

**INTERNSHIP AT
ZYDUS HOSPITALS – CANCER CENTRE
AHMEDABAD
(OCTOBER 2020-JANUARY 2021)**

MODIFIED EARLY WARNING SCORE(MEWS)

by

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(2019-2021)**



**National Forensic
Sciences University**

Knowledge | Wisdom | Fulfilment

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(Ministry of Home Affairs, Government of India)**

PROJECT REPORT
ON
MODIFIED EARLY WARNING SCORE
AT
ZYDUS HOSPITALS – CANCER CENTRE



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QUALITY ASSURANCE INTERN

PREFACE

The project report has been prepared in fulfilment of voluntary internship of MBA in Hospital and Healthcare Management, Semester 3 in the academic years 2020. For preparing the project, I have visited Zydus Hospital – Cancer Centre during the suggested duration to avail the necessary information. The blend of learning and knowledge acquired during my practical study at the hospital is presented in this Project Report. The rationale behind visiting and preparing the project report is to study the Quality Management at Radiology Department of the hospital, which includes calculating Waiting time and Turnaround time of the patient undergoing various scans and procedures.

PREFACE

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ACKNOWLEDGEMENT

I wish to express my sincere gratitude to Dr. Medhavini, CEO and Ms. Jesintha K., Quality Associate at Zydus Hospital – Cancer Centre, Ahmedabad for giving me this opportunity to do the project at this highly esteemed organisation. I am grateful to Mr. Shival Sharma, senior executive, Operations for his advice and encouragement rendered at every stage. I am grateful to Dr. Bhavika Makwana, Medical Services for her immense guidance and support. I am thankful to the nursing staff for their support during the project, without their encouragement and guidance this report would not have been materialized.

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I am thankful to the staff of hospital who contributed in the completion of this project.

Dr. Vishra Shah

N.F.S.U., Gandhinagar

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INTRODUCTION OF THE HOSPITAL

With a mission to extend World Class healthcare solutions to the community through advances in medical technology, medical research and by adopting best man management practices - Zydus Hospitals has launched its newly built flagship hospital in Ahmedabad. The facility is among Western India's largest private hospitals. The hospital complex is located in the posh western suburb of Ahmedabad, just 20 minutes from the airport and in close vicinity of most hotels and shopping malls.

Zydus Hospitals are committed to excellence and quality with an established focus on the well-being of our patients. Zydus Hospitals provide the right mix of cutting edge technology, warmth and compassionate care. Backed by the best team of medical professionals and procedures, Zydus offers the best in private healthcare in a cost effective way and also provide the highest standard of clinical skills and nursing care across an extensive range of specialities and attract world-class doctors and surgeons from leading hospitals.



Mission –

“To provide world standard healthcare solutions to the community by leveraging advances in medical research science and technology and adoption of best management practices”

Vision –

“To be leading provider in healthcare service delivery to the community. To become a most preferred destination for comprehensive medical care and treatment.

Values –

- Patient Centric
- Adaptable to change
- People-driven
- Committed to deliver
- Innovative in what we do
- Humble
- Value – driven

