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# Public Pharmaceuticals Procurement Practice & Efficiency in Ethiopia in Accordance With the Federal Public Procurement Guidelines/March 2015

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# Outlines

- 👉 **Operational definitions**
- 👉 **Introduction**
- 👉 **Materials and Methods**
- 👉 **Result and discussion**
- 👉 **Conclusion**
- 👉 **Recommendation**
- 👉 **Acknowledgements**



# Introduction

- Worldwide, public procurement (PP) has become an issue of public attention and debate
- It has been subjected to reforms, restructuring, rules and regulations
- PP is the acquisition of goods, services and works by a procuring entity using public funds  
**(World Bank, 1999)**



## Cont...

- PP is a key tool to the overall achievements of development goals such as
- Reducing poverty and providing health, infrastructure, education and other services (**WTO, 2003**)
- PP represents 18.42% of the world GDP

## Cont...

- In developing countries, also accounts for a high proportion of total expenditure
- For example, it accounts 60 % in Kenya, 58% in Angola, 40% in Malawi and 70% of Uganda's public spending (**OECD, 2011**)
- In Ethiopia out of the total public spending, more than 60 percent goes to procuring public goods and services which is very high when compared with a global average of 12-20 % ( **Tesfahun Y, 2011**)

## Cont...

- Pharmaceuticals represent one of the largest components of health expenditure
- In developing countries, pharmaceutical expenditures and drug procurements account for 20–50% of public health budgets, which is the largest health expenditure after staff salaries (**Vian T, 2008**)



## Cont...

- In Ethiopia public pharmaceuticals procurement capacity in 2007/2008 was 624 million birr and reaching 6.7 billion birr in 2012/2013 (**PFSA, 2014**)
- An efficient procurement process ensures the availability of the right drugs in the right quantities, available at the right time, for the right patient and at reasonable prices, and at recognizable standards of quality (**WHO, 2007**)

## Cont...

- Generally in the world particularly in developing and transition countries, inefficiency in PP has negatively impacted the rate and quality of progress in realizing the objectives of national development (**World Bank, 2007**)
- In Kenya, the inefficiency and incompetence of overall administration and management of procurement function in many public institutions contributes to loss of over 50 million Kenyan shilling annually (**PPOA, 2011**)

## Cont...

- Experiences from Kenya and Uganda also notified that strict adherence to public procurement regulations, awarding tender to the lowest bidder resulted wide stock-outs of anti-malarial drug in part due to the company's inability to supply the order in full and on time (**Ameyaw C, 2012**)
- Inflexible and bureaucratic systems of procurement contributes to inefficient public procurement which leads to unacceptable contract delays, increased costs and lack of fair competition



## Cont...

- All of which create the perception in the population at large, that public expenditure is slow, ineffective, expensive and often corrupt (**John Karanja Ngugi and Hildah W. Mugo, 2011**)

## Cont...

- Studies showed that as the demand for medicines and health supplies reflect changes in population health and environmental conditions, there is a great need for flexibility and responsiveness in procurement and contracting (**Arney L. & Yadav P, 2014**)
- In Ethiopia to ensure community's access to the essential medicines, procuring Pharmaceuticals in bulk, decreasing procurement lead time from 240 days to 120 days was targeted as strategic objective for pharmaceutical Supply and Services (**HSDP IV, 2010/11-2014/15**)

## Cont...

- But the public procurement guideline puts estimated lead time for goods for ICB to be 175 to 441 days and for NCB the estimated lead time for goods is 91 to 259 days ( **PPA manual, 2011**) which does not conform with the health sectors target
- Reports showed that around 55 % of all procurement in PFSA done by the year 2010/11 is by RB and only 18 % by open tender (**ihp+/2014**)
- PFSA also is not adhering the financial thresholds of the regulation

## Cont...

- Considering the above bottlenecks to the PPPP, no research was done on PP legal factors associated with public pharmaceutical procurement efficiency in Ethiopia

# Materials and Methods

## Study Area and period

- The study was carried out at the **Central PFSA** and **PPA** which are located in the capital of Ethiopia, Addis Ababa
- **The PFSA;**
  - ☞ An agency under FMoH replaced PHARMID in late 2007 by proclamation No 553/2007
  - ☞ The leading organization for managing the health care supply chain of the country (**PFSA, 2014**)
  - ☞ Distribute pharmaceuticals to eleven hubs





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## Cont...

