መረጃሰብሳቢስም_____¨

<u>ስለሰጡትመረጃትከክለኛነትከልብአመሰግናለሁ</u>

ክፍልአንድ፤ማህበራዊናዲሞግራፍያዊሁኔታ			
ተ/ቁ	ጥያቄ	መልስ	ም ር መ ሪ
101	ጾታ 1. ወንድ 2. ሴት		
102	ዕድሜ? _____		
103	የምንሃይማኖትተከታይኖት? ኦርቶዶክስ ፕሮተስታንት እስልምና ካቶሊክ ሌላካለይጥቀሱ, _____		
104	ጎሳዎምንድነው? ጋሞ ጎፋ ወላይታ ኦሮሞ አማራ ትግራይ 7. ሌላካለ፣ይግለጹ _____		
105	የትምህርትደረጃዎት ሰርተፍከት ዲፕሎማ ዲግሪ ማስተርስእናከዚያበላይ		
106	የተማሩበትየሙያአይነት (educational background) ፋርማሲ ሃክም ጤናመኮነን ነርስ(ክሊኒካል፣ሚድዋይፍ) አካዉታንት፣ኢኮኖሚክስ፣ማናጅመንትወዘተ.. ጤናመረጃተከኒሽያን		
107	ስንትዓመትሰሩእዚህሆስፕታል_____¨ዓመት?		
108	የተመደቡበትየስራክፍል(responsible department) 1. ፋርማሲ 2. የጤናመረጃአያያዝስርዓት (የህክምናካርድክፍል፣የጤናመረጃኦፍሰር)(HMIS)		

	3. ግዝፋይናንስእናንብረትወይምሂሳብክፍል 3. ሌላካለ፣ይግለጹ _____			
109	የሥራሃላፍነተዎምንድነው? 1. ኃላፊ (ዲፓርትመንት፣case team) 2. ባለሙያ 3. Focal person (ቡድንመሪ) 4. ሆስፕታልስራአስክያጅ 5. ሆስፕታልዳይረክተር			
ክፍልሁለት:የመድሃኒትግዥንበተመለከተ				
201	የመድኃኒትግዥአሠራሮችንያውቃሉ?	አዎን	አይደለም	
202	የመድኃኒትግዥበእነማንእንደሚከናወንያውቃሉ?	አዎን	አይደለም	
203	የመድኃኒትግዥዓመታዊበጀትያውቃሉ?	አዎን	አይደለም	አይደለምካሉወድጥ/ቁጥር 205 ይሂዱ
204	አዎንካሉ፣ስንትነዉ_____ብር			
205	የመድኃኒትግዥሂደትግልፅነውን?	አዎን	አይደለም	
206	የመድኃኒትግዥበመመሪያእናደነብመሠረትየተከናወነይመስልዎታል (standard or regulation of FMOH)?	አዎን	አይደለም	
207	በዓመትስንትጊዜየመድኃኒትግዥይከናወናል? 1. አንድጊዜበዓመት 2. ሁለትጊዜበዓመት 3. ሶስትእናከዚያበላይጊዜያትበዓመት			
208	እንደትየመድኃኒትግዥይከናወናል? 1. በፕሮግራምመሠረት 2. እንደአስፈላጊነቱ 3. በፋርማሲክፍልጥያቄመሠረት 4. ሌሎች፣ይግለጹ _____			
209	ምንዓይነትየመድሃኒትግዥዘዴይጠቀማሉ? 1. ክፍትጨረታ 2. የተዘጋ / የተከለከለጨረታ 3. ፐርፎርማ (Performa method) 3. ቀጥታግዥ 4. ሌላከሆነይግለጹ_____			
210	መድኃኒትግዥንበተመለከተየክትትል(Monitoring system) ሥርዓትአለ?	አዎን	አይደለም	አይደለምካሉወደጥ/ቁጥር212 ይሂዱ
211	አዎንካሉ, የክትትልስርዓቱንይግለጽ			

