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# Applying the Health Systems Technical Efficiency Guide in Bauchi State: Final Report

*This module was prepared by the Bauchi State Ministry of Health and the Health Finance and Governance project.*

*September 2018*

# About the Health Finance and Governance Project

The Health Finance and Governance (HFG) project works to address some of the greatest challenges facing health systems today. Drawing on the latest research, the project implements strategies to help countries increase their domestic resources for health, manage those precious resources more effectively, and make wise purchasing decisions. The project also assists countries in developing robust governance systems to ensure that financial investments for health achieve their intended results.

With activities in more than 40 countries, HFG collaborates with health stakeholders to protect families from catastrophic health care costs, expand access to priority services—such as maternal and child health care—and ensure equitable population coverage through:

- Improving financing by mobilizing domestic resources, reducing financial barriers, expanding health insurance, and implementing provider payment systems;
- Enhancing governance for better health system management and greater accountability and transparency;
- Improving management and operations systems to advance the delivery and effectiveness of health care, for example, through mobile money and public financial management; and
- Advancing techniques to measure progress in health systems performance, especially around universal health coverage.

The HFG project (2012–2018) is funded by the U.S. Agency for International Development (USAID) and is led by Abt Associates in collaboration with Avenir Health, Broad Branch Associates, Development Alternatives Inc., the Johns Hopkins Bloomberg School of Public Health, Results for Development Institute, RTI International, and Training Resources Group, Inc. The project is funded under USAID cooperative agreement AID-OAA-A-12-00080.

To learn more, visit www.hfgproject.org

# About the Technical Efficiency Guide

Health system stakeholders in low- and middle-income countries are exploring ways to achieve more with available resources, and realize savings that can be used to fill the gap in resources needed to expand effective health coverage to all. Where other guides and tools focus on improving allocative efficiency ("doing the right things"), this guide focuses on technical efficiency ("doing things right"). It is intended to **help diagnose and address technical inefficiencies** across health systems.

# Contents

# Acknowledgements

The application of the Health Systems Technical Efficiency Guide in Bauchi State was achieved through the leadership of the following individuals.

- Dr. Zuwaira Ibrahim Hassan, Honorable Commissioner of the Ministry of Health, Bauchi
- Pharm Abdulkadir Galadi, Director, Pharmaceutical Services, Hospitals Management Board, Bauchi
- Pharm Ahmed Abdulkadir, MD, Bauchi State Drugs and Medical Consumables Management Agency
- Pharm Umar Gumau, Coordinator, Bauchi State Logistics Management Coordinating Unit
- Ibrahim Angale, HFG

Sharon Nakhimovsky and Elaine Baruwa provided remote support from the HFG project.

# Acronyms

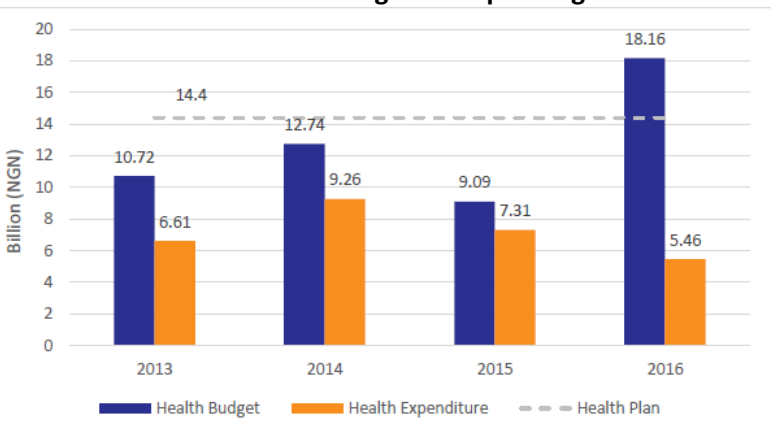
| | |
|---|---|
| **BSG** | Bauchi State Government |
| **BSMOH** | Bauchi State Ministry of Health |
| **DMMA** | Drugs and Medical Consumables Management Agency |
| **DPS** | Director Pharmaceutical Services |
| **HFG** | Health Finance and Governance |
| **NAFDAC** | National Agency for Food and Drug Administration and Control |
| **TEG** | Technical Efficiency Guide |
| **WHO** | World Health Organization |

# 1. Introduction

Health systems in low- and middle-income countries are facing pressure to increase funding from domestic sources, and use those resources more efficiently. Factors driving this pressure include the uncertainty of donor funding, continuing high levels of poverty, and growing demand for health care, due to population growth, technological innovation, and additional needs from emerging and new disease areas. In Nigeria, governments at federal and state levels are responding to this pressure by making commitments to universal health coverage as a way to improve equity in access to quality health care in a sustainable way. In Bauchi State, the Bauchi State Government (BSG) has undertaken a series of steps to reform the state health system in accordance with its vision and mission statement, "A healthy society free from communicable and non-communicable diseases.[1]

However, as of 2018, BSG has not been spending enough to meet its populations' health needs. As Figure 1 shows, BSG allocated an increasing percentage of its budget to health between 2013 and 2016; however, actual spending has decreased and has not met the amount needed, as specified in the State Health Development Plan (2010–2015).[2] Health outcomes remain far below targets: infant mortality rate (deaths per 1,000 live births) was 81 in Bauchi State—much higher than the average of 70 in Nigeria and 62 in Nigeria's North-East Region.[3]

**Figure 1. Trends in Government Health Budget and Spending in Bauchi State**[4]




To address this problem, BSG and its local and external partners are pursuing multiple reforms to make more progress towards UHC. Reforms are not limited to efforts to increase revenue, but also include efforts to improve efficiency. In this context, HFG (2012–2018) proposed using its Health Systems Technical Efficiency Guide (TEG) to the Bauchi State Ministry of Health (BSMOH). Using the TEG could help BSMOH identify areas of efficiency loss and next steps to address them. BSMOH was interested and went through the exercise in the summer of 2018. This report documents this exercise. It begins with an overview of the TEG approach and methods before presenting on overview of the process, including next steps. Detailed findings from the exercise are presented in Annex B and in the TEG Excel Tool.

