

Hospital Trusts Medication Analysis Report

A Descriptive Analysis of 199 Trusts on Dispensed Prescriptions.

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Report Overview – Hospital Prescribing

- The KPI dashboard provides a comprehensive analysis of medication costs, utilisation, and efficiency for the period April to June 2024.
- Further analysis on Trusts and Medications draws insights into different hospital trust's performance on medication utilisation, costs, and efficiency management.



Key Performance Indicators

- Overview
- Average Actual Costs
- Efficiency and Cost Analysis

Total Quantity Dispensed	Total Medication Cost	Total NIC Cost	Trusts
128M	£26.82M	£27.85M	199

Avg. Cost per Medication Qty	Avg. Cost per Medication Item	Avg. Qty per Prescription Item	Cost Efficiency Ratio
0.21	18.84	89.87	0.96

1. Overview:

- 128 million units of medication were dispensed across 199 NHS trusts.
- The overall expenditure on medications reached £26.82 million indicating a small difference due to adjustments such as discounts.
- The Net Ingredient Cost (NIC) was slightly higher at £27.85 million.

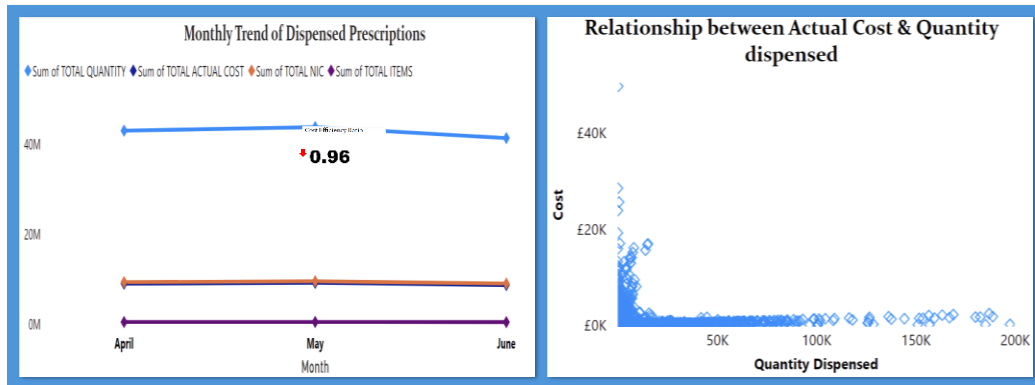
2. Average Actual Costs:

- A cost of £0.21 was made per medication unit dispensed.
- A cost of £18.84 was incurred per medication item across all prescriptions.
- Average medication quantity of 89.87 was dispensed per prescription item.

3. Efficiency and Cost Analysis:

- A cost efficiency ratio of 0.96 suggests near-optimal spending efficiency, reflecting effective management of medication costs in relation to the NIC.

Monthly Trend of Dispensed Prescription. Actual Cost vs Quantity Dispensed



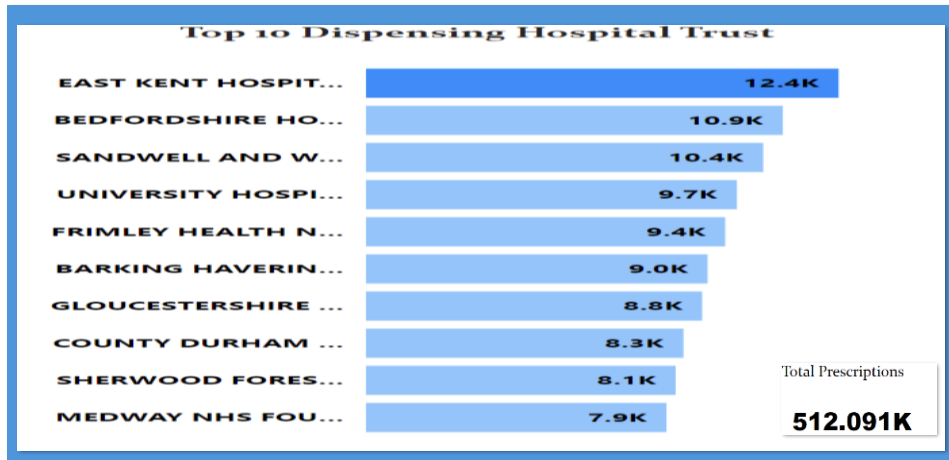
1. Monthly Trend of Dispensed Prescriptions:

- Total quantity of prescriptions dispensed increased from April to May, but declined slightly by June. This trend was consistent for Total Actual Cost, NIC, and Items.
- Actual Cost overlapped with NIC but slightly lower than NIC. Cost efficiency ratio of 0.96 indicates an actual cost of £0.96 spent for every £1 of NIC.

