



Assessing Reasons for Delay of Renal Function Test in OPD Patients of Abeer Family Medical Center, Kozhikode

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Introduction

- Abeer Medical Group is a healthcare organization which owns and operates medical centers and hospitals across major cities in Saudi Arabia, Qatar, United Arab Emirates and India.
- The group because of its innovations is in Saudi Arabia's healthcare domain for the last 18 years.
- Abeer Medical Group is currently running 20 healthcare facilities in Saudi Arabia catering to the healthcare needs of 3 million people every year.
- Abeer Medical Group is also active in non-medical sectors like travel and tourism, visual media, aviation, marketing and advertising.

Abeer Family Medical Center, Kozhikode

- Abeer Family Medical Center, Kozhikode is a multi specialty polyclinic.
- It has a set of skilled and highly qualified professionals who provide healthcare services to the population.
- Doctors: 23
- Nurses: 10
- Total staff: 40
- Floors: 2
- Ground floor: Reception, waiting area, OPD, treatment room, cafe and pharmacy
- 1st floor: OPD, radiography, echocardiography and ultrasound
- 2nd floor: HR, Marketing, IT and Accounts

RESEARCH QUESTIONS

- How many tests are delayed from the standard turnaround time of 2 hours for Renal Function Test of OPD patients?

RESEARCH OBJECTIVES

- To find the number of delays from the standard turnaround time of 2 hours for Renal Function Test
- To provide suggestions to reduce the delay

METHODOLOGY

Area of study

The study was conducted on OPD patients in Abeer Family Medical Center, Kozhikode.

Design

Cross sectional study

Study population

Inclusion criteria: All outpatients with renal impairments were included in the study.

Duration of study

3 months

Sample Size

All the samples collected from 1st March to 15th April, 2019 are included for each marker of Renal Function Test.

Sampling technique

The data was collected on the basis of purposive sampling.

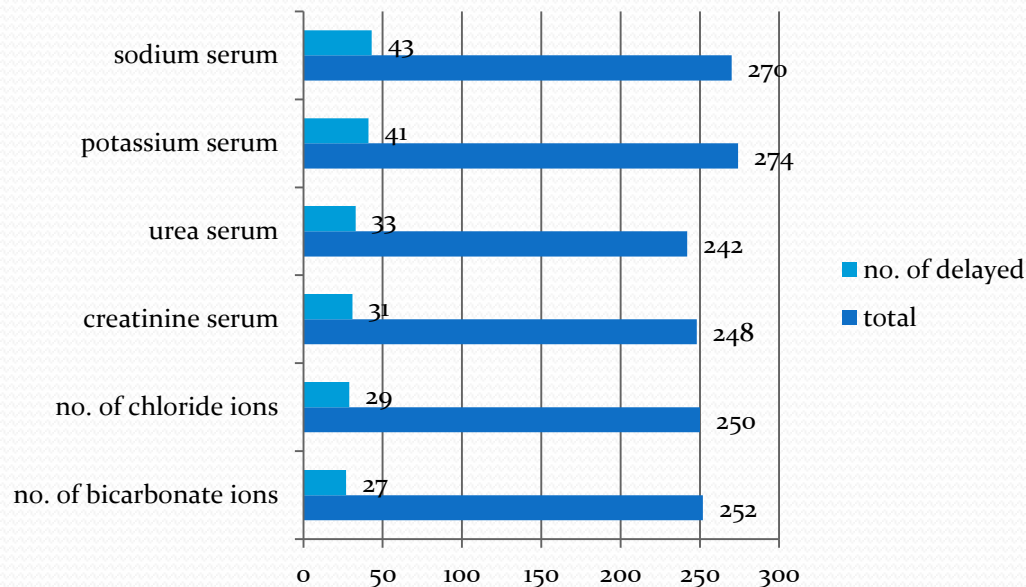
Data collection procedure

Primary data was collected from Hospital Information System.

DATA ANALYSIS

Data is analyzed with the help of Microsoft Excel and is presented graphically.

Graph 1: Total number of delays in the components of Renal Function Test from sample requisition to test verification.