[1] Garkuwa, Lafiya. n.d. BSG Five-Point Agenda on Health.

[2] HFG.2018. *Bauchi State 2012-2016 Public Expenditure Review.* Bethesda, MD: Health Finance & Governance Project, Abt Associates.

[3] Multiple Indicator Cluster Survey 2016–2017 in HFG 2018.

[4] HFG 2018.

# 2. Overview of TEG Approach and Methods

*The material in this section summarizes the Health Systems Technical Efficiency Guide Frequently Asked Questions (FAQ). Please see this document for more information. It is available through the TEG website at https://www.hfgproject.org/technical-efficiency-guide/.*

The TEG is intended to help ministries of health look across the health system and prioritize areas of technical inefficiency that are likely to yield efficiency gains in the short term (1–5 years). It helps users:

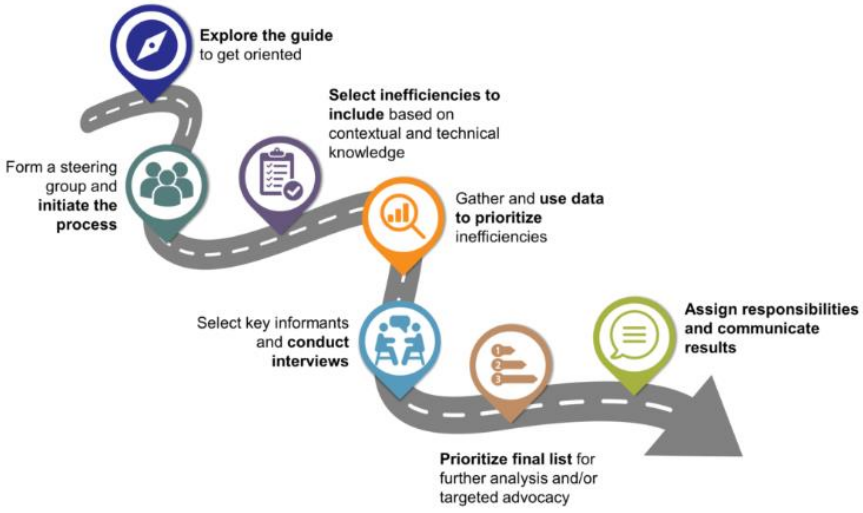
- Understand technical inefficiency through a health systems lens and identify multiple entry points for addressing complex and intersecting sources of inefficiency
- Lead a rapid, evidence-informed, multi-stakeholder assessment process
- Prioritize areas for targeted quantitative analyses needed to design and implement solutions
- Overcome technical or political paralysis, and build organizational commitment for addressing technical inefficiencies in prioritized areas

As its name implies, the TEG focuses on **technical efficiency:** achieving better health outcomes using as few inputs, at as low a price as possible, in the production process. It complements the many existing health system resources that help low- and middle-income country governments improve **allocative efficiency:** investing in a mix of health care goods and services that reflects the preferences of the populations.

The TEG is organized into four **clusters**: Service Delivery, Health Workforce, Pharmaceutical Products, and Financing and Governance. These clusters roughly align with the World Health Organization (WHO) health system building blocks, with information systems treated as a cross-cutting issue. These clusters are broken down into 14 **modules**, and 34 **inefficiencies**, each of which aligns with a technical inefficiency common in low- and middle-income countries and its sources. This list was compiled through extensive literature review and expert consultation.

The TEG helps facilitate a flexible, evidence-informed prioritization process that extends across the health system. It has seven steps, depicted in Figure 2.

**Figure 2. Steps in Applying the Health System TEG**



# 3. Process of Applying the TEG in Bauchi State

This section documents the process that the BSMOH and other health system stakeholders went through as they used the TEG to diagnose and prioritize technical inefficiencies at the health system level.

## *Steps 1-3: Exploring the guide, initiating the process, and selecting inefficiencies to include*

As the HFG project was finalizing the Health System TEG in spring 2018, HFG representatives in Bauchi State reached out to BSMOH to gauge interest in using it. BSMOH responded enthusiastically. With HFG and WHO representatives in Bauchi State, BSMOH began to consider what scope might be most useful, and how the process might play a role in their policymaking process. After reviewing the inefficiencies covered in the TEG, BSMOH selected three of the four modules in the Pharmaceutical Products cluster:

- 3.1 Suboptimal warehousing, inventory management, and transport
- 3.2 Poor quantification and procurement processes
- 3.3 Weak regulatory systems (including both ineffective regulatory systems and substandard, falsified, and unregistered pharmaceutical products)

There were several strong reasons for selecting the inefficiencies in these three modules. Along with the health workforce (cluster 2), pharmaceutical products account for a substantial portion of health spending, and thus represent potential to realize savings through efficiency improvements. WHO was already working with BSMOH on strengthening multiple issues in the state's health workforce; given these ongoing interventions, it was clearly not the right time to use the TEG to help stakeholders prioritize areas for investment and strengthening across health workforce areas. Bauchi State's pharmaceutical systems, however, seemed ideal: the BSMOH and other health agencies were already committed to strengthening this area, but recognized the need to conduct an overall assessment that could serve as a baseline for next steps and coordinate all state and donor activity in this area. The BSMOH decided to exclude module 3.4 on irrational medicines selection and inappropriate use, due to concerns that data would not be available to inform decisions.

