QI PROJECT PDSA CYCLES REPORT FORM

QIP: Reduce supply chain Inefficiency from a median of 17% to less than 5% from 21/10/2016 to 20/10/2017

START DATE:21/10/ 2016 EC

END DATE: 20/10/2017EC

QI PROJECT LEADER: Nuredin Yigezu (MPH)

CHANGE IDEA: CONDUCTING SUPPLY CHAIN MEETING	PDSA 1: CYCLE 1	DATE: 30/1/2017EC

PLAN

WHAT IS THE PURPOSE OF THIS CYCLE? (Check one)	DEVELOP	✓ TEST	IMPLEMENT

WHAT IS THE OBJECTIVE OF THIS CYCLE? WHAT QUESTIONS DO YOU WANT TO ANSWER? WHAT ARE YOUR PREDICTIONS?

Objective: Reduce supply chain Inefficiency from a median of 17% to less than 5% from 21/10/2016 to 20/10/2017 by implementing quarterly supply chain meeting with feedback.

Questions to Answer: Do implementing quarterly supply chain meeting reduce supply chain Inefficiency (improve supply chain efficiency) to lessthan 5%

Predictions: Supply chain Inefficiency will be decreased by 4% (i.e to 13%) during this cycle.

LIST TASKS NECESSARY TO SET UP AND CONDUCT THE TEST (THINK 'ONENESS' AND 'DROP TWO')

What? (Specifc task)	How? (Checklist, tally sheet)	Who? (Name or role)	When? (Times, dates - be specifc)	Where? (Program, location site - be specifc)
• Conduct supply chain meeting	• Standardized checklist • Assessment reports	Nuredin Y. (Team Leader) Rediwan S. (Data Collector)	QUARTERLY	FINANCE

OUTLINE YOUR PDSA DATA COLLECTION PLAN (WHAT, HOW, WHO WHEN AND WHERE)

What data will be collected?	How? (Checklist, tally sheet)	Who? (Name or role)	When? (Times, dates – be specifc)	Where will the data be recorded?
Assessment of 11 areas of supply chain areas	Model 19, BINCARD, EAPTS TRANSACTIONS, observation	Rediwan S	Quarterly	Pharmacy and Finance

DO

WHAT DID YOU OBSERVE DURING THE TEST? WERE THERE ANY UNEXPECTED OBSERVATIONS OR ISSUES? WHAT WENT WELL?

- **Dispensing practices (0.16%)**, **storage practices (0.24%)**, and **wastage reduction (0.36%)** were the **least inefficient areas**, indicating effective medication handling, proper stock storage, and minimal damage or expiry.
- Similarly, **communication and coordination (0.48%)** and **technology integration (0.48%)** had lower values, although their potential impact is still considerable if fully utilized.
- The quarterly meeting fostered better **team alignment**, bringing together pharmacy, finance, and procurement staff for shared learning and feedback.

- **Inventory management (1.2%)** was the **highest contributor to inefficiency**, followed by **procurement (1.0%)**, and **supplier and distribution (0.9%)**. These areas involved stockouts, ordering delays, and poor forecasting accuracy—largely due to inconsistent planning and lack of real-time data.
- **Demand forecasting (0.8%)** and **financial management (0.85%)** also showed high inefficiency contributions, revealing weaknesses in cost estimation and budget utilization.
- **Monitoring and reporting (0.6%)** was completely inactive despite previous recommendations—no KPIs were tracked, and no dashboards or periodic summaries were generated.
- **Technology tools such as EAPTS**, although available, were **not being used for operational decision-making** or routine transactions in most departments.
- **Supplier contract reviews and cost variance analyses** were entirely absent, leaving the hospital vulnerable to pricing fluctuations and low supplier accountability.