Accessibility –

- 16km far away from Airport
- 12 km away from Railway station

Address –

Zydus Hospitals Road,
Thaltej, SG Highway,
Ahmedabad – 380054,
Gujarat, India

SCOPE OF SERVICES AND FACILITIES

- Medical Oncology
- Haematology and Bone Marrow Transplant
- Nuclear Oncology
- Radiation Oncology
- Surgical Oncology
- High precision radiotherapy with versar HD
- First-of-its-kind 32 Slice PET CT in Western India
- Gujarat's biggest bone marrow transplant unit
- Robotic techniques for complex surgeries
- Stage-IV Peritoneal Cancer treatment using HIPEC technique
- 3D mammography with High Definition (HD) tomosynthesis
- SPECT with high definition detectors
- Fully-integrated diagnostic services with cutting-edge technology
- High dose radionuclide therapy, nuclear theranostics and precision medicine
- Scarless head and neck surgeries
- Breast reconstruction surgeries
- HDRS - unique approach to stereotactic radiosurgery
- Transparent billing and comprehensive packages
- 20-bedded day care facilities
- Neutropenic area
- Various category wise rooms including suite rooms
- Corporate desk
- Dedicated OPD wings for Medical, Surgical & Radiation departments
- Ambulance services
- Three spacious operation theatres with HEPA filters and laminar flows
- Modern anaesthesia machines with ventilation
- Comprehensive multi-channel monitors including respiratory gas and spirometry monitoring in operation theatres
- Blood gas monitoring facilities
- 25-bedded state-of-the-art ICUs
- Intensive care services in-surgical ICU for post-operative care for major extensive surgeries and in-medical ICU for other critically ill patients who may require both non-invasive and invasive ventilatory support
- Cytology, Histopathology, Microbiology laboratories along with pneumatic tube system for easy transportation of collected blood samples.

MODIFIED EARLY WARNING SCORE (MEWS SCORE)

The Modified Early Warning Score (MEWS) is a simple, physiological score that may allow improvement in the quality and safety of management provided to surgical ward patients. The primary purpose is to prevent delay in intervention or transfer of critically ill patients.

It determines the degree of illness of the patient.

It is based on the vital signs (respiratory rate, oxygen saturation, temperature, blood pressure, pulse/heart rate, AVPU response)

The resulting observations are compared to a normal range to generate a single composite score, for instance based on the following diagram (an early modified EWS):

Score	3	2	1	0	1	2	3
Respiratory rate (breaths/min)	>35	31-35	21-30	9-20			<7
SpO2 (%)	<85	85-89	90-92	>92			
Temperature (C)		>38.9	38-38.9	36-37.9	35-35.9	34-34.9	<34
Systolic BP (mmHg)		>199		100-199	80-99	70-79	<70
Heart rate (bpm)	>129	110-129	100-109	50-99	40-49	30-39	<30
AVPU				Alert	Verbal	Pain	Unresponsive

A score of five or more is statistically linked to increased likelihood of death or admission to an intensive care unit.

Within hospitals, the EWS is used as part of a "track-and-trigger" system whereby an increasing score produces an escalated response varying from increasing the frequency of patient's observations (for a low score) up to urgent review by a rapid response or Medical Emergency Team (MET call). Concerns by nursing staff may also be used to trigger such call, as concerns may precede changes in vital signs.

MEWS (Modified Early Warning Score)							
Score	3	2	1	0	1	2	3
Respiratory rate (breaths/min)	>=30	21-29	15-20	14-9		<9	
SpO2(%)	<=85	85-89	90-94	>=95			
Temperature (Fahrenheit)		>=101.3	99.32-101.12	96.98-99.14	95-96.8	<95	
Systolic BP (mmHg)	>=220	201-219	181-200	101-180	81-100	71-80	<=70
Heart rate (rate/min)	>=130	110-129	101-110	51-100	41-50	<=40	
Consciousness Level				Alert	Voice	Pain	Unconscious

Wellington Early Warning Score Escalation Pathway		
Zone	Indicator (MEWS Total)	Mandatory Action
YELLOW	1-5	Manage pain, fever or distress (symptomatic treatment)
ORANGE	6-7	Floor Medical Officer review within 30 mins, Inform to consultant, Discuss with nurse incharge and increase frequency of vital signs monitoring
RED	8-9	Consider ICU referral
BLUE	>=10	Activate code blue

STUDY OF MEWS SCORE

AIM –

- Understand whether the compliance is achieved for MEWS score according to the scale given of the Zydus Cancer Centre
- To identify the existing problems and help find possible solutions for the betterment of the patients and hospitals.

