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EVALUATION OF TAT FOR BIOCHEMISTRY ED SAMPLES

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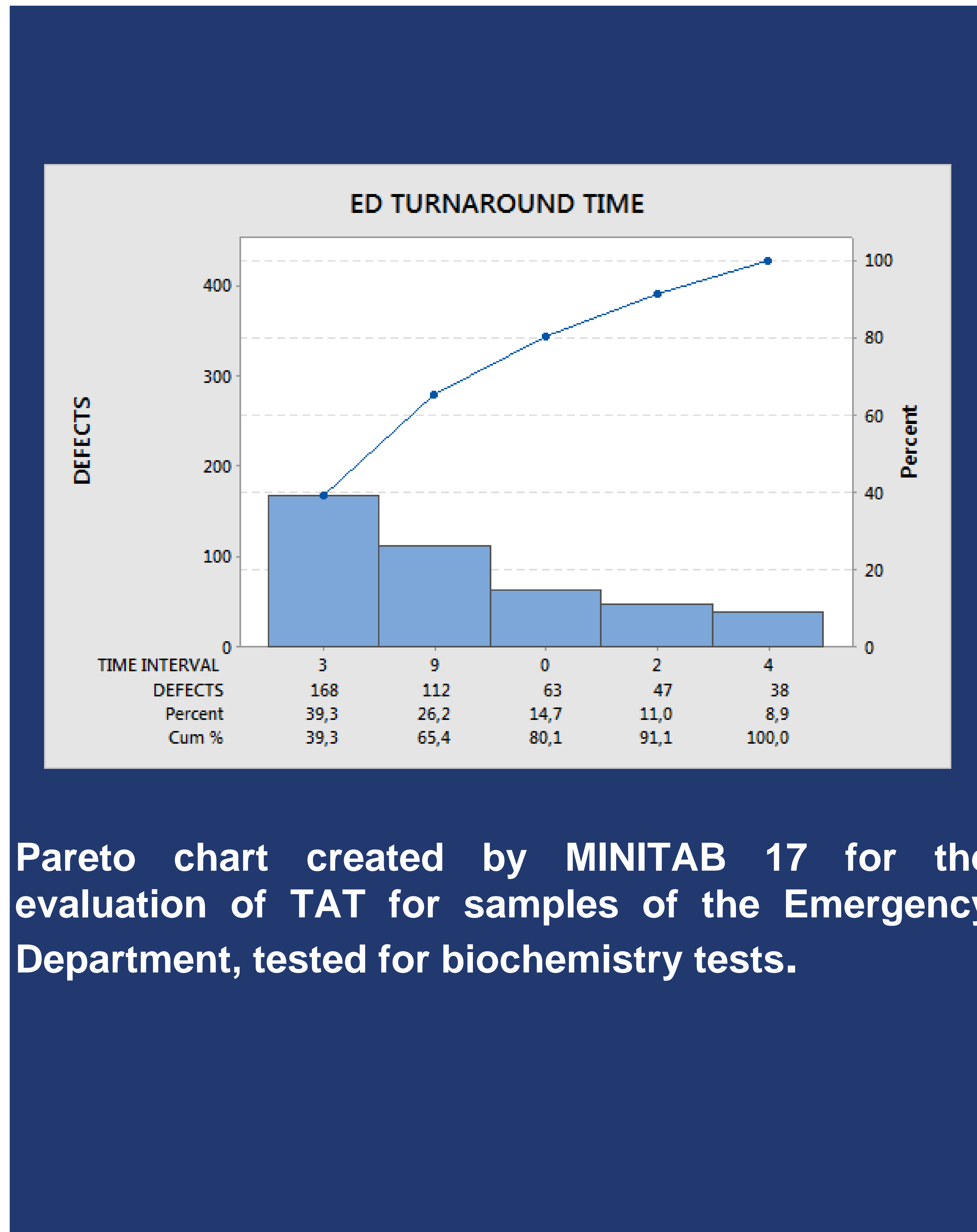
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PURPOSE / OBJECTIVES

Prolonged Turnaround Time (TAT) of laboratory results affects patient care as well as patient satisfaction adversely. The objectives of our study were to measure the TATs of biochemistry results to the Emergency Department (ED) and to identify the causes of prolonged TAT.

MATERIALS & METHODS

The TATs for the biochemistry ED profile measurements during one month were used (428 samples). Data were collected from the HIS database. TAT start time was defined as the time of specimen arrival at the laboratory; end time was defined as the time of completion of the last test ordered, including the 20-minute clotting step. Outliers were defined as more than 60 minutes for biochemistry measurements. The time taken to transport blood samples to the laboratory was excluded. Incomplete tests due to haemolysis or lost specimen, as well as those for which part or all of the data was missing were excluded. Full day work cycle was divided in 2-hour intervals. Analysis was performed by means of Pareto chart, which is a bar graph. The lengths of the bars represent frequency and are arranged with longest bars on the left and the shortest to the right. In this way the chart visually depicts which situations are more significant.



RESULTS

The total TAT results confirmed that the 60-minute goal for the processing of stat specimens was not being met for 10.5% of the samples. 60.3% of the prolonged TAT was recorded from 06:00 to 10:00 every day, which coincides with healthcare personnel shift changes at 07:00, as well as high volume of testing, workload and internal quality control process during this time interval.

SUMMARY/CONCLUSION

TAT is an important quality indicator of laboratory performance. Appropriate triage and discharge of patients is impacted by the timely return of laboratory test results, so TAT of laboratory tests is a key contributor to ED workflow. A Pareto chart is a basic quality tool that helps you identify the most frequent defects, complaints, or factors you can **count** and **categorize**. It is based on the "80/20 rule," which postulates that 80% of the problems come from 20% of the causes. In our study we measured prolonged TAT in 10% of stat specimens. We studied the lab processes in more detail and successfully identified human factors in process control.