Interpretation

Percentage delay per parameter

Sodium: 15.9%

Potassium: 15%

Urea: 13.6%

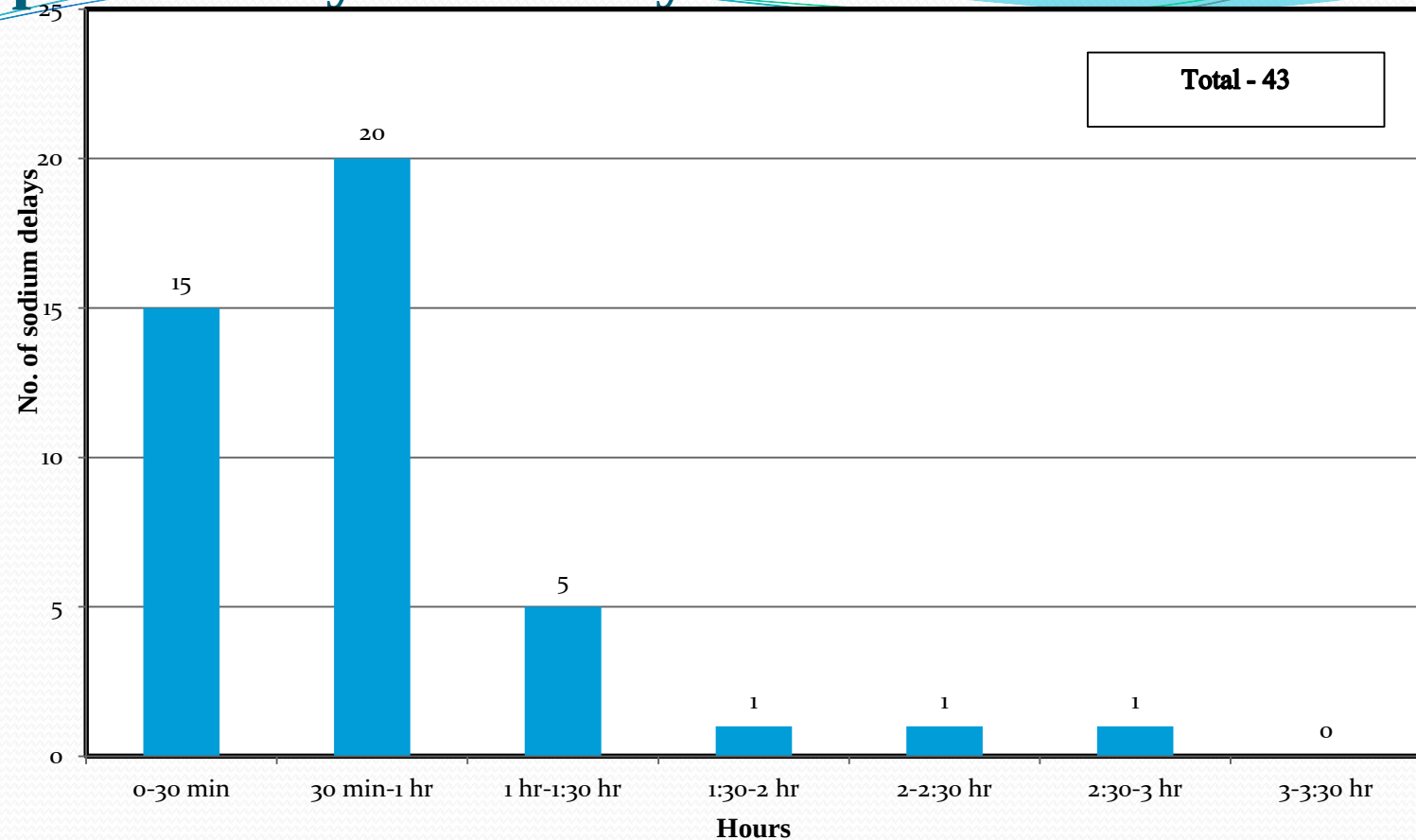
Creatinine: 12.5%

Chloride ions: 11.6%

Bicarbonate ions: 10.7%

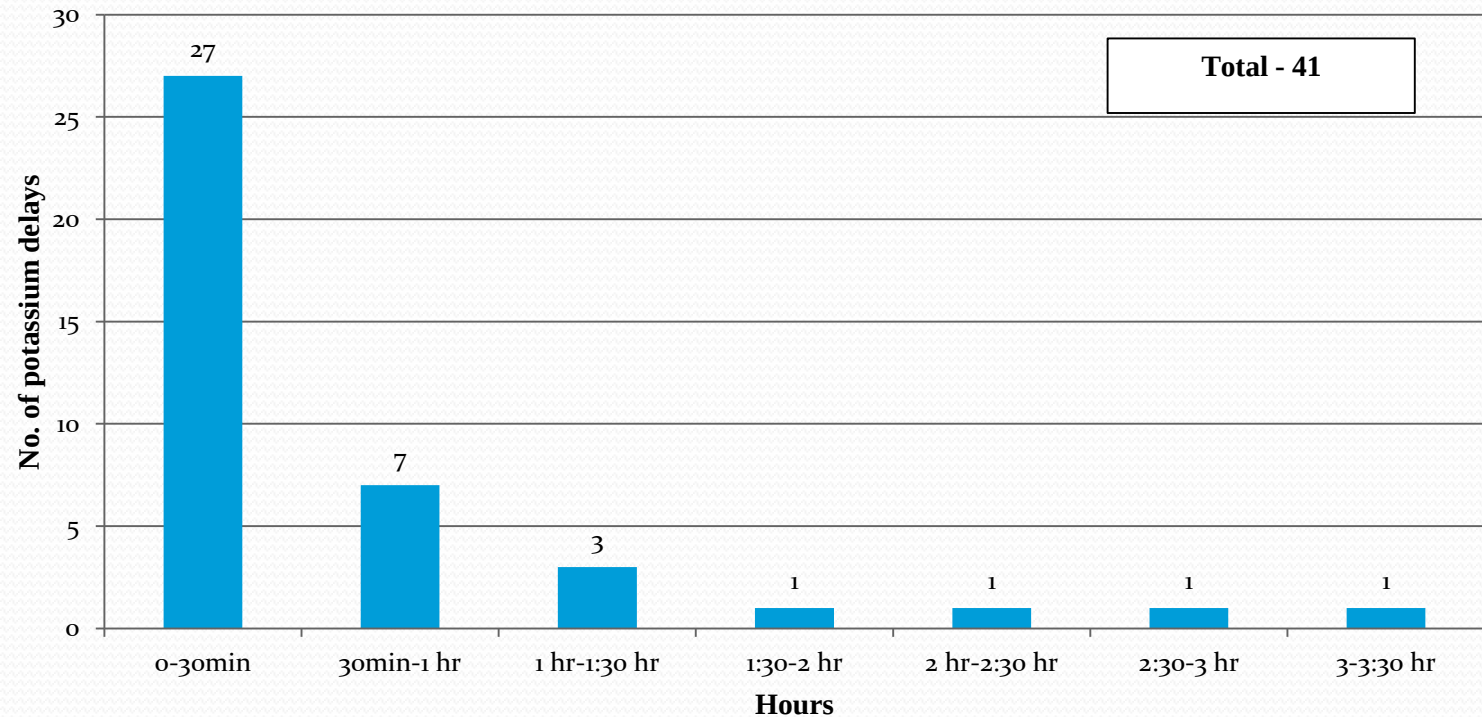
Overall average delay: 13.2%

Graph 2: Analysis of delay in sodium ion test