	_____			
212	መድኃኒትማሻሻያበተመለከተየግምገማ(Evaluation system) ስርዓትአለ?	አዎን	አይደለም	አይደለምካሉወደጥ/ቁጥር214 ይሂዱ
213	አዎንካሉ፣የግምገማ(Evaluation system) ስርዓትአለ? _____			
214	በሆስፒታልዎውስጥየመድኃኒትማሻሻኮሚቴአለ?	አዎን	አይደለም	አይደለምካሉወደጥ/ቁጥር216 ይሂዱ
215	አዎንካሉ፣የሥራድርሻቸዉንይግለጹ ----------			
216	አስፈላጊበሆኑመድኃኒቶችዝርዝር(essential drug list) ያዉቃሉ?	አዎን	አይደለም	አይደለምካሉወደጥ/ቁጥር218 ይሂዱ
217	አዎንካሉ፣የመድኃኒትማሻአስፈላጊበሆኑመድኃኒቶችዝርዝር(based on essential drug list) ላይየተመሠረተነው?	አዎን	አይደለም	
218	በሆስፒታሎዎውስጥየመድኃኒትብክነትን (Expiry) እንዴትይከላከላሉ? 1. የመጀመሪያማብቂያየመጀመሪያመውጫ(First Expiry First Out) 2. የመጨረሻማብቂያየመጨረሻ (First In First Out) 3. በመጀመሪያበመጀመሪያ (First Expiry Last Out) 4. አላውቅም (I don't know)			
219	መድኃኒትስገዛከአንድዓመትበታችከሆነው(less than one year expiry date?) ጊዜጋርነው?	አዎን	አይደለም	
220	በሆስፒታልዎውስጥመድሃኒት expired አድርገዉያዉቃል?	አዎን	አይደለም	አይደለምካሉወደጥ/ቁጥር222 ይሂዱ
221	አዎንካሉ፣ምክንያቱንበደንብይግለጹ _____ _____ _____ _____			
222	የመድሃኒትግዜየሚያልፍበት (expiry date) ደረጃእንደትይገልጻሉ? አልፎአልፎ (rare) አንዳንደ(sometimes) በብዛት(often) ሁልግዜ(always)			

223	በሆስፒታልዎውስጥመድኃኒትከምችትአልቆ (stock out) ያዉቃል?	አዎን	አይደለም	አይደለምካሉወደጥ/ቁጥር226 ይሂዱ
224	መልስዎአዎከሆነ፣ምክንያቶችምንድንናቸው? 1. የመድኃኒትግዥበጤናመረጃላይየተመሠረተአይደለም 2. የባለሙያቸልተኝነት 3. ፋርማሲክፍልእናበጤናመረጃስርዓትመካከልየመተባበርእጥረት			
225	አዎንካሉጥ/ቁጥር 223፣መድኃኒትከምችትየማለቁን (stock out) ደረጃእንደትይገልጻሉ? አልፎአልፎ (rare) አንዳንደ(sometimes) በብዛት(often) ሁልጊዜ(always)			
226	ትክክለኛዉመድሃኒትእናህክምናመገልገያመሳሪያዎችበትክክለኛዉሰዓ ትይደርሳል?	አዎን	አይደለም	
227	የመድሃኒትግዥየመዘግይትሁኔታይኖራል?	አዎን	አይደለም	
228	በሆስፒታልዎውስጥአብዛኛውየመድኃኒትግዥከየትነው? 1. የመንግስትጠቅላላሻጮች (ኤጀንሲዎችለምሳሌ EFSA) 2. የግልጅምላሻጮች 3. ሁለቱም			
229	በመድኃኒትግዥንበተመለከተስልጠናተሳትፈዋል?	አዎን	አይደለም	
230	በሆስፒታልዎውስጥመደበኛየጤናመረጃንይጠቀማሉ?	አዎን	አይደለም	
231	በሆስፒታልዎውስጥመደበኛየጤናመረጃንለመድሃኒትግዥይጠቀማሉ ?	አዎን	አይደለም	
232	መልስዎአዎከሆነ፣መደበኛየጤናመረጃንለየትኛውውሳኔይጠቀማሉ? 1. top10 እና top 5 disease classification 2. የመድኃኒትግዥዕቅድማውጣት 3. ሌላካለይግለጹ_____			
233	አይደለምከሆነ፣መደበኛየጤናመረጃንላለመጠቀምተመሳሳይነትምንድ ነው? 1. የእውቀትማነስ 2. የችሎታማነስ 3. ተነሳሽነትአለመኖር 4. የባለሙያቸልተኝነት			
ክፍልሦስት-መደበኛየጤናመረጃአጠቃቀምንበተመለከተ				
Technical factors(ተክኒካልተጻዕኖ) በመግለጫዎችውስጥእንዴትእንደሚስማሙአስተያየትዎንማወቅእፈልጋለሁ::አስተያየትዎንበመጠቀምትክክለኛ ወይምየተሳሳተመልስየለም፣ 1- በጥብቅአለመስማማት፣ 2 አለመስማማት፣ 3-ይስማማሉወይምአይስማሙም፣ 4 - ይስማማሉ 5-በጥብቅይስማማሉ።				Remarks