Once they had selected modules 3.1, 3.2, and 3.3, in April 2018, the BSMOH established a Steering Committee. It was not a new group, but rather the existing Health Commodities Logistics Working Group. This group is composed of state program coordinators from malaria, tuberculosis and HIV, family planning, and essential drugs and lifesaving commodities programs. Steering Committee members were interested in leading this exercise under the leadership of the Managing Director of the State Drugs and Medical Consumable Management Agency. In addition, three people (hereafter called the "Technical Team") were tasked with leading data collection and synthesis for each of the three modules.

HFG worked with the Steering Committee to facilitate a Kick-off Workshop on May 8, 2018. Workshop objectives were:

- Ensure clarity in understanding the purpose of using the TEG in Bauchi State.
- Validate decisions scope and approach in Bauchi State.
- Familiarize steering committee members with top inefficiencies (pharmaceutical-specific) and their sources.
- Agree on steps and timeline for completing process.

This workshop achieved its objectives. Participants reached consensus on the importance of conducting a rapid, high-level efficiency assessment of the pharmaceutical systems in Bauchi State using the TEG. While participants agreed that focusing on pharmaceutical systems made sense for spring and summer of 2018, they also expressed interest in using the TEG across the inefficiencies in the other three clusters as well (health workforce, service delivery, and financing and governance). They identified 17 interview respondents who could provide information on one or more of the inefficiencies included in the TEG exercise. Participants also agreed to a timeline for implementing the next steps in the exercise. See Annex A for more information.

Compared to guidance on using the TEG on the TEG website, and in the FAQ, completing these steps in Bauchi State differed in several ways. First, stakeholders selected the modules before the Kick-Off Workshop, and then used the Kick-Off Workshop to validate the decision. In contrast, the website and FAQ advise using the workshop to prioritize. The approach in Bauchi State was efficient and achieved strong consensus from participants. Secondly, while the website and FAQ advise setting the scope by inefficiency, and not by module, BSMOH selected a cluster and specific modules within it. This approach became a straightforward way to select related inefficiencies that could be addressed well in combination with each other.

## *Steps 4-5: Gather and use data to prioritize, and select key informants and conduct interviews*

As mentioned above, three people composed the Technical Team and were assigned the responsibility for leading data collection and synthesis for each of the three modules. They first applied for and received Institutional Review Board approval from the Health Research Ethical Committee to conduct interviews with respondents. Part of the consent speech included approval for the Technical Team and Steering Committee to use and publicize the information and perspectives shared in the interviews. This step is not included in the FAQ and website, because the assessment is not considered "research," but in many contexts, as was the case in Bauchi State, getting formal approval and consent will also be important.

Data collection (indicators and interviews) was conducted between May and July, 2018. It took longer than originally expected, because Technical Team members had some conflicting work responsibilities, and also their availability did not always align with respondents' availability. In August 2018, Technical Team members synthesized the data they had gathered into the TEG Excel Tool, in preparation for validation and prioritization with the Steering Committee and other health system stakeholders participating in the exercise.

**Indicator data**

Ultimately, 25 indicators were selected to help understand the sources of technical inefficiency and the magnitude of loss coming from each one. This number exceeded the recommended number in the FAQ and on the website (the recommendation was one per inefficiency, and there are six inefficiencies across the three modules included in this exercise in Bauchi State). However, the increased number made sense, because the data were available, documented different aspects of the issue, and were identified by respondents as being important.

Indicator selection was not a one-off event but rather an iterative process. Specifically, it changed as people responsible for the modules were able to interview more people, since respondents had strong perspectives and appropriate data to share.

Although it was deleted in the final draft of the TEG Excel Tool, participants found the Budget Line Item column useful. As presented in Table 1, this column helps determine existing funding to support improvement and investment into the inefficiency identified.

**Table 1. Excerpt from Tab 1 of the Bauchi State TEG Excel Tool**

| Inefficiency | Indicator | Associated Budget Lines | Calculations and Interpretations Based on Comparisons to Benchmarks or Targets |
|---|---|---|---|
| **Poor warehousing and transport systems** | Product losses due to size and volume of stock, which could lead to expired products, damage, and theft per value received, at central and/or regional medical stores (percentage and number). Pilferages due to theft. | There is budgetary allocation for Central Medical Stores maintenance and operations, but releases are sub-optimal. | Product loss: 20% (Drugs and Medical Consumables Management Agency (***DMMA)***)<br>Theft: 200,000 naira in 2017 (per Bauchi State Drugs Management Agency)<br>National target product loss: <25 (national strategic plan) |
| **Suboptimal transport systems** | Average transportation cost per km/volume/weight | Only one program gets full funding (allocation and releases) of the direct vaccine deliveries; it is managed by third-party logisticians. | Transportation cost per km in Bauchi is 24 naira/km (from BSPHCDA PHC-MOU Team Analysis), as against the national recommendation of 50 naira/km. |

**Respondent interviews**

The technical team held 11 interviews with respondents representing a range of relevant institutions. Questionnaires were adapted for each respondent. They included questions to diagnose the source of the inefficiencies, and to gather ideas about possible interventions that could improve efficiency. Broadly, these questions included the following:

1. What are the sources of these technical inefficiencies?
2. Which sources are the most pressing to address? What has already been done to address them? By whom?
3. What additional work or new strategies are still needed to address these concerns? Who is responsible for implementing them?
4. Are there existing plans to implement these next steps or additional work or new strategies?
5. Is the political environment conducive to mobilizing support for advancing work in this area? Are there other barriers to action?

