IMPLEMENTATION OF PATIENT BLOOD MANAGEMENT STRATEGIES AND ITS CLOSE MONITORING AS A QUALITY IMPROVEMENT PRACTICE IN ELECTIVE SURGICAL PATIENTS

Thesis

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DECLARATION

I hereby declare that **'Implementation Of Patient Blood Management Strategies And Its Close Monitoring As A Quality Improvement Practice In Elective Surgical Patients',** embodies the original work carried out by the undersigned in All India Institute of Medical Sciences (Jodhpur).

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CERTIFICATE

This is to certify that the thesis titled **'Implementation Of Patient Blood Management Strategies And Its Close Monitoring As A Quality Improvement Practice In Elective Surgical Patients'** is the bonafide work of Dr Pallavi Singh, carried out under our guidance and supervision, in the Department of Transfusion Medicine and Blood Bank, All India Institute of Medical Sciences, Jodhpur.

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Dr. Pallavi Singh

Dedicated to My Parents

LIST OF ABBREVIATIONS

ABC	Anemia and blood transfusion in critically ill
ACLR	Arthroscopic Anterior Cruciate Ligament Reconstruction
ACSQHC	Australian Commission on Safety and Quality in Health Care
ANOVA	Analysis of Variation
ANVH	Autologous Normo-volemic Hemodilution
APACHE-II	Acute Physiology and Chronic Health Evaluation II
CBC	Complete Blood Count
CKD	Chronic Kidney Disease
COVID	Corona Virus Disease-19
CRP	C Reactive Protein
CTVS	Cardiothoracic Vascular Surgery
DMT	Divalent metal ion transporter 1
DVT	Deep Vein Thrombosis
EACA	Epsilon amino-caproic acid
EPO	Erythropoietin
EU	European Union
FCM	Ferric Carboxymaltose
GEN	General Surgery
GI	Gastro-Intestinal Surgery
Hb	Hemoglobin
HIV	Human Immunodeficiency Virus
ICU	Intensive Care Unit
IV	Intravenous
LOHS	Length of Hospital Stay
LOS	Length of Stay after Surgery
LOS	Length of Stay
MCV	Mean corpuscular volume
MOHFW	Ministry of Health and Family Welfare
NEURO	Neurosurgery

NFHS	5th National Family Health Survey
NHSBT	NHS Blood and Transplant
NS	Normal Saline
NSQHS	National Safety and Quality Health Service Standards
ONCO	Oncosurgery
OPD	Out Patient Department
ORTHO	Orthopedics
OT	Operation Theatre
PA	Pre-Operative Anemia
PBF	Peripheral blood film
PBM	Patient Blood Management
PDSA	Plan-Do-Study-Act
PE	Pulmonary Embolism
PRBC	Packed Red Blood Cells
QIS	Quality Improvement Study
RBC	Red Blood Cell
RCT	Randomized Control Trial
RDW	Red cell distribution width
TIBC	Total Iron Binding Capacity
TI	Transfusion index
TKA	Total knee arthroplasty
TM	Transfusion Medicine
TRALI	Transfusion Related Acute Lung Injury
TRICC	Transfusion Requirements in critical care
TRIM	Transfusion related immunomodulation
TR	Transfusion rate
TXA	Tranexamic Acid
UK	United Kingdom
URO	Urosurgery
USA	United States of America
WHA	World Health Assembly

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SUMMARY

Background: Patient Blood Management (PBM) is a multidisciplinary approach where before surgery every reasonable measure should be taken to optimize the patient's own blood volume, minimize the patient's blood loss, and harness and optimize the patient-specific physiological tolerance of anemia. These are the three pillars of PBM and executing their strategies effectively will lead to the reduced requirement of allogeneic blood transfusion, decreased morbidity and mortality and cost-benefit.

Objectives: To study the effect of patient blood management on overall prognosis, recovery and duration of hospital stay in surgical patients. PRIMARY OBJECTIVE: To study the impact of close monitoring of patient blood management strategies on peri-operative morbidity in patients undergoing elective surgery. SECONDARY OBJECTIVE: To study the difference in clinical outcome between the patients receiving hematinics vs packed red blood cell (PRBC) transfusion as a part of patient blood management.

Methods: This is a prospective quality improvement study over two years involving departments of Transfusion Medicine, Anaesthesiology, Cardiothoracic Surgery, General Surgery, Neurosurgery, Orthopaedic Surgery, Surgical Gastroenterology, Surgical Oncology and Urology at AIIMS, Jodhpur. The study involves the implementation of PBM strategies to improve clinical outcomes in the patient. Before starting the PBM program, the ongoing practice was observed and relevant data was collected. Based on the problem area, execution of PBM policies through a multidisciplinary approach was undertaken. The primary focus of this study was the optimization of red cell reserve of the patient by correction of anemia using iron. Other PBM measures like acute normovolemic hemodilution (ANVH) and using tranexamic acid (TXA) were also promoted. After promoting and implementing PBM initiatives, a similar set of data was collected. The comparison was made between both sets to assess the efficacy of the PBM program and determine problem areas.

Results: Out of 938 patients included in the study, 518 were in the pre-PBM implementation group and 420 were in the post-PBM group. There was a statistically significant improvement in pre-operative hemoglobin and hemoglobin at the time of discharge after PBM strategies ($p<0.05$). The percentage of transfusion decreased

from 24.9% to 14.5% after PBM. The average length of stay after surgery (LOS-AS) before PBM was 7.14 ± 5.73 days which decreased by approximately 48% to 3.49±4.38 days after PBM ($p<0.05$). Similarly, the average length of stay (LOS) before PBM was 13.2 ±22.38 days which decreased by approximately 48% to 7.09±6.4 days after PBM ($p=0.0005$). ICU admission was required in 112 (21.6%) patients before PBM whereas it was required only in 12.6% patients after PBM ($p=0.0005$). Also, ICU stay and length of hospital stay were directly proportional to the degree of pre-operative anemia.

Conclusion: The patient blood management (PBM) concept is an evidence-based, multidisciplinary, multimodal therapeutic approach to individually manage and preserve the patient's own blood in surgical and non-surgical settings. The high frequency of untreated pre-operative anemia, the unmet need for better bleeding control, and a liberal transfusion practice all point to significant potential for improving outcomes and avoiding millions of transfusions each year. Our study showed positive outcomes after the implementation of PBM strategies. There was a decline in the proportion of anemic patients taken for surgery, a decline in anemia severity in hospital discharged patients, decreased length of hospital stay, decreased ICU admission rate and decreased allogeneic transfusion requirement. Implementing an effective PBM program is tiresome but is highly beneficial in terms of patient's clinical outcome as well as on healthcare infrastructure.

INTRODUCTION

According to the world health organization (WHO), patient blood management (PBM) is a "patient-focused, evidence based and systematic approach for optimizing the management of patients and transfusion of blood products to ensure high quality and effective patient care. In 2010 the World Health Assembly Resolution WHA63.12 endorsed PBM specifically referring to the three-pillar concept “bearing in mind that patient blood management means that before surgery every reasonable measure should be taken to optimize the patient’s own blood volume, to minimize the patient’s blood loss and to harness and optimize the patient-specific physiological tolerance of anemia”

Patient Blood Management (PBM) is not just limited to enforcement of restrictive transfusion strategies but in fact is involved in overall managing of patient’s blood reserve by increasing red cell reserve, decreasing blood loss, decreasing allogenic requirement and increasing tolerance to mild anemia. The concept of PBM appears an obvious choice while managing a patient and fairly easy to implement but in reality, it requires consistent effort from all the healthcare forces involved in treatment of the patients including the physician, surgeon, the anaesthetist, the transfusion specialist, the nurse, the administration as well as the patients themselves.

The execution of PBM started much earlier in developed countries and it is a part of routine patient care. In developing countries like India, the concept of PBM seems unattainable. There are multiple obstacles involved in success of PBM including enthusiasm among treating physicians and surgeons, initiative by transfusion medicine specialist and awareness among patient groups. The patient blood management (PBM) is multidisciplinary approach and involves multiple primary stakeholders namely clinical department heads, patient organizations and transfusion medicine department who are involved directly in the treatment. Various secondary stakeholders like government agencies, medical journalist and media also play and important role in success of PBM by creating positive viewpoint and discernment.

The strategies to implement such management policies involves layered stepwise approach at different phases of patient’s treatment. It is tailored according to each patient.

PBM is fundamentally based on three pillars:

1. Optimization of the (preoperative) red blood cell volume

2. Reduction of diagnostic, therapeutic, or intraoperative blood loss

3. Increasing individual tolerance towards anemia and accurate blood transfusion triggers.

PBM primarily identifies patients at risk for transfusion and provides a management plan aimed at reducing or eliminating anemia and the need for blood transfusion donated from someone other than the patient (allogeneic transfusion), thus reducing the risks, blood bank inventory pressures, and the escalating costs associated with transfusion.

Each pillar has three phases i.e., pre-operative, intra-operative and post-operative phase. The strategies in the three phases are all interlinked and are reliant on each other.

This study is a quality improvement study of PDSA type. Before starting PBM program, the ongoing practice was observed and relevant data was collected. Based on the problem areas, execution of PBM policies through multidisciplinary approach was undertaken. As our institute had started PBM in the form of adhering to restrictive transfusion guidelines since inception of the department of transfusion medicine, the primary focus of this study was optimization of red cell reserve of the patient by correction of anemia using iron. Other PBM actions such as blood conserving measures like ANVH and using TXA was promoted. After promoting PBM initiatives, similar set of data was collected and comparison was made between both the sets. the outcome of the program will be measured in three major aspects i.e., allogenic PRBC transfusion rate, length of hospital stays and anemia correction. PBM is not widely used in India, despite the fact that it provides several benefits in developed countries. In the Indian population, there is a scarcity of evidence demonstrating the effectiveness of the PBM programme. This study will help in determining correlation between severity of anaemia, allogenic transfusion rate and length of hospital stay.

REVIEW OF LITERATURE

Patient Blood Management (PBM) is evidence-based enhancement of patients' own blood for better medical and surgical outcome. It is not just limited to enforcement of restrictive transfusion strategies but in fact is involved in overall managing of patient's blood reserve by increasing red cell reserve, decreasing blood loss, decreasing allogenic requirement and increasing tolerance to mild anemia. The concept of PBM appears an obvious choice while managing a patient and fairly easy to implement but in reality, it requires consistent effort from all the healthcare forces involved in treatment of patient including the physician, surgeon, the anesthetist, the transfusion specialist, the nurse, the administration as well as the patients themselves. Over the years, transfusion of blood products has become one of the primary medical therapeutics and has been customarily rooted in the treatment of patients. Its benefit is usually assumed and risks ignored. It has become a default treatment option in scenario of diagnostic uncertainty. There is an urgent need to reverse this trend and create awareness of ill-effects of allogenic blood transfusion. Creating awareness about PBM strategies is the best way to uproot this custom and emphasis should be the patient instead of the disease.

Over the years the concern regarding abuse of allogenic transfusion has increased. The science of transfusion medicine has come a long way from World War I, where anticoagulation and refrigeration were introduced to increase shelf life of the blood to World War II where blood storage methods were utilized. Today "safe" blood is tested for virus and matched with patient before transfusion. But is allogenic blood really safe? Blood is not considered safe only if it is negative for transfusion transmissible infections or antibodies. Instead, allogenic blood can also cause immunomodulation known as transfusion related immunomodulation (TRIM), acute lung injury (TRALI), hemolytic reactions etc. Over the years blood has saved many lives but as there were no studies to prove harmful effects of transfusion, blood was considered to be a default treatment option especially in patients of trauma, war victims and those undergoing surgery.

At multiple instances throughout the history apprehensions were raised regarding blood exploitation. The following is extracted from the British Medical Journal (1945):

852 JUNE 16, 1945 BRITISH MEDICAL JOURNAL

Correspondence

Blood Transfusion

I am unrepentant in condemning the giving of blood during straightforward operations.

a smooth operation should lead to smooth convalescence without biochemical assistance.—I am, etc.,

London, N.W.8. W. H. OGILVIE.

INTERCOLONIAL MEDICAL CONGRESS OF AUSTRALASIA.

FIFTH SESSION.

BRISBANE, QUEENSLAND.

FIRST DAY—MONDAY, 18TH SEPTEMBER, 1899.

SECTION OF MIDWIFERY AND GYNÆCOLOGY.

INTERCOLONIAL MEDICAL CONGRESS OF AUSTRALASIA.

TRANSACTIONS

OF THE

FIFTH SESSION

HELD IN

BRISBANE, QUEENSLAND,

SEPTEMBER, 1899.

Published under the direction of the Literary Committee.

BY WILTON LOVE, M.B.

Brisbane:

BY AUTHORITY: E. GREGORY, GOVERNMENT PRINTER, WILLIAM STREET.

1901.

POST-PARTUM HÆMORRHAGE. 1899 427

POST-PARTUM HÆMORRHAGE: ITS TREATMENT—ANTICIPATORY AND ACTUAL.

BY ED. LUTHER, B.A., M.D. (B.CH., ETC., DUB. UNIV.),
Hon. Surgeon to the Lady Musgrave Hospital; and Hon. Physician, Wide Bay and Burnett Hospital, Maryborough, Queensland.

The first requisite against hæmorrhage from the post-partum uterus is the maintenance of its firm uniform contraction and tonic retraction (Lusk).

In my experience the chief cause of post-partum hæmorrhage amongst Queensland women is the want of this muscular tone, for amongst our women one meets with a large number suffering from inanition and anæmia, especially during the summer months. Whether this anæmia is caused by malaria, anchylostoma, or just the enervating heat, it matters not for the purpose of this paper. But, whenever I am engaged to attend at the confinement of a woman anæmic in appearance, I always anticipate having some post-partum hæmorrhage, for with the anæmia you will certainly have uterine inertia and flaccid abdominal muscles, that may have just sufficient stamina to expel the fœtus, but none left for the expulsion of the placenta, or for keeping the uterus contracted afterwards.

Now, what I wish to bring before you to-day is that by a preparatory treatment we can ward off this evil, dreaded by most accoucheurs.

My method of treatment is first to try and cure the anæmia and debility by tonics of iron and strychnine, and during the last fortnight or three weeks of gestation to place the patient on the following mixture:—Extractum ergotae, 22 gr.; liquor strychninæ, 1 dr.; acid sulphuric dilut, 1 dr.; glycerin, 1 oz.; aq. anisi, 8 oz.; a tablespoonful to be taken three times a day. I have now been adopting this treatment for the past four or five years in all cases that have a history of having had post-partum hæmorrhage at their former confinements, or where the patient seemed debilitated or a likely subject for hæmorrhage, and in every case with satisfactory results.

Figure 1: Excerpts from historic journals

In 1950s, there were some who saw that surgeries could be done without use of blood and by limiting blood loss of the patient. When such surgeries had no adverse

outcomes and instead the patients were having better clinical outcome, these bloodless medicine and surgeries emerged. American surgeon Denton Cooley successfully performed open-heart surgery in 1957 without use of any blood which was quite an achievement at the time when 10-12 units of blood were utilized in open heart surgeries. This led to a trend of bloodless surgeries with multiple surgeons reporting thousands of successful cases without the use of blood.

In 1988, professor James Isbister, an Australian hematologist noted that focus of treatment should be the patient. (1) He coined the term 'patient blood management', noting that the focus should be changed from the product to the patient. He defined patient blood management as an evidence-based bundle of care to optimize medical and surgical patient outcomes by clinically managing and preserving a patient's blood.

The execution of PBM started much earlier in developed countries and it is a part of routine patient care. It is well established in healthcare guidelines of countries of Europe, Canada, Australia and New Zealand. After almost more than a decade, numerous studies and robust healthcare infrastructure, it is still work in progress in these countries.

In Australia, the first edition of the Australian Commission on Safety and Quality in Health Care (ACSQHC), National Safety and Quality Health Service (NSQHS) Standards was released in 2011. It became mandatory for assessment of hospitals and day procedure services from 1 January 2013. One of the ten standards focuses on blood and blood products (Standard 7). (2) Their Blood Management Standard aims to improve outcomes for patients by identifying risks and using strategies that optimize and conserve a patient's own blood, as well as ensuring that any blood and blood products that patients receive are safe and appropriate. Since the launch of the PBM Guidelines and accompanying implementation strategy, Australia has seen a significant reduction in the use of red blood cells. Their experience also showed that the PBM strategies though developed for elective surgeries, the principles could also be applied to emergency situations.

In Canada, the Canadian blood services is involved in implementation of PBM. The initiative Choosing Wisely was launched in 2014 and is involved in reducing unnecessary tests and treatments in healthcare. These services have policies to review alternatives to transfusion, decrease transfusion of multiple units of packed red cells,

taking patients informed consent regarding transfusion and following transfusion guidelines and triggers.

In the European union (EU), over the last decade the focus has shifted to more holistic, multidisciplinary approach to care for a patient's hematopoietic system with an aim to achieve best possible clinical outcome as a part of patient blood management. According to Annual Summary of the Reporting of Serious Adverse Reactions and Events, 2015, European Commission, more than 5 million patients are receiving more than 24 million units of blood each year in EU. Whereas multiple evidences showed that clinical conditions in significant fraction of cases could be treated effectively with correction of anemia and controlling blood loss leading to decreased allogenic blood requirement.

Due to change from 'product focused' to 'patient focused' approach, a project called EU optimal blood use was started which was funded by EU Public Health Fund. This project made recommendations regarding blood safety and effectiveness of transfusions. (3) A Manual of Optimal Blood Use was developed by transfusion experts from 18 EU countries and is available in 9 languages. Subsequently, several national PBM programs were developed including Better Blood Transfusion in Scotland, PBM by NHS Blood and Transplant (NHSBT) in England, initiatives in Italy and in four University hospitals in Germany. Many countries in EU showed reduction in utilization of PRBC after implementation of these policies indication positive cultural change due to PBM. A study by Shander et al showed that Netherlands has successfully implemented PBM strategies particularly for major surgeries. (4)

In March 2011 the WHO organized the "Global Forum for Blood Safety: Patient Blood Management" in Dubai, stating in its Concept Paper that "Patient blood management (PBM) is designed to improve patient outcomes through the safe and rational use of blood and blood products and by minimizing unnecessary exposure to blood products. Essential elements of patient blood management include: the prevention of conditions that might otherwise result in the need for transfusion (through health promotion and screening for early detection), appropriate diagnosis and optimal treatment, including the use of alternatives to transfusion, good surgical and anesthetic techniques and blood conservation." The attendees also sought to

assess the current challenges in implementing PBM programs and to identify mechanisms for improving the impact of PBM programs (5)

The patient blood management (PBM) is multidisciplinary approach and involves multiple primary stakeholders namely clinical department heads, patient organizations and transfusion medicine department who are involved directly in the treatment. Various secondary stakeholders like government agencies, medical journalists and media also play and important role in success of PBM by creating positive viewpoint and discernment.

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Each pillar has three phases i.e., pre-operative, intra-operative and post-operative phase. The strategies in the three pillars in the three phases are all interlinked and are reliant on each other. Depending on each patient's hematopoietic cell reserve, time available for correction and availability of resources, various approaches can be employed either alone or in combination.

Table 1: Three pillars of PBM

	1st Pillar **Optimization of Red cell mass**	**2nd Pillar** **Minimizing Blood loss**	**3rd Pillar** **Harness and optimize physiological reserve of anemia**
Pre-operative	• Detect anaemia • Identify underlying disorders • Manage disorders • Refer for further evaluation if necessary • Treat suboptimal iron stores • Treat other hematinic deficiencies	• Identify and minimize bleeding risk • Minimize iatrogenic blood loss • Procedure planning and rehearsal	• Assess/optimise patient's physiological reserve • Compare estimated blood loss with patient-specific tolerable blood loss • Formulate patient specific management plan
Intra-operative	• Time surgery with haematological optimization	• Meticulous haemostatic and surgical techniques • Blood sparing surgical devices • Anaesthetic blood conserving strategies • Autologous blood transfusion • Maintain normothermia • Pharmacological haemostatic agents	• Optimize cardiac output • Optimize ventilation and oxygenation
Post-operative	• Optimize erythropoiesis • Be aware of drug interactions • Vigilant monitoring and management of post-operative anaemia • Avoid infection	• Avoid secondary haemorrhage • Maintain normothermia • Minimise iatrogenic blood loss • Haemostasis/anticoagulant management • Avoid infection • Be aware of drug interactions	• Optimize anaemia reserve • Maximise oxygen delivery • Minimise oxygen consumption • Avoid/treat infections promptly • Restrictive transfusion thresholds

First Pillar: Optimization of the Red Cell Volume

According to WHO, anemia is defined as hemoglobin <12.0 g/dL in females and <13.0 g/dL in males. The prevalence of anemia in Indian females is 53% according to WHO survey of 2019. 5th National Family Health Survey (NFHS-5) data released by MOHFW shows that India has highest total prevalence of anemia at 39.86% in the world.

Various studies on anemia prevalence in past decade over the globe show appallingly high number of anemic patients taken for non-emergency surgeries. Almost one-third to half the number of patients planned for elective surgeries are anemic. The number is lower in Australia due to success of PBM but still around 14% of the patients are still anemic.

Table 2: Comparison of anemia prevalence around the world

Country	Study Population	Year	Anemia prevalence
Central Ghana(6)	Non-cardiac surgery patients	2017	54.3%
Australia (7)	Elective major surgery patients	2017	13.9%
Singapore(8)	Elective surgery patients	2017	55.6%
Spain(9)	Major elective surgery patients	2019	30-40% in pre-operative 80% in post-operative
USA(10)	Systematic Review in elective surgery patients	2014	40%
UK(11)	Meta-analysis on surgical patients	2015	39.1%

Optimization of patients' red cell reserve using iron supplementation in pre-operative phase is the most effective, easiest and inexpensive method if done appropriately. Numerous evidences indicate that anemia is an independent risk factor for increased morbidity and mortality in hospitalized patients. A study by Carson et al in 1988 showed inverse relationship between pre-operative hemoglobin and operative mortality. It also showed direct association of mortality with amount of surgical blood loss. (12) Many subsequent studies showed similar results and adviced correction of anemia for better clinical outcome. In recent years, moderate to severe anemia has been shown to be associated with increased 30-day mortality and risk of allogenic

blood transfusion as compared to mild anemia. (13) Also, the length of hospital stay (LOHS) and ICU admission rates were higher in anemic patients. (14).

In cardiac patients, pre-operative anemia is associated with significantly higher rate of stroke, major morbidity and a significantly higher operative mortality rate. (15)

Similarly, a retrospective cohort study in non-cardiac surgery patients in 2011 showed increased 30-days morbidity and mortality in anemic patients. This risk was consistent with degree of anemia and severe pre-operative anemia had higher mortality rate.(16)

Multiple studies have shown similar results and it has been established that anemia is independent risk factor for morbidity and mortality in peri-operative period. It is therefore imperative to correct anemia before taking the patient for surgery. The correction can be done either by increasing patient's own red cells by giving iron and folic acid supplements with or without erythropoietin and/or by giving allogenic red cells in the form of packed red blood cell (PRBC) transfusion. Depending on urgency of the surgery and pre-correction hemoglobin the decision is made. By increasing patient's own red cells, the risk of allogenic transfusion is avoided.

Before the correction, it is important to consider the cause of anemia. In cases of nutritional iron deficiency anemia, the patient is most benefitted by iron supplementation. Whereas in bone marrow suppression even very frequent and high dose of iron is not going to be beneficial. The latter group of patients are transfusion dependent and will require PRBC transfusion. The diagnosis of anemia can be made by blood investigations like hemogram for hemoglobin, mean corpuscular volume (MCV), red cell distribution width (RDW), peripheral blood film (PBF), Serum Ferritin, Total Iron Binding Capacity (TIBC), Serum Iron level and Transferrin saturation. When implementing PBM, it is important to ensure most practical diagnostic criteria to warrant maximum compliance. Markers of iron status that may indicate a need for iron include a serum ferritin of less than 100 ug/L, a transferrin saturation of less than 20%, and a percentage of hypochromic red cells more than 10%.

A systematic review and Meta-analysis on pre-operative patients by Elhenawy et al published in 2021 included 10 RCTs. The analysis showed that pre-operative anemia correction done by IV Iron decreased allogenic blood transfusion in anemic patients

by 16%. Additionally, pre-operative hemoglobin and serum ferritin increased in iron treated patients without increasing post-surgery risk of infection and mortality. (17)

If the surgery is an emergency and there is no time to correct anemia using iron, PRBC transfusion is warranted. Although this should be avoided in preventable circumstances where patient can tolerate anemia.

In case of iron deficiency anemia, supplementation can be in the form of iron alone, iron+ folate or iron+folate+erythropoietin. It is advisable to administer folate along with iron supplementation as increased erythropoiesis post iron will utilize folic acid reserve. Also, the patients of nutritional deficiency are folate deficient too.

Erythropoietin (EPO) administration is required in patients of chronic kidney disease (CKD) who have anemia due to EPO deficiency. It is also beneficial in cancer patients on chemotherapy, zidovudine treated HIV patients among others. EPO leads to stimulation of red cell production. It regulates the proliferation and differentiation of committed erythroid progenitors in bone marrow. It also increases the number of developing erythroid precursors in bone marrow. This results in increase in red cell count, hemoglobin and hematocrit. The safety and risk should be conveyed to the patient before administration. In case of surgical patients, the usual recommended schedule is 300units/kg/day subcutaneously for 15 days total i.e., 10 days before surgery, on the day of surgery and 4 days following surgery. Deep venous thrombosis prophylaxis is recommended during EPO administration as it causes increased risk of thromboembolic events. Treatment of iron deficiency with erythropoietin alone leads to functional iron deficiency where in spite of normal hemoglobin levels, the serum ferritin levels are low. This indicates low body iron reserve which can precipitate anemia after bleeding. Therefore, it is important to supplement iron with EPO administration.

Among iron supplements, based on mode of administration the dosing could be oral in the form of tablets, capsules or oral solution or parenteral such as intravenous. Various salts of iron are available with each having pharmacokinetics and bioavailability. Most commonly used formulation is Ferrous sulphate which provides 65 mg elemental iron per 200 mg tablet.