### ➤ PPA;

Has been established under proclamation № 649/2009

Accountable to MoFED

Mandated for advising, regulating and monitoring the federal government on all PP and property administration *policies, principles, implementation and practices* (Tesfahun Y, 2011)

## Cont...

- The study was conducted from March 1 -30/ 2015

## Study Design

- Cross sectional study design with both qualitative and quantitative data collection methods were used

# Population

## Source population

- All workers working in central PFSA and PPA of Ethiopia
- All procurement documents of RDF pharmaceuticals at PFSA in 2006/07 EFY (from July 1/2005-June 30/2006 E.C)

## Study population

- All professional workers who are directly involved in procurement practices in PFSA and procurement regulation in PPA
- Sampled individuals in PFSA and PPA who are mid level and top level managers for in-depth interview
- Sampled procurement documents of RDF pharmaceuticals at PFSA in 2006/07 EFY



# Inclusion Criteria for Quantitative Study

- Procurement professional workers in the PFSA and PPA directly involved in the procurement practices and regulations and
- Who worked at least 1 year before the data collection time
- Randomly selected finished procurement documents for observation were used



# Inclusion Criteria for Qualitative Study

- Information rich key informants (top and mid level managers in PFSA and PPA)

## **Exclusion criteria**

- Workers at PFSA and PPA who were not present at the time of data collection
- Workers who have less than 1 year experience in the area at the time of data collection

## Cont...

- Workers who didn't participate directly in public procurement practice and regulation were excluded from the study
- Non professional worker with in the public procurement practice and regulation were not included in the study
- Procurement documents with unfinished procurement process were not considered

# Sample Size Determination

## ➤ For quantitative study

- All individuals who fulfilled the inclusion criteria were included in the study and a total of **61** individuals were participated in the quantitative study
- From a total of **154** procurement documents, 30% were taken randomly, finally **46** procurement documents were observed

## For Qualitative Study

- Purposively 8 Individuals were selected to participate in to the in-depth interview 4 persons from PFSA and 4 persons from PPA



# Sampling Procedure

## ➤ For quantitative study

- Initially, census was conducted since the population is not large
- Profile of all workers was taken from each agency human resource directorates,
- Workers were categorized by the departments they work, their work experience and their job role
- Finally 24 workers from PFSA and 41 workers from PPA were selected giving

## Cont...

- Pretest of the questionnaire was carried out on 5% of the study population that is 4 respondents which resulted 61 study participants for the study
- Document review was conducted retrospectively for 2006/07 EFY RDF pharmaceutical procurement documents at PFSA
- Documents were selected randomly by lottery method

## For Qualitative Study

- For the in depth interview, purposive sampling technique were used to identify the participants
- Eight top and mid level managers in PFSA and PPA were involved
- Before conducting the discussion, explanation and elaboration of the need to do the in-depth interview was made

# Variables

- **Dependent Variable** objection'
- ❖ *Procurement efficiency:* ❖ *Internal environment:*
  - ↳ Delivery precision
  - ↳ Flexibility
  - ↳ Lead time
- **Independent Variables**
  - ❖ *Public Procurement Regulations:*
    - ➔ Procurement methods
    - ➔ Financial thresholds
    - ➔ Delay in passing 'no-
  - ↳ Nature of pharmaceuticals
  - ↳ Delay in passing the budget
  - ↳ Speed (timeliness) of procurement

# Instrument and Data Collection Procedure

## ❖ For Quantitative Study

- **A structured, pre-tested and self-administrated questionnaire-** was used for quantitative data collection
- The questionnaire were adapted from OECD/DAC MAPS, the WB/CPAR and literatures done on supply chain performance measurements **(OECD/MAPS, 2006 & Kess P, 2012, & Pettersson A, 2008)**

# Cont...

- **Observation-** observational checklist to assess public pharmaceuticals procurement practice at PFSA
- **Interview guide-** for the in-depth interview
- **Data collection facilitators and supervisor**
  - ✓ Two data collection facilitators and 1 supervisor
  - ✓ Two days orientation by PI on
    - Objectives of the study,
    - The contents of the questionnaire,
    - Issues related to the confidentiality of the responses and the rights of respondents

# Pretest

- Pretest of the questionnaire was carried out on 5% of workers at PFSA and PPA who are included in the study, and then they were excluded at the time of the data collection
- Cronbanch' s alpha reliability test was done
- The result of the pretest was discussed and some correction and changes like: Ambiguous questions, logic and sequences were revised before the questionnaire was finalized



# Data Processing, Analysis and Presentation

- **For Quantitative data**

- Epidata 3.1

- SPSS software, version 21.0

- Bivariate and

- Multivariate regression analysis

logistic

- Graphs and tables



## For Qualitative Data

- The tape-recorded qualitative data was translated to English and transcribed.
- The main points raised from the in-depth interview were coded based on the in-depth guide and categorized under selected themes, finally summarized manually
- This study used a thematic content analysis
- The results were presented in narratives for supporting the quantitative results.