**Synthesis**

All interview and indicator data were synthesized into the TEG Excel tool, which the Technical Team and Steering Committee found to be a useful way to consolidate and review all of the information gathered and facilitate the prioritization process.

## *Steps 6-7: Validate findings, prioritize inefficiencies, and assign responsibility for next steps*

A final Validation and Prioritization Workshop for the TEG in Bauchi State was held on September 11, 2018. Stakeholders in attendance are listed in Annex B.

A significant portion of the time was spent validating results—correcting the content of the findings in the TEG Excel Tool and simplifying and adjusting the presentation so that the tool could be most useful to the stakeholders' needs. Annex B also shares the PowerPoint presentation with edits made during the workshop. Workshop participants also ranked inefficiencies identified in order of importance (Table 2). Ultimately, the regulation and quality assurance module was ranked lower, primarily because the federal government of Nigeria has primary authority in making changes that would have significant impact. In contrast, BSG holds authority itself to address the inefficiencies in the other two modules.

**Table 2. Final Score Prioritizing Inefficiencies for Further Investment**

| Module | Inefficiency | Score |
|---|---|---|
| **Weak Supply Chain and Logistics** | Poor warehousing and transport systems | **5** |
| | Suboptimal transport systems | **4** |
| **Poor Quantification and Procurement** | Poor quantification | **4** |
| | Suboptimal procurement processes | **3** |
| **Weak Regulation and Quality Assurance** | Ineffective regulatory systems | **1** |
| | Substandard, falsified, and unregistered pharmaceuticals | **2** |

Participants at the meeting discussed the value of the TEG process and results for BSG. First, pharmaceutical products is an area of interest for 12 out of 18 developmental partners working in Bauchi State. Despite this high number, there has been little evidence of real improvement in the past, largely due to fungibility of government funding and duplication of efforts by these many developmental partners. In this context, conducting this type of assessment and prioritizing areas of importance was an important way to coordinate activities and ensure streamlined processes towards shared objectives. As the Honorable Commissioner of Health rightly said during this workshop:

> "Findings from this exercise will form baseline for future interventions and targeted investments in the area of health commodities logistics and supply chain: starting with only budgeting for the specific items required capital expenditure for (equipment, staff development, infrastructural improvements) and recurring costs for (essential drugs, commodities and HRH). Hence I am assigning this responsibility to MD DMMA, DPS SMOH, and DPRS-SMOH[5] ensuring this happens during the 2019 budgeting process."

[5] Managing Director State Drugs and Medical Consumables Management Agency (MD-DMMA), Director Pharmaceutical Services  Managing Director State Drugs and Medical Consumables Management Agency, Director

As this quotation indicates, BSG plans to use the results as a baseline and work planning instrument. As the HFG project closes, results will be shared with the Health Policy Plus project, which will be taking over much of the health financing technical assistance previously conducted under HFG. BSMOH will internalize the final findings in the TEG Excel Tool and PowerPoint, take ownership of them, and align findings with Bauchi State's Strategic Health Development Plan II (2017-2022). Finally, the State Drugs and Medical Consumable Management Agency will share the final TEG draft with all partners supporting the state in the areas of logistics and supply chain.

Pharmaceutical Services-State Ministry of Health (DPS-SMOH), Director Planning Research and Statistics (DPRS)-SMOH

# 4. Validated results of the TEG exercise in Bauchi State

Table 3 presents a summary of the validated results for the modules included in this TEG exercise. For a detailed presentation of results, please see pages 24-31 in Annex B.

**Table 3. Validated results summary**

| 3.1.1 Poor warehousing | | 3.1.2 Poor transport | |
|---|---|---|---|
| **Source** | **Proposed solutions** | **Source** | **Proposed solutions** |
| Inadequate human resources and training; inadequate storage facilities, poor inventory records, weak monitoring and supervision, paper-based reporting systems, donor funds fungibility, irregular government funding | Increase budget, regulate donor-supported training, share performance reports with state Health Finance Working Group and lawmakers, leverage interns to support Logistics Management Coordination Unit (LCMU), ensure donors align support with LCMU operational plan | Not all commodities have last mile deliveries, no budget line for commodity delivery, not leveraging programs | Harmonize state commodity transport systems – state take control of all commodity deliveries, create direct link between health facilities and Central Medical Stores, provide additional vehicles |
| **3.2.1 Poor quantification** | | **3.2.2 Sub-optimal procurement processes** | |
| **Source** | **Proposed solutions** | **Source** | **Proposed solutions** |
| Service and consumption data used weak, centralized and fragmented processes, State Quantification Committee new and limited to few commodities, inadequate quantification capacity | Ensure availability of LMIS data, expand terms of reference for Quantification Committee, re-capitalize the Drug Management Agency with additional funds, advocate for more funding from donors | Insufficient funding for long-term procurement, parallel procurement processes, staggered procurement, irregular data on consumption patterns, unclear purchasing strategies | Inaugurate Procurement Committee as sub-set of Logistics Working Group to harmonize procurement processes in the state. |
| **3.3.1 Ineffective regulatory systems** | | **3.3.2 Substandard, falsified, and unregistered pharmaceuticals** | |
| **Source** | **Proposed solutions** | **Source** | **Proposed solutions** |
| *Limited information among Bauchi State stakeholders because levers of change lie at national level* | | | |

# 5. Conclusions

Pharmaceutical products systems in Bauchi State account for a large percentage of health spending, and attract interest from multiple development partners. BSG has prioritized efforts to strengthen these systems, to get more health for the money. This assessment and prioritization process came at an ideal time in the policymaking process, and will allow BSG to coordinate different actors (development partners and internal agencies), prioritize interventions in the context of a limited overall health budget, and monitor progress in achieving greater efficiency in spending on pharmaceutical products. The exercise also documented important revisions and additions to the TEG process that other governments interested in the process may want to adopt. Overall, the Steering Committee and Technical Team took the approach and adapted it to the Bauchi State context, and ensured that it met the ongoing needs of the specific stakeholders who participated in the process, and will allow them to better achieve Bauchi State's health sector development goals.