Modification in dietary habit is helpful in nutritional iron deficiency. The iron content of diet is important but also the bioavailability of iron in food is important. Iron rich

food and oral iron supplements are taken empty stomach preferably 1-2 hours before meal along with water or fruit juice. Heme iron which is only 6% of dietary iron is has higher bioavailability and therefore constitutes 30% of absorbed iron.(18) The dietary iron absorption is inhibited by various compounds such as phosphates. The non-heme iron content is higher in vegetarian diet whose absorption is inhibited by high phosphate amount in vegetarian diet. Whereas ascorbic acid and animal proteins facilitate absorption of iron. Food high in iron (>5 mg/100 g) include organ meats such as liver and heart, brewer's yeast, wheat germ, egg yolks, oysters, and certain dried beans and fruits; foods low in iron (<1 mg/100 g) include milk and milk products and most nongreen vegetables. While evaluation dietary intake of iron it is important to emphasize on bioavailability of iron too instead of amount of iron only.

The difference in quantity of dietary iron and iron requirement is dependent on body iron stores. These iron stores are depleted in increased requirement post blood loss such as menstruation, pregnancy, gastrointestinal diseases associated bleeding and after surgery. Also, inflammatory conditions such as infections and post-operative inflammation can lead to increased hepcidin which binds to ferroprotein and leads to internalization of iron and therefore lesser serum iron is available for red cell production.

When giving oral, ceiling effect of iron absorption should be considered. The amount of iron absorbed is proportional to degree of anemia. Similarly erythroid marrow response to iron is also proportional to degree of deficiency. But the iron absorption through gut is dependent on transport proteins namely divalent metal ion transporter 1 (DMT-1) and ferroportin. With increasing oral iron supplements, these transporter proteins will get saturated and excess iron will not be absorbed. At the same time the excess iron will cause adverse effects such as nausea, constipation and epigastric pain leading to decreased compliance to oral iron. Up to 70% of patients administered with oral iron (Ferrous sulphate) present with gastrointestinal side effects. (19) With moderate to severe anemia, oral iron will deliver approximately 40-60 mg of iron per day to erythroid marrow which might not be adequate to increase hemoglobin to desired level if surgery is required in near future. In such cases parenteral iron is preferred. The response to iron therapy is seen in the form of increased reticulocyte, hemoglobin and hematocrit. The rise in reticulocyte count is seen after 4-7 days of initiating the treatment whereas rise in hemoglobin can be seen after 2-3 weeks by

increment in hemoglobin by up to 2g/dL. This waiting time is required before labelling the patient as non-responsive to oral iron.

A randomized controlled trial in iron-depleted women published in 2017 to compare oral iron given daily vs alternate day showed that giving iron daily in multiple doses leads to increase in hepcidin level which can decrease iron absorption. Whereas giving single dose on alternate days gave improved outcome and better compliance.(20) Dosing can be tailored as per patient's requirement. A 325 mg ferrous sulfate tablet contains 65 mg of elemental iron per tablet, of which approximately 25 mg is absorbed and used in production of heme and other molecules. (21)

When therapy with oral iron fails, gastrointestinal absorption impaired or faster increase in hemoglobin is desired, intravenous iron supplements are pursued. Parenteral iron therapy should be used only when clearly indicated because acute hypersensitivity, including anaphylactic and anaphylactoid reactions, can occur. Other reactions to intravenous iron include headache, malaise, fever, generalized lymphadenopathy, arthralgias, urticaria, and, in some patients with rheumatoid arthritis, exacerbation of the disease.

Various formulations of parenteral iron are available including iron dextran, sodium ferric gluconate, ferumoxytol, iron sucrose, and ferric carboxymaltose. These formulations differ in their metabolism, bioavailability, adverse effect profiles and maximum tolerable doses. Iron sorbitol citrate is intramuscular preparation whereas Iron dextran and Iron dextrin can be given via both intravenous and intramuscular route. All the other formulations are administered intravenously.

Iron dextran has prominent adverse effect of hypersensitivity and also avoided in patients with connective tissue disorders. They require processing by macrophages that may take up to weeks. Though the risk of anaphylaxis is lower with iron sucrose, its chronic use can lead to renal tubulointerstitial damage.

Ferric Carboxymaltose (FCM) contains iron in a stable ferric state as a complex with a carbohydrate polymer designed to release utilizable iron to the iron transport and storage proteins in the body like ferritin and transferrin. Intravenous administration results in transient elevations in serum iron, serum ferritin, and transferrin saturation, with subsequent correction in hemoglobin levels and replenishment of depleted iron

stores. Ferric carboxymaltose is rapidly cleared from the circulation, becoming distributed (~80%) in the marrow, as well as the liver and spleen. A single FCM administration should not exceed 15 mg/kg body weight by intravenous injection or 20 mg/kg body weight by intravenous infusion. Maximum tolerated single dose is 1000 mg of iron and it should not be administered more than once a week. A single maximum daily injection dose of 200 mg iron should not be exceeded in hemodialysis dependent chronic kidney disease patients. In case of infusions, FCM is diluted in sterile 0.9% normal saline and dilutions to concentrations <2 mg iron/ mL is not permissible due to stability reasons.

Decision regarding mode of administration:

Among the three routes, the appropriate mode of administration is selected based on patient profile. If the patient can tolerate oral iron, free of gastrointestinal disease which can prohibit iron absorption and urgency in iron correction not needed then oral iron can be preferred. However, if given in conjunction with EPO and if the patient is already iron store depleted then oral iron might not be able to cope with requirement due to ceiling effect.

Parenteral iron is preferred in failure of oral therapy, urgent correction, with EPO and in gastrointestinal diseases. Intramuscular route can cause brownish discoloration which could be undesirable for the patient. It can also cause intramuscular bleeding especially in patients of coagulation defects and bleeding tendencies. Some studies have reported risk of muscle sarcoma after intramuscular iron. Even the bioavailability and absorption can be variable.

Intravenous iron injection or infusion is preferred mode. It is devoid of adverse effects seen with intramuscular administration. As seen with other iron formulations, IV Iron can also cause hypersensitivity. Therefore, it is adviced to start slow infusion and monitor the patient and then continue in the absence of any adverse drug reactions.

Low molecular weight complexes such as Iron sodium gluconate is associated with rapid release of iron which can surpass transferrin binding ability. This can cause free iron reaction. Hence it is advisable to use higher molecular weight complexes such as ferric carboxymaltose. (22)

Anemia correction in post-operative phase:

Anemia correction is beneficial not only before surgery but after surgery too. A patient when discharged from the hospital should be treated for or advised medication for treatment of anemia. In patients who might require follow-up surgeries, this correction will be beneficial during next hospitalization. The modalities for anemia correction post-op are similar to pre-operative except that the former is not time bound. If tolerable, oral iron is preferred. The patient should be discharged with iron and folic acid supplements and should be followed up after regular intervals to see improvement. A prospective randomized controlled trial in 2016 showed significant improvements in serum iron, serum ferritin and transferrin saturation in the arm administered with ferric carboxymaltose after 4 weeks as compared to patients receiving only standard care. Fewer blood transfusions were required in FCM group. Additionally, no adverse events were observed in FCM group. (23)

Second Pillar: Minimizing blood loss

The second pillar of PBM involves decreasing blood loss in peri-operative and intra-operative phase. The reduction of peri-operative blood loss improves patient outcomes and reduces healthcare costs. Interventions can begin early in the preoperative phase through identification of patients at high risk of bleeding. Reducing perioperative blood loss requires a multimodal and multidisciplinary approach.

Table 3: Various techniques to reduce peri-operative blood loss

Organizational	Surgical	Anesthetic	Hemostatic
Preoperative history	Tourniquet	Permissive hypotension	Desmopressin
Risk stratification	Antifibrinolytics	Neuraxial anaesthesia	Procoagulant factors
Management of antiplatelet and anticoagulant therapies	Cell salvage	Patient positioning	Viscoelastic haemostatic assays
	Topical agents	Normothermia	
	Diathermy	Adequate ventilation	

Different strategies involved that can decrease blood loss both iatrogenic and otherwise are:

- Minimising blood sampling unless absolutely required to decrease iatrogenic blood loss.
- Identify and minimize bleeding risk by correcting thrombocytopenia, platelet dysfunction and coagulation abnormalities by doing surgical procedures under the cover of platelet and plasma transfusion, if required.
- Meticulous haemostatic and surgical techniques.
- Blood sparing surgical devices such as harmonic scalpel and cell saver device.
- Anaesthetic blood conserving strategies like controlled hypotension, local vasoconstrictors, epidural block etc.
- Autologous blood transfusion which should be planned before surgery after evaluation of the patient based on expected surgical blood loss and patient's baseline hemoglobin.
- Maintaining normothermia during surgery is important so as to prevent surgical site infections and associated consequences such as metabolic acidosis, cardiovascular effects, increased respiratory distress, and surgical bleeding.
- Pharmacological haemostatic agents like tranexamic acid should be employed if surgical blood loss >500 mL is expected.
- Avoid secondary haemorrhage after surgery by taking proper precaution regarding surgical site and maintaining patient's haemostatic function.
- Haemostasis/anticoagulant management in peri-operative phase with drugs like clopidogrel, warfarin etc.
- Avoiding infection by providing appropriate antibiotic cover as infection can hamper wound healing.

- While dealing with multiple drugs during hospitalization it is important to be aware of drug interactions especially with the drugs having enzyme-based metabolism.

The above-mentioned strategies have to be adapted as per every patient's clinical status and type of surgery. A combination of these strategies can be used if indicated in a patient with the goal of reduction in peri-operative bleeding.

Autologous blood transfusion:

Acute normovolemic haemodilution (ANH) is a technique intended to minimize or decrease the need for allogeneic transfusion. With ANH, whole blood is phlebotomized from the patient at the start of surgery, usually just after the induction of anaesthesia. The blood that is taken off is replaced with a colloid or crystalloid volume expander in order to maintain isovolumia. During or at the end of surgery, the phlebotomized blood is transfused back to the patient. The central principle of ANH is that the patient will bleed blood that is less concentrated in terms of its red cells and clotting factors. Added benefits of decreased blood viscosity and therefore better tissue oxygenation is provided by ANH.

A meta-analysis in 2015 by Zhou et al to reassess efficacy and safety of ANH in reducing allogenic PRBC transfusion concluded that ANH is effective. (24) A systematic review and meta-analysis which included 29 RCTs and total 2439 patients undergoing cardiac surgery also showed similar result. It concluded that ANH reduced total allogenic PRBC units transfusion and decreased bleeding overall. (25)

However, a retrospective propensity matched study of 2017 in 1289 cardiac surgery patients showed that ANH reduced intra-operative PRBC transfusion rate and PRBC units and decreased post-operative pulmonary infection. But there was no significant reduction in overall transfusion rate of plasma, platelets and PRBC units.(26)

Antifibrinolytic agents:

The fibrinolytic system contributes to the balance between bleeding and thrombosis by controlling clot formation and extension, and dissolving unnecessary clots. In patients with excessive bleeding, inhibiting fibrinolysis can improve haemostasis by delaying clot dissolution. The two most commonly used agents, epsilon amino-caproic acid (EACA) and tranexamic acid (TXA), are lysine analogues that inhibit the conversion of plasminogen to its active form plasmin.

Tranexamic acid (TXA) forms a reversible complex that displaces plasminogen from fibrin resulting in inhibition of fibrinolysis; it also inhibits the proteolytic activity of plasmin.

The generally followed dosing for perioperative prevention of blood loss and transfusion is intravenous 1 g (or 10 to 30 mg/kg) prior to procedure; administering at a rate not exceeding 100 mg/minute (generally over 10 to 30 minutes). Depending

upon type of procedure, a continuous infusion may be given intraoperatively after the initial bolus dose, or the bolus dose may be repeated at the end of procedure and/or during the postoperative period.

A randomized controlled trial was done by Lei et al in 2017 to assess the efficacy and safety of multiple-dose (IV-TXA) on blood loss following total knee arthroplasty (TKA). (27) They concluded that the 5-dose TXA regimen can further reduce the blood loss, diminish the maximum Hb drop, minimize inflammation, enhance mobility, and shorten LOS following TKA, without increasing the risk of complications.

There is no consensus regarding the ideal dosages and times of multiple-dose intravenous tranexamic acid (IV-TXA) administration in post-surgical patients. A randomized study by Zhang et al in 2019 studied the effect of six-dose IV-TXA in postoperative fibrinolysis and hidden blood loss following total knee arthroplasty in 175 patients. The administration of six-dose IV-TXA during the first 24 hours resulted in reduced hidden blood loss following total knee arthroplasty without a measured increase in thromboembolic events.(28)

The contraindications to TXA are active thromboembolic disease, subarachnoid haemorrhage, acquired defective colour vision (condition impedes appropriate monitoring for ocular toxicity) and renal impairment.

A systematic review of tranexamic acid in hip fracture surgery was done by Farrow et al in 2016. On meta-analysis, intravenous TXA resulted in a 46% risk reduction in blood transfusion requirement compared to a placebo/control group. There was also a significantly higher post-operative haemoglobin for TXA versus placebo/control. There was no increased risk of thromboembolic events.(29)

The effect of intravenous tranexamic acid on blood loss and early post-operative pain in total shoulder arthroplasty was studied in a randomised, placebo-controlled trial in 2017 by Pauzenberger et al. They found that the mean peri-operative blood drainage and calculated mean total blood loss were significantly lower in the TXA group. Intravenous administration of TXA successfully reduced mean peri-operative blood drainage, total estimated blood loss, pain during the first post-operative days, and haematoma formation in total shoulder arthroplasty.(30)

Tranexamic acid has been used as injectable, topical or as combination of both. The combined administration of intravenous (IV) and topical tranexamic acid (TXA) in primary total knee (TKA) knee remains controversial. A meta-analysis of randomized controlled trials by Xiong et al was done to study the efficacy and safety of combined administration of intravenous and topical tranexamic acid in primary total knee arthroplasty in 2018. (31) A total of 6 RCTs involving 701 patients were included in the meta-analysis. The available evidence indicates combined group were associated with lower total blood loss, drainage volume, and maximum hemoglobin drop. A similar transfusion requirement was found in both groups. Subgroup analyses demonstrates that total blood loss was less in patients with non-tourniquet, topical TXA dose > 1.5 g and number of IV TXA ≥ 2 doses of TXA. There was no increase the rates of DVT and PE.

A prospective randomized study by Chiang et al in 2018 to evaluate the effect of intra-articular injection of tranexamic acid in patients receiving arthroscopic anterior cruciate ligament reconstruction (ACLR) showed that intra-articular injection of TXA could significantly reduce postoperative intra-articular bleeding in the first 24 hours in patients receiving arthroscopic ACLR. TXA injection may also decrease pain and the grade of hemarthrosis in the early postoperative period. No systemic side effects or need for aspiration was noted during the follow-up period.(32)

Reducing iatrogenic blood loss:

Despite the fact that sampling appears to be a minor quantity of blood loss, repeated phlebotomy for laboratory tests can cause a considerable drop in the patient's hemoglobin concentration and can result in anemia. Several studies have shown that the amount of blood withdrawn for diagnostic purposes is significantly greater than that required to complete the testing, implying that steps to decrease the volume of blood collected for laboratory testing should be employed. (33) (34) (35)Therefore, it is important to limit the number of samplings to absolute minimum and to withdraw only the amount required. The promotion of point-of-care testing also decreases the unnecessary sampling.

Third Pillar: Harness and optimize physiological reserve of anemia

The third pillar of PBM involves optimizing patient's physiological reserve of anemia and increasing their tolerance. The strategies involve improving cardiopulmonary function, improved oxygen delivery, improving ventilation, avoiding infection and following restrictive transfusion strategies.

Estimation of surgical blood loss:

The estimation of intra-operative blood loss serves as a parameter for planning surgical and blood preservation techniques in advance. This helps in determining the quantity of blood that patient can tolerate before the need of allogenic transfusion arises. The important fact to consider is that the estimated blood loss can vary with actual blood loss during surgery. Also, the methods to measure intra-operative blood loss varies. There is no common consensus to quantify the blood loss during surgery. (36) Commonly used method is visual analogue scale based on blood soaked gauze, but even this method is subjective. (37) The estimated intra-operative blood loss also helps in understanding the fall in hemoglobin seen after surgery and managing it accordingly.

Restrictive Transfusion Strategies:

A randomized controlled trial (RCT) of transfusion requirements in critical care (TRICC) was published in 1999 by Paul et al to determine whether a restrictive strategy of red cell transfusion and a liberal strategy produced equivalent results in critically ill patients. It was found out that the rates were significantly lower with the restrictive transfusion strategy among patients who were less acutely ill — those with an Acute Physiology and Chronic Health Evaluation II (APACHE-II) score of ≤20. It was concluded that a restrictive strategy of red-cell transfusion is at least as effective as and possibly superior to a liberal transfusion strategy in critically ill patients, with the possible exception of patients with acute myocardial infarction and unstable angina.

Another study by Bracey et al in 1999 involved 428 patients undergoing coronary artery bypass grafting who were randomized to receive transfusion for a hemoglobin threshold less than 9 g/dL and less than 8 g/dL. There was no difference in mortality, morbidity, and clinical outcomes between the two groups.(38)

In 2002, Anemia and blood transfusion in critically ill (ABC trial) by Vincent el al was published to prospectively define the incidence of anemia and use of red blood cell (RBC) transfusions in critically ill patients and to explore the potential benefits and risks associated with transfusion in the ICU. They concluded that for similar degrees of organ dysfunction, patients who had a transfusion had a higher mortality rate. Both ICU and overall mortality rates were significantly higher in patients who had vs had not received a transfusion. This further rationalizes the use of hematinics in the management of anemia rather than transfusing PRBC.(39)

Corwin et al in 2004 (40) published a prospective cohort study in ICU patients to quantify the incidence of anemia and red blood cell (RBC) transfusion practice in critically ill patients and to examine the relationship of anemia and RBC transfusion to clinical outcomes (The CRIT study). It was concluded that a nadir hemoglobin level of <9 g/dL was a predictor of increased mortality and length of stay. The number of RBC transfusions a patient received during the study was independently associated with longer ICU and hospital lengths of stay and an increase in mortality.

A systematic review of the literature to determine the association between red blood cell transfusion, and morbidity and mortality in high-risk hospitalized patients was done by Marik et al in 2008. 45 studies with a median of 687 patients/study were analysed. In 42 of the 45 studies the risks of RBC transfusion outweighed the benefits; the risk was neutral in two studies with the benefits outweighing the risks in a subgroup of a single study (elderly patients with an acute myocardial infarction and a hematocrit <30%).(41)

A systematic review of randomised trials with meta-analysis and trial sequential analysis by Lars et al in 2015 included 31 trials totalling 9813 randomised patients. Compared with liberal strategies, restrictive transfusion strategies were associated with a reduction in the number of red blood cell units transfused and number of patients being transfused, but mortality, overall morbidity, and myocardial infarction seemed to be unaltered. Liberal transfusion strategies have not been shown to convey any benefit to patients.

Meta-analysis of the effects of lower versus higher hemoglobin thresholds on mortality in critically ill patients was carried out by Ripollés et al in 2016. They found that restrictive strategy is at least as effective to liberal strategy in critically ill patients

for correction of anemia.(42) A cohort study by Sanders et al in 2017 showed that participants with pre-operative anaemia were over three times more likely to receive RBC transfusion, had greater morbidity remained in hospital 2 days longer than non-anaemic patients. Transfused patients remained in hospital 5 days longer than non-transfused patients, had higher pulmonary, renal, GI, neurological, endocrine and ambulation morbidities. It was concluded that pre-operative anaemia and RBC transfusion are independently associated with increased post-operative morbidity.(43)

Morton et al in 2019 published a retrospective cohort of 1,186 patients to assess the incidence of pre-operative anaemia in patients presenting for general surgery and determine the relationship between pre-operative anaemia, transfusion and post-operative metrics including length of stay (LOS) and infectious complications. The incidence of pre-operative anaemia (PA) was 17.4%. Red blood cell (RBC) transfusion was greater in those with pre-operative anemia than those without, 13.1% versus 0.7%.(44)

AIM AND OBJECTIVES

AIM

To study effect of patient blood management on overall prognosis, recovery and duration of hospital stay in surgical patients.

PRIMARY OBJECTIVE

To study the impact of close monitoring of patient blood management strategies on peri-operative morbidity in patients undergoing elective surgery.

SECONDARY OBJECTIVE

To study the difference in clinical outcome between the patients receiving hematinics vs PRBC transfusion as a part of patient blood management.

MATERIAL AND METHODS

STUDY DESIGN

A Prospective observational study

STUDY SITE

Department of Transfusion Medicine and Blood Bank, AIIMS, Jodhpur

Department Anaesthesiology and Critical Care, AIIMS, Jodhpur

Department of Cardiothoracic Surgery, AIIMS, Jodhpur

Department of ENT, AIIMS, Jodhpur

Department of General Surgery, AIIMS, Jodhpur

Department of Neurosurgery, AIIMS, Jodhpur

Department of Orthopaedic surgery, AIIMS, Jodhpur

Department of Surgical Gastroenterology, AIIMS, Jodhpur

Department of Surgical Oncology, AIIMS, Jodhpur

Department of Urology, AIIMS, Jodhpur

SAMPLE SIZE

938 patients

DURATION OF STUDY

January 2020 to January 2022

ELIGIBILITY CRITERIA

1. Inclusion criteria:

- Patients registered for elective surgery in the department of Cardiothoracic Surgery, General Surgery, Neurosurgery, Orthopaedic surgery, Surgical Gastroenterology, Surgical Oncology and Urology of AIIMS, Jodhpur.
- Patients should be able to provide informed consent.

2. Exclusion criteria:

- Incomplete treatment details.
- Patients with any other life-threatening co-morbid condition that might be a confounding factor.
- Patients admitted after emergency surgery.
- Patients not willing for the study.

METHODOLOGY

This is prospective quality improvement study from January 2020 to January 2022. All the patients admitted for elective surgery during this time period were eligible for the study.

The study is a quality improvement study of PDSA type. PDSA involves plan, do, study and act.

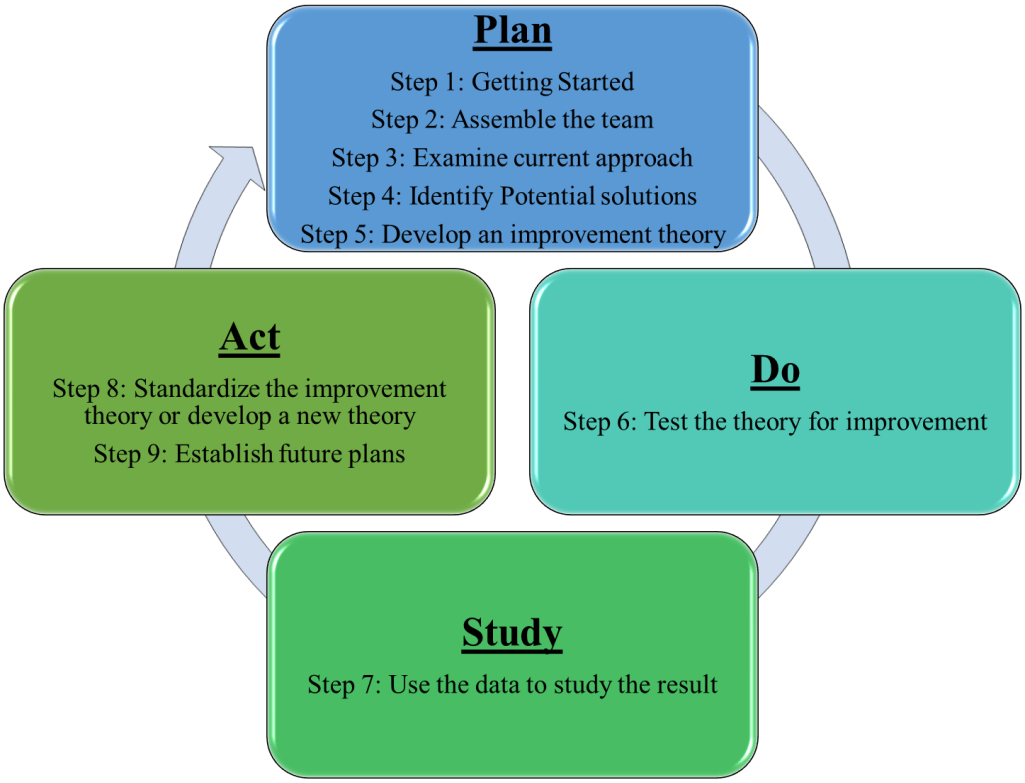


Figure 2: Workflow of PDSA type of QIS

Planning: A standard set of data was collected for the patients admitted under Department of Cardiothoracic Surgery, General Surgery, Neurosurgery, Orthopaedic surgery, Surgical Gastroenterology, Surgical Oncology or Urology for elective surgeries from **January 2020 to October 2020**. After applying the inclusion and exclusion criteria, the selected patients were monitored for patient blood management. The monitoring included thorough history taking, evaluation of anaemia, its causes, steps that were taken for its correction by the treating surgeon, history of transfusion, relevant past history, surgical blood loss and post-operative clinical outcome. This set of data was evaluated after the end of October 2020 for the efficiency of correction of anaemia. Planning for any corrective actions was done based on this data.

The data was collected based on routine OT list prepared by respective departments and the data regarding following parameters were collected:

- Patient's name:
- Age:
- Gender:
- Department:
- Diagnosis:
- Planned surgery:
- Date of admission:
- Date of surgery:
- Date of discharge:
- Length of total hospital stay:
- Length of stay after surgery:
- Length of ICU stay, if any:
- Total PRBC transfusion:
- Hemoglobin before surgery:
- Hemoglobin after surgery:
- Hemoglobin at the time of discharge:

The original plan of finishing phase 1 (planning phase) of the study was delayed to outbreak of COVID-19 pandemic which led to holdup of routine surgeries.

Implementation: Another set of data was collected for the patients admitted under Department of Cardiothoracic Surgery, General Surgery, Neurosurgery, Orthopaedic surgery, Surgical Gastroenterology, Surgical Oncology or Urology for elective surgeries from **November 2020 to December 2021** after implementing PBM strategies. The treating surgeons were sensitized and assured about the patient blood management based on the data evaluated after the planning phase. The percentage of anemic patients operated were higher than expected thereby pre-operative anaemia correction was emphasized.