LOCATION –

- , Zydus Cancer Centre

DURATION OF THE STUDY –

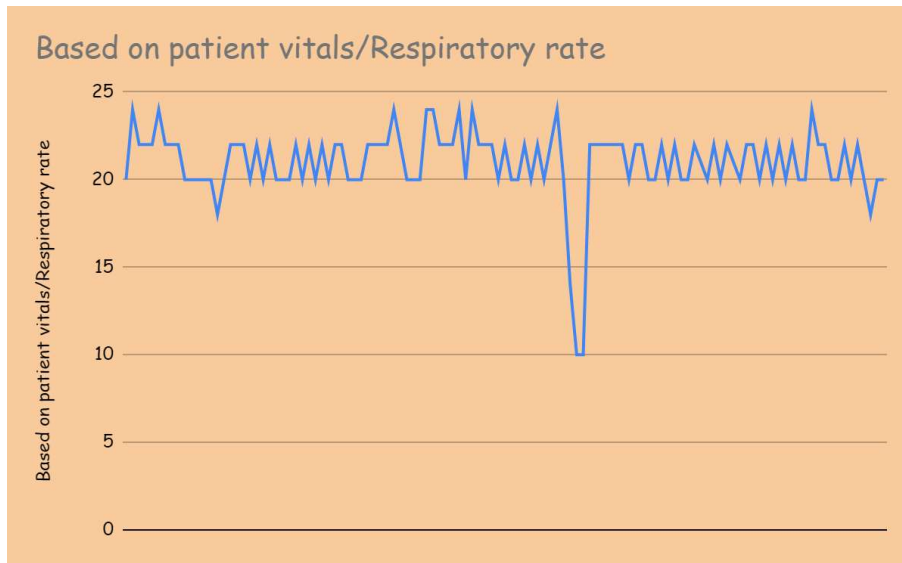
- 24-10-2020 to 24-12-2020 (October 2020 – December 2020)