# Findings

- **General information about respondents for quantitative study**
  - Out of 61 study participants, 60 (98%) completely filled and returned the questionnaire
  - Out of the 60 respondents, 38 (63.3%) were from PPA and 22 (36.7%) were from PFSA



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# Public Pharmaceuticals Procurement Practices

- All study participants 60 (100%) confirmed for the presence procurement plan of PFSA
- Nearly half of respondents 25 (41.7%) reported that the procurement plan published on PFSA's website, 25 (41.7%) reported as the plan not published on PFSA's website and 10 (16.7%) don't know



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- Regarding the conformance of the procurement plan of PFSA with the PPA's format, 20 (33.3%) agrees with its conformance, 19 (31.7%) didn't agree with its conformance,
- From the document review the procurement plan for the year 2006/07 EFY exist at PFSA having
  - List of products to be procured, Source of budget as RDF and programs, Estimated budget of the procurement in birr and USD and
  - Estimated time to procure
  - But the plan had no selected procurement method and procurement type to be used as compared with PPA format



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- Fifty eight (96.7%) of study participants reported that PFSA used direct and emergency procurement methods
- The document review showed, from the randomly selected 46 procurement documents, 8 (17.39%) were by ICB, 21(45.65%) by NCB, 13 (28.26%) by restricted tender and 4 (8.7%) by direct tender



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- Majority of study participants 54 (90%) reported that PFSA has tender committee, tender opening committee, tender evaluation committee and tender endorsing committee,
- All study participants confirmed absence of inspection and acceptance committee and disposal committee at PFSA



# Cont...

- About half 27 (45%) of respondents reported that there is high conflict between PPA regulatory guidelines and procurement functions of PFSA
- Ten (19.2%) of participants explained that approved procurement methods as source of conflict and 19 (36.5%) financial thresholds and
- 23 (44.2%) reported, both procurement methods and financial thresholds as source of conflict



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# Public Pharmaceuticals Procurement Efficiency

- ❖ Nearly half of respondents 27 (45%) agree and 1 (1.7%) strongly disagree on the delivery precision of pharmaceuticals in terms of quantity by PFSA
- ❖ From 46 procurement documents reviewed, 42 (91.3%) of the documents have the same quantity of pharmaceuticals in the purchase order and packing list





# Cont...

- ❖ Regarding flexibility of public procurement system to meet any emergency situations in health sector, 22 (36.7%) strongly disagree and 6 (10%) strongly agree
- ❖ Concerning lead time of pharmaceuticals procurement, 42 (70%) disagreed on lead time less than 120 days



# Table 3: Efficiency of Pharmaceuticals Procurement Practices, March 2015

Variables (n=60)	Strongly disagree	Disagree	Agree	Strongly agree
There is Delivery precision of pharmaceuticals by PFSA in terms of quantity	4 (6.7%)	18 (30%)	25 (41.7%)	13(21.7%)
Public procurement system is flexible to meet any emergency situations in the health sector	27 (45%)	17(28.3%)	10 (16.7%)	6 (10%)
The average lead time for pharmaceuticals at PFSA is less than 120 days	10(16.7%)	37(61.7%)	6 (10%)	7(11.7%)



# Summary Statistics of Efficiency Score (table 4)

Efficiency	Observed			Expected (n=60)					
	Min	Max	Range	Min	Max	Range	Mean	SD	Cro Alph
	3	15	3-15	4	15	4-15	7.98	3.034	0.758

**Table 5: Factors affecting public pharmaceuticals procurement efficiency, March 2015**

Variables (n=60)		Procurement efficiency		COR (95%CI)
		Inefficient	Efficient	
Poor technical expertise of procurement personnel	Yes	33 (82.5%)	7 (17.5%)	8.75 (2.56, 29.9)*
	No	7 (35%)	13 (65%)	
Resistance to change by procurement personnel	Yes	16 (69.6%)	7 (30.4%)	1.24 (0.4, 3.78)
	No	24 (64.9%)	13 (35.1%)	
Interference by elected or appointed political officers	Yes	21 (72.4%)	8 (27.6%)	1.65 (0.56, 4.9)
	No	19 (61.3%)	12 (38.7%)	
Interferences by contractors or bidders	Yes	17 (70.8%)	7 (29.2%)	1.37 (0.45, 4.18)
	No	23 (63.9%)	13 (36.1%)	
Delays in passing the budget	Yes	25 (62.5%)	15 (37.5%)	0.56 (0.16, 1.84)
	No	15 (75%)	5 (25%)	
Delays in securing 'no-objection' from PPA	Yes	15 (65.2%)	8 (34.8%)	1.1 (0.37, 3.34)
	No	25 (67.6%)	12 (32.4%)	
Unsuitable procurement methods of PPA for health products	Yes	35 (87.5%)	5 (12.5%)	21 (5.3, 83.4)*
	No	5 (25%)	15 (75%)	
Approved financial thresholds of PPA for health products	Low	36 (87.8%)	5 (12.2%)	27 (6.4, 114)*
	High	4 (21.1%)	15 (78.9%)	
There is Considering Nature of pharmaceuticals by the regulation	Yes	33 (80.5%)	8 (19.5%)	7 (2.1, 23.7)*
	No	7 (36.8%)	12 (63.2%)	
The regulation has reduced the speed with which pharmaceuticals are procured	Yes	29 (85.3%)	5 (14.7%)	7.9 (2.3, 27)*
	No	11 (42.3%)	15 (57.7%)	