The following measures were taken for the same:

- Multiple meetings with the clinicians and lectures for the resident doctors were held to educate them regarding hazards of allogenic transfusion. Alternatives to transfusion like iron supplementation were promoted.
- Pre-operative anaemia clinic was started by department of general medicine in September 2021. Resident doctors and clinicians were motivated to refer the anemic patients who were planned for surgery to the OPD for anaemia correction.
- It was decided by mutual agreement between all the participants in hospital transfusion committee that emphasis will be given on pre-operative and peri-operative anaemia correction by modalities other than transfusion.
- Close monitoring of patients admitted for surgery by residents of transfusion medicine for laboratory finding suggestive of anaemia was done. The anemic patients were adviced iron supplementation.
- Use of TXA was promoted in intra-operative and peri-operative bleeding patients. Documentation regarding dosing of the drug was requested for effective follow-up.
- Estimated intra-operative blood loss was requested to be documented in all surgeries.
- Scheduling of regular PBM classes for resident doctors were discussed.

- Informed consent before transfusion was made mandatory. The patient were informed about risks and alternatives of transfusion before any transfusion.

IMPLEMENTATION OF PATIENT BLOOD MANAGEMENT

It involved stepwise approach:

Generate a sense of requirement for PBM

- The result from baseline data used to motivate surgeons and physicians to act on anemia correction
- Problem areas which are preventable should be addressed

Formation of PBM Team

- Led by transfusion medicine specialist, the team comprises of treating clinician, anesthetist, nurse and concerned paramedical staff.

Setting up PBM goals

- Depending on the prevailing problems in the system and availability of the resources, achievable goals should be formed. Our goal was to correct pre-operative anemia in elective surgery patients using IV or oral iron
- The goals should be achievable and flexible enough so that every team member can promote and perpetuate.
- Setting up of impossible goals will demotivate the participants and lead to failure of the program.

Identify potential obstacles

- Difficulties faced by anyone involved in the PBM program should be addressed appropriately.
- Necessary modifications should be made in the strategies to accomodate larger group of people.
- In our study, initial plan was to correct anemia using IV ferric caroboxymaltose. But some clinicians preferred oral iron and some preferred other formulations of IV iron. In such cases emphasis should be on the goal i.e., anemia correction rather than means to approach the goal.

Inculcate PBM in culture

- Through repeated trial and error, and over a substantial amount of time, PBM can be successfully implemented.
- Necessary changes in institutional protocols and transfusion guidelines are required.

The following flowchart was circulated to simplify the anemia correction in pre-operative stage:

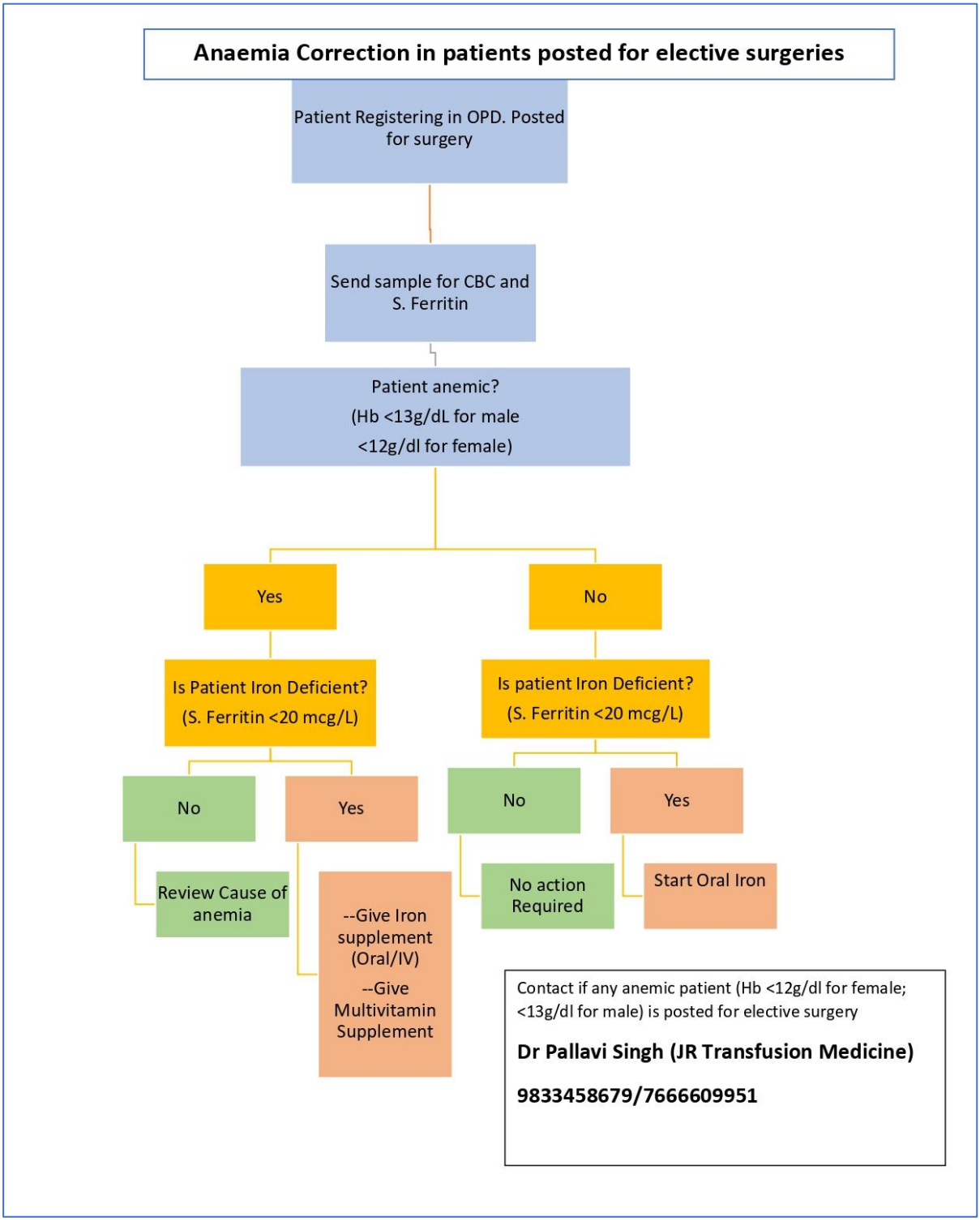


Figure 3: Anaemia correction flowchart

After applying the inclusion and exclusion criteria, the selected patients were evaluated for anemia by thorough history taking and clinical examinations. Any history of or symptoms of underlying illnesses, such as constitutional symptoms, malignancy, renal failure, endocrinopathies (thyroid disorders, for example), infections, or liver disease, were targeted. Past history of anemia including previous hemoglobin values and therapies, onset, need for previous blood transfusions, splenectomy, and blood donations were considered.

The patient's family history that could contain a history of anemia, bleeding and other hematological disorders, splenectomy, and early onset cholelithiasis, which may indicate congenital haemolytic disorders was taken.

Initial laboratory testing included a complete blood count (CBC). If MCV and RDW were suggestive of anaemia, iron studies were done. These included serum iron, TIBC and serum ferritin.

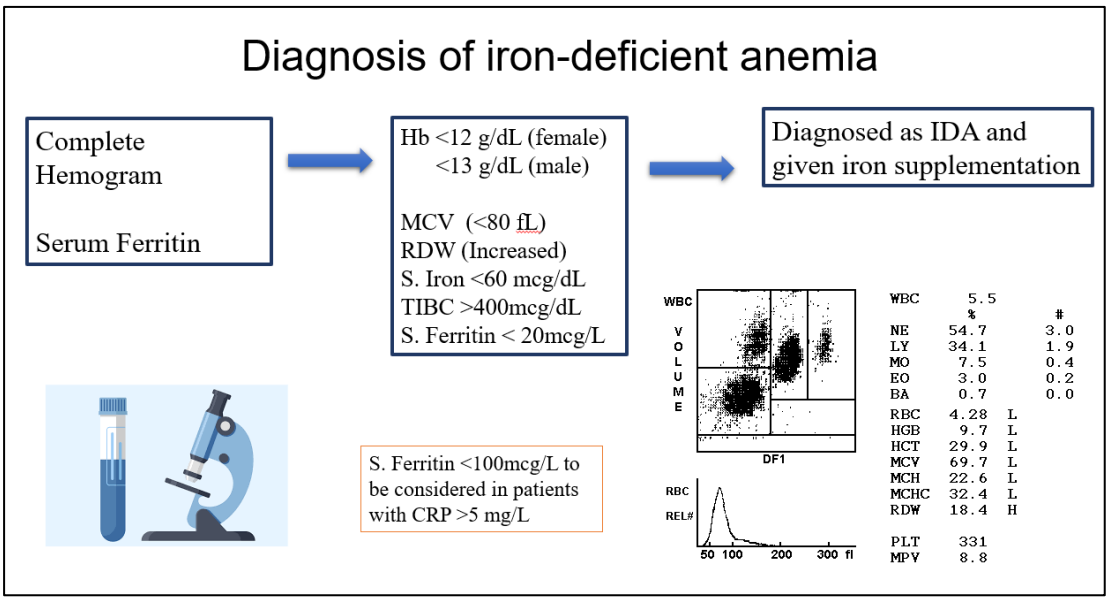


Figure 4: Flowchart for diagnosis of iron deficiency anaemia

The information was collected on patients' hemoglobin level before surgery, after surgery, PRBC transfusion requirement during admission and surgery, intra-operative blood loss, duration of hospital stays, hemoglobin level at the time of discharge and dosage of IV-TXA, if administered.

Any post-operative complications which could be attributed to anemia were also considered. Intervention, if any, to correct the anemia before surgery like use of iron-

folic acid tablets, dietary modification, multivitamin supplementation etc were documented along with their impact on the hemoglobin status of the patients.

- ✓ The adviced iron supplementation was Inj Ferric CarboxyMaltose 10mL (1000mg) in 100 mL 0.9%NS slow IV infusion over 1 hour along with Folic acid/Multivitamin B complex tablets.

Post-operative intervention for anemia due to blood loss like administration of Inj. Tranexamic acid and its effect on the rise of patient's Hb level were assessed.

Analyse: After the end of **January 2022**, both sets of data were analysed for the effectiveness of patient blood management program. Comparison was made between the two based on various parameters like

- Patient's name:
- Age:
- Gender:
- Department:
- Diagnosis:
- Planned surgery:
- Date of admission:
- Date of surgery:
- Date of discharge:
- Length of total hospital stay:
- Length of stay after surgery:
- Length of ICU stay, if any:
- Total PRBC transfusion:
- Hemoglobin before surgery:
- Hemoglobin after surgery:
- Hemoglobin at the time of discharge:

Analysis regarding correlation of Hb level with length of stay (LOS), requirement of PRBC transfusion and overall cost of treatment was done.

The patients with hemoglobin >7g/dl during surgery were expected to have better outcomes and shorter hospital stay. While those with hemoglobin level <7g/dl were expected to have more intra-operative complications, post-operative morbidity and longer hospital stay.

Action: Based on the findings after comparison of both sets of data, future planning regarding PBM implementation should be done. The deficiencies and lack of response should be addressed. As the path to PBM implementation is a dynamic one and requires consistent effort from all those involved, the cycle should be repeated multiple times till the best possible outcome is achieved.

STATISTICAL ANALYSIS

The collected data was analyzed with IBM SPSS Statistics for Windows, Version 23.0.(Armonk, NY: IBM Corp).To describe about the data descriptive statistics frequency analysis, percentage analysis were used for categorical variables and the mean & S.D were used for continuous variables. To find the significant difference in the multivariate analysis the one way ANOVA with Tukey's Post-Hoc test was used. To find the significance in categorical data Chi-Square test was used. In all the above statistical tools the probability value 0.05 is considered as significant level.

RESULT

Total of 1114 patients were evaluated to be included in this study. Out of 1114 patients, 176 were excluded due to incomplete data. Total of 938 patients were included in this study over the course of 2 years from January 2020 to January 2022. Out of 938, 518 patients were included in pre-implementation phase and 420 were included post-implementation of PBM strategies. These patients were admitted for elective surgeries under either of the departments of Cardiothoracic Surgery, General Surgery, Neurosurgery, Orthopaedic surgery, Surgical Gastroenterology, Surgical Oncology or Urology. As the number of elective surgeries were suspended for a substantial amount of time in 2020 and early part of 2021 due to COVID-19 pandemic and mucormycosis, the number of patients from department of ENT were not enough to be included in this study.

The department wise distribution of patients is as follows:

(Table 4: Department wise distribution of patients)

	PRE-PBM		**POST-PBM**	
	Frequency	Percent	Frequency	Percent
CTVS	99	19.1	31	7.4
GEN	47	9.1	107	25.5
GI	30	5.8	30	7.1
NEURO	37	7.1	39	9.3
ONCO	63	12.2	72	17.1
ORTHO	213	41.1	49	11.7
URO	29	5.6	92	21.9
Total	518	100.0	420	100.0

It is important to consider that our hospital was following PBM guidelines with respect to restrictive transfusion strategy since the department of Transfusion Medicine started in 2015. Over the course of 5 years, the surgical departments follow the restrictive transfusion triggers for PRBC and other blood component transfusions. The primary focus was on pre-operative and peri-operative anemia correction in the patients. Therefore, the use of the term pre-PBM and post-PBM implementation for the purpose of this study will refer to primarily implementation of anemia correction

using iron (IV or oral; pre-op or peri-op). Other PBM strategies were also advocated including use of TXA if bleeding >500mL expected and use of ANVH. Although after multiple dialogues and meetings, documentation of use of intra-op TXA and intra-op blood loss was not done for majority of the patients. Therefore, TXA use cannot be labelled as a successful strategy due to lack of documentation in patient's OT records.

Result of Pre-PBM implementation:

In pre-PBM phase, 518 patients were evaluated. Out of these, 225 (43.4%) were females and rest 293 (56.6%) were males. The below table shows the percentage of patients at different level of Hb in pre-operative, immediately post-operative and at the time of discharge.

(Table 5: Percentage of patients w.r.t severity of anaemia in pre-PBM)

Hb(g/dL)	Pre-Operative %	Post-Operative %	At Discharge %
< 7	1.0	4.2	0.8
7 - 9	8.7	19.5	28.6
9 - 11	22.7	36.4	40.2
11 - 13	35.1	27.0	23.0
> 13	32.8	12.9	7.3

As seen above, the proportion of patients increased towards lower spectrum of hemoglobin immediately post-surgery. As the patients move towards hospital discharge, the maximum proportion of patients are between 7-11 g/dL groups. 32.8% patients had hemoglobin >13 g/dL at the time of admission and only 12.9% had hemoglobin >13g/dL post-surgery. This fall is attributed to intra-operative surgical blood loss. However, only 7.3% remained in the same category at the time of hospital discharge which is due to iatrogenic blood loss during blood sampling as well as post-operative bleeding.

In pre-PBM phase, transfusion was required in 129 patients out of 518 (24.9%) whereas iron supplementation was given in only 75 (14.5%) patients. All the iron administration was oral iron tablets. Pre-operative anemia correction was attempted using oral iron tablets irrespective of time remaining for surgery which led to incomplete correction. Average length of total hospital stay was 11.84 days with average length of stay post-surgery 7.13 days. Average duration of ICU stay was 0.72

days. ICU stay was required in 112 patients (Average 3.32 days per patient). Total of 263 units of PRBC transfusion were required in 129 patients.

The table below shows detailed result of parameters in pre-PBM phase:

(Table 6: Detailed parameters in pre-PBM phase)

PRE-PBM	N		Mean	Median	Std. Deviation	Range	Minimum	Maximum
	Valid	Missing						
Age	518	0	47.42	50.00	17.49	86.0	4.0	90.0
Total Duration of stay	518	0	13.20	10.00	22.39	350	2	352
Duration of stay postop	518	0	7.14	6.00	5.73	51	0	51
Preop Hb	518	0	11.94	12.00	2.18	12.8	5.2	18.0
Postop Hb	481	37	10.54	10.40	2.12	13.3	4.7	18.0
Hb At Discharge	482	36	10.14	9.90	1.80	9.9	6.2	16.1
Transfusion	515	3	0.51	0.00	1.12	9.0	0.0	9.0
ICU	516	2	0.72	0.00	2.09	33.0	0.0	33.0

Result of Post-PBM implementation:

In pre-PBM phase, 420 patients were evaluated. Out of these, 153 (36.4%) were females and rest 267 (63.6%) were males. The below table shows the percentage of patients at different level of Hb in pre-operative, immediately post-operative and at the time of discharge:

(Table 7: Percentage of patients w.r.t severity of anaemia in post-PBM)

Hb(g/dL)	Pre-Operative %	Post-Operative %	At Discharge %
< 7	0.5	2.0	0.7
7 - 9	6.4	15.9	19.7
9 - 11	17.6	37.3	38.4
11 - 13	35.2	28.5	27.6
> 13	40.2	16.3	13.6

As compared with pre-PBM, the proportion of patients increased towards higher spectrum of hemoglobin pre-surgery. As the patients move towards hospital discharge, the maximum proportion of patients are beyond hemoglobin 9 g/dL. The prominent gap in hemoglobin which was seen between post-operative and hospital discharge in pre-PBM phase due to iatrogenic blood loss and post-operative bleeding decreased in post-PBM phase.

In post-PBM phase, transfusion was required in 61 patients out of 420 (14.5%) whereas iron supplementation was given in only 103 (24.5%) patients. Due to PBM intervention, pre-operative anaemia correction was done using IV iron. Post-operative oral iron was continued in anemic patients. Average length of total hospital stay was 7.09 days with average length of stay post-surgery 3.49 days. Average duration of ICU stay was 0.41 days. ICU stay was required in 53 patients (Average 3.26 days per patient). Total of 169 units of PRBC transfusion were required in 61 patients.

The table below shows detailed result of parameters in post-PBM phase:

(Table 8: Detailed parameters in post-PBM phase)

POST-PBM	N		Mean	Median	Std. Deviation	Range	Minimum	Maximum
	Valid	Missing						
Age	420	0	45.7	46.0	17.1	81.0	4.0	85.0
Total Duration of stay	420	0	7.1	5.0	6.4	49	0	49
Duration of stay postop	420	0	3.5	2.0	4.4	42	0	42
Preop Hb	420	0	12.3	12.3	2.1	15.0	4.4	19.4
Postop Hb	295	125	10.8	10.7	2.0	10.1	5.7	15.8
Hb At Discharge	294	126	10.6	10.5	2.0	9.5	6.3	15.8
Transfusion	419	1	0.4	0.0	1.5	18.0	0.0	18.0
ICU	419	1	0.4	0.0	1.3	14.0	0.0	14.0

For some patients who are admitted for minor surgical procedures with minimal blood loss and without anaemia, the duration of hospitalisation between surgery and hospital discharge is usually of a single day. The usual practice is not to repeat blood investigations for these patients' post-surgery if laboratory parameters were normal pre-operatively and the procedure itself was uneventful. Therefore, the hemoglobin levels were missing for such patients in post-operative and hospital discharge periods.

These patients were not excluded from the study so as to promote the minimization of blood loss due to unrequired blood sampling.

Anemia Correction

Anemia correction using iron therapy was advocated in all the anemic patients unless contraindicated. Based on the time available for correction, appropriate mode of administration was adviced. Also, anemia correction was promoted post-surgery to decrease peri-operative morbidity. The use of iron for anaemia correction is the only factor considered in this study and the mode of administration is irrelevant because the purpose of PBM is increasing patient's red cell reserve and it doesn't depend on which type of formulation is used for the same.

Following tables show in detail the level of hemoglobin for the patients in respective departments at pre-operative, post-operative and hospital discharge:

PRE-PBM

(Table 9: Department wise patients with pre-operative hemoglobin in pre-PBM phase)

p-value=0.0001			Pre-Operative Hemoglobin in g/dL					Total
			< 7	7 - 9	9 - 11	11 - 13	> 13	
Department	CTVS	Count	2	1	16	34	46	99
		%	2.0%	1.0%	16.2%	34.3%	46.5%	100.0%
	GEN	Count	0	9	13	17	8	47
		%	0.0%	19.1%	27.6%	36.2%	17.0%	100.0%
	GI	Count	0	4	8	13	5	30
		%	0.0%	13.3%	26.7%	43.3%	16.7%	100.0%
	NEURO	Count	1	2	5	15	14	37
		%	2.7%	5.4%	13.5%	40.5%	37.8%	100.0%
	ONCO	Count	2	4	14	31	12	63
		%	3.2%	6.3%	22.2%	49.2%	19.0%	100.0%
	ORTHO	Count	0	22	46	67	78	213
		%	0.0%	10.3%	21.6%	31.5%	36.6%	100.0%
	URO	Count	0	3	15	4	7	29
		%	0.0%	10.3%	51.7%	13.8%	24.1%	100.0%
Total		Count	5	45	117	181	170	518
		%	1.0%	8.7%	22.6%	34.9%	32.8%	100.0%

(Table 10: Department wise patients with post-operative hemoglobin in pre-PBM phase)

p-value=0.054			Post-Operative Hb in g/dL					Total
			< 7	7 - 9	9 - 11	11 - 13	> 13	
Department	CTVS	Count	1	12	30	33	18	94
		%	1.1%	12.8%	31.9%	35.1%	19.1%	100.0%
	GEN	Count	2	15	12	16	2	47
		%	4.2%	31.9%	25.5%	34.0%	4.2%	100.0%
	GI	Count	0	5	10	9	3	27
		%	0.0%	18.5%	37.0%	33.3%	11.1%	100.0%
	NEURO	Count	0	5	18	8	1	32
		%	0.0%	15.6%	56.3%	25.0%	3.1%	100.0%
	ONCO	Count	3	12	27	15	5	62
		%	4.8%	19.4%	43.5%	24.2%	8.1%	100.0%
	ORTHO	Count	14	39	66	45	29	193
		%	7.3%	20.2%	34.2%	23.3%	15.0%	100.0%
	URO	Count	0	6	12	4	4	26
		%	0.0%	23.1%	46.2%	15.4%	15.4%	100.0%
Total		Count	20	94	175	130	62	481
		%	4.2%	19.5%	36.4%	27.0%	12.9%	100.0%

(Table 11: Department wise patients with hospital discharge hemoglobin in pre-PBM phase)

p-value=0.023			Hb at Hospital Discharge in g/dL					Total
			< 7	7 - 9	9 - 11	11 - 13	> 13	
Department	CTVS	Count	2	28	49	17	1	97
		%	2.1%	28.9%	50.5%	17.5%	1.0%	100.0%
	GEN	Count	0	16	14	16	1	47
		%	0.0%	34.0%	29.8%	34.0%	2.1%	100.0%
	GI	Count	1	5	13	7	1	27
		%	3.7%	18.5%	48.1%	25.9%	3.7%	100.0%
	NEURO	Count	0	7	18	5	1	31
		%	0.0%	22.6%	58.1%	16.1%	3.2%	100.0%
	ONCO	Count	1	20	20	17	3	61
		%	1.6%	32.8%	32.8%	27.9%	4.9%	100.0%
	ORTHO	Count	0	53	69	47	24	193
		%	0.0%	27.5%	35.8%	24.4%	12.4%	100.0%
	URO	Count	0	9	11	2	4	26
		%	0.0%	34.6%	42.3%	7.7%	15.4%	100.0%
Total		Count	4	138	194	111	35	482
		%	.8%	28.6%	40.2%	23.0%	7.3%	100.0%

The above tables show that the difference in anaemia prevalence between the surgical departments in pre-operative and hospital discharge period is statistically significant ($p<0.05$). Hence, different departments need varied levels of stringency while implementing PBM. This shows that even in same institute, due to diverse practice by different clinicians, the PBM strategies need to be tailored accordingly.

POST-PBM

After implementation of PBM, the distribution of patients according to departments and hemoglobin range in the three points of time is as follows:

(Table 12: Department wise patients with pre-operative hemoglobin in post-PBM phase)

p-value=0.0005			Pre-Operative Hemoglobin in g/dL					Total
			< 7	7 - 9	9 - 11	11 - 13	> 13	
Department	CTVS	Count	0	0	0	13	18	31
		%	0.0%	0.0%	0.0%	41.9%	58.1%	100.0%
	GEN	Count	0	7	11	27	62	107
		%	0.0%	6.5%	10.3%	25.2%	57.9%	100.0%
	GI	Count	0	5	9	15	1	30
		%	0.0%	16.7%	30.0%	50.0%	3.3%	100.0%
	NEURO	Count	0	1	6	20	12	39
		%	0.0%	2.6%	15.4%	51.3%	30.8%	100.0%
	ONCO	Count	1	2	23	27	19	72
		%	1.4%	2.8%	31.9%	37.5%	26.4%	100.0%
	ORTHO	Count	0	3	6	13	27	49
		%	0.0%	6.1%	12.2%	26.5%	55.1%	100.0%
	URO	Count	1	9	19	33	30	92
		%	1.1%	9.8%	20.7%	35.9%	32.6%	100.0%
Total		Count	2	27	74	148	169	420
		%	.5%	6.4%	17.6%	35.2%	40.2%	100.0%

(Table 13: Department wise patients with post-operative hemoglobin in post-PBM phase)

p-value=0.008			Post-Operative Hemoglobin in g/dL					Total
			< 7	7 - 9	9 - 11	11 - 13	> 13	
Department	CTVS	Count	0	4	18	9	0	31
		%	0.0%	12.9%	58.1%	29.0%	0.0%	100.0%
	GEN	Count	1	9	9	18	9	46
		%	2.2%	19.6%	19.6%	39.1%	19.6%	100.0%
	GI	Count	0	6	15	5	2	28
		%	0.0%	21.4%	53.6%	17.9%	7.1%	100.0%
	NEURO	Count	0	5	14	12	7	38
		%	0.0%	13.2%	36.8%	31.6%	18.4%	100.0%
	ONCO	Count	1	11	33	17	8	70
		%	1.4%	15.7%	47.1%	24.3%	11.4%	100.0%
	ORTHO	Count	3	4	10	16	12	45
		%	6.7%	8.9%	22.2%	35.6%	26.7%	100.0%
	URO	Count	1	8	11	7	10	37
		%	2.7%	21.6%	29.7%	18.9%	27.0%	100.0%
Total		Count	6	47	110	84	48	295
		%	2.0%	15.9%	37.3%	28.5%	16.3%	100.0%

(Table 14: Department wise patients with hospital discharge hemoglobin in post-PBM phase)

p-value=0.003			Hb at Hospital Discharge in g/dL					Total
			< 7	7 - 9	9 - 11	11 - 13	> 13	
Department	CTVS	Count	0	10	14	7	0	31
		%	0.0%	32.3%	45.2%	22.6%	0.0%	100.0%
	GEN	Count	0	9	12	16	9	46
		%	0.0%	19.6%	26.1%	34.8%	19.6%	100.0%
	GI	Count	1	7	15	5	0	28
		%	3.6%	25.0%	53.6%	17.9%	0.0%	100.0%
	NEURO	Count	0	4	14	15	5	38
		%	0.0%	10.5%	36.8%	39.5%	13.2%	100.0%
	ONCO	Count	0	15	34	16	5	70
		%	0.0%	21.4%	48.6%	22.9%	7.1%	100.0%
	ORTHO	Count	0	6	12	15	12	45
		%	0.0%	13.3%	26.7%	33.3%	26.7%	100.0%
	URO	Count	1	7	12	7	9	36
		%	2.8%	19.4%	33.3%	19.4%	25.0%	100.0%
Total		Count	2	58	113	81	40	294
		%	0.7%	19.7%	38.4%	27.6%	13.6%	100.0%

The below table shows statistically significant difference due to iron intervention after PBM.