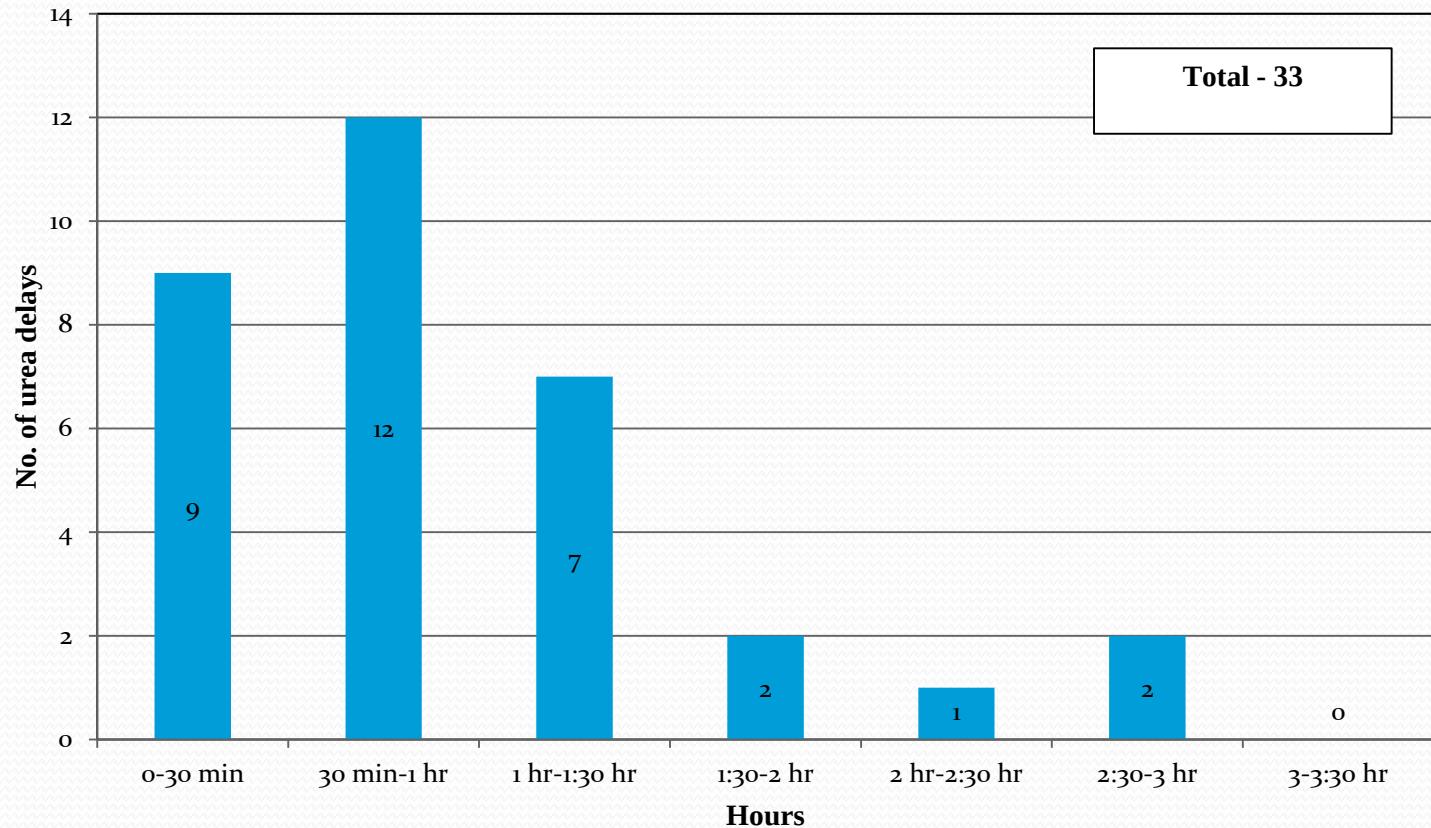
Graph 2 depicts that out of 43 delays, 20 delays were between 30-60 minutes above standard time of 2 hours.

Graph 3: Analysis of delay in potassium ion test



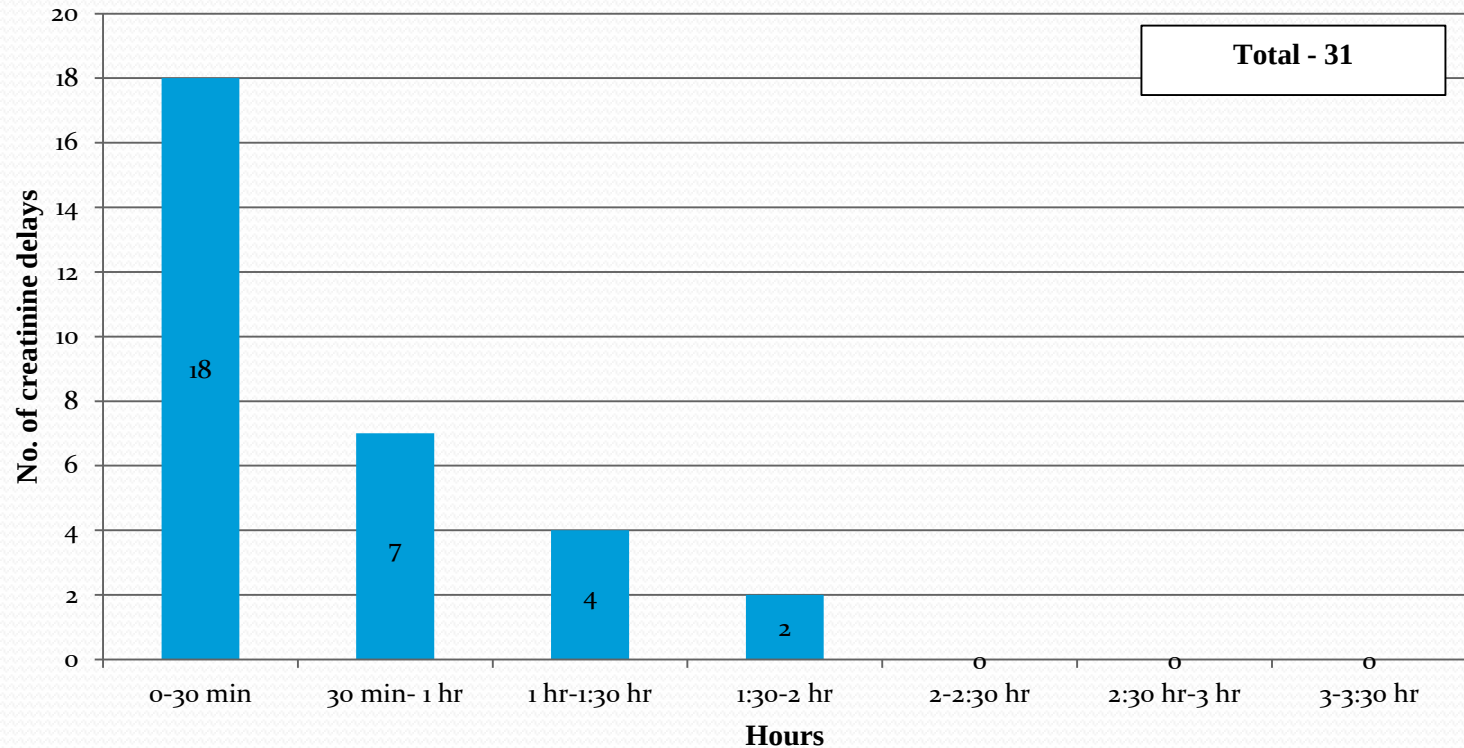
Graph 3 depicts that out of 41 delays, 27 delays were within 30 minutes beyond the standard time of 2 hours.