# Annex A. Results of the TEG Kick-Off Workshop in Bauchi State

The following stakeholders attended this Kick-Off Workshop:

- Representative of Hon Commissioner for Health, BSMOH
- Three directors of pharmaceutical services
- Director Pharmaceutical Services (DPS) Operations,
- DPS Human Resources (Health Management Board)
- DPS Specialist Hospital
- Managing director, Drugs Management Agency
- Chief pharmacist of the state
- Central Medical Store pharmacist
- Coordinator, Logistics Management Coordinating Unit, BSMOH
- Three state logistics officers from different program areas: Malaria, TB & HIV, Vaccines
- Representative of regulatory body (National Drug Law Enforcement Agency)
- Representative of National Agency for Food and Drug Administration and Control (NAFDAC) /NRA
- USAID HFG team

Participants identified the following interview respondents for the TEG data collection process:

| # | Designation | Institution | Module |
|---|---|---|---|
| 1 | DPS HMB | SHM | All three modules |
| 2 | Director, pharmaceutical services, BSMOH | BSMOH | All three modules |
| 3 | Managing director, State DMMA | DMMA | All three modules |
| 5 | Director, Pharmaceutical Services Specialist Hospital, Bauchi | Specialist Hospital Board | Supply Chain, Quantification, and Procurement |
| 6 | Central commodity store pharmacist | DMMA | Supply Chain, Quantification, and Procurement |
| 7 | Coordinator, State Logistics Management Coordinating Unit | BSMOH | Supply Chain, Quantification, and Procurement |
| 8 | State logistic and supply chain officers | BSMOH, State Primary Health Care Development Agency, State TB and HIV Control Agency | Supply Chain and Quantification |
| 9 | NAFDAC | NAFDAC | Regulatory Systems |

| | | | |
|---|---|---|---|
| **10** | NDLEA | NDLEA | Regulatory Systems |
| **11** | Pharmacists Council of Nigeria | PCN | Regulatory Systems |
| **12** | Federal Medical Center, Azare | | |
| **13** | ATBUTH | | Supply Chain and Quantification |
| **14** | National Fistula Center | | Supply Chain |
| **15** | General Hospital Dass | | Supply Chain |
| **16** | General Hospital Ningi | | Supply Chain |
| **17** | General Hospital Azare | | Supply Chain |

Participants listed and agreed to the following next steps to complete the TEG in 2018.

| Action | Responsible actor | Timeline |
|---|---|---|
| Steering group members to send inputs on the interview questions | Managing Director, State Drugs and Medical Consumables Management Agency, responsible for final collation | May 11,2018 |
| Ethical approval and letters of introduction: state will secure ethical approval. | DPS, BSMOH and Managing Director, State Drugs and Medical Consumables Management Agency | June 14th |
| Data generation: indicators and interviews | HFG | To be announced later<br>NB: interviews should last for two weeks or less. |
| Validation and Prioritization Workshop | BSMOH with support from HFG | Week of June 12, 2018 |
| Communicate results; assign next steps | BSMOH under the leadership of Honorable Commissioner for Health | To be discussed |

# Annex B. Results from the Validation and Prioritization Workshop in Bauchi State

This workshop was held September 11, 2018. Participants included the following representatives:

- Representative of Hon Commissioner for Health, BSMOH
- Three directors pharmaceutical services
- DPS Operations (BSMOH)
- DPS Human Resources (Health Management Board)
- Managing director of Drugs Management Agency
- Central Medical Store pharmacist
- Coordinator, Logistics Management Coordinating Unit, BSMOH
- Three state logistics officers from different program areas: Malaria, TB and HIV, Vaccines
- Representative of NAFDAC/NRA and National Drugs Law Enforcement Agency
- WHO representative
- HFG representative

The PowerPoint presentation sharing synthesized results was shared and validated during this workshop. This presentation is below. For more-detailed information, please see the Bauchi State TEG Excel Tool.

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# Health System Technical Efficiency Guide in Bauchi State

## Validation and Prioritization Workshop

Abdulkadir Ahmed, September 11, 2018

## Agenda for Validation and Prioritization Workshop Morning

| Session | Facilitator/Presenter | Start time | End time |
|---|---|---|---|
| Welcome, opening remarks, introductions | SMOH, HFG, WHO | 9:00 | 9:10 |
| Presentation 1: Overview of the Technical Efficiency Guide (TEG) in Bauchi State | MD DMMA | 9:10 | 9:35 |
| Q&A on presentation | | 9:35 | 10:00 |
| Presentation 2: Key findings on supply chain and logistics, and quantification and procurement | Ibrahim Angale | 10:00 | 10:30 |
| Plenary discussion to validate/correct findings from Presentation 2 | Abdulqadir Ahmed, MD DMMA | 10:30 | 11:00 |
| Break | | 11:00 | 11:30 |
| Plenary discussion: inefficiencies in regulation and quality assurance systems | | 11:30 | 12:00 |

## Agenda for Validation and Prioritization Workshop Afternoon

| Session | Facilitator/Presenter | Start time | End time |
|---|---|---|---|
| Presentation 3: Initial prioritization based on initial criteria, with rationale | Ibrahim Angale | 12:00 | 12:30 |
| In small groups: discussion/debate on criteria and initial prioritization across all inefficiencies | Ibrahim Angale | 12:00 | 12:30 |
| Plenary report out | ALL | 12:30 | 1:30 |
| Lunch | | 1:30 | 2:00 |
| Final prioritization and next steps | Abdulkadir Ahmed | 2:00 | 3:00 |
| Closing | SMOH, HFG, WHO | 2:45 | |

## Validation and Prioritization Workshop Objectives

- Validate/correct the findings gathered and synthesized through the TEG process.
- Rank inefficiencies based on shared criteria.
- Determine next steps and assign responsibility for Bauchi State's technical efficiency agenda.
- Share reflections on the TEG process.