(Table 15: Iron intervention in pre-PBM and post-PBM)

P-value=0.0005			Groups		Total
			Pre-PBM	Post-PBM	
Iron Intervention	NO	Count	443	314	757
		%	85.5%	74.8%	80.7%
	YES	Count	75	106	181
		%	14.5%	25.2%	19.3%
Total		Count	518	420	938
		%	100.0%	100.0%	100.0%

The following comparison table shows the result of the iron intervention. There is statistically significant improvement in pre-operative hemoglobin and hemoglobin at

the time of discharge after PBM strategies. Whereas in immediately post-operative period the difference between the two groups is not statistically significant.

(Table 16: Hemoglobin at various time periods in pre and post PBM)

Groups		N	Mean	SD	p-value
Preop Hb	Pre-PBM	518	11.94	2.18	0.011
	Post-PBM	420	12.30	2.14	
Postop Hb	Pre-PBM	481	10.54	2.12	0.067
	Post-PBM	295	10.82	2.01	
Hb At Discharge	Pre-PBM	482	10.14	1.80	0.001
	Post-PBM	294	10.62	1.98	

At the time of hospital discharge, it is responsibility of the physician to prescribe hematinics to the anemic patients which is important especially in cases where the patient may require another surgery in future such as cardiac conditions, intestinal anastomoses, oncosurgeries etc. In some cases, if patients develop surgical site infection or implant infection, they may require debridement or revision surgeries. Therefore, it is imperative to correct anaemia while discharging the patient.

The following table shows the use of iron in both the settings and the level of hemoglobin at which they were discharged from hospital. As shown, before PBM was promoted, only the patients with hemoglobin <10g/dL were given iron supplementation. Only 2 patients were given iron but they were in 10-13g/dL range of hemoglobin which is still anaemia. Whereas after PBM, those in mid-range hemoglobin i.e., 10-13g/dL were given iron more frequently. In spite of the efforts, 17.3% patients with hemoglobin <10g/dL were discharged to home without iron supplements. There is scope for further improvement and will require numerous cycles of PBM implementation as discussed before.

(Table 17: Iron supplementation w.r.t Hemoglobin at time of discharge)

IRON Administration p-value=0.0005			PRE-PBM		Total	POST-PBM		Total
			NO	YES		NO	YES	
Hb at hospital discharge (g/dL)	< 10	Count	173	73	246	33	78	111
		%	42.5%	97.3%	51.0%	17.3%	75.7%	37.8%
	10 - 13	Count	200	2	202	119	24	143
		%	49.1%	2.7%	41.9%	62.3%	23.3%	48.6%
	> 13	Count	34	0	34	39	1	40
		%	8.4%	0.0%	7.1%	20.4%	1.0%	13.6%
Total		Count	407	75	482	191	103	294
		%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TRANSFUSION REQUIREMENT

The transfusion requirement is key performance indicator of PBM program. The department wise transfusion in both pre-PBM and post-PBM phases are shown in the following table:

(Table 18: Department wise transfusion requirement)

Department wise Transfusion			PRE-PBM			POST-PBM		
			Transfusion		Total	Transfusion		Total
			Yes	No		Yes	No	
Department	CTVS	Count	42	57	99	10	21	31
		%	42.40%	57.60%	100.00%	32.3%	67.7%	100.0%
	GEN	Count	11	36	47	6	101	107
		%	23.40%	76.60%	100.00%	5.6%	94.4%	100.0%
	GI	Count	8	22	30	11	19	30
		%	26.70%	73.30%	100.00%	36.7%	63.3%	100.0%
	NEURO	Count	12	25	37	5	34	39
		%	32.40%	67.60%	100.00%	12.8%	87.2%	100.0%
	ONCO	Count	20	43	63	17	55	72
		%	31.70%	68.30%	100.00%	23.6%	76.4%	100.0%
	ORTHO	Count	33	180	213	6	43	49
		%	15.50%	84.50%	100.00%	12.2%	87.8%	100.0%
	URO	Count	3	26	29	6	86	92
		%	10.30%	89.70%	100.00%	6.5%	93.5%	100.0%
Total		Count	129	389	518	61	359	420
		%	24.90%	75.10%	100.00%	14.5%	85.5%	100.0%

As seen in the above table, the percentage of transfusion decreased from 24.9% to 14.5% after PBM. As our institute was following restrictive transfusion guidelines even before this study started, the most important variable in this scenario is pre-operative anaemia correction. As seen previously, the proportion of anemic patients substantially declined after PBM, the positive impact can be seen on transfusion rate also.

The following table shows the transfusion rate before and after PBM in patients with different levels of pre-operative hemoglobin.

(Table 19: Pre-operative hemoglobin vs PRBC transfusion)

Pre-operative Hb (g/dL) vs PRBC Transfusion			**PRE-PBM**			**POST-PBM**		
			Transfusion		**Total**	**Transfusion**		**Total**
			Yes	No		Yes	No	
Hb in g/dL	**< 7**	**Count**	5	0	5	2	0	2
		%	100.0%	0.0%	100.0%	100.0%	0.0%	100.0%
	7 - 9	**Count**	29	16	45	14	13	27
		%	64.4%	35.6%	100.0%	51.9%	48.1%	100.0%
	9 - 11	**Count**	44	73	117	16	58	74
		%	37.6%	62.4%	100.0%	21.6%	78.4%	100.0%
	11 - 13	**Count**	28	153	181	20	128	148
		%	15.5%	84.5%	100.0%	13.5%	86.5%	100.0%
	> 13	**Count**	23	147	170	9	160	169
		%	13.5%	86.5%	100.0%	5.3%	94.7%	100.0%
Total		**Count**	129	389	518	61	359	420
		%	24.9%	75.1%	100.0%	14.5%	85.5%	100.0%

Length of Stay

The length of stay (LOS) in hospital is key indicator of peri-operative morbidity in patients.

Increased LOS is also associated with hospital acquired infection.

The following tables show department wise length of stay in hospital before and after PBM.

(Table 20: Department wise LOS in pre-PBM phase)

PRE-PBM p-value=0.857	N	Mean	Std. Deviation	Minimum	Maximum
CTVS	99	14.77	7.852	4	58
GEN	47	11.88	6.301	3	28
GI	30	13.73	8.737	2	28
NEURO	37	11.19	13.521	4	84
ONCO	63	14.84	8.375	4	48
ORTHO	213	13.36	33.373	3	35
URO	29	7.34	4.442	2	21
Total	518	**13.20**	22.387	2	35

(Table 21: Department wise LOS in post-PBM phase)

POST-PBM p-value=0.0005	N	Mean	Std. Deviation	Minimum	Maximum
CTVS	31	13.00	4.442	5	28
GEN	107	4.44	4.863	0	23
GI	30	16.07	9.599	3	49
NEURO	39	6.95	4.395	2	22
ONCO	72	8.43	7.091	0	47
ORTHO	49	4.94	4.303	1	30
URO	92	5.42	4.085	1	20
Total	420	**7.09**	6.434	0	49

Apart from total length of hospital stay, the length of stay after surgery is also important. It is the duration after surgery till the patient is discharged from the hospital. Sometimes the surgeries are delayed due to various medical and non-medical reasons which can falsely increase LOS. But determining the significant LOS after surgery (LOS-AS) can aid in detecting peri-operative morbidity load better.

As seen in the table below, average LOS-AS before PBM was 7.14 ± 5.73 days which decreased by approximately 48% to 3.49±4.38 days after PBM.

(Table 22: LOS-AS in pre and post PBM)

P-value=0.0005		N	Mean	SD
Length of stay after surgery	**Pre-PBM**	518	7.14	5.733
	Post-PBM	420	3.49	4.388

LOS also correlates with pre-operative hemoglobin levels. There is an inverse relationship between the two. The table below shows LOS in patients with various degrees of pre-operative anaemia.

(Table 23: Association of LOS with severity of anaemia)

p-value=0.0005 Hb in g/dL	**POST-PBM**				
	N	**Mean**	**Std. Deviation**	**Minimum**	**Maximum**
< 7	2	14.00	5.657	10	18
7 – 9	58	12.24	9.651	1	49
9 - 11	113	9.55	6.392	1	36
11 - 13	81	6.41	4.964	1	28
> 13	40	4.65	2.547	1	11
Total	294	8.58	6.933	1	49

ICU Admission

ICU admission was required in 112(21.6%) patients before PBM whereas it was required only in 12.6% patients after PBM.

(Table 24: ICU admission in pre and post PBM)

P-value = 0.0005			**Groups**		**Total**
			Pre-PBM	Post-PBM	
ICU Stay	**Yes**	**Count**	112	53	165
		%	21.6%	12.6%	17.6%
	No	**Count**	406	367	773
		%	78.4%	87.4%	82.4%
Total		**Count**	518	420	938
		%	100.0%	100.0%	100.0%

The table below shows the number and percentage of patients requiring ICU stay with respect to varying levels of pre-operative hemoglobin. There is statistically significant difference ($p<0.05$) between different groups.

(Table 25: Association of ICU stay with severity of anaemia)

p-value= 0.003			**ICU Stay**		**Total**
			Yes	No	
Pre-op Hb in g/dL	**< 7**	**Count**	2	0	2
		%	100.0%	0.0%	100.0%
	7 - 9	**Count**	5	22	27
		%	18.5%	81.5%	100.0%
	9 - 11	**Count**	7	67	74
		%	9.5%	90.5%	100.0%
	11 - 13	**Count**	21	127	148
		%	14.2%	85.8%	100.0%
	> 13	**Count**	18	151	169
		%	10.7%	89.3%	100.0%
Total		**Count**	53	367	420
		%	12.6%	87.4%	100.0%

DISCUSSION

Patient Blood Management (PBM) is not just limited to enforcement of restrictive transfusion strategies but in fact is involved in overall managing of patient's blood reserve by increasing red cell reserve, decreasing blood loss, decreasing allogenic requirement and increasing tolerance to mild anemia. The concept of PBM appears an obvious choice while managing a patient and fairly easy to implement but in reality, it requires consistent effort from all the healthcare forces involved in treatment of patient including the physician, surgeon, the anaesthetist, the transfusion specialist, the nurse, the administration as well as the patients themselves.

According to the WHO, patient blood management (PBM) is a "patient-focused, evidence based and systematic approach for optimising the management of patients and transfusion of blood products to ensure high quality and effective patient care" In 2010 the World Health Assembly Resolution WHA 63.12 endorsed PBM specifically referring to the three-pillar concept "bearing in mind that patient blood management means that before surgery every reasonable measure should be taken to optimise the patient's own blood volume, to minimise the patient's blood loss and to harness and optimize the patient specific physiological tolerance of anaemia"

The modern patient blood management (PBM) concept is an evidence-based, multidisciplinary, multimodal therapeutic approach to individually manage and preserve the patient's own blood in surgical and non-surgical settings. The high frequency of untreated pre-operative anaemia, the unmet need for better bleeding control, and a liberal transfusion practise all point to significant potential for improving outcomes and avoiding millions of transfusions each year.

A stakeholder is the one who is involved in or affected by a course of action. The primary stakeholders are those involved directly in implementation of a successful PBM program in an institute are treating clinicians, the team of anaesthetists, transfusion medicine specialist, perfusionist, nurses in operating room, nurses in ICU and wards as well as the administration and the patients themselves.

The primary and the most important stakeholder in a PBM program is the patient. The most affected group of patients are those with bleeding, anemia, iron deficiency or at risk of major bleeding. The educated patient who has knowledge about pros and cons about transfusion and knows their alternatives can demand his choice of treatment.

Similarly, a responding clinician who responds positively to the demand of the patient also constitutes the first step in PBM. In fact, many restrictive transfusion programs were started by patient groups who refused transfusions due to personal reasons. It was observed that in spite of restrictive transfusion strategy that was followed, there was no difference in the clinical outcome. The patients also reserve the right to refuse transfusion and therefore it is mandatory to take informed consent regarding blood transfusion after informing the patient about risks-benefits as well as alternatives to transfusion.

Surgeries with high blood loss like cardiothoracic, gastrointestinal, orthopaedic, general and trauma surgeries are associated with high transfusion rates. They are also associated with high surgeon to surgeon transfusion variability. It is important to recognise surgeons as key stakeholders and plan the strategies accordingly. It is important for surgeons to understand that bleeding and patient's circulatory system is also like other systems of body and should be treated diligently.

The role of anaesthetists is also undeniable in PBM. Most of the times the decision to transfuse inside the operation theatre and sometimes in post-op recovery room lies with the anaesthetists. Often the decision regarding blood conserving strategies such as ANVH, cell saver, administration of TXA is taken by anaesthetist. Peri-operative anaemia management, bleeding management and measures to optimise oxygenation while reducing metabolic demand are usually in the professional domain of these experts. These treatment modalities represent major elements of the three pillars of PBM.

Another important stakeholder is transfusion medicine (TM) specialist. The treating clinicians are most of the times focussed on diagnosis and treatment of their patients and concerns like correction of anemia become secondary. This is especially true in emergency situations and critical care. During such times the role of transfusion medicine specialist becomes even more important. TM specialist is focussed only on transfusion requirements of the patient as well as can suggest alternatives to transfusion wherever feasible. They can discuss the challenges faced by their peers and come up with solutions. They may also help with PBM by advocating and enforcing restrictive transfusion protocols and a single-unit transfusion policy. They can also provide post- and under-graduate PBM education programmes with a focus on the hazards and consequences of blood transfusions. It is important for them to

form strong network among clinicians and administration for successful implementation of PBM. It is important for TM specialist to take lead in hospital transfusion committee meetings to modify transfusion practices and inculcate patient blood management strategies in hospital protocols. It is necessary to educate their clinical peers regarding benefits of practicing PBM and discussing evidences and guidelines regarding same.

The nurses involved in taking care of the patients in OT, ICUs and wards are vital for fruitful PBM program. The protocol should be in place to minimize iatrogenic blood loos due to blood sampling and withdrawing only the minimum amount of blood required for testing. The nursing staff should be trained about iatrogenic blood loss. They should be trained to assess the patients at risk for bleeding and should be well-educated regarding concept of making transfusion decisions based on clinical status of patients rather than laboratory values alone.

The secondary stakeholders are the ones not directly involved in treatment of the patient but affects the outcome nonetheless. These are medical governing bodies, medical journalists and media doctors. Even though not involved directly, they can reach thousands of people and have the power to bring a positive change. These media should be utilised for spreading awareness regarding PBM. Once this kind of public information and education reaches critical mass, patients are able to make an informed treatment choice. Patients should be supported and educated in a way that they might be enabled to become key PBM stakeholders. For example, IEC materials can be circulated among the patients visiting surgical OPDs containing information about risks of transfusions and ways to avoid it. These materials should be in local language and should explain all the aspects of transfusion including how it might be a necessity in some unavoidable situations. Patients should be encouraged to ask their clinicians if blood will be required during their procedures, if transfusion can be avoided, how many units of transfusions are expected, how much blood loss is expected etc. The clinician should also inform the patients regarding requirement of blood and hazards of transfusion.

Often the TM specialists are at crossroads due to economic burden PBM can cause. With PBM program, the blood utilization of a hospital decreases significantly. This could lead to downscaling of TM department by the administration, redirecting of personnel and budget among other modifications. The hospital administration may

sometimes hinder workflow of PBM due to fear of loss of profit from blood components. The important point here is that with the implementation of PBM the hospital blood bank will most likely encounter significant reductions in pre-transfusion testing (cross matching, antibody identification, etc.). This in turn will divert the resources to other more needed aspects of transfusion medicine. So, in long-term the apparent financial loss suffered because of transfusing lesser blood components is compensated greatly by growth in other aspects.

Unfortunately, the cost benefit analysis could not be done during this study due to lack of denominator data on cost of PRBC transfusion, hospitalization cost etc.

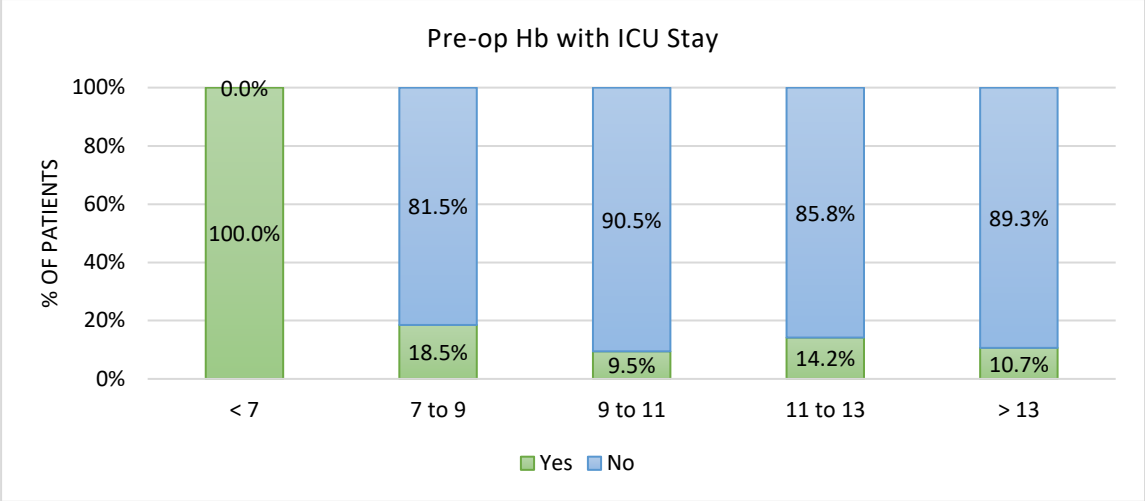
The concerns of hospital administrators are cost, mortality rates, complications and length of stay. Our study showed that implementation of PBM significantly reduces length of stay along with length of stay after surgery.

(Table 26: LOS-AS in pre and post PBM)

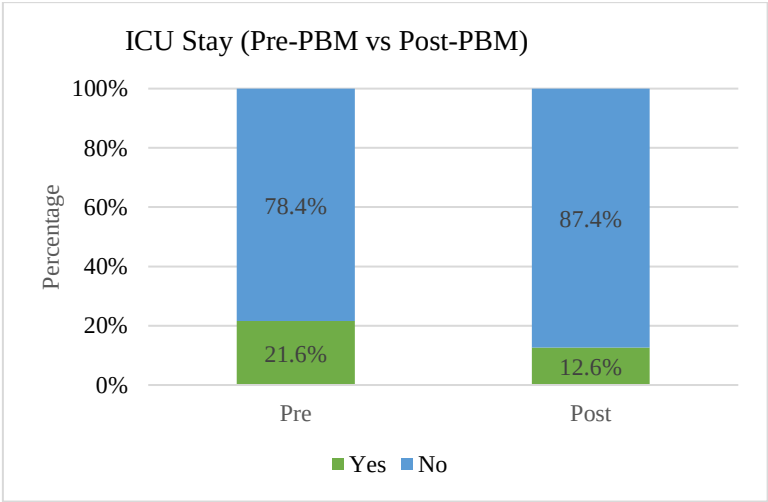
P-value=0.0005		**N**	**Mean**	**SD**
Duration of stay after surgery	**Pre-PBM**	518	7.14	5.733
	Post-PBM	420	3.49	4.388

LOS has inverse relationship with pre-operative hemoglobin levels. At pre-operative hemoglobin level <7g/dL, mean LOS was 13±9.64 days whereas for patients with hemoglobin >13g/dL, mean LOS was 7.09±3.8 days ($p<0.05$).

ICU hospitalisation also decreased after PBM (21.6% to 12.6%; $p=0.0005$) and ICU stay is inversely related to pre-operative hemoglobin ($p=0.003$).



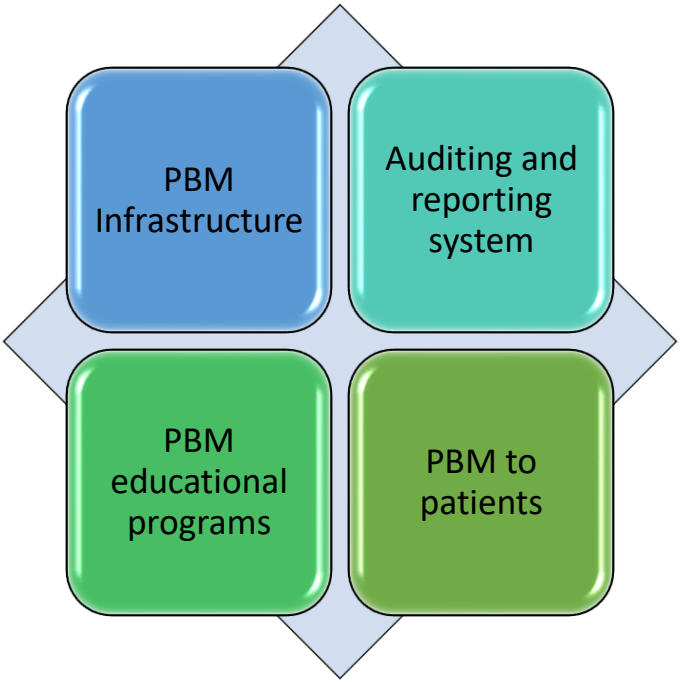
Graph 1: Association of pre-operative anaemia with ICU stay



Graph 2: ICU stay before and after PBM

Once hospital administrators have understood the positive impact PBM can have on their institutions' financial results and improved patient outcomes they are expected to fully support implementation of PBM strategies.

The administration should be able to provide the following:



(Figure 5: Backbone of PBM)

The PBM infrastructure refers to workspace, human resources and technology to aid in the program. These include pre-operative anemia clinic, bleeding management system, PBM information system, micro sampling system etc. The personnel involved have formal organization and have descriptive responsibilities and roles. There is multidisciplinary PBM committee which oversees all the protocols and PBM related work.

"If you cannot measure it, you cannot improve it" - Lord Kelvin

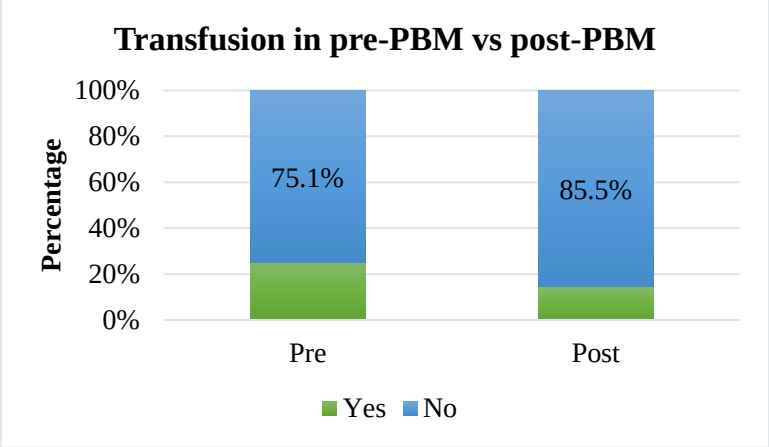
To measure success of PBM and monitor its efficacy, it is important to set goals and standards. Continuous auditing and reporting should be in place to achieve these goals. The parameters that can be assessed are transfusion rate, treatment of anemic patients, peri-operative blood loss, patient clinical outcome and mortality rate.

Transfusion indices are key indicators for PBM program. Transfusion rate (TR) is the percentage of transfused patients with a defined patient cohort of patients. Transfusion index (TI) is the mean number of units per transfused patient within a defined cohort of patients.

TR after our PBM decreased from 24.9% to 14.5% ($p<0.05$).

(Table 27: Allogenic PRBC Transfusion rate before and after PBM)

p-value=0.0005			Groups		Total
			Pre	Post	
Transfusion	Yes	Count	129	61	190
		%	24.9%	14.5%	20.3%
	No	Count	389	359	748
		%	75.1%	85.5%	79.7%
Total		Count	518	420	938
		%	100.0%	100.0%	100.0%



Graph 3: Transfusion requirement before and after PBM

PBM education is crucial element that can change the shape of future of medicine. Multidisciplinary PBM post- and under-graduate education will sensitize future clinicians to blood conserving strategies and hazards of transfusion. Workshops on detailed PBM subjects such as managing different forms of anaemia in preoperative clinics, point-of-care coagulation management, surgical bleeding management etc can be conducted. Regularly organising lectures with national and international PBM key opinion leaders to bring about change in policies is also important. Well-coordinated PBM programmes should have education programmes for physicians, nurses, transfusion medicine specialists, hospital administrators and other non-clinical staff and also patients and their families to learn about the patient benefits.

PBM leaders and hospital directors should continue to promote PBM implementation to ensure that it becomes ingrained in hospital culture. This includes the existing PBM team as well as new staff. One bad succession decision (for example not considering PBM in the training of new staff members or not providing necessary resources) can undermine a decade of hard work. Anchoring PBM also necessitates devoting enough effort to ensuring that the next generation of PBM team members truly internalises the new approach.