2. Relationship between Actual Cost & Quantity Dispensed:

- The scatter plot highlights that Lower quantities were associated with a wide range of costs while higher quantities tended towards lower costs.

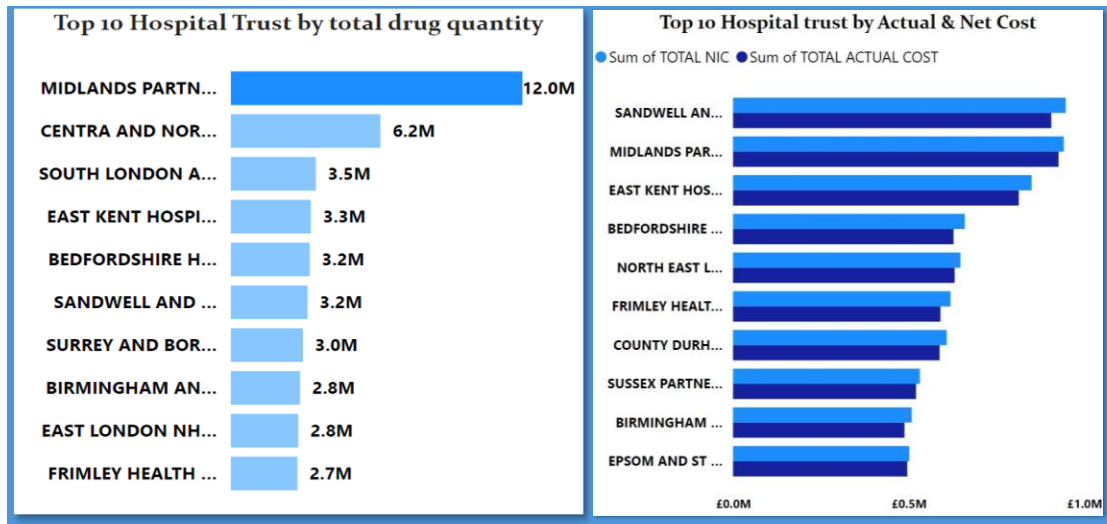
Top 10 Trust by Medication Dispensed



Top Dispensing Hospital Trusts:

- There are about **513 thousand** total prescriptions dispensed across all hospital trusts.
- **East Kent Hospitals University** led with **12.4K** dispensed prescriptions.
- **Bedfordshire Hospitals NHS Foundation Trust** follows closely with **10.9K** prescriptions.

Medication Quantity and Total Cost Of Top Hospitals Trust



Total Quantity of Medicals dispensed:

1. **Midlands Partnership Trust** led with a significant margin, dispensing **12M** quantities while **Central and North West London Trust** follows with **6.2M** quantities.

Top 10 Trusts by Actual & Net Costs:

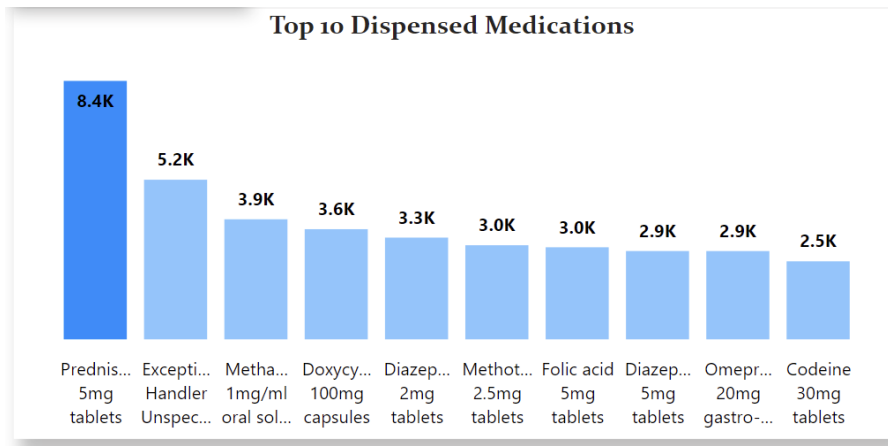
1. **Sandwell and West Birmingham Hospitals Trust** has the highest NIC and actual cost.
2. **Midlands Partnership Trust** also shows a high level of cost, which correlates with its high total drug quantity.