Graph 4: Analysis of delay in urea test



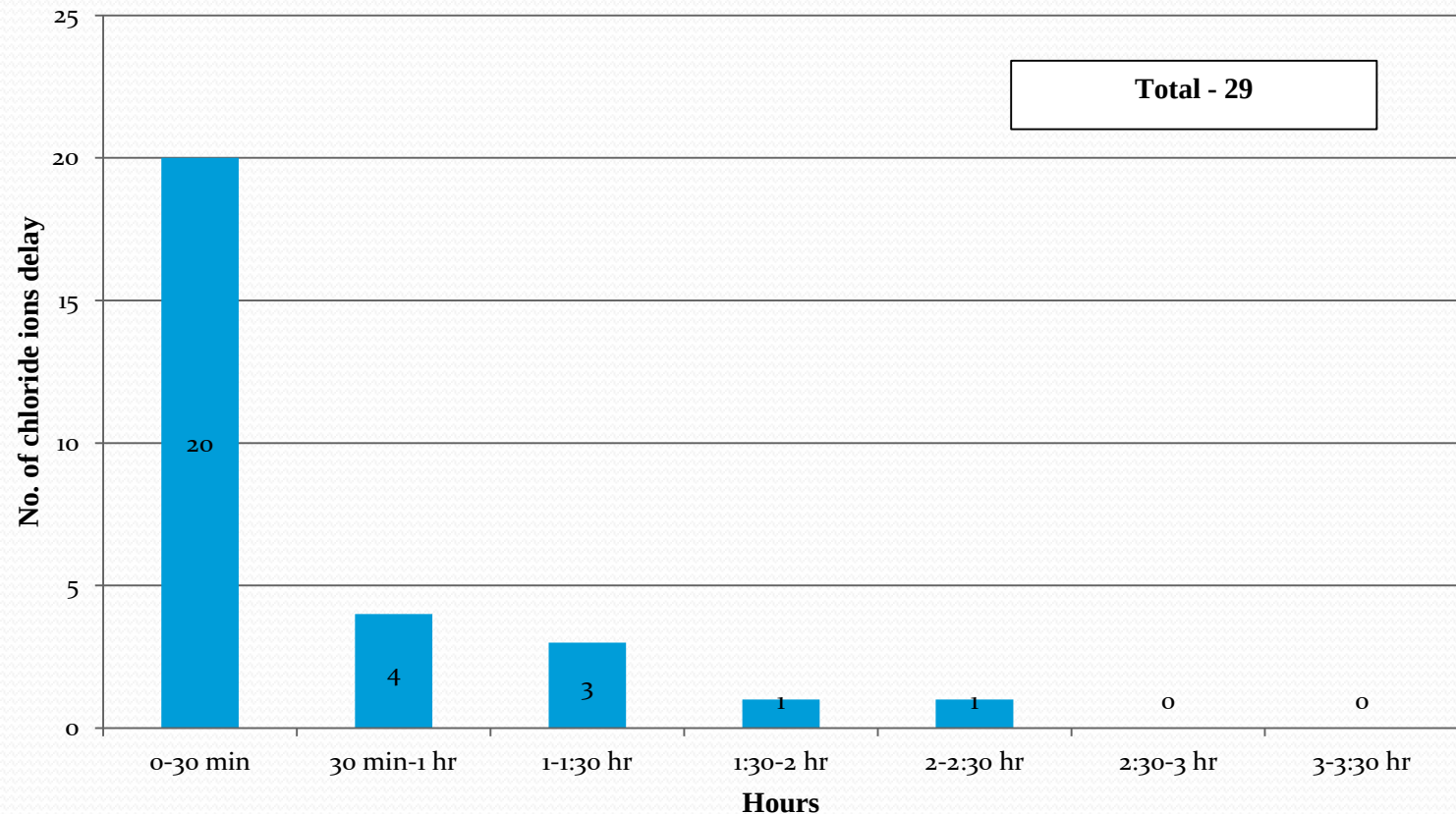
Graph 4 depicts that out of 33 delays, maximum delays were between 30 minutes to 60 minutes above standard time of 2 hours.