CHALLENGES FACED DURING PBM IMPLEMENTATION

- There was lack of knowledge among clinicians regarding PBM and its advantages. PBM is generally considered equivalent to restrictive transfusion policy and its other aspects are overlooked.
- Clinicians are concerned about side effects of iron supplementation such as nausea and epigastric pain which could decrease compliance towards the treatment.
- It is difficult to change practice suddenly and takes patience from stakeholders.
- Multiple resident doctors and consultants are involved for treatment of a patient especially in teaching hospitals which can lead to non-uniform practices.
- There is inconsistent anemia correction across patients due to difference in practices.
- There was incomplete documentation of blood loss during surgery.
- Logistic issues in timely diagnosis of iron deficiency anaemia and its correction using iron.

LIMITATIONS OF THE STUDY

- Patient outcome in terms of mortality was not considered.
- Patients undergoing multiple surgeries during same hospitalization or different hospitalizations were not separated from those undergoing single surgery.
- The dose of iron supplements was not standardised across patients.
- Due to inconsistent and incomplete documentation of intra-operative blood loss, it was not included in the study.
- The patients were not segregated based on minor vs major surgery.
- Re-admission rate was not considered.

STRENGTHS OF THE STUDY

- PBM is not routinely practiced in India and has shown multiple benefits in developed countries.
- The data is lacking regarding prevalence of pre-operative anaemia in this region.
- The data showing efficacy of PBM program is lacking in Indian population.
- The study will help in determining correlation between severity of anaemia, allogenic transfusion rate and length of hospital stay.

CONCLUSION

The modern patient blood management (PBM) concept is an evidence-based, multidisciplinary, multimodal therapeutic approach to individually manage and preserve the patient's own blood in surgical and non-surgical settings. The high frequency of untreated pre-operative anaemia, the unmet need for better bleeding control, and a liberal transfusion practise all point to significant potential for improving outcomes and avoiding millions of transfusions each year. Implementing an effective PBM program is tiresome but is highly beneficial in terms of patient's clinical outcome as well as on healthcare infrastructure.

Consistently effective interventions such as periodic reminders and education through interactive meetings should be promoted. Concerned healthcare providers should be involved in such meetings and workshops to discuss problems and potential solutions. Regular audit and feedbacks should be in place to determine performance of the PBM programs.

Our study was primarily focussed on pre-operative anaemia correction. Other aspects of PBM were also implemented although not strictly. Our study showed positive outcome after implementation of PBM strategies. There was decline in proportion of anemic patients taken for surgery, decline in anaemia severity in hospital discharged patients, decreased length of hospital stay, decreased ICU admission rate and decreased allogenic transfusion requirement.

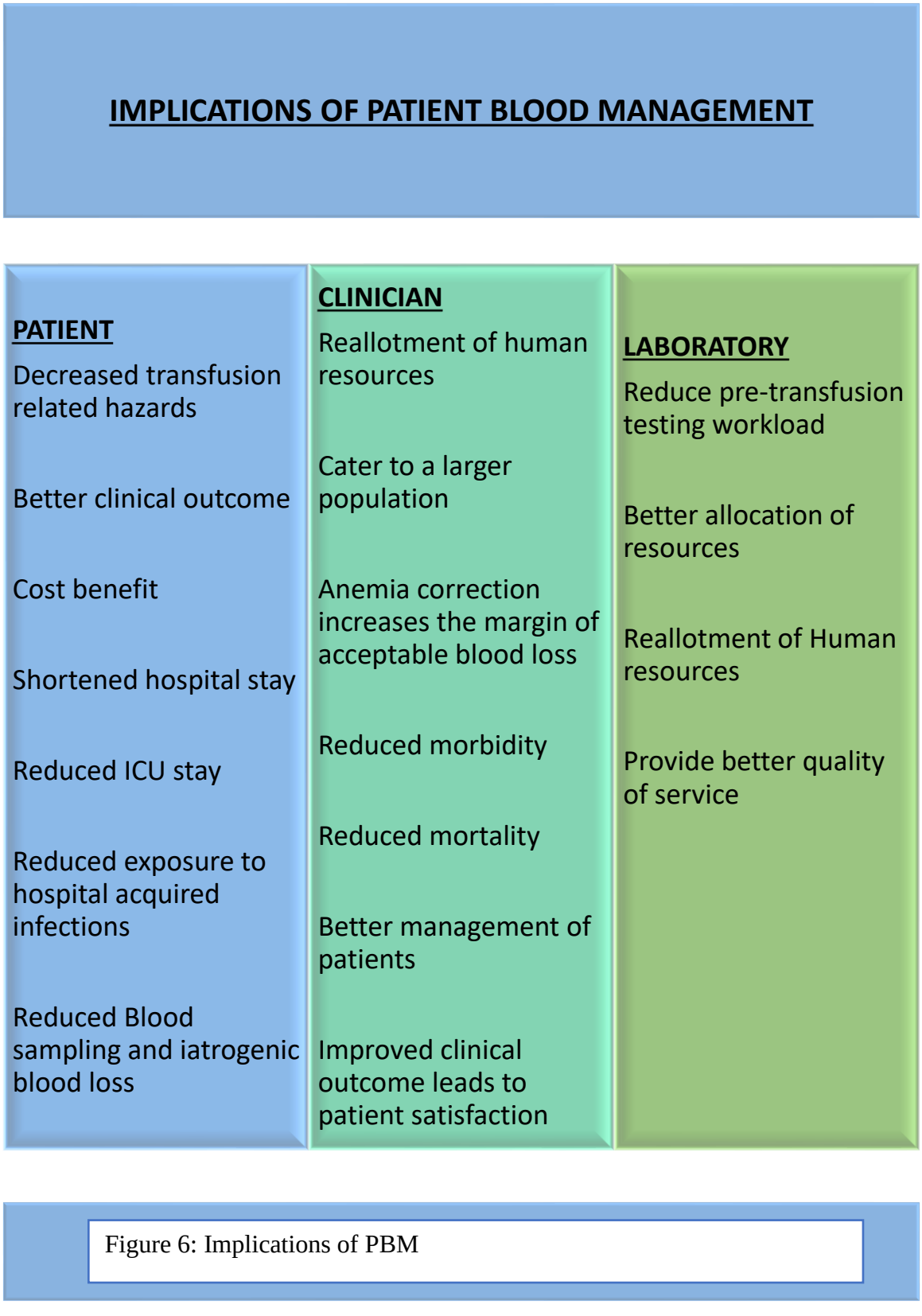


Figure 6: Implications of PBM

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ANNEXURES

Ethical Clearance Certificate

अखिल भारतीय आयुर्विज्ञान संस्थान, जोधपुर
All India Institute of Medical Sciences, Jodhpur
संस्थागत नैतिकता समिति
Institutional Ethics Committee

No. AIIMS/IEC/2020/2088 **Date: 01/01/2020**

ETHICAL CLEARANCE CERTIFICATE

Certificate Reference Number: **AIIMS/IEC/2019-20/1006**

Project title: **"Implementation of patient blood management strategies and its close monitoring as a quality improvement practice in elective surgical patients"**

Nature of Project:	**Research Project**
Submitted as:	**M.D. Dissertation**
Student Name:	**Dr.Pallavi Singh**
Guide:	**Dr.Archana Bajpyee**
Co-Guide:	**Dr. Mahendra Kumar Garg, Dr. Pradeep Kumar Bhatia, Dr. Ashok Kumar Puranik, Dr. Abhay Elhence, Dr. Poonam Elhence, Dr. Deepak Kumar Jha, Dr. Amit Goyal, Dr. Alok Kumar Sharma, Dr. Gautam Ram Choudhary, Dr. Jayakumar & Dr. Vaibhav Kumar Varshney**

This is to inform that members of Institutional Ethics Committee (Annexure attached) met on **23-12-2019** and after through consideration accorded its approval on above project. Further, should any other methodology be used, would require separate authorization.

The investigator may therefore commence the research from the date of this certificate, using the reference number indicated above.

Please note that the AIIMS IEC must be informed immediately of:

- Any material change in the conditions or undertakings mentioned in the document.
- Any material breaches of ethical undertakings or events that impact upon the ethical conduct of the research.

The Principal Investigator must report to the AIIMS IEC in the prescribed format, where applicable, bi-annually, and at the end of the project, in respect of ethical compliance.

AIIMS IEC retains the right to withdraw or amend this if:

- Any unethical principle or practices are revealed or suspected
- Relevant information has been withheld or misrepresented

AIIMS IEC shall have an access to any information or data at any time during the course or after completion of the project.

On behalf of Ethics Committee, I wish you success in your research.

Dr. Praveen Sharma
Member secretary
Institutional Ethics Committee
AIIMS,Jodhpur

Enclose:
1. Annexure 1

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Annexure 1

Institutional Ethics Committee
All India Institution of Medical Sciences, Jodhpur

Meeting of Institutional Ethics committee held on **23-12-2019 at 10:00** AM at Committee Room, Admin Block AIIMS Jodhpur.

Following members were participated in the meeting:-

S/No.	Name of Member	Qualification	Role/Designation in Ethics Committee
1.	Dr. F.S.K Barar	MBBS, MD (Pharmacology)	**Chairman**
2.	Justice N.N Mathur	LLB	Legal Expert
3.	Dr. Varsha Sharma	M.A (Sociology)	Social Scientist
4.	Mr. B.S.Yadav	B.Sc., M.Sc. (Physics), B.Ed.	Lay Person
5.	Dr. K.R.Haldiya	MD (General Medicine)	Clinician
6.	Dr. Arvind Mathur	MBBS, MS (General Medicine)	Clinician
7.	Dr. Surajit Ghatak	MBBS, MS (Anatomy)	Basic Medical Scientist
8.	Dr. Vijaya Lakshmi Nag	MBBS, MD (Microbiology)	Basic Medical Scientist
9.	Dr. Sneha Ambwani	MBBS, MD (Pharmacology)	Basic Medical Scientist
10.	Dr. Kuldeep Singh	MBBS, MD (Paediatric), DM (General Medicine)	Clinician
11.	Dr. Abhinav Dixit	MBBS, MD (Physiology), DNB (Physiology)	Basic Medical Scientist
12.	Dr. Pradeep Kumar Bhatia	MBBS, MD (Anaesthesiology)	Clinician
13.	Dr. Tanuj Kanchan	MBBS, MD (Forensic Medicine)	Basic Medical Scientist
14.	Dr. Pankaj Bhardwaj	MBBS, MD (CM&FM)	Clinician
15.	Dr. Praveen Sharma	M.Sc., Ph.D. (Biochemistry)	Member Secretary

Dr. Praveen Sharma
Member secretary
Institutional Ethics Committee
AIIMS,Jodhpur

All India Institute of Medical Sciences, Jodhpur
Department of Transfusion Medicine and Blood Bank
Informed Consent Form

Title of the project: **Implementation of patient blood management strategies and its close monitoring as a quality improvement practice in elective surgical patients.**

Name of the Principal Investigator: Dr. Pallavi Singh

Tel. No. (Mobile): - 09833458679

Patient OPD/IPD No: _____

I, _____S/o or D/o_____
R/o _____give my full, free, voluntary consent to be a part of the study "**Implementation of patient blood management strategies and its close monitoring as a quality improvement practice in elective surgical patients.**", the procedure and nature of which has been explained to me in my own language to my full satisfaction. I confirm that I have had the opportunity to ask questions.
I understand that my participation is voluntary and I am aware of my right to opt out of the study at any time without giving any reason.
I understand that the information collected about me and any of my medical records may be looked at by responsible individual from AIIMS Jodhpur or from regulatory authorities. I give permission for these individuals to have access to my records.

Date: _____ _____

Place: _____ Signature/Left thumb impression (Patient) (Caregiver)

This to certify that the above consent has been obtained in my presence.

Date: _____ _____

Place: _____ Signature of Principal Investigator

1. Witness 1 2. Witness 2

_____ _____

Signature Signature
Name: _____ Name: _____
Address: _____ Address: _____
_____ _____

सूचित सहमति प्रपत्र

परियोजना का शीर्षक: - वैकल्पिक सर्जिकल रोगियों में एक गुणवत्ता में सुधार अभ्यास के रूप में रोगी रक्त प्रबंधन रणनीतियों का कार्यान्वयन और इसकी करीबी निगरानी (Implementation of patient blood management strategies and its close monitoring as a quality improvement practice in elective surgical patients)

प्रधान अन्वेषक: डॉ पल्लवी सिंह

टेलीफोन नंबर: 09833458679

रोगी / स्वयंसेवी पहचान संख्या: _____

मैं,_____पुत्र/पुत्री_____

निवासी_____

स्वयं को अध्ययन का हिस्सा होने के लिए अपनी पूर्ण स्वैच्छिक सहमति देता हूँ। इस अध्ययन का शीर्षक है "- वैकल्पिक सर्जिकल रोगियों में एक गुणवत्ता में सुधार अभ्यास के रूप में रोगी रक्त प्रबंधन रणनीतियों का कार्यान्वयन और इसकी करीबी निगरानी" । मेरी पूर्ण संतुष्टि के लिए मेरी खुद की भाषा में मुझे समझाया गया है। मैं इस बात की पुष्टि करता हूं कि मुझे सवाल पूछने का पूर्ण अवसर मिला है।

मैं यह समझता हूँ कि मेरी भागीदारी स्वैच्छिक है और बिना कोई कारण बताए किसी भी समय इस अध्ययन से स्वयं को वापस लेने के लिए मेरे अधिकार के बारे में मुझे पता है।

मैं यह समझता हूँ कि मेरे मेडिकल रिकॉर्ड की एकत्रित की गई जानकारी "अखिल भारतीय आयुर्विज्ञान संस्थान जोधपुर" या नियामक अधिकारियों द्वारा देखी जा सकती है। मैं इन व्यक्तियों को मेरे रिकॉर्ड के उपयोग के लिए अनुमति देता हूँ।

दिनांक: हस्ताक्षर/अंगूठे का निशान

स्थान:

यह प्रमाणित किया जाता कि इस संस्करण की सहमति मेरी उपस्थिति में प्राप्त की गयी है:

दिनांक: प्रमुख अन्वेषक के हस्ताक्षर स्थान:

1. साक्षी 1 2. साक्षी 2

हस्ताक्षर: _____ हस्ताक्षर: _____

नाम:_____ नाम: _____

पता: _____ पता: _____

All India Institute of Medical Sciences, Jodhpur
Department of Transfusion Medicine and Blood Bank
Patient Information Sheet

Title of the study: **Implementation of patient blood management strategies and its close monitoring as a quality improvement practice in elective surgical patients.**

Name of the Principal Investigator: Dr. Pallavi Singh
Tel. No. (Mobile): - 09833458679

Before you decide whether or not you wish to participate in this study, it is important for you to understand why this study is being done and what it will involve. Please take the time to read the following information carefully and discuss it with others if you wish.

1) What is the purpose of this study?
The purpose of this study is to assess the effect of patient blood management on overall prognosis, recovery and duration of hospital stay in surgical patients.

2) What if I don't want to participate or if I want to leave the study later?
Participation in this study is voluntary. It is completely up to you whether you want to participate. You may withdraw from the study at any time and for any reason or no reason. Please tell the researcher that you wish to discontinue.

3) What does this study involve?
This study will involve collection of the patient's basic information, laboratory investigation data, intra-operative data, medications and total money spent by the patient during the course of the admission.

4) Will my confidentiality be protected?
The information about you will be subjected to absolute anonymity.

Thank you for taking the time to consider taking part in this study.
If you wish to take part, please sign the attached consent form.
This information sheet is for you to keep.

मरीज़ सूचना पत्र

परियोजना का शीर्षक: - वैकल्पिक सर्जिकल रोगियों में एक गुणवत्ता में सुधार अभ्यास के रूप में रोगी रक्त प्रबंधन रणनीतियों का कार्यान्वयन और इसकी करीबी निगरानी

प्रधान अन्वेषक: **डॉ पल्लवी सिंह**

टेलीफोन नंबर: 09833458679

इससे पहले कि आप यह तय करें कि आप इस अध्ययन में भाग लेना चाहते हैं या नहीं, आपके लिए यह समझना महत्वपूर्ण है कि यह अध्ययन क्यों किया जा रहा है और इसमें क्या शामिल होगा। कृपया निम्नलिखित जानकारी को ध्यान से पढ़ने के लिए समय निकालें और यदि आप चाहें तो दूसरों के साथ इस पर चर्चा करें।

1) इस अध्ययन का उद्देश्य क्या है?

इस अध्ययन का उद्देश्य सर्जिकल रोगियों में समग्र रक्तस्राव, स्वास्थ्य लाभ और अस्पताल में रहने की अवधि पर रोगी के रक्त प्रबंधन के प्रभाव का आकलन करना है।

2) यदि मैं भाग नहीं लेना चाहता या यदि मैं बाद में अध्ययन छोड़ना चाहता हूँ तो क्या होगा?

इस अध्ययन में भागीदारी स्वैच्छिक है। यह पूरी तरह से आप पर निर्भर है कि आप भाग लेना चाहते हैं या नहीं। आप किसी भी समय और किसी भी कारण या बिना किसी कारण के अध्ययन से हट सकते हैं। कृपया शोधकर्ता को बताएं कि आप बंद करना चाहते हैं।

3) इस अध्ययन में क्या शामिल है?

इस अध्ययन में रोगी की बुनियादी जानकारी, प्रयोगशाला जांच डेटा, इंट्रा-ऑपरेटिव डेटा, दवाएं और प्रवेश के दौरान रोगी द्वारा खर्च किए गए कुल धन का संग्रह शामिल होगा।

4) क्या मेरी गोपनीयता की रक्षा की जाएगी?

आपके बारे में जानकारी पूर्ण गुमनामी के अधीन होगी.

इस अध्ययन में भाग लेने पर विचार करने के लिए समय निकालने के लिए धन्यवाद।

यदि आप भाग लेना चाहते हैं, तो कृपया संलग्न सहमति पत्र पर हस्ताक्षर करें।

यह सूचना पत्र आपके पास रखने के लिए है.

All India Institute of Medical Sciences, Jodhpur
Department of Transfusion Medicine and Blood Bank

Case Record Sheet

Date:

Name:

Age/Sex: **Department:** **Ward/Bed:**

Diagnosis:

Date of admission:

Date of surgery:

Date of discharge:

Hemoglobin(g/dl): At admission:

Before Surgery:

After Surgery:

At the time of discharge:

Name of the surgery:

Name of the Operating Surgeon:

Blood loss during surgery:

Intra-op Blood conservation methods?

Is the patient Anemic? Yes/No

Was there any intervention done to correct anemia before surgery? Yes/No

Was there any intervention done to correct anemia after surgery? Yes/No

Did patient Require any PRBC transfusion? Yes/No

Was patient's anemia corrected before surgery? Yes/No

Was there any post-op complication in the patient attributable to anemia? Yes/No

Remarks:

MASTER CHART (PRE - PBM)

S. No	Age	Gender	DEPT	UID	Diagnosis	Surgery	Preop Hb	Postop Hb	Hb At Discharge	DOSx	DOA	DOD	Total Duration of stay	Duration of stay postop	ICU	Transfusion	Intervention
1	80	F	ORTHO	AIIMS/JDH/2018/08/018557	TKR	TKR	7.2	9.9	9.9	23.8.19	20.8.19	1.9.19	12	9	1	1	NO
2	50	M	ORTHO	AIIMS/JDH/2019/04/009635	NON-UNION NOF#	THR	10.5	10.2	10.4	18.9.19	17.9.19	23.9.19	6	5	0	0	NO
3	48	F	ORTHO	AIIMS/JDH/2019/08/014787	BL OA RA	TKR	13.2	11.3	11.3	19.9.19	16.9.19	26.9.19	10	7	0	0	NO
4	53	M	ORTHO	AIIMS/JDH/2019/08/013706	ANKYLOSED HIP	THR	13.9	12.3	12.3	19.9.19	17.9.19	25.9.19	8	6	0	0	NO
5	75	F	ORTHO	AIIMS/JDH/2019/03/005297	IMPLANT REMOVAL	CRIF	9.9	9.5	9.5	22.9.19	9.9.19	26.9.19	17	4	0	0	NO
6	35	F	ORTHO	AIIMS/JDH/2019/02/007615	NEGLECTED FRACTURE	RECONSTRUCTION	10.7	6.8	7.2	26.9.19	23.9.19	1.10.19	8	5	0	1	YES
7	38	M	ORTHO	AIIMS/JDH/2019/09/002234	AVN	THR	14.1	12.9	11	29.9.19	28.9.19	9.10.19	11	10	0	0	NO
8	48	M	ORTHO	AIIMS/JDH/2019/08/015555	AVN	THA	13.2	11.6	10.9	7.10.19	5.10.19	12.10.19	7	5	0	0	NO
9	53	M	ORTHO	AIIMS/JDH/2019/07/001944	AVN	THA	13.6	12.1	12.3	13.12.19	11.12.19	19.12.19	8	6	0	0	NO
10	28	M	ORTHO	AIIMS/JDH/2018/02/005145	AVN	THA	17.1	11.7	11.9	18.12.19	17.12.19	25.12.19	8	7	0	0	NO
11	69	F	ORTHO	AIIMS/JDH/2019/10/010778	AVN	THA	13.8	9.9	9.9	23.12.19	21.12.19	29.12.19	8	6	0	0	NO
12	35	F	ORTHO	AIIMS/JDH/2016/09/006790	AVN	THA	13.4	12.3	8.4	27.12.19	24.12.19	1.1.20	8	5	0	0	NO
13	34	M	ORTHO	AIIMS/JDH/2019/11/015629	LOOSENING	REVISION THA	15	12.2	8.9	27.12.19	24.12.19	1.1.20	8	5	0	0	NO
14	45	F	ORTHO	AIIMS/JDH/2019/06/010748	OA KNEE	TKR	11.5	10.2	10	30.12.19	25.12.19	6.1.20	12	7	0	0	NO
15	81	F	ORTHO	AIIMS/JDH/2019/12/008070	NON-UNIOR FEMUR #	FEMORAL REPLACEMENT	9.2	8.1	9.1	31.12.19	30.12.19	6.1.20	7	6	0	2	NO
16	27	M	ORTHO	AIIMS/JDH/2019/12/009377	AVN	THA	15.5	11.2	10.9	1.1.20	31.12.19	6.1.20	6	5	0	0	NO
17	41	M	ORTHO	AIIMS/JDH/2019/08/002826	AVN	THA	17.5`	13	11.3	13.1.20	12.1.20	18.1.20	6	5	0	0	NO
18	30	M	CTVS	AIIMS/JDH/2019/07/012441	RHD, MVR		13.3	9.7	8.9	16.1.20	15.1.20	28.1.20	13	12	3	0	NO
19	58	M	CTVS	AIIMS/JDH/2019/12/007206	CAD-TVD		15.5	8.9	9.5	21.1.20	17.1.20	28.1.20	11	7	5	2	NO
20	24	F	ORTHO	AIIMS/JDH/2020/01/022154	BL SACRUM FRACTURE	TBW	9.4	10.8	7.8	23.1.20	9.1.20	4.2.20	26	12	0	1	YES
21	24	F	ORTHO	AIIMS/JDH/2020/01/022154	BL SACRUM FRACTURE	SCREW PLATING	10.8	9.5	7.8	28.1.20	9.1.20	4.2.20	26	7	0	0	YES
22	64	F	ORTHO	AIIMS/JDH/2019/10/001210	AVN	THA	13.6	9.4	9.2	30.1.20	29.1.20	6.2.20	8	7	0	0	NO
23	18	F	CTVS	AIIMS/JDH/2019/11/015971	ASD		14.4	9.9	9.5	30.1.20	27.1.20	10.2.20	14	11	2	0	NO
24	60	M	ORTHO	AIIMS/JDH/2020/01/027420	AVN	THA	13.2	11.9	11.9	30.1.20	28.1.20	5.2.20	8	6	0	0	NO
25	40	F	ORTHO	AIIMS/JDH/2019/11/015784	DEGENERATIVE SPINE	POSTERIOR INSTRUMENTATI	10.8	8.2	8.2	11.2.20	10.2.20	13.2.20	3	2	0	0	NO
26	55	F	ORTHO	AIIMS/JDH/2019/12/007574	AVN	THA	14.8	14.2	12.3	12.2.20	11.2.20	19.2.20	8	7	0	0	NO
27	69	F	ORTHO	AIIMS/JDH/2020/01/021544	SSI	DEBRIDEMENT	8.1	5.7	10.2	14.2.20	11.2.20	8.3.20	26	23	0	3	NO
28	38	F	CTVS	AIIMS/JDH/2020/01/018915	RHD		15.1	11.7	9.8	18.2.20	15.2.20	9.3.20	23	20	3	0	NO
29	32	F	ORTHO	AIIMS/JDH/2020/02/010750	TB HIP	THA	9.3	6	7.5	20.2.20	19.2.20	26.2.20	7	6	0	2	YES
30	46	F	CTVS	AIIMS/JDH/2020/01/029229	RHD, MVR		14.1	9.6	9.1	20.2.20	12.2.20	27.2.20	15	7	0	1	NO
31	46	F	CTVS	AIIMS/JDH/2020/01/029229	RHD SEVERE MS		14.1	9.1	9.6	20.2.20	10.2.20	26.2.20	16	6	3	0	NO
32	27	M	ORTHO	AIIMS/JDH/2018/08/010607	AVN	THA	14.4	10.9	10.9	20.2.20	18.2.20	26.2.20	8	6	0	0	NO
33	76	F	ORTHO	AIIMS/JDH/2020/02/007405	AVN	THA	10.8	8.6	8.6	21.2.20	20.2.20	28.2.20	8	7	0	0	NO
34	62	M	ORTHO	AIIMS/JDH/2019/03/016625	AVN	THA	12.6	10.5	10.5	24.2.20	23.2.20	29.2.20	6	5	0	0	NO
35	74	M	CTVS	AIIMS/JDH/2019/09/005064	CABG, CAD		14	8.7	7.8	25.2.20	21.2.20	5.3.20	13	9	3	0	YES
36	65	F	CTVS	AIIMS/JDH/2020/01/030152	CABG		10.4	7.4	7.7	27.2.20	24.2.20	6.3.20	11	8	3	4	YES
37	64	M	ORTHO	AIIMS/JDH/2015/08/000809	OA KNEE	TKR	11.6	10.8	9.1	27.2.20	26.2.20	11.3.20	14	13	0	0	NO
38	67	F	ORTHO	AIIMS/JDH/2015/03/007500	OA KNEE	TKR	9.9	8.6	7.9	4.3.20	2.3.20	10.3.20	8	6	0	0	YES
39	23	M	ORTHO	AIIMS/JDH/2019/09/017075	ANKYLOSED HIP	THA	17.5	9.7	9.7	4.3.20	2.3.20	12.3.20	10	8	0	0	NO
40	68	M	CTVS	AIIMS/JDH/2020/02/014610			15.4	12.3	12.1	4.3.20	2.3.20	8.3.20	6	4	0	0	NO
41	50	F	ORTHO	AIIMS/JDH/2019/12/005344	RA KNEE	TKR	11.4	8.8	8.8	5.3.20	4.3.20	11.3.20	7	6	0	0	NO
42	55	M	ORTHO	AIIMS/JDH/2015/04/001487	OA KNEE	TKR	15.6	11.9	11.8	11.3.20	8.3.20	19.3.20	11	8	0	0	NO
43	40	M	CTVS	AIIMS/JDH/2020/02/007044	RHD		14.1	9.5	8.9	17.3.20	14.3.20	22.3.20	8	5	3	0	NO
44	60	F	ORTHO	AIIMS/JDH/2020/02/017788	AVN	THA	13.3	9.3	9.3	17.3.20	16.3.20	25.3.20	9	8	0	0	NO
45	62	F	ORTHO	AIIMS/JDH/2019/06/003251	OA KNEE	TKR	11.5	8.3	8.3	19.3.20	15.3.20	26.3.20	11	7	0	0	NO
46	71	F	ORTHO	AIIMS/JDH/2019/05/017155	OA KNEE	TKR	13.8	9.9	9.9	19.3.20	17.3.20	26.3.20	9	7	0	0	NO
47	18	F	CTVS	AIIMS/JDH/2019/07/021532	RHD,SEVERE MR	12.6	10.6	10	9.8	21.3.20	19.3.20	25.3.20	6	4	0	1	NO
48	50	M	CTVS	AIIMS/JDH/2020/01/018685	Chronic Constrictive Pericarditis		14.2	9.2	8.9	9.6.20	2.6.20	15.6.20	13	6	3	6	NO
49	36	F	CTVS	AIIMS/JDH/2020/02/010367	RHD,SEVERE AS		14	11.8	10.9	16.6.20	12.6.20	22.6.20	10	6	3	3	NO
50	53	M	CTVS	AIIMS/JDH/2020/02/014903	CAD,TVD,RWMA+LVEF~50%		13.5	10	7.9	23.6.20	17.6.20	28.6.20	11	5	0	0	YES
51	20	M	ORTHO	AIIMS/JDH/2020/02/016522	AVN	THR	14.9	14	12.3	26.6.20	21.6.20	2.7.20	11	6	0	0	NO
52	60	M	CTVS	AIIMS/JDH/2020/06/000387	CAD-TVD	13.1	12.3	9.4	8	30.6.20	25.6.20	16.7.20	21	16	3	0	YES
53	53	M	CTVS	AIIMS/JDH/2018/04/002177	CAD-TVD		13.5	10.6	8.3	7.7.20	4.7.20	13.7.20	9	6	4	0	NO
54	54	M	CTVS	AIIMS/JDH/2020/02/006142	RHD,SEVERE AS		15.8	NA	10.8	17.7.20	9.7.20	27.7.20	18	10	5	0	NO
55	37	F	CTVS	AIIMS/JDH/2019/03/016401	RHD,SEVERE MS	8.5	9.9	8.1	7.9	25.7.20	15.7.20	6.8.20	22	12	9	6	YES
56	26	M	CTVS	AIIMS/JDH/2018/04/013943	RHD,SEVERE MR		12.1	10.8	10.8	28.7.20	23.7.20	7.8.20	15	10	3	0	NO
57	59	M	CTVS	AIIMS/JDH/2020/07/003154	CAD-TVD		11.8	8.1	8.1	11.8.20	5.8.20	17.8.20	12	6	4	1	YES
58	23	M	CTVS	AIIMS/JDH/2020/01/024391	OS-ASD RBBB		14	11.3	11.3	23.8.20	20.8.20	30.8.20	10	7	3	0	NO
59	45	M	CTVS	AIIMS/JDH/2020/07/002078	CAD-TVD		13.5	11.1	11.1	1.9.20	27.8.20	8.9.20	12	7	4	0	NO
60	76	F	CTVS	AIIMS/JDH/2020/07/005778	CAD-TVD		10.8	10	10	8.9.20	3.9.20	12.9.20	9	4	3	2	NO
61	40	F	CTVS	AIIMS/JDH/2020/09/004032	B/L Subclavian artery thrombosis		5.2	7.9	7.9	11.9.20	10.9.20	14.9.20	4	3	0	3	YES
62	35	M	CTVS	AIIMS/JDH/2020/06/006150	RHD,SEVERE AS		14.6	11.9	11.9	15.9.20	10.9.20	21.9.20	11	6	3	0	NO
63	56	F	CTVS	AIIMS/JDH/2020/09/005029	Aorto-bifemoral graft thrombosi		9.2	7.6	7.6	17.9.20	13.9.20	18.9.20	5	1	5	2	YES
64	63	M	CTVS	AIIMS/JDH/2020/07/009386	CAD-TVD		12.9	8.8	8.8	22.9.20	16.9.20	27.9.20	11	5	3	2	NO
65	45	M	ORTHO	AIIMS/JDH/2020/09/010880	TIBIA #		10.1	8.6	8.4	1.10.20	28.9.20	3.10.20	5	2	0	0	NO