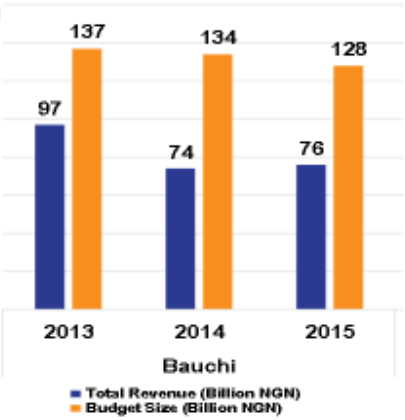
# PRESENTATION 1:

# OVERVIEW OF THE TEG IN BAUCHI STATE


## 1. WHAT IS THE TEG? HOW CAN IT HELP BAUCHI STATE?

## Background: Strong interest in improving health system efficiency

- 20–40% health spending wasted globally (WHO 2010)
- In Bauchi, need additional resources for UHC
  - Past budgets consistently above available revenue
  - Future budgets will account for the Bauchi State Contributory Healthcare Scheme
- Improving efficiency one promising option for domestic resource mobilization (among many)
  - Efficiency as intrinsic component of high-quality services
  - More value for money in spending towards health goals



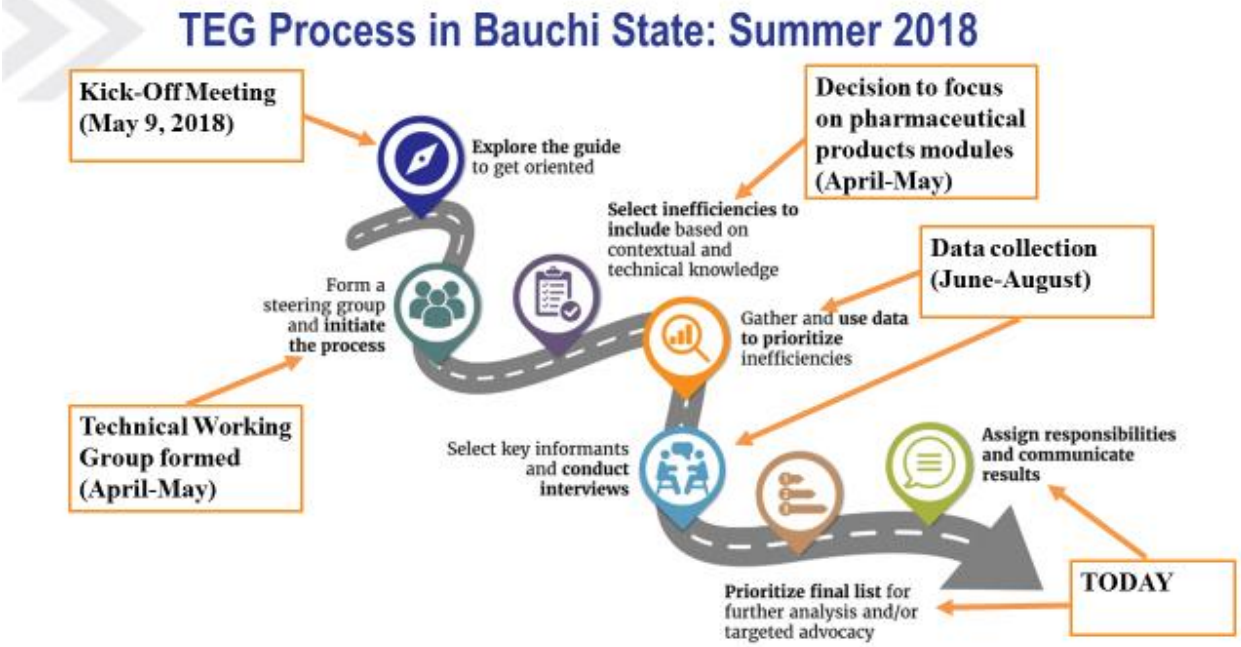

## The guide is…

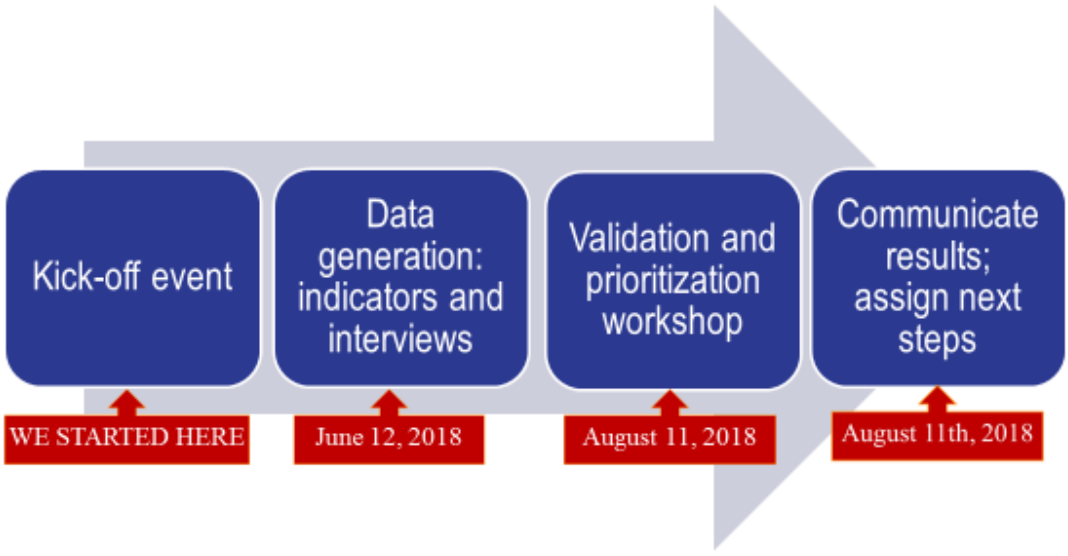
- The result of a rapid, **evidence-informed, multi-stakeholder assessment process**
- A resource to understand technical inefficiency through a **health systems lens** and identify **multiple entry points for addressing complex and intersecting sources of inefficiency**
- A way to **overcome technical or political paralysis and build organizational commitment** for addressing technical inefficiencies across the health system
- A step that ***leads to* a consensus-driven agenda for improving technical efficiency; may include targeted quantitative analyses** needed to find/select and implement solutions