Graph 5: Analysis of delay in creatinine test



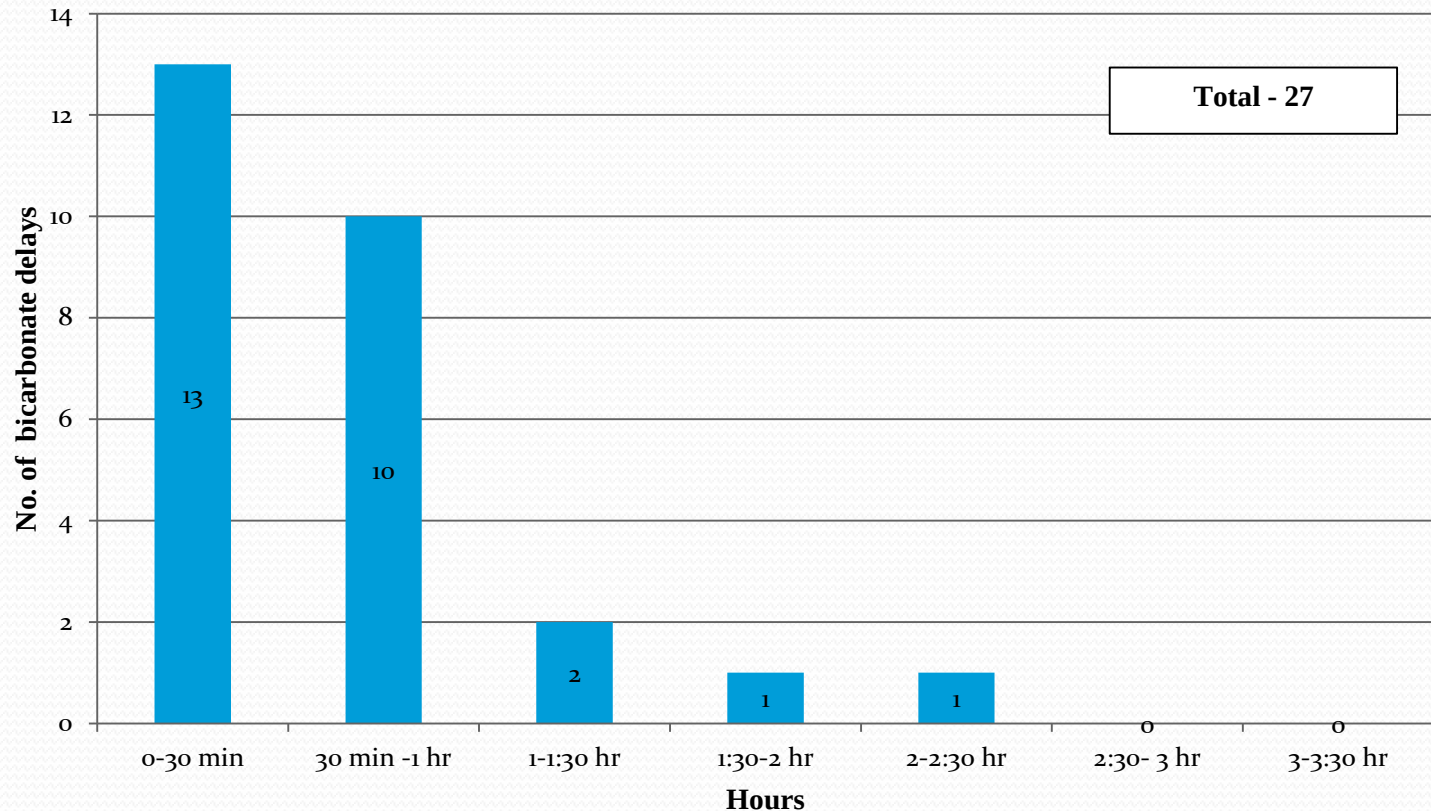
Graph 5 depicts that out of 31 delays, 18 of them were within 30 minutes beyond the standard time of 2 hours.

Graph 6: Analysis of delay in chloride ions test



Graph 6 depicts that out of 29 delays, 20 delays were within 30 minutes beyond the standard time of 2 hours.

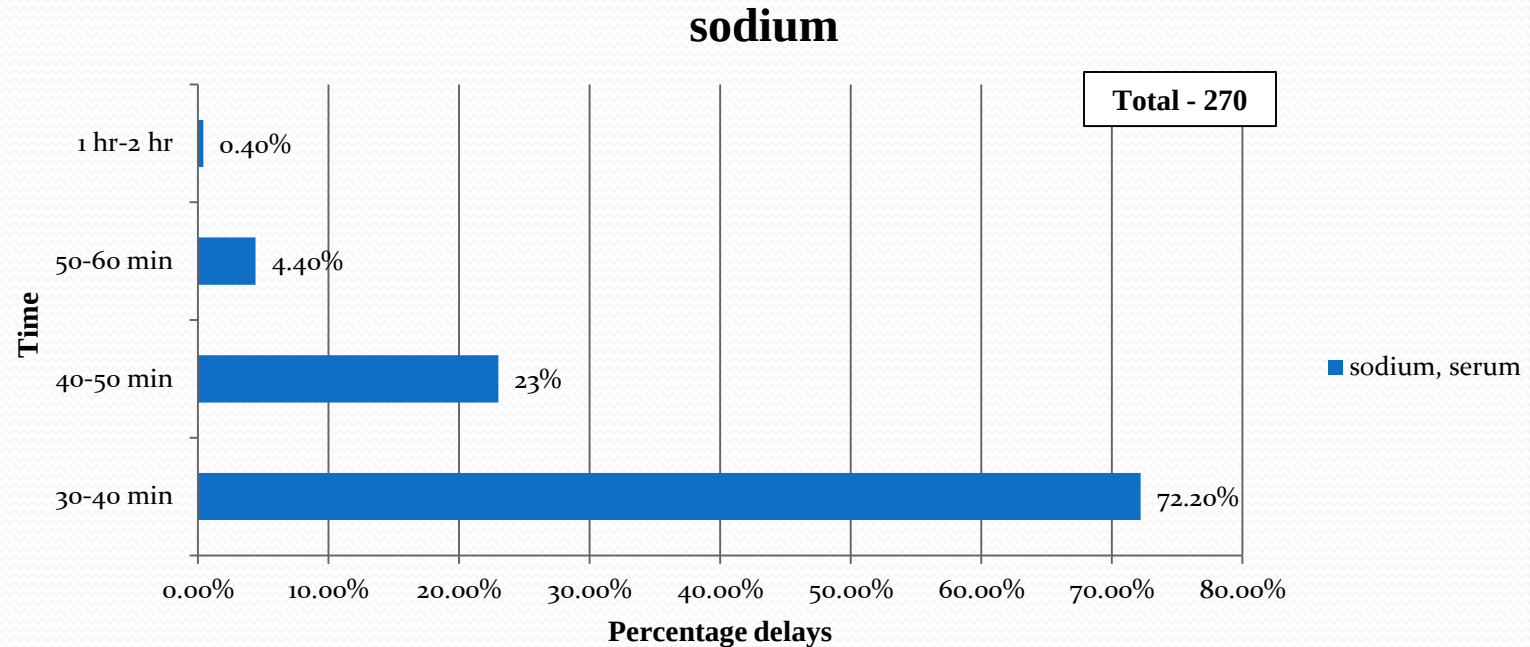
Graph 7: Analysis of delays in bicarbonate ions test



Graph 7 depicts that out of 27 delays, 13 delays were within 30 minutes beyond the standard time of 2 hours.