# Cont...



- ➡ Poor technical expertise of procurement personnel,
- ➡ Approved procurement methods of PPA for health products,
- ➡ Approved financial thresholds of PPA for health products,
- ➡ Considering nature of pharmaceuticals by the regulation, and
- ➡ The speed with which pharmaceuticals procured were a candidate for multiple logistics regression at  $p\text{-value} < 0.25$  following binary logistic regression



# Cont...

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- Finally, approved financial thresholds of PPA and considering nature of pharmaceuticals by the regulation were significantly associated with the odds of public pharmaceutical procurement efficiency at **p-value < 0.05** following back ward step wise multiple logistic regressions



# The final model for factors affecting public pharmaceuticals procurement efficiency, March

2015

Variables (n=60)		Procurement efficiency		COR(95%CI )	AOR (95%CI)
		Inefficient	Efficient		
Approved financial thresholds of PPA for health products	Low	36 (87.8%)	5 (12.2%)	27 (6.4, 114)*	16.9 (3.3,86.8)**
	High	4 (21.1%)	15 (78.9%)		
Considering Nature of pharmaceuticals by the regulation	Yes	33 (80.5%)	8 (19.5%)	7 (2.1, 23.7)*	6 (1.2, 31)**
	No	7 (36.8%)	12 (63.2%)		



# Qualitative study

- ➔ The in-depth interview was conducted with 8 KIs
- ➔ Three of them were top level managers and the rest were mid level managers
- ➔ Regarding their educational qualifications 3 of them were post graduates and 5 of the participants were first degree holders





# The financial thresholds in the regulation

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➔ The approved financial thresholds in the PPA regulations are low for pharmaceuticals procurement to operate efficiently. What A 32 years old mid level manager from one of the agencies stated confirms this:

*'...Financial thresholds for different goods should not be equal. Practically, Even for pharmaceuticals majority are out of thresholds and few are within the threshold. Another scenario is some products are urgently needed, but its total price goes ICB thresholds. At this time the procurement personnel will suffer a dilemma of ignoring the rule or urgency.'* (A 32 years old mid level manager from one of the agencies)



# Nature of Pharmaceuticals and PR

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*‘...Pharmaceuticals are not ordinary items. Since they have great impact in an individual’s health status, especial care should be given when they are selected, procured, stored and distributed. If attention is not given at policy level, it is hard to meet our mission of serving customers according their needs and expectation ...’ (A 42 years old, top level manager from one of the agencies)*



# Conclusion and Recommendation

- ☞ This study concludes that the public procurement regulation affects the public pharmaceuticals procurement efficiency at PFSA
- ☞ In this study approved low financial thresholds of the PPA regulation and lack of consideration to nature of pharmaceuticals affect efficient public pharmaceutical procurement practices



# Cont...

- The in-depth interview study also indicated that the financial thresholds of the public procurement regulation are too low for pharmaceuticals and one major source of inefficiency in the public pharmaceutical procurement practices



# Cont...



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- ➔ Achieving efficiency in public procurement requires a lot of dedication and collaborative efforts from all stakeholders
- ➔ Accordingly this study recommends:
  - **For PPA & MoFED;**
    - 🖥️ Should introduce a comprehensive and sector-specific procurement manual for pharmaceuticals, with a concise set of clear rules and guidelines



# Cont...

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-  Should also perform threshold matrix for different procuring entities separately based on the type and cost of products they procure, core missions, values or existence of organizations & the annual procurement expenditure of procuring entities and PFSA should be treated accordingly
-  Should revise the financial thresholds for different procurement methods regularly based on national and international market conditions of pharmaceuticals and international best practices



# Cont...

- **For PFSA, FMOH & PFSA Board of Directors;**
  - 📄 Should influence and convince the PPA and other stakeholders to consider the special concern of pharmaceuticals in the actual procurement practice
  - 📄 Should publish and disclose the latest market values of drugs on a regular basis and inform policy makers in public procurement
  - 📄 Should encourage further studies to be conducted in the area

• ***I*** ***THANK***  
***YOU!!!***