SAMPLE SIZE – 117

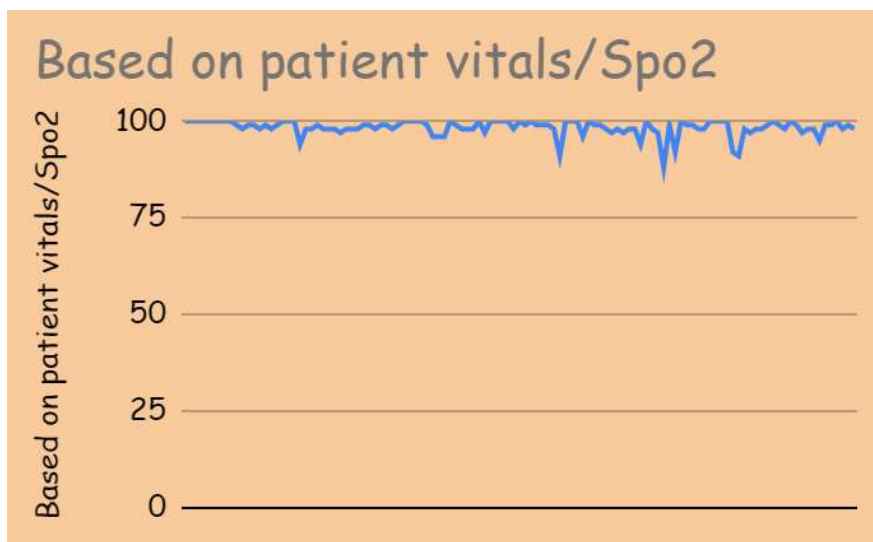
TOOLS USED – MS-Excel, Graphs

ANALYSIS AND INTERPRETATION

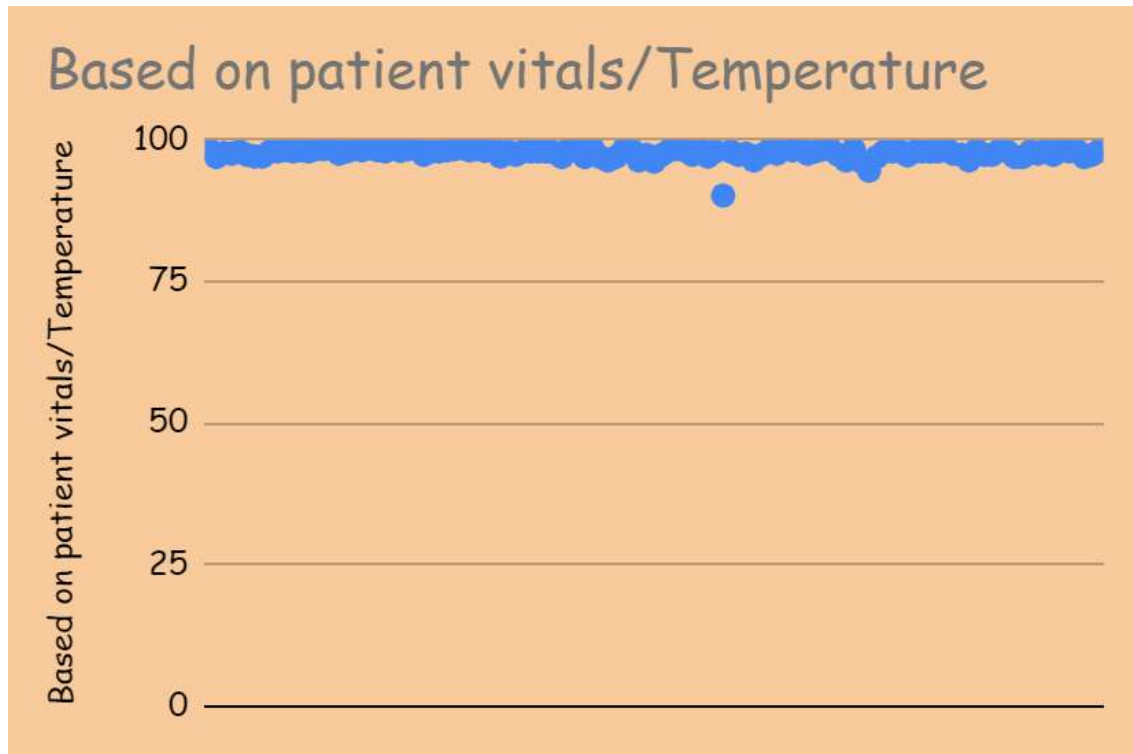
1) Respiratory Rate



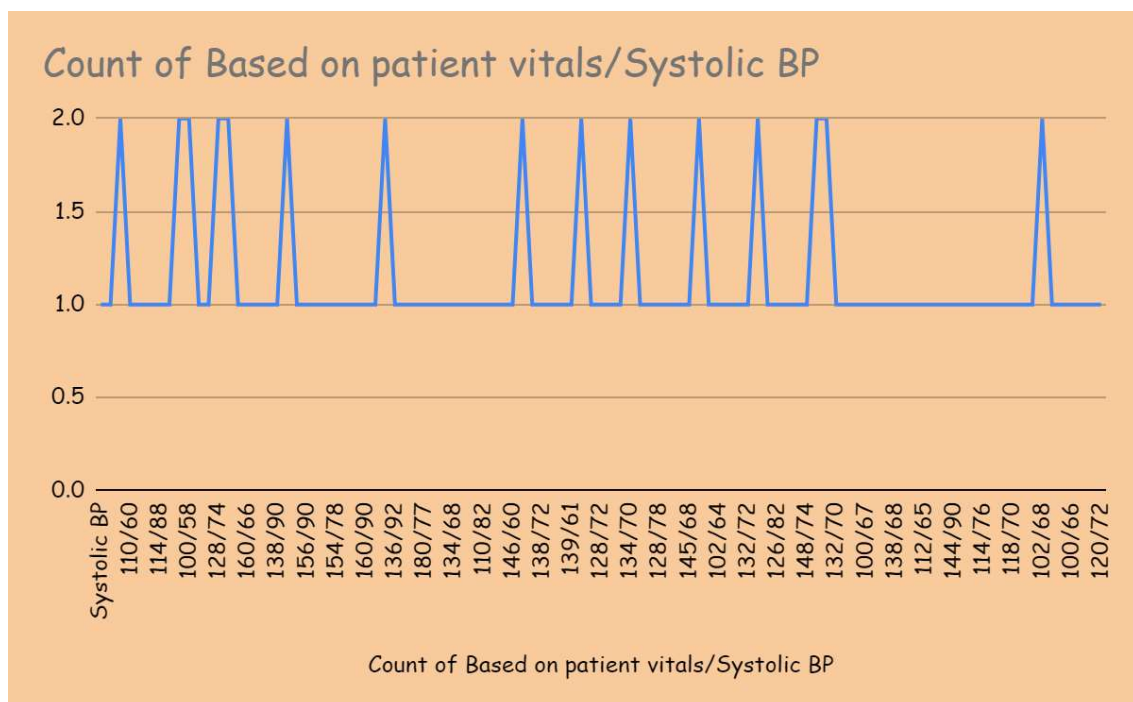
2) SpO2



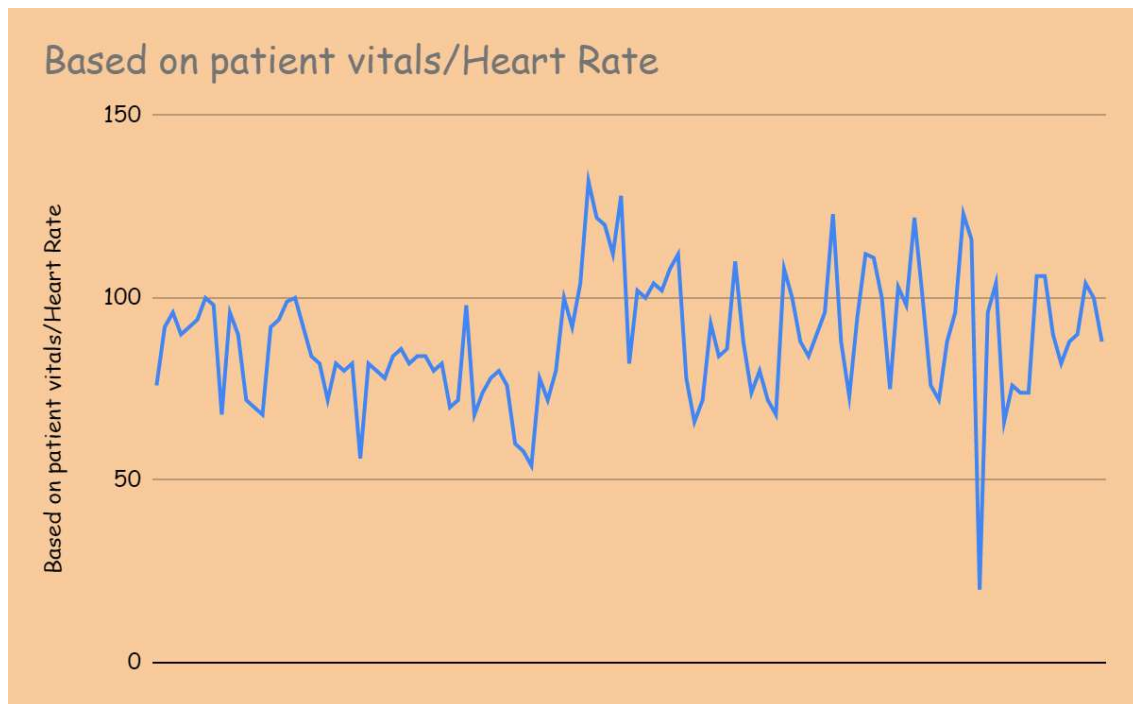
3) Temperature



4) Blood Pressure

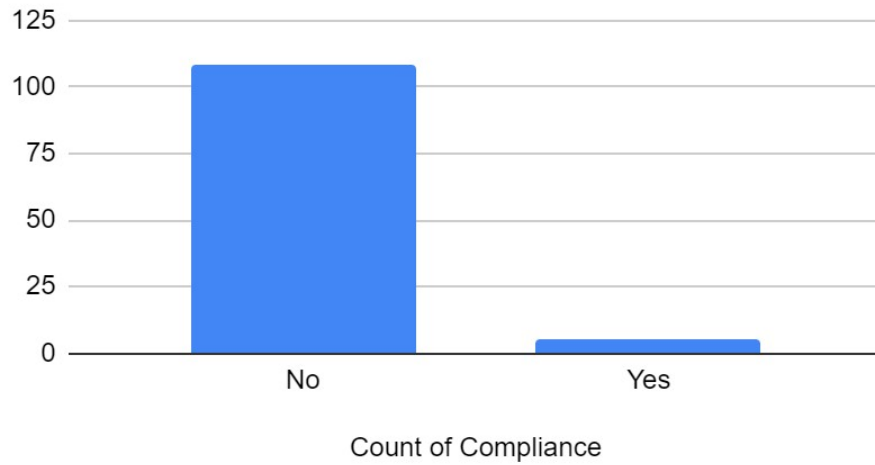


5) Heart Rate

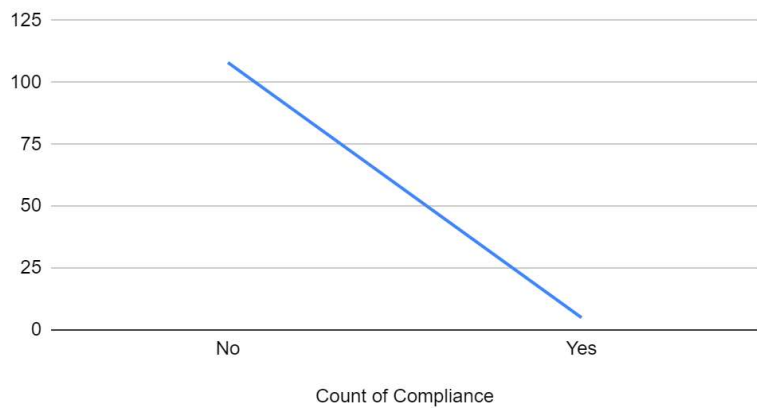


6) Compliance

Count of Compliance