S. No	Age	Gender	DEPT	UID	Diagnosis	Surgery	Preop Hb	Postop Hb	Hb At Discharge	DOSx	DOA	DOD	Total Duration of stay	Duration of stay postop	ICU	Transfusion	Intervention
66	55	F	GEN	AIIMS/JDH/2020/08/004842	LEFT CA BREAST	RESECTION	11.0	10.8	11.5	1.10.20	28.9.20	5.10.20	7	4	0	0	NO
67	32	F	ORTHO	AIIMS/JDH/2020/09/011406	TIBIA #	ORIF	11.4	9.8	9.6	2.10.20	30.9.20	11.10.20	11	9	0	0	NO
68	30	M	ORTHO	AIIMS/JDH/2020/09/011226	RADIUS#		15.4	14.7	14.7	2.10.20	30.9.20	4.10.20	4	2	0	0	NO
69	52	F	GEN	AIIMS/JDH/2019/10/016004	RECURRENT APPENDICULA	HEMICOLECTOMY	8.1	7.8	7.9	4.10.20	3.10.20	8.10.20	5	4	0	1	YES
70	50	M	ORTHO	AIIMS/JDH/2020/09/008065	OPEN GRADE 3C RADIUS#	WITH BRACHIAL ARTERY TRAN	10.9	7.5	8.4	4.10.20	22.9.20	8.10.20	16	4	0	9	YES
71	49	F	ORTHO	AIIMS/JDH/2020/10/000416	HUMERUS #		12.0	10.8	10.8	4.10.20	2.10.20	7.10.20	5	3	0	0	NO
72	35	M	GI	AIIMS/JDH/2019/12/009796	SAIO ILIOCECAL TB	RIGHT HEMICOLECTOMY	14.7	13.6	13.1	4.10.20	2.10.20	7.10.20	5	3	0	0	NO
73	55	M	ONCO	AIIMS/JDH/2020/08/005627	CA BUCCAL MUCOSA		10.1	9.0	8.8	5.10.20	22.9.20	6.10.20	14	1	0	0	NO
74	44	F	URO	AIIMS/JDH/2020/09/009447	UB MASS		9.3	9.1	9.5	5.10.20	28.9.20	9.10.20	11	4	0	0	NO
75	19	M	ORTHO	AIIMS/JDH/2020/09/005009	MALLEOLAR #	SX	12.5	10.8	10.7	5.10.20	4.10.20	7.10.20	3	2	0	0	NO
76	47	M	NEURO	AIIMS/JDH/2017/02/004198	BRAIN TUMOR	TUMOR EXCISION	12.0	11.2	11.1	5.10.20	4.10.20	12.10.20	8	7	1	0	NO
77	60	F	ONCO	AIIMS/JDH/2020/09/000672	CA ENDOMETRIUM	HYSTERECTOMY WITH PELVI	12.6	11.6	11.3	5.10.20	1.10.20	12.10.20	11	7	0	1	NO
78	43	F	ONCO	AIIMS/JDH/2019/11/002801	CA TONGUE		13.6	12.8	12.6	5.10.20	23.9.20	8.10.20	15	3	0	0	NO
79	80	M	GI	AIIMS/JDH/2020/10/000418	CHOLELITHIASIS WITH CBD	STONE	12.9	11.2	10.9	6.10.20	5.10.20	21.10.20	16	15	0	0	NO
80	47	F	ONCO	AIIMS/JDH/2020/07/008715	CA VULVA		12.6	11.0	11.1	6.10.20	3.10.20	10.10.20	7	4	0	0	NO
81	50	M	ONCO	AIIMS/JDH/2020/09/004896	CA OVARY	BL SALPINGOOOPERECTOMY	12.1	11.8	11.8	6.10.20	4.10.20	8.10.20	4	2	0	0	NO
82	65	M	GI	AIIMS/JDH/2020/02/009428	CA SPLENIC FLEXURE	SEGMENTAL RESECTION	14.7	12.2	11.9	6.10.20	1.10.20	10.10.20	9	4	0	0	NO
83	50	F	GI	AIIMS/JDH/2020/10/001301	GASTRIC OUTLET OBST WI	DIAGNOSTIC LAP AND PARTI	14.1	12.6	12.1	7.10.20	6.10.20	18.10.20	12	11	0	0	NO
84	50	M	NEURO	AIIMS/JDH/2020/08/009734	BRAIN TUMOR	TUMOR EXCISION	14.5	13.6	13.6	7.10.20	6.10.20	11.10.20	5	4	0	0	NO
85	32	F	URO	AIIMS/JDH/2020/09/009116	VESICOVAGINNAL FISTULA	FISTULA REPAIR	9.0	8.8	8.8	8.10.20	7.10.20	12.10.20	5	4	0	0	NO
86	45	F	ONCO	AIIMS/JDH/2019/10/010713	CA OVARY		11.1	9.8	8.9	8.10.20	6.10.20	10.10.20	4	2	0	0	NO
87	50	F	GI	AIIMS/JDH/2020/09/009976	PERI AMPULLARY CARCINO	WHIPPLE'S PROCEDURE	11.4	10	10.0	8.10.20	3.10.20	20.10.20	17	12	1	0	NO
88	50	F	ONCO	AIIMS/JDH/2020/10/000615	CA RECTOSIGMOID	COLECTOMY	13.1	11.8	12.0	8.10.20	7.10.20	16.10.20	9	8	0	0	NO
89	25	M	ORTHO	AIIMS/JDH/2020/10/001404	FEMUR# SUBTROCHANTERIC		8.7	6.2	7.6	9.10.20	6.10.20	11.10.20	5	2	0	2	YES
90	38	M	URO	AIIMS/JDH/2020/05/000177	SCC URETHRA WITH STRIC	URETHROPLASTY	9.0	8.8	8.8	9.10.20	5.10.20	12.10.20	7	3	0	0	NO
91	45	F	NEURO	AIIMS/JDH/2020/10/001665	FRONTAL MENINGIOMA	TUMOR EXCISION	11.4	9.6	9.8	9.10.20	6.10.20	12.10.20	6	3	0	1	NO
92	20	F	ONCO	AIIMS/JDH/2020/08/006588			12.0	7.2	9.8	9.10.20	8.10.20	13.10.20	5	4	1	2	NO
93	58	M	GEN	AIIMS/JDH/2020/02/004649	MYXOID LIPOSARCOMA LE	RESECTION	11.7	11.5	11.5	9.10.20	8.10.20	11.10.20	3	2	0	0	NO
94	46	M	ORTHO	AIIMS/JDH/2020/10/001381	TIBIA #		12.8	12	12	9.10.20	6.10.20	15.10.20	9	6	0	0	NO
95	50	M	URO	AIIMS/JDH/2020/08/000767	LT RENAL MASS	LT RADICAL NEPHRECTOMY	11.0	NA	NA	9.10.20	7.10.20	13.10.20	6	4	0	0	NO
96	32	F	ORTHO	AIIMS/JDH/2020/09/011406	TIBIA #		11.4	NA	NA	9.10.20	30.9.20	11.10.20	11	2	0	0	NO
97	40	F	GEN	AIIMS/JDH/2020/09/004032	SUBCLAVIAN THROMBOSIS	THROMBECTOMY	10.6	9.8	10.0	11.10.20	4.10.20	20.10.20	16	9	0	4	NO
98	20	M	NEURO	AIIMS/JDH/2020/10/002732	CERVICAL FRACTURE		11.3	NA	NA	11.10.20	9.10.20	16.10.20	7	5	0	0	NO
99	45	F	NEURO	AIIMS/JDH/2020/10/001665	FRONTAL MENINGIOMA		7.8	NA	NA	11.10.20	6.10.20	12.10.20	6	1	0	1	NO
100	26	M	ONCO	AIIMS/JDH/2019/04/005720	CA RECTUM		14.1	14.3	8.6	12.10.20	7.10.20	8.11.20	32	27	0	0	NO
101	57	M	NEURO	AIIMS/JDH/2020/10/002601	C3-C6 POST LONGITUDANA	SX	13.4	12.8	NA	12.10.20	10.10.20	14.10.20	4	2	0	0	NO
102	53	M	ONCO	AIIMS/JDH/2020/05/001281	CA RECTOSIGMOID		11.2	NA	NA	12.10.20	5.10.20	19.10.20	14	7	0	1	NO
103	46	F	CTVS	AIIMS/JDH/2020/07/001906	CAD-TVD		12.8	NA	9.8	13.10.20	9.10.20	16.10.20	7	3	0	0	NO
104	55	M	ORTHO	AIIMS/JDH/2020/06/002211	TIBIA #	DEBRIDEMENT + IMPLANT	10.0	10.8	10.5	13.10.20	11.10.20	19.10.20	8	6	0	0	NO
105	80	M	GI	AIIMS/JDH/2020/10/000418	POST ERCP	EXPLORATION	12.3	NA	NA	13.10.20	5.10.20	21.10.20	16	8	0	0	NO
106	54	M	GI	AIIMS/JDH/2020/09/010853	CBD CALCULI	CBD EXPLORATION	12.4	NA	NA	13.10.20	9.10.20	18.10.20	9	5	0	0	NO
107	50	F	GI	AIIMS/JDH/2020/07/006217	CHOLEDOCHOLITHIASIS	EXPLORATION	10.4	NA	NA	13.10.20	11.10.20	17.10.20	6	4	0	0	NO
108	60	F	ORTHO	AIIMS/JDH/2020/10/003135	FEMUR#	CRIF	12.6	NA	NA	13.10.20	11.10.20	16.10.20	5	3	0	1	NO
109	50	M	ORTHO	AIIMS/JDH/2020/10/003149	RT IT#		14.9	NA	NA	13.10.20	11.10.20	15.10.20	4	2	0	1	NO
110	25	F	NEURO	AIIMS/JDH/2020/08/003135	ICH ON ACITROM	DECOMPRESSIVE CRANIOTO	11.1	10.4	10.1	14.10.20	12.10.20	19.10.20	7	5	0	0	NO
111	36	M	ORTHO	AIIMS/JDH/2020/10/003026	FEMUR #		12.0	11.2	11.1	14.10.20	11.10.20	16.10.20	5	2	0	0	NO
112	46	M	ORTHO	AIIMS/JDH/2020/10/001381	TIBIA #		12.8	12	12	14.10.20	12.10.20	17.10.20	5	3	0	0	NO
113	27	M	ORTHO	AIIMS/JDH/2019/11/001358	ACL TEAR	ACL REPAIR	13.8	14	14	14.10.20	13.10.20	16.10.20	3	2	0	0	NO
114	50	M	ORTHO	AIIMS/JDH/2020/08/006615	RTA		16.8	14.6	14.4	14.10.20	11.10.20	18.10.20	7	4	0	0	NO
115	31	M	ORTHO	AIIMS/JDH/2020/10/002430	SACRAL#		8.4	NA	NA	14.10.20	9.10.20	20.10.20	11	6	0	0	NO
116	50	F	GI	AIIMS/JDH/2020/10/001301	RENAL MASS	PARTIAL NEPHRECTOMY	11.6	10.8	10.8	15.10.20	6.10.20	18.10.20	12	3	0	0	NO
117	32	F	URO	AIIMS/JDH/2020/10/002266	RT URETERIC CALCULUS		12.5	NA	NA	15.10.20	11.10.20	16.10.20	5	1	0	0	NO
118	55	F	ORTHO	AIIMS/JDH/2020/09/008663	AVN LT HIP		10.9	7.5	7.5	16.10.20	13.10.20	20.10.20	7	4	0	1	YES
119	58	F	ORTHO	AIIMS/JDH/2020/05/002214	SOF#		8.2	7.6	8.4	16.10.20	13.10.20	27.10.20	14	11	0	3	NO
120	50	M	GI	AIIMS/JDH/2020/09/008625	CARCINOMA STOMACH	GASTRECTOMY WITH TRANS	12.1	10.4	9.6	16.10.20	15.10.20	25.10.20	10	9	0	0	NO
121	41	F	NEURO	AIIMS/JDH/2020/07/001924	BL VESTIBULAR SHWANOM	TUMOR EXCISION	11.7	11.0	11.0	16.10.20	13.10.20	18.10.20	5	2	0	1	NO
122	30	M	ORTHO	AIIMS/JDH/2020/09/005436	SACRAL#	SX	12.9	12.3	12.3	18.10.20	16.10.20	20.10.20	4	2	0	0	NO
123	72	F	ORTHO	AIIMS/JDH/2020/10/003410	HUMERUS #	ORIF	12.5	NA	NA	18.10.20	16.10.20	20.10.20	4	2	0	0	NO
124	26	M	ONCO	AIIMS/JDH/2019/04/005720	CA RECTUM		14.3	12.9	8.6	19.10.20	7.10.20	8.11.20	32	20	0	0	NO
125	62	F	NEURO	AIIMS/JDH/2016/02/004467	D11 PATHOLOGICAL #		10.6	9.3	9.1	19.10.20	13.10.20	28.10.20	15	9	0	0	NO
126	15	F	NEURO	AIIMS/JDH/2020/10/004139	DIFFUSE GLIOMA	TUMOR EXCISION	14.1	9.8	9.6	19.10.20	18.10.20	26.10.20	8	7	0	0	NO
127	34	F	ORTHO	AIIMS/JDH/2020/10/004120	DISC PROLAPSE		12.4	10.7	10.7	19.10.20	15.10.20	22.10.20	7	3	0	0	NO
128	73	M	ONCO	AIIMS/JDH/2018/05/001820	CA TONGUE		11.1	11.0	11.5	19.10.20	12.10.20	25.10.20	13	6	0	0	NO
129	51	M	ONCO	AIIMS/JDH/2019/06/006439	LIPOMATOUS TUMOYR		14.5	13.7	14.3	19.10.20	17.10.20	29.10.20	12	10	0	1	NO
130	36	M	ORTHO	AIIMS/JDH/2020/10/003076	PROXIMAL TIBIA#		13.0	NA	NA	19.10.20	13.10.20	21.10.20	8	2	0	0	NO
131	25	F	GI	AIIMS/JDH/2020/08/003996	GE JUNCTION ADENOCA	ESOPHAGOGASTRECTOMY	10.0	9.8	9.8	20.10.20	19.10.20	23.10.20	4	3	1	0	NO
132	41	F	ONCO	AIIMS/JDH/2019/08/012449	CA LT BREAST	MRM	10.9	8.2	9.1	21.10.20	20.10.20	12.11.20	23	22	1	1	NO
133	52	F	ORTHO	AIIMS/JDH/2020/01/023845	D12 COLLAPSE WITHOUT CORD	COMPRESSION	10.7	9.2	9.2	21.10.20	13.10.20	22.10.20	9	1	0	2	NO