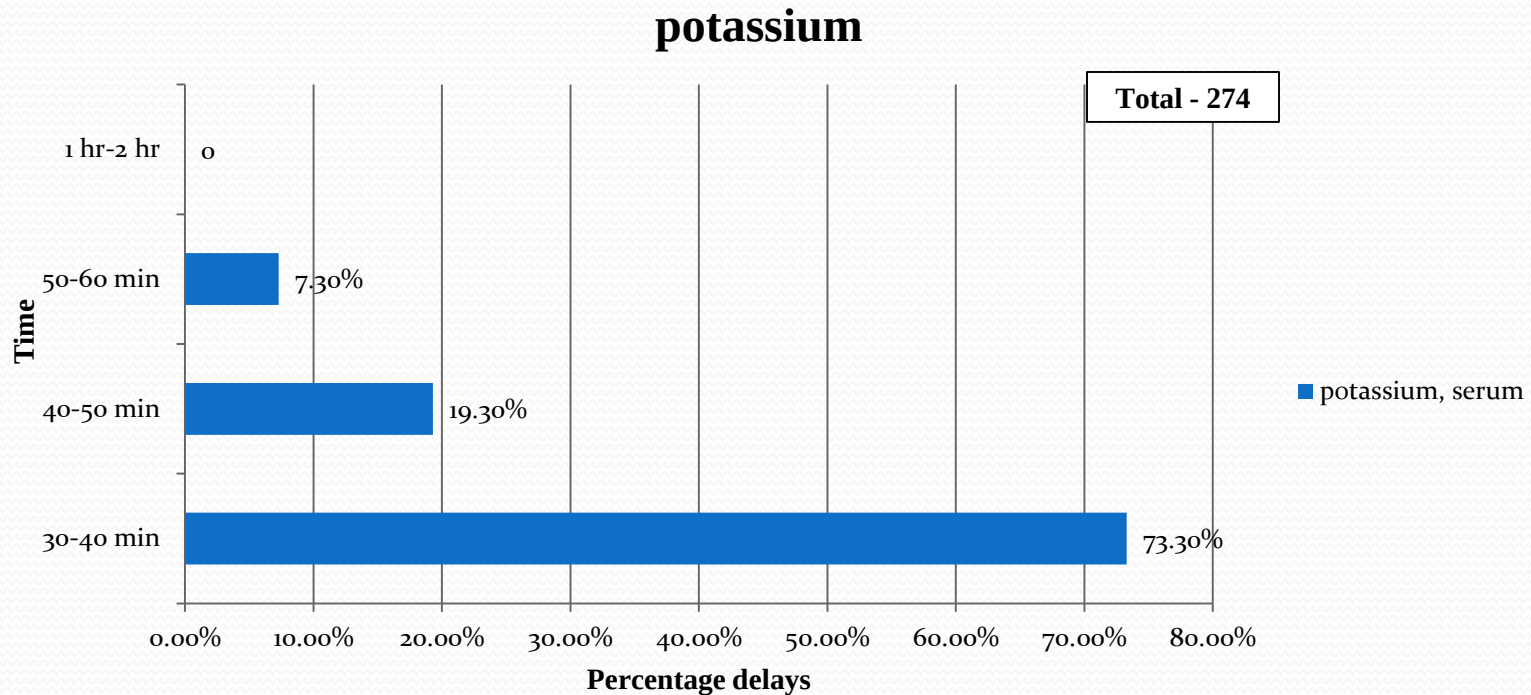
Analysis of delay from nurse's collection to sample requisition in lab

Graph 8: Analysis of delay in sodium ion test



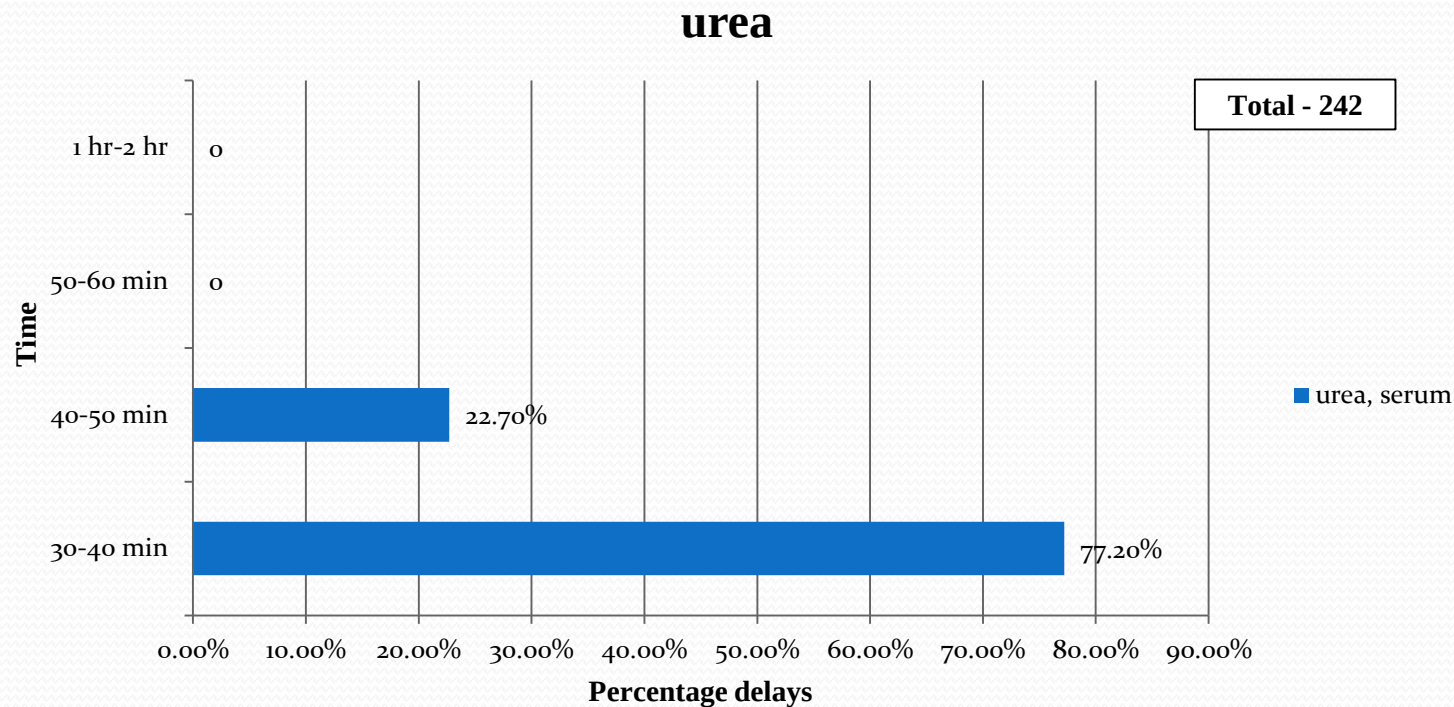
Graph 8 depicts that 72.2% samples reached the lab 30-40 minutes after nurse's collection, 23% samples after 40-50 minutes of collection, 4.4% samples reached the lab after 50-60 minutes of collection and 0.4% samples reached the lab in 1-2 hours after collection.