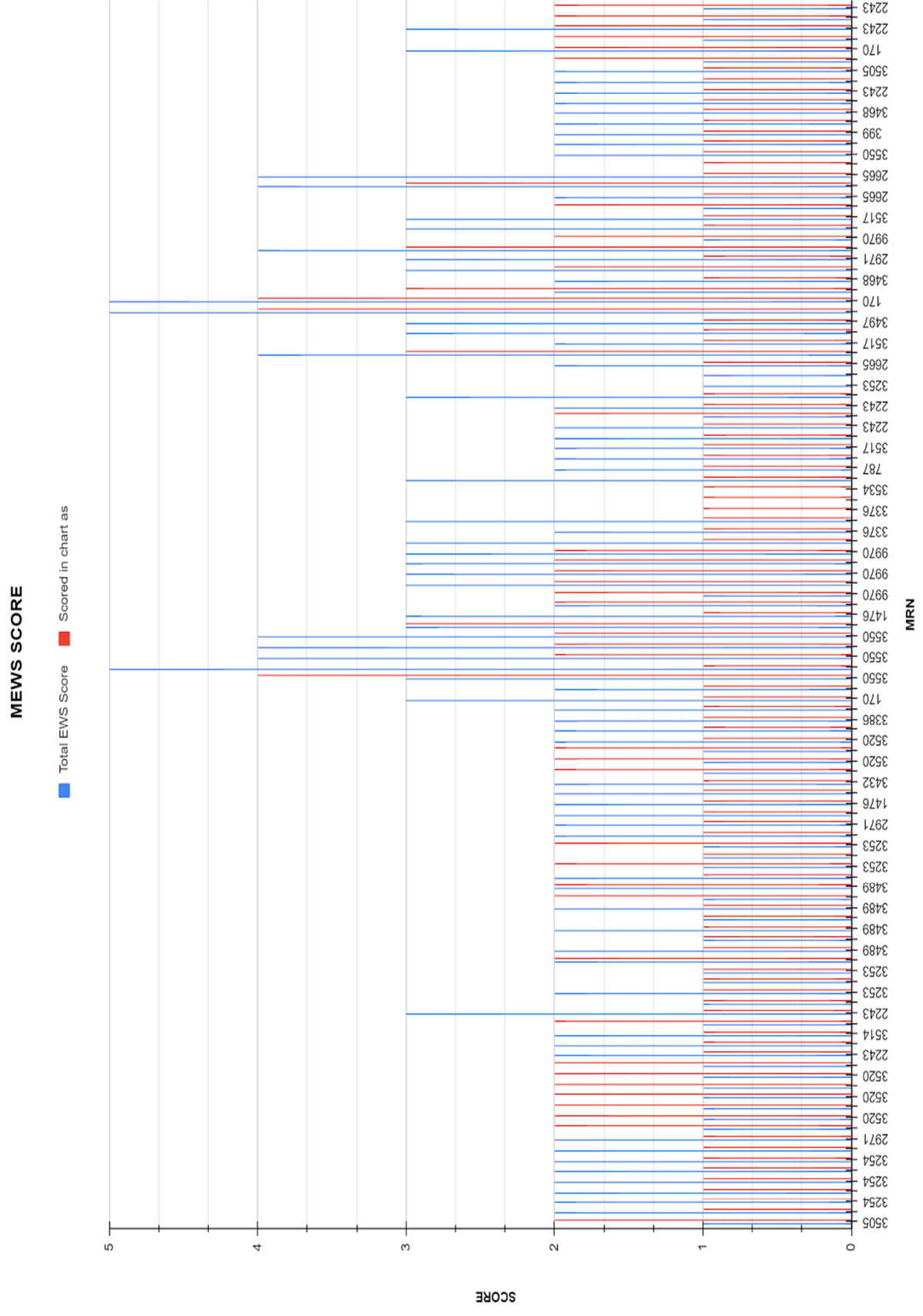
Count of Compliance



Analysis – Normally the inaccurate summation is because there is an error in the scoring of Respiratory rate and Heart rate in the assessment sheet in the IPD files done by respective nursing staff.

From the graphs (6), it can be seen that the compliance has not been achieved for majority of the samples collected, in 108 samples compliance has not been achieved and 5 samples compliance has been achieved, in other 4 samples Total EWS score was not recorded as there was insufficient data in the scored chart.

In the graph below, MRN vs MEWS Score is plotted showing Total EWS score(blue) and Score in chart as (red). The analysis of the graph shows inaccuracy and wrong reading for different patients. Wrong reading can lead to inaccuracy in determining the degree of illness in a patient as vitals are the most important indicator of the statistics of health.



RECOMMENDATIONS

- Induction and training of the nursing staff
- Regular checks by nursing supervisor
- Inaccurate summation can lead to critical situation of CODE BLUE in a patient hence proper checking and sensitization towards patient should be maintained

MEWS SCORE												
Sr. No.	Date	Room No.	MRN	Time								
					Respiratory Rate	SpO2	Temperature	Systolic BP	Heart Rate	Total EWS score	Scored in Chart As	Remarks