## Focus on improving "technical efficiency"

- Technical efficiency = "Doing things right," or optimizing the production of health care, for a given quantity and price of inputs
- Complements work on "Doing the right things" = allocating more spending towards cost-effective services

## 2. WHAT HAVE WE ALREADY ACCOMPLISHED?


TEG Process in Bauchi State: Summer 2018
Kick-Off Meeting (May 9, 2018)
Explore the guide to get oriented
Decision to focus on pharmaceutical products modules (April-May)
Select inefficiencies to include based on contextual and technical knowledge
Data collection (June-August)
Form a steering group and initiate the process
Gather and use data to prioritize inefficiencies
Technical Working Group formed (April-May)
Select key informants and conduct interviews
Assign responsibilities and communicate results
TODAY
Prioritize final list for further analysis and/or targeted advocacy


Overall approach and timeline
Kick-off event
Data generation: indicators and interviews
Validation and prioritization workshop
Communicate results; assign next steps
WE STARTED HERE
June 12, 2018
August 11, 2018
August 11th, 2018

## Decision to focus on pharmaceutical products modules

- Rationale for selecting three pharmaceutical modules by the state
  - High potential budget impact
  - Lack of coordinated/streamlined robust supply chain and commodity management
  - State's commitment to integrate all health commodities quantification and procurement and supply chain system
  - State commitment to improve capital spending on health commodities procurement and last mile deliveries
- Alternative areas of focus that TEG can address
  - Health workforce: also huge potential, but work ongoing already by WHO
  - Service delivery
  - Financing and governance

## Role of stakeholders

- Everyone: participate in Validation and Prioritization Workshop, June 12, 2018
- Some stakeholders, as needed:
  - Participate in interviews (1-hour, confidential)
  - Provide technical team with additional inputs (e.g., data for indicators; advice on interpretation of indicators)

## Data collection and synthesis

- **25** indicators estimated
- **11** key informant interviews with stakeholders representing range of relevant institutions. Some questions:
  - What are the sources of these technical inefficiencies?
  - Which sources are the most pressing to address? What has already been done to address them? By whom?
  - What additional work or new strategies are still needed to address these concerns? Who is responsible for implementing them?
  - Are there existing plans to implement these next steps, or additional work or new strategies?
  - Is the political environment conducive to mobilizing support for advancing work in this area? Are there other barriers to action?
- Synthesized all interview and indicator data into one Excel spreadsheet

## Today's meeting—process and objectives

- Validate the synthesized findings, making corrections and additions as needed.
- Use presentation and plenary discussion.
- Use findings to stimulate discussion about priorities, next steps, and responsibilities for taking them.
- Share initial ideas about prioritization; then use group and plenary discussion to consider issues in more depth.

# PRESENTATION 2:

# KEY FINDINGS ON INEFFICIENCIES AND THEIR SOURCES


## "Modules" and "inefficiencies" explored

| MODULE | INEFFICIENCY |
|---|---|
| 3.1 Supply chain and logistics | 3.1.1 Poor warehousing and transport systems |
| | 3.1.2 Suboptimal transport systems |
| 3.2 Quantification and procurement | 3.2.1 Poor quantification |
| | 3.2.2 Sub-optimal procurement processes |
| 3.3 Regulation and quality assurance | 3.3.1 Ineffective regulatory systems |
| | 3.3.2 Substandard, falsified, and unregistered pharmaceuticals |

## 3.1.1 Poor warehousing and transport systems: indicators and initial prioritization

- **Product losses due to expired products, damage**
  - 20% in Bauchi State; lower than <25% national target
  - This is largely due to small size and volume of stock managed at the Central Medical Store. If the stock volume were to be increased through re-capitalization of Drug Revolving Fund, then the wastage might increase.
- **Pilfering due to theft**
  - Findings revealed that losses recorded were largely due to weak financial management and system of recovery. An estimated of 200,000 naira was lost in 2017 (source: DMMA).
- **Is there an associated budget line?**
  - Yes, for Central Medical Store maintenance and operations, but releases are sub-optimal
- **Assessment and prioritization**
  - Score for relative severity: 2 (1 lowest, 5 highest)
  - Rationale: under national ceiling, but emphasized in interviews—especially lack of operational funds for this

## 3.1.1 Poor warehousing and transport systems: sources of inefficiencies

- Inadequate human resources; insufficient capacity-building training
- Inadequate storage facility (below minimum standard of a commodity warehouse); insufficient shelves
- Poor inventory records
- Weak monitoring and supervision/paper-based data generation and reporting tools
- Fungibility of donor funds; irregular government funding

## 3.1.1 Poor warehousing and transport systems: potential strategies and their feasibility

- Increase budget and advocate for release of allocation for provision of means of transportation, M&E tools, and operational funding.
- Regulate donor-supported capacity-building training to suit the pressing needs of the state.
- Share budget performance reports with state health finance working group, which can share with lawmakers for proper actions
- Leverage availability of newly recruited pre-service interns to complement the human resources of the logistics management coordinating unit (LMCU).
- Ensure all supporting donors align their support with the LMCU operational plan.
- Consider poor warehousing as a high-priority area that needs immediate intervention.