Graph 9: Analysis of delay in potassium ions test



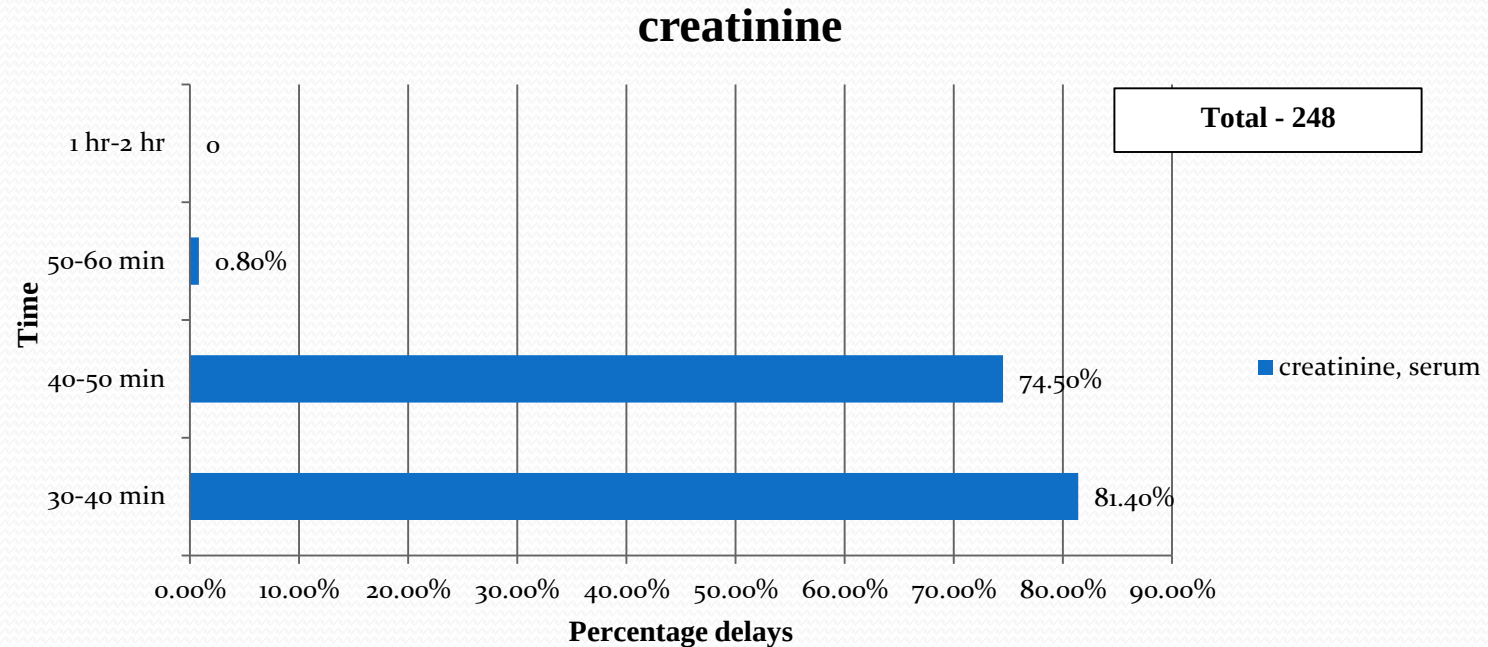
Graph 9 depicts that 73.3% samples reached the lab 30-40 minutes after -collection, 19.3% samples reached the lab 40-50 minutes after collection and 7.3% samples reached the lab 50-60 minutes after collection.

Graph 10: Analysis of delay in urea test



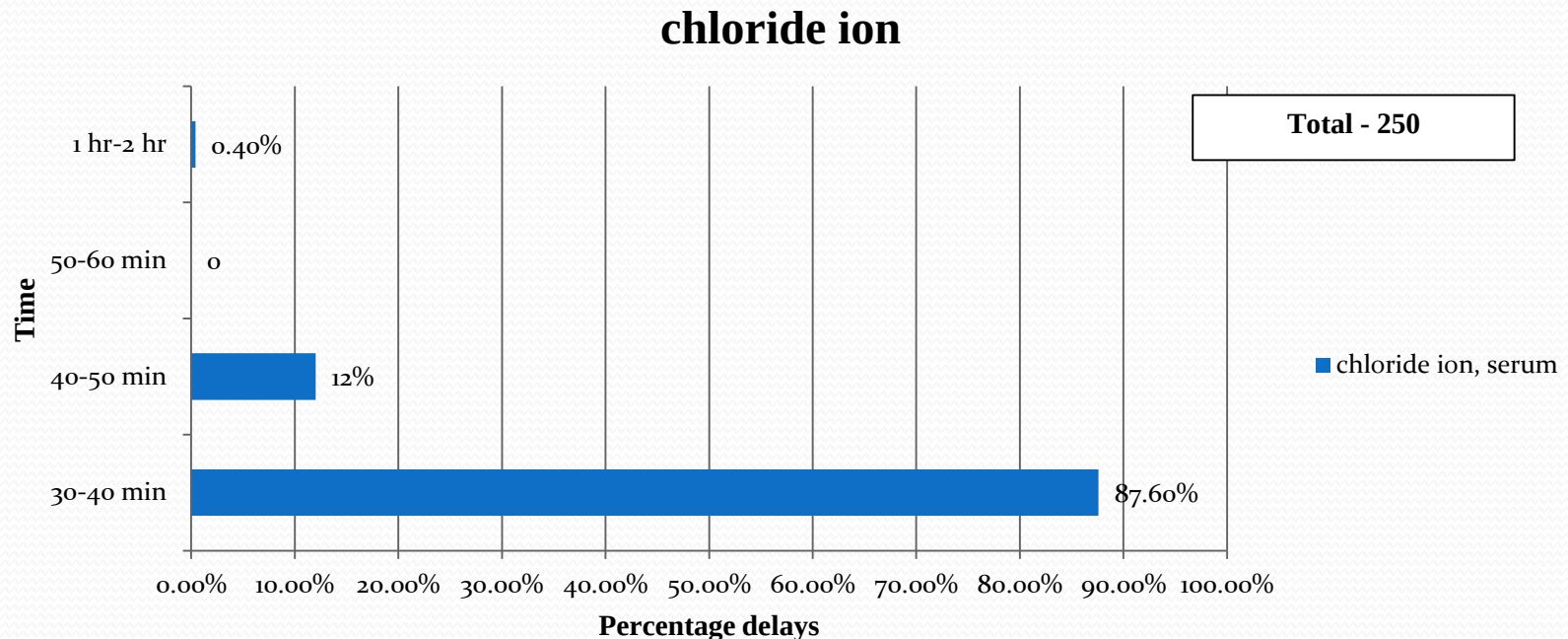
Graph 10 depicts that 77.2 % samples reached the lab 30-40 minutes after collection and 22.7% reached 40-50 minutes after collection.