		በጥብቅአልስማማ (strongly disagree)	አልስማማ(disagree)	አስማማሁ-ወይምአልስማማም(neutral)	እስማማለሁ(agree)	በጥብቅአስማማለሁ(strongly agree)	
	ሰራትኞች(ጤናባለሙያዎች)መደበኛየጤናመረጃን(Routine health management information)ውጤታማበሆነመንገድለመጠቀምበቂዕውቀትአላቸው	1	2	3	4	5	
	መደበኛየጤናመረጃ(Routine health management information) ተጠቃሚዎች(ጤናባለሙያዎች)ጥሩየመረጃቴክኖሎጂክህሎቶችአላቸዉ	1	2	3	4	5	
	የጤናመረጃ(Routine health information)አያያዝስርዓት (system design) ጥቅምላይየዋለውለተጠቃሚ(ጤናባለሙያዎች) ምቹነው	1	2	3	4	5	
	መደበኛየጤናመረጃ(Routine health management information)ስርዓትውስብስብነትለሠራተኞች(ጤናባለሙያዎች)ሥርዓቱንለመጠቀምቀላልያደርገዋል	1	2	3	4	5	
	ፋርማሲክፍልእናሌሎችክፍሎችከመደበኛየጤናመረጃመረጃ(Routine health management information)ስርዓትጋርየተቀናጀቅንጅትአለ	1	2	3	4	5	
	አስፈላጊውየጤናመረጃ(Routine health management information)በቀላሉማግኘትይቻላል	1	2	3	4	5	
	ከሆስፕታልሃላፍዎችጤናመረጃ / መዝገብአያያዝንበተመለከተለሰራተኞችግብረመልስይሰጣሉ	1	2	3	4	5	
	በመደበኛየጤናመረጃትንተናእናአጠቃቀምላይጤናሰራተኞችመካከልየችሎታእጥረትየለም	1	2	3	4	5	
	ሠራተኞችበመደበኛየጤናየመረጃማሰባሰቢያመሣሪያያአጠቃቀመላይገለጻይደረጋል	1	2	3	4	5	
	በሆስፒታልዎውስጥውሳኔአሰጣጥንበተመለከተመደበኛየጤናመረጃንለመጠቀምሲሞክሩምንሌሎችቴክኒካዊችግሮች (technical challenges) ያጋጥሟቸዋል _____ _____ __						
(II) የድርጅታዊምክንያቶች (Organizational factors)							
		በጥብቅአልስማማ (strongly disagree)	አልስማማ(disagree)	አስማሁ-ወይምአልስማማ(neutral)	እስማማለሁ(agree)	በጥብቅአስማማለሁ(strongly agree)	
	ጤንካራመደበኛየጤናመረጃጥንቅርቁጥጥርስርዓትአለ	1	2	3	4	5	
	ወቅታዊመደበኛየጤናመረጃሪፖርትለሚመለከተዉአካልበወቅቱይደርሳል	1	2	3	4	5	
	ከሃላፍዎችመደበኛየጤናመረጃላይወቅታዊግብረመልስይሰጣሉ	1	2	3	4	5	

