DEMAND MANAGEMENT: AUDIT OF REJECTED TESTS AND COST SAVINGS BY ELECTRONIC-GATE-KEEPING (EGK) SYSTEM AT A RURAL ACADEMIC HOSPITAL IN SOUTH AFRICA.

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BACKGROUND

Over the years, the National Department of Health (NDoH) became increasingly aware of the remarkable increase in the expenditure and billing associated with the National Health Laboratory Services (NHLS) in its facilities.

In order for laboratory services to remain affordable and sustainable for the department to utilise; the NDoH and its partner, the NHLS collaborated to introduce Electronic Gate Keeping (EGK) system across the country.

EGK is a demand management strategy; a full electronic stop system based intervention. The aim of EGK is to reduce overutilization on selected laboratory tests.

Demand management is a process used to reduce demand of a product or service.

The concept of EGK was based on three principles; minimum repeat interval of a test, category of the requesting clinician and the location of the patient.

METHODS AND MATERIALS

The study involved the use of cross-sectional study design to determine cost effectiveness of EGK on cost savings for a period of 24 months after it was implemented from June 2015 to May 2017.

A total of 28 tests was conveniently sampled from a population of 40 EGK subjected tests. 22 of the tests were chemistry, 2 haematology and 4 serology.

Data was collected and analyzed on type and number of laboratory tests requested and rejected.

Data management and analysis were carried out using MS Excel and Stata software.

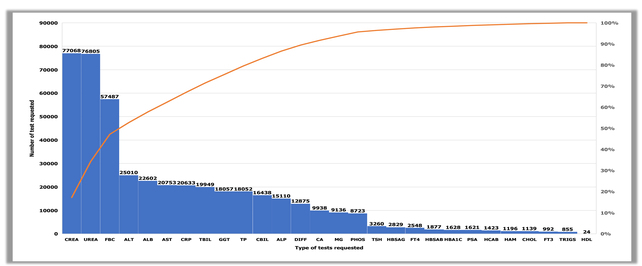

Fig 1: Top requested tests

RESULTS

During the 24 months of EGK implementation, about 448,028 tests were requested and 17,480 (3,9%) were rejected by EGK. The rejected tests generated a cost savings of R807,110.95

The top 3 requested tests by quantity were creatinine, urea and full blood count as indicated in figure 1.

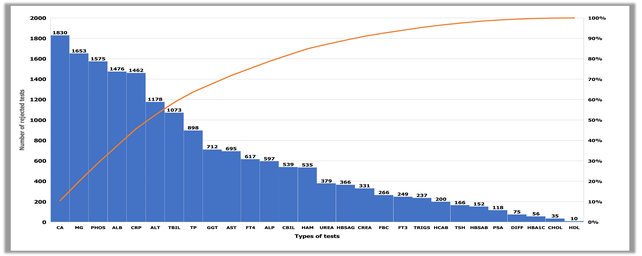

Fig 2: Top rejected tests

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The top 3 rejected tests by quantity were calcium, magnesium and phosphate as indicated in figure 2.

The top 3 tests with the most savings were c-reactive protein (R94,393.59), free thyroxine (R80,760.94) and hepatitis A IgM (R59,229.98).

CONCLUSIONS

The study demonstrated that the introduction of EGK has had positive spinoffs; parallel to saving costs; it strengthened dialogue between clinicians and pathologists allowing a platform for continuous education, teaching and learning.

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