Graph 11: Delay time from nurse's collection to sample requisition in lab for creatinine



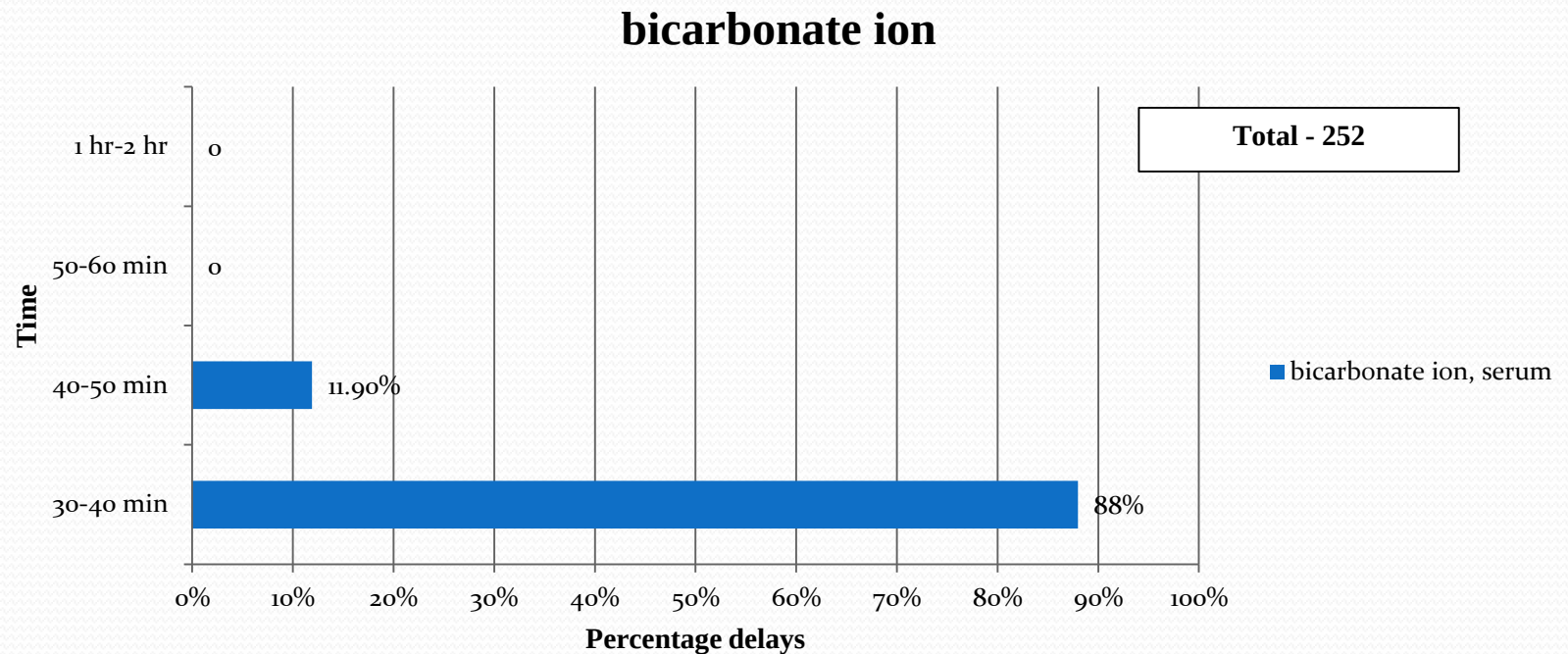
Graph 11 depicts that 81.4 % samples reached the lab 30-40 minutes after collection, 74.5% samples reached the lab 40-50 minutes after collection and 0.8 % samples reached the lab 50-60 minutes after collection.

Graph 12: Delay time from nurse's collection to sample requisition in lab for chloride ion



Graph 12 depicts that 87.6 % samples reached the lab 30-40 minutes after collection, 12% samples reached the lab 40-50 minutes after collection and 0.4% samples reached the lab 1-2 hours after collection.

Graph 13: Delay time from nurse's collection to sample requisition in lab for bicarbonate ion



Graph 13 depicts that 88% samples reached the lab 30-40 minutes after collection and 11.9% samples reached the lab 40-50 minutes after collection.

REASONS OF DELAY:

- Only a single staff to collect and transport the sample to the laboratory
- Delay in sample requisition due to the absence of staff to receive the sample in laboratory
- Samples being loaded late in the equipments by the lab technician
- Lack of proper maintenance of equipments
- Delay in entering result in the system
- Rejected samples

SUGGESTIONS

- Better work management by lab staff by providing them training.
- Roster should be prepared so that a staff is always present to receive the sample and to enter the result in the system.
- More number of staff for collection and transfer of samples.
- Proper technique should be used to collect blood samples to avoid hemolysis and thus sample rejection.
- Sample should be drawn with the help of clot tube.
- Proper calibration of equipments, weekly audit for calibration.



Thank you