S. No	Age	Gender	DEPT	UID	Diagnosis	Surgery	Preop Hb	Postop Hb	Hb At Discharge	DOSx	DOA	DOD	Total Duration of stay	Duration of stay postop	ICU	Transfusion	Intervention
134	52	F	ORTHO	AIIMS/JDH/2020/01/023845	D12 COLLAPSE WITHOUT CORD COMPRESSION		10.7	9.2	9.2	21.10.20	19.10.20	27.10.20	8	6	0	0	NO
135	73	M	ONCO	AIIMS/JDH/2018/05/001820	CA TONGUE		11.0	11.5	11.5	21.10.20	12.10.20	25.10.20	13	4	0	0	NO
136	34	F	NEURO	AIIMS/JDH/2020/10/004074	TB CV JUNCTION		13.5	12.1	12.1	21.10.20	15.10.20	23.10.20	8	2	0	0	NO
137	68	M	ORTHO	AIIMS/JDH/2020/10/004348	PROXIMAL TIBIA#		14.2	NA	NA	21.10.20	16.10.20	22.10.20	6	1	0	0	NO
138	65	M	URO	AIIMS/JDH/2020/09/008379	BLADDER SOL	BIOPSY	10.4	NA	NA	21.10.20	19.10.20	22.10.20	3	1	0	0	NO
139	40	F	GI	AIIMS/JDH/2020/07/005211	CA ESOPHAGUS	ESOPHAGECTOMY	11.5	12.2	7.8	22.10.20	19.10.20	28.10.20	9	6	3	0	YES
140	24	F	ORTHO	AIIMS/JDH/2020/10/005025	ANTEROLISTHESIS OF L4 OVER L5 WITH PARAPLEGIA AN		10.1	9.8	9.8	22.10.20	18.10.20	23.10.20	5	1	0	0	NO
141	35	M	ORTHO	AIIMS/JDH/2020/10/005487	FEMUR#		10.9	9.8	10.4	22.10.20	19.10.20	31.10.20	12	9	0	0	NO
142	42	M	ORTHO	AIIMS/JDH/2020/10/003690			15.2	12.3	12.3	22.10.20	21.10.20	1.11.20	11	10	0	0	NO
143	90	F	ORTHO	AIIMS/JDH/2020/10/003181	TRAUMATIC IT#		7.8	6.1	7.3	23.10.20	12.10.20	25.10.20	13	2	0	2	YES
144	50	M	ONCO	AIIMS/JDH/2020/07/001915	CA TONGUE	WITH FLAP RECONSTRUCTIO	13.1	12.3	8.2	23.10.20	12.10.20	31.10.20	19	8	3	1	NO
145	56	M	ONCO	AIIMS/JDH/2020/05/001998	CA BUCCAL MUCOSA		10.8	8.0	8.5	23.10.20	14.10.20	8.11.20	25	16	1	2	NO
146	43	F	NEURO	AIIMS/JDH/2020/10/002593	BRAIN TUMOR	TUMOR EXCISION	11.3	10.3	9.2	23.10.20	13.10.20	28.10.20	15	5	1	0	NO
147	16	F	URO	AIIMS/JDH/2020/09/006956	LT RENAL STONE DS		10.0	11.0	10.0	23.10.20	21.10.20	24.10.20	3	1	0	0	NO
148	55	M	GEN	AIIMS/JDH/2020/10/004127	PERI AMPULLARY CARCINOMA		12.8	11.9	10.2	23.10.20	15.10.20	8.11.20	24	16	0	0	NO
149	30	M	ORTHO	AIIMS/JDH/2020/09/007846	AVN RT HIP		12.0	10.4	10.4	23.10.20	20.10.20	24.10.20	4	1	0	0	NO
150	50	F	ORTHO	AIIMS/JDH/2020/10/005735	ANTEROLISTHESIS OF C4 OVER C5 WITH QUADRIPARESIS		11.9	11	11	23.10.20	21.10.20	25.10.20	4	2	0	0	NO
151	21	M	ORTHO	AIIMS/JDH/2019/08/002322	SHOULDER DISLOCATION		12.8	10.7	11.6	23.10.20	21.10.20	24.10.20	3	1	0	0	NO
152	20	M	GI	AIIMS/JDH/2020/10/006379	CA STOMACH WITH GASTR	GASTRECTOMY	14.6	12.5	12.5	23.10.20	22.10.20	26.10.20	4	3	0	0	NO
153	21	M	ORTHO	AIIMS/JDH/2019/08/002322	SHOULDER DISLOCATION		10.7	12.8	12.8	23.10.20	21.10.20	24.10.20	3	1	0	0	NO
154	80	F	ORTHO	AIIMS/JDH/2018/08/018557	TKR SSI	REVISION TKR	10.0	8.1	8.1	24.10.20	23.10.20	29.10.20	6	5	0	0	NO
155	37	M	ORTHO	AIIMS/JDH/2020/10/005363	HUMERUS #		9.1	8.5	8.5	24.10.20	22.10.20	29.10.20	7	5	0	1	NO
156	80	F	ORTHO	AIIMS/JDH/2018/08/018557	TKR SSI	REVISION TKR	8.6	10	10	24.10.20	23.10.20	27.10.20	4	3	0	1	NO
157	66	F	ORTHO	AIIMS/JDH/2020/10/003920	RT IT#		11.1	8	8	25.10.20	16.10.20	31.10.20	15	6	0	1	YES
158	75	F	NEURO	AIIMS/JDH/2020/10/007069	ANEURYSM RUPTURE		10.0	9.3	8.3	25.10.20	24.10.20	21.11.20	28	27	2	1	NO
159	75	M	ORTHO	AIIMS/JDH/2020/10/005271	LT IT# CLOSED		8.9	7.5	7.6	26.10.20	19.10.20	29.10.20	10	3	0	0	YES
160	17	F	ORTHO	AIIMS/JDH/2020/10/005281	LL CRUSH INJURY		8.1	8.3	7.9	26.10.20	23.10.20	30.10.20	7	4	0	1	YES
161	43	M	ONCO	AIIMS/JDH/2020/10/005493	CA LEFT BUCCAL MUCOSA		14.4	10.7	10.4	26.10.20	21.10.20	5.11.20	15	10	3	0	NO
162	55	M	GEN	AIIMS/JDH/2020/10/004127	PERI AMPULLARY CARCINO	RESECTION	13.0	11.7	10.8	26.10.20	15.10.20	8.11.20	24	13	0	0	NO
163	25	M	ORTHO	AIIMS/JDH/2020/10/006167	SPINE#		12.4	11.4	11.6	26.10.20	22.10.20	28.10.20	6	2	0	0	NO
164	28	M	ORTHO	AIIMS/JDH/2020/10/004976	PROXIMAL TIBIA#		13.3	11.9	11.9	26.10.20	19.10.20	31.10.20	12	5	0	0	NO
165	63	M	ORTHO	AIIMS/JDH/2019/03/007975	AVN	THR	14.8	12.1	12.1	26.10.20	23.10.20	31.10.20	8	5	0	0	NO
166	29	M	ORTHO	AIIMS/JDH/2020/08/008664	#PCL AVULSION		13.5	12.3	12.4	26.10.20	24.10.20	30.10.20	6	4	0	0	NO
167	30	M	NEURO	AIIMS/JDH/2020/10/003321	C1-C7 SOL	TUMOR EXCISION	14.8	12.7	12.7	26.10.20	25.10.20	29.10.20	4	3	0	0	NO
168	16	F	CTVS	AIIMS/JDH/2020/10/002232	Chronic constrictive pericarditis		11.8	10.4	13	26.10.20	11.10.20	1.11.20	21	6	5	0	NO
169	63	M	ORTHO	AIIMS/JDH/2020/03/007975	BL OSTEOARTHRITIS		16.3	14.8	14.7	26.10.20	24.10.20	31.10.20	7	5	0	0	NO
170	50	F	URO	AIIMS/JDH/2020/07/007623	RT PHEOCHROMOCYTOMA	EXCISION	8.7	7.8	7.8	27.10.20	18.10.20	30.10.20	12	3	2	0	YES
171	50	M	ONCO	AIIMS/JDH/2020/07/001915	CA TONGUE		12.3	6.5	8.2	27.10.20	12.10.20	31.10.20	19	4	2	1	YES
172	72	M	GEN	AIIMS/JDH/2020/10/004940	CHOLECYSTODUODENAL FI	RADICAL CHOLECYSTECTOMY	10.4	9.5	8.1	27.10.20	17.10.20	1.11.20	15	5	0	1	NO
173	56	F	NEURO	AIIMS/JDH/2020/09/006720	GLIOMA	TUMOR EXCISION	11.0	12.7	9.4	27.10.20	25.10.20	30.10.20	5	3	0	1	NO
174	28	F	URO	AIIMS/JDH/2020/07/004132	BL RENAL STONE		9.0	9.8	9.8	27.10.20	23.10.20	28.10.20	5	1	0	0	NO
175	60	M	ORTHO	AIIMS/JDH/2020/09/010103	TIBIA #		10.9	9.9	9.9	27.10.20	19.10.20	2.11.20	14	6	0	0	NO
176	72	M	GI	AIIMS/JDH/2014/02/004775	CA GB WITH CHOLANGITIC	EXTENDED RADICAL CHOLEC	9.0	9.8	10.5	27.10.20	19.10.20	13.11.20	25	17	2	1	NO
177	41	F	CTVS	AIIMS/JDH/2020/09/008850	CAD-TVD		12.6	9.8	10.6	27.10.20	20.10.20	17.12.20	58	51	4	0	NO
178	63	F	GI	AIIMS/JDH/2020/09/002636	PERI AMPULLARY CARCINO	WHIPPLE'S PROCEDURE	12.0	13.8	12.0	27.10.20	18.10.20	11.11.20	24	15	2	2	NO
179	77	M	URO	AIIMS/JDH/2020/10/001933	UB MASS		10.0	12.1	12.1	27.10.20	21.10.20	29.10.20	8	2	0	0	NO
180	18	M	ORTHO	AIIMS/JDH/2020/10/005384	PROXIMAL TIBIA#		11.6	12.3	12.3	27.10.20	21.10.20	3.11.20	13	7	0	0	NO
181	35	M	ORTHO	AIIMS/JDH/2020/10/008566	ANKLE#		8.1	7.2	7.2	28.10.20	26.10.20	31.10.20	5	3	0	0	YES
182	32	M	ORTHO	AIIMS/JDH/2020/10/007501	D11 SPINAL INJURY		12.3	8.7	8.7	28.10.20	26.10.20	31.10.20	5	3	0	0	YES
183	32	M	ORTHO	AIIMS/JDH/2020/10/006107	RT IT#		11.8	9.1	9.1	28.10.20	27.10.20	2.11.20	6	5	0	0	NO
184	35	M	ORTHO	AIIMS/JDH/2020/10/005487	FEMUR#		9.8	9.6	9.6	28.10.20	19.10.20	31.10.20	12	3	0	0	NO
185	50	M	NEURO	AIIMS/JDH/2020/09/009138	PITUITARY TUMOR	TUMOR EXCISION	13.0	10.1	10.1	28.10.20	23.10.20	31.10.20	8	3	0	0	NO
186	24	M	ORTHO	AIIMS/JDH/2020/10/006058	CLAVICLE#		12.5	10.7	10.7	28.10.20	27.10.20	31.10.20	4	3	0	0	NO
187	75	M	URO	AIIMS/JDH/2020/09/005044	CA UB	TUMOR EXCISION	10.0	9.7	9.4	29.10.20	14.10.20	31.10.20	17	2	0	0	NO
188	35	M	GI	AIIMS/JDH/2020/09/001030	CHOLEDOCHOLITHIASIS	CBD EXPLORATION	14.4	12.8	12.8	29.10.20	28.10.20	30.10.20	2	1	0	0	NO
189	44	M	GI	AIIMS/JDH/2020/10/009143	CA SIGMOID COLON	LEFT HEMICOLECTOMY	12.2	11.7	10.2	31.10.20	30.10.20	8.11.20	9	8	0	0	NO
190	19	M	ORTHO	AIIMS/JDH/2020/10/008236	CLAVICLE#	ORIF	15.2	10.4	10.4	31.10.20	29.10.20	5.11.20	7	5	0	0	NO
191	60	M	NEURO	AIIMS/JDH/2020/10/008306	L3-L4 PIVD		14.7	NA	NA	31.10.20	28.10.20	2.11.20	5	2	0	0	NO
192	21	F	GI	AIIMS/JDH/2020/10/008879	STEROID REFRACTORY UC	COLECTOMY WITH ILEOSTON	8.4	10.7	7.5	1.11.20	31.10.20	9.11.20	9	8	0	2	YES
193	30	F	ORTHO	AIIMS/JDH/2020/10/005285	T12 INJURY		11.1	9.8	9.8	1.11.20	22.10.20	4.11.20	13	3	0	0	NO
194	50	F	NEURO	AIIMS/JDH/2020/09/000836	PITUITARY TUMOR	RESECTION	11.0	10.3	8.1	2.11.20	23.10.20	8.11.20	16	6	0	0	NO
195	55	F	GEN	AIIMS/JDH/2016/01/024322	HIATUS HERNIA	REPAIR	8.6	8.7	8.3	2.11.20	24.10.20	4.11.20	11	2	0	0	NO
196	50	M	ONCO	AIIMS/JDH/2020/07/003666	CA BUCCAL MUCOSA		11.1	8.1	10.1	2.11.20	14.10.20	10.11.20	27	8	1	0	NO
197	55	M	ORTHO	AIIMS/JDH/2020/06/002211	SSI POSTOP		10.5	10.6	10.6	2.11.20	29.10.20	6.11.20	8	4	0	0	NO
198	55	M	ORTHO	AIIMS/JDH/2020/06/002211	SSI POSTOP		10.5	10.6	10.6	2.11.20	12.10.20	6.11.20	25	4	0	0	NO
199	60	M	ORTHO	AIIMS/JDH/2020/11/000191	TRAUMATIC AMPUTATION	DEBRIDEMENT	14.1	9	10.8	2.11.20	1.11.20	13.12.20	42	41	0	0	NO
200	78	M	ORTHO	AIIMS/JDH/2019/11/011436	BL KNEE OA	TKR	11.2	11.1	11	2.11.20	25.10.20	9.11.20	15	7	0	0	NO
201	78	M	ORTHO	AIIMS/JDH/2019/11/011436	BL KNEE OA	TKR	11.2	11.1	11.1	2.11.20	25.10.20	9.11.20	15	7	0	0	NO

S. No	Age	Gender	DEPT	UID	Diagnosis	Surgery	Preop Hb	Postop Hb	Hb At Discharge	DOSx	DOA	DOD	Total Duration of stay	Duration of stay postop	ICU	Transfusion	Intervention
202	50	M	ONCO	AIIMS/JDH/2020/09/002823	CA TONGUE LEFT		12.3	10.4	NA	2.11.20	16.10.20	5.11.20	20	3	0	0	NO
203	30	F	ORTHO	AIIMS/JDH/2020/10/006746	BIMALLEOLAR# RT		12.3	NA	NA	2.11.20	31.10.20	3.11.20	3	1	0	0	NO
204	55	M	URO	AIIMS/JDH/2020/10/008554	RT RENAL MASS WITH HEN	PARTIAL NEPHRECTOMY	10.7	7.8	7.5	3.11.20	30.10.20	7.11.20	8	4	0	2	YES
205	69	M	URO	AIIMS/JDH/2020/01/031655	CA BLADDER	EXPLORATION	9.0	9.6	7.8	3.11.20	19.10.20	9.11.20	21	6	0	0	YES
206	64	M	CTVS	AIIMS/JDH/2020/10/000844	CAD-TVD		13.3	NA	7.9	3.11.20	29.10.20	7.11.20	9	4	0	0	YES
207	26	M	ONCO	AIIMS/JDH/2019/04/005720	CA RECTUM		13.2	9.7	8.6	3.11.20	7.10.20	8.11.20	32	5	1	0	NO
208	72	M	GI	AIIMS/JDH/2014/02/004775	CA GB	RADICAL CHOLECYSTECTOMY	9.7	11.3	10.5	3.11.20	17.10.20	12.11.20	26	9	2	2	NO
209	29	M	GEN	AIIMS/JDH/2017/08/010458	BILIARY PANCREATITIS	CHOLECYSTECTOMY	12.1	11.9	11.9	3.11.20	27.10.20	5.11.20	9	2	0	0	NO
210	62	F	GEN	AIIMS/JDH/2015/08/000100	SAIO	LAPROTOMY	13.6	11.9	12.1	3.11.20	2.11.20	8.11.20	6	5	0	0	NO
211	64	F	ONCO	AIIMS/JDH/2020/06/007159	CA OVARY		12.1	9.6	8.7	4.11.20	3.11.20	12.11.20	9	8	0	0	YES
212	38	F	NEURO	AIIMS/JDH/2020/09/009747	ACF FLOOR MENINGIOMA	TUMOR EXCISION	13.7	10.4	10.9	4.11.20	29.10.20	11.11.20	13	7	0	1	NO
213	18	M	ORTHO	AIIMS/JDH/2020/10/005384	PROXIMAL TIBIA#		12.3	11	11	4.11.20	2.11.20	8.11.20	6	4	0	0	NO
214	50	M	GEN	AIIMS/JDH/2020/10/008614	CA PANCREAS	RESECTION	13.3	11.4	11.8	4.11.20	28.10.20	9.11.20	12	5	0	0	NO
215	60	M	ONCO	AIIMS/JDH/2020/03/005001	CA BUCCAL MUCOSA		14.5	13.8	13.3	4.11.20	22.10.20	7.11.20	16	3	0	0	NO
216	60	M	URO	AIIMS/JDH/2018/01/030947	RT RENAL MASS	PARTIAL NEPHRECTOMY	14.0	14.5	13.7	4.11.20	4.11.20	6.11.20	2	2	0	0	NO
217	80	F	ORTHO	AIIMS/JDH/2018/08/018558	TKR SSI	REVISION TKR	15.1	13.8	13.8	4.11.20	3.11.20	6.11.20	3	2	0	0	NO
218	55	M	URO	AIIMS/JDH/2020/10/008554	RT RENAL MASS WITH HEMATURIA		7.0	7.2	7.5	5.11.20	30.10.20	7.11.20	8	2	0	1	YES
219	50	F	NEURO	AIIMS/JDH/2020/11/000545	LEFT FRONTAL MENINGIOI	TUMOR EXCISION	12.8	10.3	9.3	5.11.20	5.11.20	10.11.20	5	5	0	0	NO
220	25	M	ORTHO	AIIMS/JDH/2020/10/008343	#FEMUR		13.9	10	10	5.11.20	3.11.20	8.11.20	5	3	0	0	NO
221	26	F	GEN	AIIMS/JDH/2020/10/005144	CHOLEDOCHOLITHIASIS	CBD EXPLORATION	7.2	6.2	7.9	6.11.20	1.11.20	13.11.20	12	7	0	2	YES
222	54	F	ORTHO	AIIMS/JDH/2019/03/007975	AVN	THR	11.4	8.6	8.6	6.11.20	4.11.20	11.11.20	7	5	0	0	NO
223	54	F	ORTHO	AIIMS/JDH/2019/03/007975	AVN	THR	11.4	8.6	9.3	6.11.20	4.11.20	11.11.20	7	5	0	0	NO
224	53	F	NEURO	AIIMS/JDH/2020/07/006558	MIDBRAIN SOL	TUMOR EXCISION	10.0	8.2	10.3	6.11.20	4.11.20	15.11.20	11	9	4	0	NO
225	50	F	ONCO	AIIMS/JDH/2020/09/004071	CA LOWER ALVEOLUS		11.9	10.8	10.9	6.11.20	28.10.20	9.11.20	12	3	0	0	NO
226	60	M	URO	AIIMS/JDH/2020/10/009512	CA UB	MAJOR SX	13.6	13.3	13.3	6.11.20	1.11.20	11.11.20	10	5	0	0	NO
227	62	M	URO	AIIMS/JDH/2020/07/007731	BPH		14.6	14.4	14.4	6.11.20	4.11.20	10.11.20	6	4	0	0	NO
228	75	F	NEURO	AIIMS/JDH/2020/10/007069	ANEURYSM RUPTURE		6.9	10.4	8.3	7.11.20	24.10.20	21.11.20	28	14	0	1	NO
229	55	M	NEURO	AIIMS/JDH/2020/11/000715	LT TEMP-PAR SOL WITH M	SOL EXCISION	13.8	9.3	10.5	7.11.20	5.11.20	11.11.20	6	4	0	3	NO
230	43	M	ORTHO	AIIMS/JDH/2020/11/000005	TIBIA #		10.7	11.6	11.6	7.11.20	1.11.20	13.11.20	12	6	0	0	NO
231	36	M	GI	AIIMS/JDH/2020/11/001898	NECROTIZING PANCREATIT	SURGERY	11.7	8.6	6.8	8.11.20	7.11.20	3.12.20	26	25	14	3	YES
232	29	F	NEURO	AIIMS/JDH/2020/07/002522	RT FRONTAL AVM		13.0	10.5	10.7	9.11.20	5.11.20	13.11.20	8	4	2	1	NO
233	72	F	ONCO	AIIMS/JDH/2016/04/004556	CA ENDOMETRIUM		10.7	10.4	11.3	9.11.20	27.10.20	16.11.20	20	7	0	0	NO
234	43	M	ORTHO	AIIMS/JDH/2020/11/003063	RTA	EXPLORATION	9.9	5.1	7.4	10.11.20	9.11.20	14.11.20	5	4	0	3	YES
235	20	F	CTVS	AIIMS/JDH/2017/11/008003	ACHD		10.9	9	8.5	10.11.20	11.10.20	18.11.20	38	8	2	0	NO
236	28	M	NEURO	AIIMS/JDH/2020/11/002843	LT FRONTAL DEPRESSED#	EMERGENCY SX	16.1	12.1	9.8	10.11.20	5.11.20	15.11.20	10	5	0	0	NO
237	22	F	GEN	AIIMS/JDH/2020/09/003179	MESENTRIC CYST	RESECTION	11.7	11.3	10.9	10.11.20	7.11.20	20.11.20	13	10	0	0	NO
238	40	M	ONCO	AIIMS/JDH/2020/11/003078	CA COLON		14.8	13.8	11.2	10.11.20	10.11.20	15.11.20	5	5	0	0	NO
239	48	F	GI	AIIMS/JDH/2020/08/008941	CA ESOPHAGUS	ESOPHAGECTOMY	11.7	8.4	11.9	10.11.20	23.10.20	13.11.20	21	3	0	0	NO
240	41	F	NEURO	AIIMS/JDH/2020/07/001924	BILATERAL VESTIBULAR SC	RESECTION	11.0	8.1	8.1	11.11.20	30.10.20	14.11.20	15	3	0	0	NO
241	47	F	ONCO	AIIMS/JDH/2020/01/025506	RECURRENT RT RCC INFILTRATING LIVER		12.7	10.9	9.8	11.11.20	5.11.20	13.11.20	8	2	0	0	NO
242	35	M	ORTHO	AIIMS/JDH/2020/10/007476	BL CALCANEUM #	ORIF	12.4	10.5	10.5	11.11.20	25.10.20	13.11.20	19	2	0	0	NO
243	28	M	ORTHO	AIIMS/JDH/2020/11/000552	BURST SPINAL #	EXPLORATION	8.3	NA	NA	11.11.20	3.11.20	28.11.20	25	17	0	0	NO
244	72	F	GI	AIIMS/JDH/2019/06/011972	INCISIONAL HERNIA	MESHPLASTY	7.8	7.7	7.7	12.11.20	10.11.20	14.11.20	4	2	0	1	YES
245	57	F	GI	AIIMS/JDH/2020/10/004228	LT DIAPHRAGMATIC HERN	HERNIA REPAIR	12.1	11.5	11.5	12.11.20	9.11.20	14.11.20	5	2	0	0	NO
246	43	M	ORTHO	AIIMS/JDH/2020/11/003063		REVISION	8.3	5	7.6	13.11.20	11.11.20	26.11.20	15	13	0	4	YES
247	75	F	NEURO	AIIMS/JDH/2020/11/003482	RT ICA ANEURYSM	EMERGENCY SX	9.1	8.1	8.4	13.11.20	11.11.20	20.11.20	9	7	0	1	NO
248	60	M	ORTHO	AIIMS/JDH/2020/11/000191	TRAUMATIC AMPUTATION	DEBRIDEMENT	10.8	9.6	9.5	13.11.20	1.11.20	13.12.20	42	30	0	0	NO
249	28	M	ORTHO	AIIMS/JDH/2020/11/002843	FEMUR#	ORIF	16.1	9.8	9.8	13.11.20	11.11.20	17.11.20	6	4	0	0	NO
250	50	F	NEURO	AIIMS/JDH/2020/10/001595	MENINGIOMA	TUMOR EXCISION	11.5	10.4	10.4	13.11.20	6.11.20	15.11.20	9	2	0	0	NO
251	22	M	ORTHO	AIIMS/JDH/2020/11/003963	FEMUR#		7.3	6.1	7.8	15.11.20	14.11.20	24.11.20	10	9	0	4	YES
252	20	M	ORTHO	AIIMS/JDH/2020/11/003112	CRUSH INJURY		8.2	9.1	9.1	15.11.20	14.11.20	19.11.20	5	4	0	1	NO
253	45	F	GEN	AIIMS/JDH/2020/10/006012	CA TRANSVERSE COLON	RESECTION	11.3	11.0	10.8	16.11.20	13.11.20	24.11.20	11	8	0	0	NO
254	7	F	CTVS	AIIMS/JDH/2019/11/002202	LARGE OS-ASD		11.9	12.8	12.7	16.11.20	13.11.20	26.11.20	13	10	2	0	NO
255	90	F	ORTHO	AIIMS/JDH/2020/11/003354	IT#		8.6	NA	NA	16.11.20	15.11.20	21.11.20	6	5	0	0	NO
256	48	M	GI	AIIMS/JDH/2020/01/032385	GASTRIC STRICTURE IN CA	ESOPHAGECTOMY	8.4	10.3	9.5	17.11.20	16.11.20	14.12.20	28	27	0	2	NO
257	40	F	URO	AIIMS/JDH/2020/11/003347	HEMATURIA	EXPLORATION	11.7	10.6	10.1	17.11.20	12.11.20	19.11.20	7	2	0	0	NO
258	54	F	ONCO	AIIMS/JDH/2020/10/000137	RETROPERITONEAL SARCO	SX	11.2	9.1	7.3	18.11.20	16.11.20	9.12.20	23	21	0	0	YES
259	18	M	NEURO	AIIMS/JDH/2020/11/003118	LI BURST#	EMERGENCY SX	12.8	9.5	7.5	18.11.20	10.11.20	20.11.20	10	2	0	0	YES
260	51	M	ONCO	AIIMS/JDH/2020/07/001136	CA LOWER ALVEOLUS	EXCISION WITH MRND	11.2	9.3	7.8	18.11.20	17.11.20	24.11.20	7	6	1	1	YES
261	38	M	ORTHO	AIIMS/JDH/2020/11/002271	PELVIC#		11.6	8.5	8.5	18.11.20	13.11.20	26.11.20	13	8	0	0	NO
262	70	F	ONCO	AIIMS/JDH/2020/11/002122	CA COLON ACUTE OBSTRU	EMERGENCY SX	10.8	9.9	9.4	19.11.20	19.11.20	27.11.20	8	8	0	0	NO
263	62	F	GI	AIIMS/JDH/2020/09/000234	CA ESOPHAGUS	ESOPHAGECTOMY	11.5	10.2	9.9	19.11.20	17.11.20	24.11.20	7	5	0	0	NO
264	19	F	URO	AIIMS/JDH/2014/06/000479	RT RENAL PELVIC CALCULI		11.9	10.1	10.0	19.11.20	12.11.20	27.11.20	15	8	0	0	NO
265	59	M	GEN	AIIMS/JDH/2020/10/005054	BASAL CEL CA	RESECTION	11.1	10.9	11.3	19.11.20	13.11.20	25.11.20	12	6	0	0	NO
266	31	F	URO	AIIMS/JDH/2020/11/001274	UB MASS WITH HEMATUR	BIOPSY	8.3	8.2	8.2	20.11.20	17.11.20	24.11.20	7	4	0	0	YES
267	36	F	GEN	AIIMS/JDH/2020/11/005459	ESOPHAGEAL CARCINOMA	RESECTION	9.6	8.8	8.6	20.11.20	18.11.20	28.11.20	10	8	0	0	NO
268	68	M	URO	AIIMS/JDH/2020/11/005365	RT RENAL PELVIC CALCULI		9.6	9.2	8.8	20.11.20	19.11.20	24.11.20	5	4	0	0	NO
269	60	M	ORTHO	AIIMS/JDH/2020/11/000191	ACETABULAR WALL#		9.9	10	10	20.11.20	3.11.20	11.12.20	38	21	0	2	NO