	በሆስፒታልዎውስጥመደበኛየጤናመረጃአጠቃቀምእንደባህልተደርገዉይጠቀማሉ	1	2	3	4	5	
	ሆስፕታልሃላፍዎችበመደበኛየጤናመረጃሪፖርትትራትአጽኖትይሰጣል	1	2	3	4	5	
	ለመድሃኒትግዥመደበኛየጤናመረጃአጠቃቀምባህልእንድደረግያበረታታል	1	2	3	4	5	
	ሰራተኞችሀላፊነታቸውንያውቃሉጤናመረጃአጠቃቀምንለመድሃኒትግዥረገድ	1	2	3	4	5	
	ሠራተኞችበመረጃአያያዝእናአጠቃቀምረገድየሰለጠኑናቸው	1	2	3	4	5	
	ሆስፕታልሃላፍዎችለማቀድ፣ግቦችንለማቀናበርእናለመቆጣጠርመረጃዉንይተማመናሉ	1	2	3	4	5	
	ሆስፕታልሃላፍዎችበተቋሙውስጥያለውንየመረጃጥራትበመደበኛነትያረጋግጡ	1	2	3	4	5	
	ሆስፕታልሃላፍዎችእናየበላይአካላትበመደበኛጤናመረጃሪፖርትአማካኝነትለሠራተኞቹመደበኛግብረመልስይሰጣሉ	1	2	3	4	5	
	መድኃኒትግዥኮሚቴመደበኛየጤናመረጃንለመድኃኒትግዥይጠቀማሉ	1	2	3	4	5	
	በእርስዎአስተያየት፣በሆስፒታልዎውስጥበመድኃኒትግዥመደበኛየጤናመረጃአጠቃቀምንየሚነኩሌሎች ድርጅታዊሁኔታዎችምንድናቸው?_____ _____ _____						
	በመደበኛጤናመረጃላይየተመሠረተየመድኃኒትግዥእንድኖርሆስፒታሉአስፈላጊውመረጃእንዲኖረውእን ዴትይደግፋል? _____ _____						
	በመድኃኒትግዥወቅትየመደበኛጤናመረጃአስፈላጊነትእናአጠቃቀምንበተመለከተሆስፒታልዎእንዴትይ ደግፋል? _____ _____						
	ሆስፒታልዎ; ሠራተኞቹንመደበኛየጤናመረጃለውሳኔአሰጣጥእንድጠቀሙበሥልጠናእንዴትይደግፋል? _____ _____						
III. Behavioral factors (የስነምግባርምክንያቶች):							
		በጥብቅአልስማማ (strongly disagree)	አልስማማ(disagree)	እስማማሉወይምአልስማማም(neutral)	እስማማሉ(agree)	በጥብቅአስማማሉ(strongly agree)	
	ሆስፕታልሃላፍዎችለመድኃኒትግዥየሆስፕታሉንመደበኛየጤናመረጃለመጠቀምበራስ የመተማመንባህሪአላቸዉ	1	2	3	4	5	
	የሆስፕታልሰራተኞችመደበኛየጤናመረጃንለመድኃኒትግዥዎችለመጠቀምይተማመና ሉ						

	ለሠራተኞችመደበኛየጤናመረጃእንድጠቀሙየሚያበረታቱማበረታቻዎችይደረጋሉ						
	አላስፈላጊየመድኃኒትግዥወጪንለመቆጠብመደበኛየጤናመረጃሰራተኞችእንድጠቀሙሆስፕታሉያስገድዳል						
	መረጃመሰብሰብየመድኃኒትግዥአፈፃፀምንለማቀድእናለመቆጣጠርእንደሆነእንድሰማኝያደርገኛል						
	የመድኃኒትግዥኮሚቴመደበኛየጤናመረጃዎችንለመድሃኒትግዥይጠቀማሉ						
	ለመድኃኒትግዥውሳኔአሰጣጥመደበኛየጤናመረጃአጠቃቀምሚናእናሀላፊነትእንድሰማኝያደርገኛል						
	ሌሎችየባህሪሁኔታዎችንይጥቀሱ (መደበኛየጤናመረጃየመድኃኒትግዥውጤታማነትንበተመለከተ? _____ _____						
	የመድኃኒትግዥውሳኔመሠረትየሚያደረገዉዓመታዊየመድሃኒትበጀትነዉ						
	በመደበኛየጤናመረጃላይበመመርኮዝመድኃኒትግዥዎችእንድፈጸምየአስፈፃሚ (የሆስፕታልሃላፍዎች)አካላትግፍትያደርጋሉ						

1	የመድሃኒትግዥዉጠታማነዉብለዉ(effective) ያስባሉ?	አዎን	አይደለም	አይደለምካሉወደ ጥ/ቁጥር 3ይሂዱ
2	አዎንካሉ፤እንደትይገመግሙታልዉጠታማነቱን(effectiveness)? _____ _____			
3	የመድሃኒትግዥዉጠታማነዉብለዉ(effeciency) ያስባሉ?	አዎን	አይደለም	
4	አዎንካሉ፤እንደትይገመግሙታልዉጠታማነቱን(efficiency)? _____ _____ _____			

Annex 3 Assurance of project principal investigator

DECLARATION

I declare that the thesis entitled "assessment of routine health information utilization for pharmaceutical procurement in public hospitals" is my original work and it has not been presented for a second degree in Addis Ababa University and any other university. I also declare that all the sources of materials used for this thesis have been fully acknowledged.

Name of student: Bereket Bassa Ayka

Date of submission

Signature _____

Place Arba Minch

This thesis has been submitted for examination with my approval as a university advisor

Name Mr Gashaye Asrat (PhD fellow, MPH)

Signature _____