## 3.1.2 Suboptimal transport systems: indicators and initial prioritization

- **Average transportation cost per km/volume/weight**
  - Transportation cost per km in Bauchi is 24 naira/km (BSPHCDA PHC-MOU Team Analysis, compared to the national recommendation of 50 naira/km/vol/wgt
- **Is there an associated budget line?**
  - Only one program area had fully funded Third Party Logisticians direct delivery model
- **Assessment and prioritization**
  - Score for relative severity: 2 (1 lowest, 5 highest)
  - Rationale: under national ceiling, but the problems were emphasized in interviews—especially lack of operational funds for supporting transport systems

## 3.1.2 Suboptimal transport systems: sources of inefficiencies

- Last mile deliveries ensure availability of commodities and proper stock records. Having no commodities will eventually translate to no program: "No commodity, no program." The cost of direct deliveries is high, due to lack of competition among the third-party logisticians; also, not all commodities have last mile deliveries.
- Inadequate means of transportation of commodities.
- No budget line for commodity delivery either via third-party logisticians or third party administrators.
- Not leveraging programs.
- Any government commitments….?

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- Any government commitments….?

## 3.1.2 Suboptimal transport systems: potential strategies and their feasibility

- Harmonize state commodity transport systems and state to take control of all commodity deliveries.
- Create a direct link of communication between all health facilities in the state and the Central Medical Store.
- Provide additional vehicles.
- Sub-optimal transport system is an area of priority ranked 4 in relative severity.

## 3.2.1 Poor quantification: indicators and initial prioritization

Data not available for selected indicators:

- Forecast accuracy: Availability of data for action
- Fixed order cost: Sub-optimal procurement processes

## 3.2.1 Poor quantification: sources of inefficiencies

- Data
  - Quantification is solely done with available demographic and morbidity data. Hence mathematical assumptions are used and not actual consumption or service data.
  - Falsification of consumption data.
  - Records are mostly paper-based and have potential to get lost along the way, leading to inaccurate records, which affects data availability; no automated inventory system.
  - Inadequate records such as poor update of ICC, ledgers, and LMIS.
- Processes
  - Procurements for the vertical program commodities are done centrally, without involvement of frontline health workers. Only essential and life-saving commodities are procured at the state level. Even with those commodities, most procurement is for emergencies and based on the needs of the moment.
  - State Quantification Committee is newly constituted and limited to only MNCH commodities.
- Inadequate capacity
  - Weak awareness of quantification procedures.
  - Poor compliance with standard operating procedures and job aids.
  - Insufficient human resources.

## 3.2.1 Poor quantification: potential strategies and their feasibility

- Ensure availability of quality LMIS data.
- Expand the Terms of Reference of Quantification Committee to programs beyond just RMNCH.
- Re-capitalize the state Drug Management Agency with additional funds to help it meet the needs of the state after quantification.
- Advocate to donors to fill the state's unmet need.
- Poor quantification is an area of priority ranked 4 in f relative severity.

## 3.2.2 Sub-optimal procurement processes: indicators and initial prioritization

Data not available for selected indicators:

- Supply planning
- Availability of storage facility (warehousing)
- Availability of funds

## 3.2.2 Sub-optimal procurement processes: sources of inefficiencies

- Lack of adequate funding to make long-term procurement
- Parallel procurements by different ministry departments and agencies in the health sector
- Staggered procurement
- Irregular data on consumption patterns
- Unclear purchasing strategies; purchasing strategies impede policymakers from deciding on a course of action

## 3.2.2 Sub-optimal procurement processes: potential strategies and their feasibility

- Inauguration of Procurement Committee as subset of Logistics Working Group to harmonize procurement processes in the state

## Summary of final scores

| MODULE | INEFFICIENCY | Score |
|---|---|---|
| 3.1 Supply Chain and Logistics | 3.1.1 Poor warehousing and transport systems | 5 |
| | 3.1.2 Suboptimal transport systems | 4 |
| 3.2 Quantification and Procurement | 3.2.1 Poor quantification | 4 |
| | 3.2.2 Sub-optimal procurement processes | 3 |
| 3.3 Regulation and Quality Assurance | 3.3.1 Ineffective regulatory systems | 1 |
| | 3.3.2 Substandard, falsified and unregistered pharmaceuticals | 2 |

# 2. HOW CAN THE TEG HELP BAUCHI STATE?

## Final prioritization and next steps

- Findings will form baseline for future interventions and targeted investments: starting with only budgeting for the specific items required capital expenditure for (equipment, staff development, infrastructural improvements) and recurring costs for (essential drugs, commodities, and health workforce). Managing Director, State Drugs and Medical Consumables Management Agency; Director, Pharmaceutical Services; Director, Planning Research and Statistics-State Ministry of Health are responsible for ensuring this happens during the 2019 budgeting process.

- Share final TEG draft with all implementing partners supporting the state in area of logistics and supply chain.

- Internalize the final document, taking ownership of the content, and align findings with Bauchi State's Strategic Health Development Plan II (2017–2022)

# Thank You!

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