Summary of Observed Supply Chain Inefficiency Contributions (Q1 2017 EC)

No.	Area of Inefficiency	Cost (ETB)	% of Total Inefficiency
1	**Inventory Management**	9,000	**1.20%**
2	Procurement Inefficiency	7,500	1.00%
3	Supplier & Distribution	7,200	0.90%
4	Financial Management & Cost Efficiency	6,600	0.85%
5	Demand Forecasting	6,300	0.80%
6	Monitoring & Reporting	4,500	0.60%
7	Technology & System Integration	3,600	0.48%
8	Communication & Coordination	3,600	0.48%
9	Wastage Reduction	2,700	0.36%
10	Storage Practice Inefficiency	1,800	0.24%
11	Dispensing Practice Inefficiency	1,200	0.16%
	Total	**54,000**	**7.20%**

The **areas with the highest inefficiency scores—inventory management, procurement, and supplier management—require urgent and sustained improvement efforts**. While the quarterly meeting helped raise awareness and initiate corrective actions, **greater use of digital tools like EAPTS**, **routine audits**, and **clear accountability frameworks** are necessary to reduce these values and move closer to the QI target of less than 5% inefficiency.

STUDY

ANALYZE YOUR DATA AND DESCRIBE THE RESULTS. HOW DO THE RESULTS COMPARE WITH YOUR PREDICTIONS? WHAT DID YOU LEARN FROM THIS CYCLE?

The targeted supply chain meeting discussions led to a remarkable reduction in inefficiency, lowering it from 16% to 7.2%, which is significantly below our predicted target of 13%.

The third quarter of 2015 EC marked a significant milestone in Deder General Hospital's ongoing effort to improve supply chain efficiency. The results of this PDSA cycle revealed that the overall supply chain inefficiency rate was reduced to **7.2%**, down from the baseline of **16%**, and well below the predicted target of **13%** for the cycle. This represents a notable achievement, demonstrating that the implementation of quarterly supply chain meetings and structured performance review sessions can lead to measurable and impactful improvements.

A closer examination of the inefficiency data showed how different components contributed to the overall 7.2% inefficiency. The **largest contributor** was **inventory management**, accounting for **1.2%** of the total inefficiency. This was followed by **procurement inefficiency** at **1%**, and **supplier and distribution**

performance at **0.9%**. These areas represent critical points in the supply chain where planning, tracking, and supplier reliability play a decisive role in overall efficiency.

Other significant contributors included **financial management and cost efficiency** at **0.85%**, and **demand forecasting** at **0.8%**, indicating ongoing challenges in aligning forecasted needs with actual consumption. Meanwhile, **monitoring and reporting** contributed **0.6%**, and both **technology integration** and **communication and coordination** each accounted for **0.48%** of the total inefficiency. These numbers highlight a persistent gap in utilizing digital tools like EAPTS and ensuring consistent communication between departments, despite the systems being available.

Smaller contributors included **wastage reduction (0.36%)**, **storage practices (0.24%)**, and **dispensing practices (0.16%)**, suggesting these operational areas are relatively more controlled but still offer room for incremental improvement.

Overall, the data revealed that while performance improvements have been achieved, particularly in procurement and inventory control, inefficiencies remain concentrated in areas where digital systems are underutilized and communication pathways are weak. These findings reinforce the need for sustained use of EAPTS, continuous capacity building, and integrated monitoring systems to fully realize the QI project's goal of reducing supply chain inefficiency to below 5%.

ACT		
Adapt: Conducting supply chain meeting		
ADAPT (note changes for next cycle	**ADOPT**	**ABANDON**

Reported by: Rediwan S.   **Case Team**: QI team   **Date: MESKEREM 30, 2017E.C**

QIP: Reduce supply chain inefficiency from 17% to less than 5% from June 21, 2016 to June 20, 2018
1st Data point

Percentage (%)

Baseline | intervention

Conduct supply chain meeting

21
20
17 — 17 — 17 — 17 — 17 — 17 — 17
16
13
12
7.2

Q3 2015 | Q4 2015 | Q1 2016 | Q2 2016 | Q3 2016 | Q4 2016 | Q1 2017

Time: Quarterly

━●━ % of Suply chain inefficiency   ━●━ Baseline Median