Top 5 Dispensing Trusts

Top 5 Dispensing Trust						
HOSPITAL TRUST	TOTAL ITEMS	TOTAL QUANTITY	TOTAL ACTUAL COST	Average Cost per Item	Cost Efficiency	Average Quantity per Item
SANDWELL AND WEST BIRMINGHAM HOSPITALS NHS TRUST	43K	3153K	£906,730.46	21.22	0.96	73.78
EAST KENT HOSPITALS UNIVERSITY NHS FOUNDATION TRUST	36K	3290K	£814,095.34	22.71	0.96	91.77
BEDFORDSHIRE HOSPITALS NHS FOUNDATION TRUST	33K	3243K	£628,447.17	19.17	0.95	98.90
FRIMLEY HEALTH NHS FOUNDATION TRUST	44K	2737K	£591,117.74	13.58	0.95	62.88
UNIVERSITY HOSPITALS SUSSEX NHS FOUNDATION TRUST	27K	1980K	£480,875.75	17.52	0.95	72.12

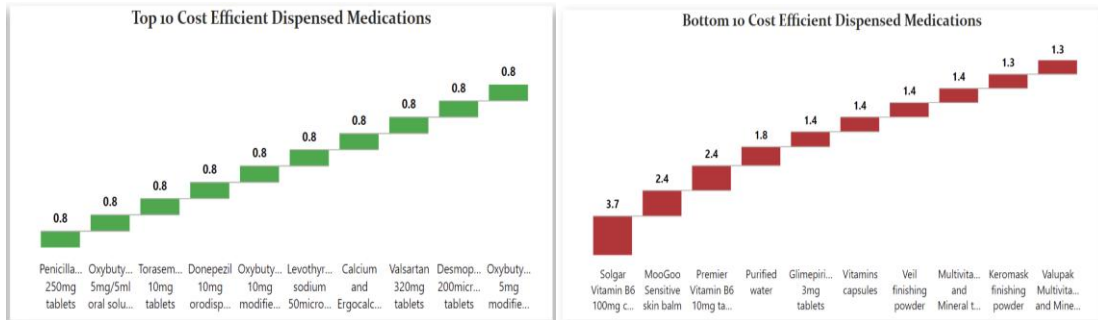
- **Bedfordshire** Hospitals NHS Foundation Trust shows an actual cost of £628,447.17 with a cost efficiency of 0.95.
- **East Kent** Hospitals University NHS Foundation Trust has a higher average cost per item (£22.71) and a cost efficiency of 0.96.

Top Medications Dispensed



- **Most Dispensed Medication:** Prednisolone 5mg tablets are the most dispensed medication, with 8.4K units dispensed.
- The list also includes a mix of medications, ranging from methadone (used in pain management and opioid dependency treatment) and diazepam which are commonly used in mental health.

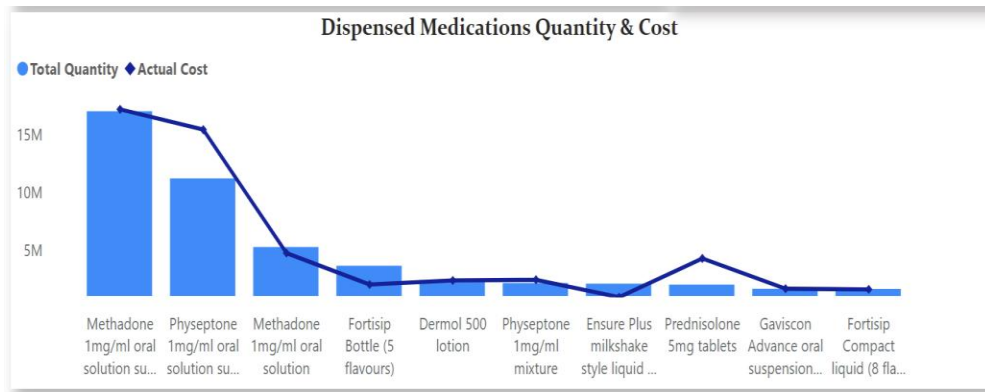
Cost Effectiveness of Medications Dispensed



The most cost efficient is penicillin 250mg tablet while Solgar Vitamin B6 100mg tablets is the least cost-efficient medication with a ratio of 3.7.

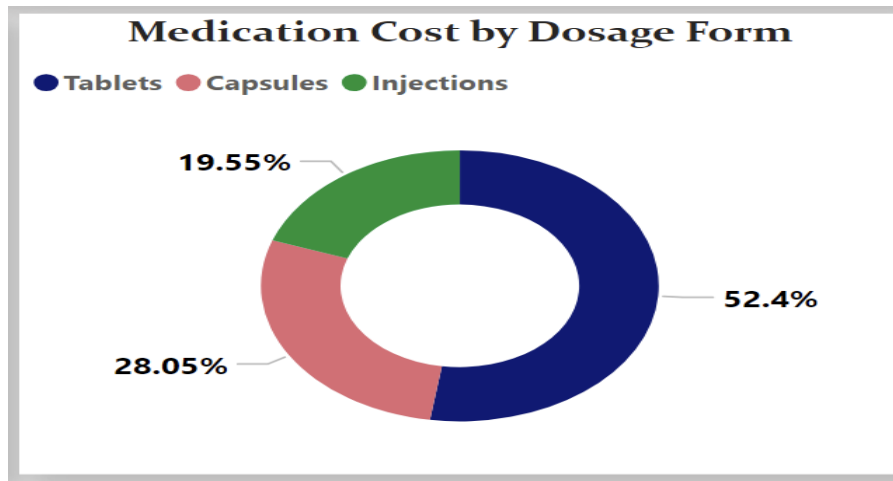
This means for every pound spent, the top 10 provides the most value in terms of quantity dispensed.

Trend of Quantity and Actual Cost for Dispensed Medications



- Drugs like Methadone oral solution, physeptine, and methadone suspension with higher cost still maintained higher dispensed quantity due to the price per unit. Their cost effectiveness are above 100%.
- **High-Cost Low-Quantity Medications:** Some medications like Fortisip (a nutritional supplement) show a higher cost than its lower quantities, indicating either a higher price per unit.
- High-Quantity-Low-Cost of Prednisolone shows its cost effectiveness at 0.84

Cost of Medications by Dosage Form



The pie chart helps in understanding how different dosage forms contribute to the overall medication cost, which can be useful for budgeting and identifying potential areas for cost-saving.

- Tablets dominate the overall medication cost at 52.4%, followed by capsules and injections.

Insights Summary

- A substantial quantity of medication was dispensed for each prescription item.
- **Total Actual Cost** of £26.82M lower than **Total NIC Cost** indicates a small difference due to adjustments such as discounts.
- Similar monthly trends in KPI's indicates consistent prescribing patterns across Q2 2024.
- A cost efficiency ratio of 0.96 shows some level of cost efficiency where the total spending is slightly less than the standard NIC. This is a positive sign of cost management, although small level cost efficiency.
- About **513K** prescriptions were dispensed in all NHS trusts between April to June 2024.

Insights Summary

- There is significant patient load or high medication needs with **East Kent University** and **Bedfordshire Hospitals NHS** Foundation Trusts. There is need to access further data to make conclusion.
- The large quantities of dispensed medicals for **Midlands Partnership Trust** suggest either a higher volume of lower-dosage prescriptions or a greater number of patients served.
- **Sandwell and West Birmingham Hospitals Trust** had highest medication costs and high dispensing volume, but not high quantity. The lower **average quantity per prescription** item signifies prescribed medications are **higher in cost** but **lower in volume**. Higher medication cost potentially is due to the type or volume of prescriptions dispensed.

- Further Investigation on what types of medications are leading to these high costs? Are they specialised, patented, or newer treatments?
- Does this trust have a policy of prescribing newer, potentially more effective but more expensive medications?
- Are the patients at this trust typically requiring more expensive or specialised treatments?

Insights Summary

- University Hospitals Sussex, Barking Havering & Redbridge, Gloucestershire, Medway, and Sherwood Forest hospitals NHS Trust have high prescription volumes, but none in top 10 prescription costs nor quantities.
- Prednisolone, being the highest dispensed drug indicates widerange of inflammatory conditions. Prednisolone is cost effective.
- The top 10 most cost effective product are majorly prescriptions only drug unlike bottom 10 except for glimepiride used as antidiabetics (POM).
- Tablets are the most prescribed form of medications.

This pattern suggests large number of patients or frequent prescriptions issue. Further analysis of patient demographics and prescription behaviors at other top dispensing trusts would help to conclude.