S. No	Age	Gender	DEPT	UID	Diagnosis	Surgery	Preop Hb	Postop Hb	Hb At Discharge	DOSx	DOA	DOD	Total Duration of stay	Duration of stay postop	ICU	Transfusion	Intervention
270	66	F	ONCO	AIIMS/JDH/2020/10/008249	CA TONGUE LEFT	TUMOR EXCISION AND MRN	12.0	10.9	11.0	20.11.20	17.11.20	24.11.20	7	4	0	0	NO
271	41	M	URO	AIIMS/JDH/2020/01/021678	BL RENAL CALCULI		16.2	12.2	12.1	20.11.20	17.11.20	23.11.20	6	3	0	0	NO
272	26	M	URO	AIIMS/JDH/2020/01/021987	BL RENAL CALCULI		16.1	14.6	14.6	20.11.20	18.11.20	21.11.20	3	1	0	0	NO
273	32	F	ORTHO	AIIMS/JDH/2020/11/000949	PELVIC INJURY		8.8	9	9	21.11.20	20.11.20	4.12.20	14	13	0	0	NO
274	55	F	CTVS	AIIMS/JDH/2020/11/002435	AVR+TPL		15.8	NA	11.7	21.11.20	16.11.20	11.12.20	25	20	3	2	NO
275	16	M	ONCO	AIIMS/JDH/2020/11/004602	CA COLON ACUTE OBSTRU	EXPLORATORY LAPAROTOMY	13.7	11.8	12.4	21.11.20	18.11.20	27.11.20	9	6	0	0	NO
276	72	M	URO	AIIMS/JDH/2020/09/009741	CA UB		13.2	9.2	9.2	22.11.20	21.11.20	25.11.20	4	3	0	0	NO
277	65	M	GEN	AIIMS/JDH/2020/11/001524	CA ESOPHAGUS	SX FOR DYSPHAGIA	9.5	8.9	9.1	23.11.20	21.11.20	9.12.20	18	16	0	0	YES
278	73	M	ONCO	AIIMS/JDH/2020/11/004669	LIVER MASS UNDER EVALUATION		7.1	6.8	8.3	23.11.20	19.11.20	9.12.20	20	16	0	3	NO
279	42	M	GEN	AIIMS/JDH/2020/02/004550	PERI AMPULLARY CARCINO	MAJOR SURGERY	11.2	10.9	10.6	23.11.20	21.11.20	5.12.20	14	12	0	0	NO
280	22	F	NEURO	AIIMS/JDH/2020/04/001048	IC ANEURYSM		12.8	NA	NA	23.11.20	19.11.20	23.11.20	4	0	0	0	NO
281	28	M	ORTHO	AIIMS/JDH/2020/11/000394	PELVIC#		12.3	NA	NA	23.11.20	22.11.20	28.11.20	6	5	0	0	NO
282	20	M	ORTHO	AIIMS/JDH/2020/11/003114	POLYTRAUMA; BL KNEE AMPUTATION		8.3	4.7	7.8	24.11.20	15.11.20	19.12.20	34	25	0	4	YES
283	70	M	ONCO	AIIMS/JDH/2020/10/004159	LIVER METS WITH UNKNOV	BM BIOPSY; COLONOSCOPY	8.6	8.3	9.1	24.11.20	19.11.20	28.11.20	9	4	0	0	NO
284	48	M	GI	AIIMS/JDH/2020/01/032385	GASTRIC STRICTURE IN CA	CONDUIT	10.3	13.3	9.5	24.11.20	16.11.20	14.12.20	28	20	1	2	NO
285	18	M	URO	AIIMS/JDH/2020/11/000283	URETHRAL STRICTURE		10.2	10.2	10.2	24.11.20	22.11.20	26.11.20	4	2	0	0	NO
286	58	M	URO	AIIMS/JDH/2020/11/001358	LT NFK		13.4	10.3	10.2	24.11.20	23.11.20	27.11.20	4	3	0	0	NO
287	54	F	GEN	AIIMS/JDH/2020/09/007259	DISTAL CA STOMACH	GASTRECTOMY	11.1	10.5	11.0	24.11.20	20.11.20	30.11.20	10	6	0	0	NO
288	51	M	CTVS	AIIMS/JDH/2019/09/009600	Retrosternal goitre		14	11.1	12	24.11.20	1.11.20	29.11.20	28	5	0	2	NO
289	55	F	NEURO	AIIMS/JDH/2020/11/005099	LEFT FRONTAL GLIOMA	TUMOR EXCISION	11.1	NA	NA	24.11.20	20.11.20	27.11.20	7	3	0	0	NO
290	54	M	ONCO	AIIMS/JDH/2020/06/007766	CA BUCCAL MUCOSA		12.1	9.5	8.4	25.11.20	17.11.20	30.11.20	13	5	0	0	NO
291	67	F	ORTHO	AIIMS/JDH/2020/11/001942	BL OA KNEE	TKR	12.1	8.4	8.4	25.11.20	22.11.20	26.11.20	4	1	0	0	NO
292	67	F	ORTHO	AIIMS/JDH/2020/11/001942	BL OA KNEE	TKR	12.1	8.4	8.4	25.11.20	22.11.20	1.12.20	9	6	0	0	NO
293	56	M	GEN	AIIMS/JDH/2020/08/009540	RT SOLITARY FIBROUS TUM	RESECTION	9.1	8.9	8.9	25.11.20	22.11.20	30.11.20	8	5	0	6	NO
294	22	M	ONCO	AIIMS/JDH/2020/04/000807	CA RECTUM		12.3	10.2	9.6	25.11.20	20.11.20	1.12.20	11	6	0	0	NO
295	46	F	NEURO	AIIMS/JDH/2020/11/006195	INTRACRANIAL ANEURYSM	COILING	10.9	9.9	9.9	25.11.20	20.11.20	29.11.20	9	4	0	0	NO
296	61	F	ORTHO	AIIMS/JDH/2016/05/012426	BL OA KNEE	TKR	12.1	10.7	10.7	25.11.20	23.11.20	1.12.20	8	6	0	0	NO
297	61	F	ORTHO	AIIMS/JDH/2016/05/012426	BL OA KNEE	TKR	12.1	10.7	10.7	25.11.20	21.11.20	30.11.20	9	5	0	0	NO
298	22	M	ORTHO	AIIMS/JDH/2020/11/003963	FEMUR SHAFT#		8.4	7	8.2	26.11.20	14.11.20	11.12.20	27	15	4	4	YES
299	28	F	ORTHO	AIIMS/JDH/2020/11/004449	PROXIMAL TIBIA#		13.2	8.2	8.2	26.11.20	22.11.20	2.12.20	10	6	0	0	YES
300	32	M	GI	AIIMS/JDH/2020/06/002032	CA ESOPHAGUS NACT	ESOPHAGECTOMY	10.1	9.1	8.6	26.11.20	22.11.20	16.12.20	24	20	1	0	NO
301	65	F	NEURO	AIIMS/JDH/2020/11/007467	ACM ANEURYSMAL RUPTU	EMERGENCY SX	14.3	10.8	10.6	26.11.20	25.11.20	2.12.20	7	6	0	0	NO
302	60	F	ORTHO	AIIMS/JDH/2020/11/006664	PELVIC INJURY		9.9	7.2	7.8	27.11.20	26.11.20	11.12.20	15	14	0	1	YES
303	51	M	URO	AIIMS/JDH/2020/11/0006795	RT RENAL MASS	BIOPSY	10.2	10.0	10.0	27.11.20	25.11.20	28.11.20	3	1	0	0	NO
304	40	F	ONCO	AIIMS/JDH/2020/05/001215	THYMOMA	EXCISION	12.4	11.4	11.8	27.11.20	17.11.20	3.12.20	16	6	1	0	NO
305	43	F	NEURO	AIIMS/JDH/2020/03/002786	PETROCLIVUS SOL	TUMOR EXCISION	13.6	11.0	12.2	27.11.20	22.11.20	29.11.20	7	2	0	0	NO
306	56	F	ORTHO	AIIMS/JDH/2020/11/006578	TIBIA #		11.0	8.8	8.8	28.11.20	27.11.20	6.12.20	9	8	0	0	NO
307	48	M	GI	AIIMS/JDH/2020/01/032385	GASTRIC STRICTURE IN CA	CONDUIT EXCISION	10.0	8.1	9.5	28.11.20	16.11.20	14.12.20	28	16	0	0	NO
308	45	F	NEURO	AIIMS/JDH/2020/10/002460	SUBDURAL HYGROMA	EXCISION	8.8	8.5	9.5	28.11.20	9.10.20	1.1.21	84	34	33	6	NO
309	73	M	ONCO	AIIMS/JDH/2020/11/004669	ILEAL CARCINOID		6.8	10.1	12.2	28.11.20	19.11.20	9.12.20	20	11	0	2	NO
310	54	F	ORTHO	AIIMS/JDH/2014/10/003161	BL TIBIA#		11.4	12.5	12.5	29.11.20	27.11.20	11.12.20	14	12	0	0	NO
311	50	M	ONCO	AIIMS/JDH/2020/07/003818	CA BUCCAL MUCOSA	RE-EXPLORATION	12.2	9.4	10.7	30.11.20	11.11.20	29.12.20	48	29	2	0	NO
312	48	F	GEN	AIIMS/JDH/2020/11/008280	RACTOVAGINAL FISTULA	REPAIR	8.3	7.9	7.8	1.12.20	29.11.20	8.12.20	9	7	0	0	YES
313	70	M	URO	AIIMS/JDH/2020/09/000010	HEMATURIA IN PROSTATO	TURP	9.9	11.9	8.4	1.12.20	23.11.20	2.12.20	9	1	0	1	NO
314	45	M	GI	AIIMS/JDH/2020/11/007564	CA STOMACH BLEED	EXPLORATION	7.3	7.5	8.6	1.12.20	28.11.20	10.12.20	12	9	0	0	NO
315	45	F	CTVS	AIIMS/JDH/2020/10/006925	CAD-TVD		12.1	8.3	8.7	1.12.20	28.11.20	5.12.20	7	4	0	2	NO
316	68	M	URO	AIIMS/JDH/2018/04/011309	RT RENAL PELVIC CALCULI		10.7	9.9	9.9	1.12.20	23.11.20	2.12.20	9	1	0	0	NO
317	65	M	GEN	AIIMS/JDH/2020/12/000186	CA PENIS	ID	8.6	6.5	7.9	2.12.20	28.11.20	11.12.20	13	9	0	2	YES
318	38	F	ORTHO	AIIMS/JDH/2020/11/005838	BL OA HIP	THR	10.2	8.8	7.9	2.12.20	4.11.20	10.12.20	36	8	0	0	YES
319	68	M	NEURO	AIIMS/JDH/2020/08/001811	L4 CHORDOMA	EXCISION	13.4	8.3	8.7	2.12.20	28.11.20	6.12.20	8	4	2	2	YES
320	38	F	ORTHO	AIIMS/JDH/2020/11/005838	BL OA HIP	THR	10.2	7	8.1	2.12.20	1.12.20	12.12.20	11	10	0	4	NO
321	22	M	ORTHO	AIIMS/JDH/2020/11/007517	SUBTROCHANTERIC#		15.9	6.6	8.1	2.12.20	27.11.20	15.12.20	18	13	0	3	NO
322	59	F	ORTHO	AIIMS/JDH/2020/11/009082	NOF#	ORIF	12.3	9.7	9.7	2.12.20	1.12.20	10.12.20	9	8	0	0	NO
323	43	F	CTVS	AIIMS/JDH/2020/10/008281	CAD-TVD		13.8	9.9	11.3	2.12.20	29.10.20	8.12.20	40	6	3	2	NO
324	73	M	ONCO	AIIMS/JDH/2020/11/004669	ILEAL CARCINOID WITH LIV	HEPATECTOMY	10.1	12.2	12.2	2.12.20	19.11.20	9.12.20	20	7	0	1	NO
325	60	M	ORTHO	AIIMS/JDH/2020/11/000191	TRAUMATIC AMPUTATION	DEBRIDEMENT	12.6	9.8	8.2	3.12.20	1.11.20	13.12.20	42	10	0	0	YES
326	25	M	GI	AIIMS/JDH/2020/08/006982	CA ESOPHAGUS NACT	ESOPHAGECTOMY	10.3	10.4	9.3	3.12.20	2.12.20	7.12.20	5	4	1	0	NO
327	45	M	GEN	AIIMS/JDH/2020/12/000684	LT LL ACUTE ISCHEMIA	EMBOLECTOMY	13.5	11.8	11.8	3.12.20	1.12.20	9.12.20	8	6	0	0	NO
328	64	F	ORTHO	AIIMS/JDH/2014/04/002563	OA KNEE	TKR	14.1	12.3	12.6	3.12.20	30.11.20	8.12.20	8	5	0	0	NO
329	66	F	ORTHO	AIIMS/JDH/2020/11/008843	PROXIMAL HUMERUS#		11.4	NA	NA	3.12.20	1.12.20	7.12.20	6	4	0	0	NO
330	39	M	ONCO	AIIMS/JDH/2020/10/007007	CA PANCREAS WITH HEMATEMESIS AND MALENA		9.0	10.1	6.9	4.12.20	3.12.20	18.12.20	15	14	0	1	YES
331	53	M	ONCO	AIIMS/JDH/2020/08/007524	SCC BUCCAL MUCOSA		9.6	7.8	8.1	4.12.20	3.12.20	8.12.20	5	4	0	0	NO
332	51	F	ONCO	AIIMS/JDH/2020/08/006500	CA TONGUE		8.4	9.2	9.0	4.12.20	23.11.20	8.12.20	15	4	2	0	NO
333	64	M	GEN	AIIMS/JDH/2020/11/007736	P/O BL BK AMPUTATION		11.2	9.5	9.5	5.12.20	26.11.20	15.12.20	19	10	0	0	NO
334	53	M	GEN	AIIMS/JDH/2020/12/001482	SMA THROMBOSIS BOWEL	EXPL LAP	14.6	13.2	11.6	5.12.20	26.11.20	14.12.20	18	9	0	0	NO
335	73	M	ONCO	AIIMS/JDH/2020/11/004669	ILEAL AND HEPATIC CA		9.8	6.6	8.2	6.12.20	19.11.20	9.12.20	20	3	0	1	YES
336	22	F	GEN	AIIMS/JDH/2020/01/018098	PERFORATION PERITONITIS	EXPL LAP	10.6	9.7	9.8	7.12.20	23.11.20	17.12.20	24	10	0	0	NO
337	20	F	ONCO	AIIMS/JDH/2020/10/008588	GLUTEAL SARCOMA		11.9	11.3	11.3	7.12.20	6.12.20	15.12.20	9	8	0	0	NO

S. No	Age	Gender	DEPT	UID	Diagnosis	Surgery	Preop Hb	Postop Hb	Hb At Discharge	DOSx	DOA	DOD	Total Duration of stay	Duration of stay postop	ICU	Transfusion	Intervention
338	50	M	ONCO	AIIMS/JDH/2020/09/005751	CA PAROTID		14.5	13.7	13.7	7.12.20	1.12.20	8.12.20	7	1	0	0	NO
339	57	F	CTVS	AIIMS/JDH/2020/08/007066	CAD-TVD		13.3	10	10.2	8.12.20	4.12.20	12.12.20	8	4	0	2	NO
340	33	F	ONCO	AIIMS/JDH/2020/07/003772	CA LOWER ALVEOLUS		11.9	8.8	8.2	9.12.20	25.11.20	15.12.20	20	6	0	0	YES
341	26	M	ONCO	AIIMS/JDH/2020/07/004445	EWINGS SARCOMA		12.3	10.2	9.7	9.12.20	4.12.20	14.12.20	10	5	0	0	NO
342	48	M	ORTHO	AIIMS/JDH/2020/02/010587	AVN	THR	14.1	12.1	12.1	9.12.20	7.12.20	14.12.20	7	5	0	0	NO
343	67	M	GEN	AIIMS/JDH/2020/12/002724	PERFORATION PERITONITIS	EXPL LAP	13.6	12.3	12.3	9.12.20	1.12.20	14.12.20	13	5	0	0	NO
344	62	F	GEN	AIIMS/JDH/2020/12/002930	PERFORATION PERITONITIS	EXPL LAP	11.9	9.9	10.1	10.12.20	8.12.20	20.12.20	12	10	0	0	YES
345	50	F	GEN	AIIMS/JDH/2020/12/001118	CA RECTUM	EXPL LAP AND RESECTION	11.0	10.4	10.4	10.12.20	6.12.20	17.12.20	11	7	0	1	NO
346	20	F	GEN	AIIMS/JDH/2020/12/002521	BENIGN GASTRIC OUTLET OBSTRUCTION		14.4	13.1	13.1	10.12.20	7.12.20	15.12.20	8	5	0	0	NO
347	25	F	ONCO	AIIMS/JDH/2020/10/004408	CA LOWER ALVEOLUS		10.9	10.8	9.7	11.12.20	4.12.20	15.12.20	11	4	0	0	NO
348	61	M	ONCO	AIIMS/JDH/2020/10/005145	CA PENIS	SX	11.1	10.5	10.5	11.12.20	8.12.20	13.12.20	5	2	0	0	NO
349	20	M	ORTHO	AIIMS/JDH/2020/10/009350	ACL TEAR	RECONSTRUCTION	14.7	14.3	14.3	11.12.20	9.12.20	14.12.20	5	3	0	0	NO
350	25	F	GEN	AIIMS/JDH/2020/10/002686	SPINDLE CELL NEOPLASM	RESECTION	8.2	7.4	8.1	13.12.20	10.12.20	18.12.20	8	5	0	1	NO
351	62	M	ORTHO	AIIMS/JDH/2020/11/001937	OA KNEE	TKR	14.2	12.5	12.5	13.12.20	6.12.20	18.12.20	12	5	0	0	NO
352	64	M	ONCO	AIIMS/JDH/2020/10/008819	RCC	PARTIAL NEPHRECTOMY	9.4	10.7	10.5	14.12.20	9.12.20	23.12.20	14	9	0	1	NO
353	71	F	ONCO	AIIMS/JDH/2018/02/012995	PARATHYROID ADENOMA	TUMOR EXCISION	11.1	10.9	11.6	14.12.20	11.12.20	20.12.20	9	6	0	0	NO
354	40	F	CTVS	AIIMS/JDH/2020/11/005844	OS-ASD+mitral valve closure		12.7	11.3	8.1	15.12.20	11.12.20	18.12.20	7	3	0	0	YES
355	39	F	GEN	AIIMS/JDH/2020/12/001271	GIST	GASTRECTOMY	8.0	7.4	8.1	15.12.20	25.11.20	23.12.20	28	8	3	1	YES
356	64	M	GEN	AIIMS/JDH/2020/11/007736	P/O BL BK AMPUTATION	REVISION	9.9	8.7	8.8	15.12.20	29.11.20	24.12.20	25	9	0	2	NO
357	42	M	ORTHO	AIIMS/JDH/2020/11/008203	O/C/O D12 VERTEBRA PLA	D12 CORPECTOMY+ RECONS	8.5	6.9	8.2	16.12.20	3.12.20	29.12.20	26	13	1	2	YES
358	42	M	ORTHO	AIIMS/JDH/2020/11/008203	O/C/O D12 VERTEBRA PLA	D12 CORPECTOMY+ RECONS	8.5	6.9	8.1	16.12.20	10.12.20	28.12.20	18	12	0	3	NO
359	73	M	ORTHO	AIIMS/JDH/2020/12/003880	SSI IN O/C/O RT TKR	DEBRIDEMENT+IMPLANT RE	8.2	8.5	8.6	16.12.20	29.11.20	24.12.20	25	8	0	4	NO
360	50	M	ONCO	AIIMS/JDH/2020/07/002341	CA BUCCAL MUCOSA		12.5	10.6	9.2	16.12.20	10.12.20	29.12.20	19	13	0	0	NO
361	20	F	GEN	AIIMS/JDH/2020/12/002521	BENIGN GASTRIC OUTLET O	GASTRECTOMY	12.2	11.2	11.2	16.12.20	14.12.20	20.12.20	6	4	0	0	NO
362	21	M	ORTHO	AIIMS/JDH/2020/11/000702	CLOSED HAGL LESION+ TEA	ARTHROSCOPIC REPAIR	15.5	14.4	13.3	16.12.20	14.12.20	19.12.20	5	3	0	0	NO
363	21	M	ORTHO	AIIMS/JDH/2020/11/000702	CLOSED HAGL LESION+ TEA	ARTHROSCOPIC REPAIR	15.5	14.4	14.2	16.12.20	13.12.20	22.12.20	9	6	0	0	NO
364	81	M	ONCO	AIIMS/JDH/2020/11/005236	CA RECTUM		12.2	10.5	12.2/9.8	16.12.20	11.12.20	23.12.20	12	7	0	0	NO
365	50	M	GEN	AIIMS/JDH/2019/01/030296	FORNIERS GANGRENE	DEBRIDEMENT	8.7	8.2	8.2	17.12.20	15.12.20	24.12.20	9	7	0	0	YES
366	73	M	ORTHO	AIIMS/JDH/2020/12/003880	SSI IN O/C/O RT TKR	DEBRIDEMENT+IMPLANT RE	8.2	8.5	9.1	17.12.20	16.12.20	26.12.20	10	9	0	0	NO
367	59	F	ONCO	AIIMS/JDH/2015/02/005413	CA BUCCAL MUCOSA		12.1	7.4	7.1	18.12.20	14.12.20	21.12.20	7	3	0	0	YES
368	73	M	ONCO	AIIMS/JDH/2020/09/003027	CA BUCCAL MUCOSA		10.1	8.2	7.9	18.12.20	15.12.20	5.1.21	21	18	3	1	YES
369	77	M	GEN	AIIMS/JDH/2020/12/005744	CELLULITIS	DEBRIDEMENT	9.2	8.5	8.7	18.12.20	15.12.20	27.12.20	12	9	0	0	YES
370	68	F	ORTHO	AIIMS/JDH/2020/07/002154	BL INFLAMMATORY ARTHR	RT SHOULDER REPLACEMEN	9.4	8.4	8.4	18.12.20	13.12.20	29.12.20	16	11	0	0	NO
371	68	F	ORTHO	AIIMS/JDH/2020/07/002154	BL INFLAMMATORY ARTHR	RT SHOULDER REPLACEMEN	9.4	8.4	8.7	18.12.20	16.12.20	26.12.20	10	8	0	0	NO
372	60	F	GEN	AIIMS/JDH/2018/07/003098	VENTRAL INCISIONAL HERI	HERNIORAPHY	9.6	9.3	9.3	18.12.20	17.12.20	20.12.20	3	2	0	0	NO
373	50	M	ORTHO	AIIMS/JDH/2020/09/008065	GRADE 2 SEGMENTAL SHA	ORIF WITH PLATING FOR RT	14.4	11.2	11.1	18.12.20	13.12.20	26.12.20	13	8	0	0	NO
374	63	M	ORTHO	AIIMS/JDH/2020/12/001409	ROTATOR CUFF TEAR LEFT	REPAIR ARTHROSCOPIC	13.6	NA	NA	18.12.20	15.12.20	23.12.20	8	5	0	0	NO
375	45	M	GEN	AIIMS/JDH/2020/12/002774	METS PERIAMPULLARY CA	EXP LAP	10.4	8.5	9.1	19.12.20	13.12.20	27.12.20	14	8	0	0	YES
376	52	F	GEN	AIIMS/JDH/2020/12/005161	CHOLECYSTODUODENAL FI	LAP CHOLE	9.5	8.4	8.7	21.12.20	18.12.20	28.12.20	10	7	0	0	YES
377	55	M	ONCO	AIIMS/JDH/2020/07/008582	CA ESOPHAGUS	ESOPHAGECTOMY	11.8	11.5	9.3	21.12.20	10.12.20	31.12.20	21	10	3	0	NO
378	29	M	CTVS	AIIMS/JDH/2020/06/001504	vsd		14	10.3	9.9	22.12.20	20.12.20	25.12.20	5	3	0	2	NO
379	30	M	GEN	AIIMS/JDH/2019/12/005615	DIAPHRAGMATIC HERNIA	REPAIR	13.2	11.2	11.2	22.12.20	21.12.20	27.12.20	6	5	0	0	NO
380	19	F	GEN	AIIMS/JDH/2020/12/003662	ACHALASIA CARDIA	HELLERS MYOTOMY AND DO	12.4	12.3	12.3	23.12.20	20.12.20	29.12.20	9	6	0	0	NO
381	65	M	GEN	AIIMS/JDH/2020/12/003638	BL ILIOPSOAS ABCESS	I-D	8.8	8.4	8.5	24.12.20	20.12.20	31.12.20	11	7	0	0	YES
382	72	F	NEURO	AIIMS/JDH/2020/12/000360	D7 IDEM	EMERGENCY SX	11.0	9.9	9.9	24.12.20	22.12.20	26.12.20	4	2	0	0	NO
383	70	F	ONCO	AIIMS/JDH/2020/12/000420	CA ILEOCECAL MASS	SX PLANNED	6.6	8.3	8.4	25.12.20	17.12.20	1.1.21	15	7	0	2	NO
384	40	F	GEN	AIIMS/JDH/2020/12/008006	ILEO-CAECAL MASS WITH F	EXPL LAP	12.5	11.4	11.2	26.12.20	23.12.20	4.1.21	12	9	0	0	NO
385	65	M	GEN	AIIMS/JDH/2020/12/007566	DRY GANGRENE; POST RT IL	IIAC THROMBUS	12.1	11.1	11.3	26.12.20	23.12.20	31.12.20	8	5	0	0	NO
386	32	M	GEN	AIIMS/JDH/2020/12/002444	CELLULITIS WITH NSTI	DEBRIDEMENT	10.6	9.5	9.2	27.12.20	25.12.20	3.1.21	9	7	0	0	NO
387	26	M	ONCO	AIIMS/JDH/2020/09/011846	RT PHEOCHROMOCYTOMA		10.6	8.5	8.5	28.12.20	24.12.20	31.12.20	7	3	1	0	NO
388	37	M	ORTHO	AIIMS/JDH/2020/12/001210	FEMUR #	IMPLANT REMOVAL	15.1	6.6	9.1	28.12.20	25.12.20	3.1.21	9	6	0	0	NO
389	45	F	ONCO	AIIMS/JDH/2020/12/007111	CA OVARY		9.8	8.9	9.3	28.12.20	27.12.20	4.1.21	8	7	0	1	NO
390	67	M	GEN	AIIMS/JDH/2020/12/006864	BLEEDING HEMORHOIDS	LIGATION	11.7	11.2	11.2	28.12.20	27.12.20	30.12.20	3	2	0	0	NO
391	66	M	CTVS	AIIMS/JDH/2020/11/008251	SEVERE AS MOD MR,NSR		10.4	9.6	8.7	29.12.20	24.12.20	18.1.21	25	20	5	3	NO
392	30	M	ONCO	AIIMS/JDH/2020/12/001621	PARATHYROID ADENOMA	TUMOR EXCISION	7.0	9.4	9.6	29.12.20	28.12.20	26.1.21	29	28	0	1	NO
393	68	M	ONCO	AIIMS/JDH/2020/10/007331	BCC	TUMOR EXCISION	12.3	12.1	10.1	29.12.20	27.12.20	6.1.21	10	8	3	2	NO
394	56	M	ORTHO	AIIMS/JDH/2020/12/002963	BL OA KNEE	TKA RT/BL	14.3	12.3	12.3	30.12.20	26.12.20	11.1.21	16	12	0	0	NO
395	56	M	ORTHO	AIIMS/JDH/2020/12/002963	BL OA KNEE	TKA RT/BL	14.3	12.3	12.3	30.12.20	28.12.20	4.1.21	7	5	0	0	NO
396	50	M	ORTHO	AIIMS/JDH/2020/09/004190	ACL, PCL, MCL TEAR RT KN	PCL WITH MCL RECONSTRUC	14.0	16.1	15.5	30.12.20	26.12.20	3.1.21	8	4	0	0	NO
397	50	M	ORTHO	AIIMS/JDH/2020/09/004190	ACL, PCL, MCL TEAR RT KN	PCL WITH MCL RECONSTRUC	14.0	16.1	16.1	30.12.20	28.12.20	5.1.21	8	6	0	0	NO
398	28	M	ORTHO	AIIMS/JDH/2020/01/024893	11 MONTH OLD PELVIC DIS	RT THA	12.9	8.1	8.1	1.1.21	29.12.20	3.1.21	5	2	0	0	NO
399	28	M	ORTHO	AIIMS/JDH/2020/01/024893	11 MONTH OLD PELVIC DIS	RT THA	12.9	8.1	8.1	1.1.21	29.12.20	8.1.21	10	7	0	0	NO
400	30	M	ORTHO	AIIMS/JDH/2020/12/005239	OPEN# RT BOTH BONE IN L	CRIF WITH IMIL NAIL FOR RT	10.8	9	9	1.1.21	28.12.20	10.1.21	13	9	0	0	NO
401	65	F	ORTHO	AIIMS/JDH/2020/12/008220	BL KNEE OA	RT TKA	12.3	9.9	9.8	1.1.21	30.12.20	8.1.21	9	7	0	0	NO
402	65	F	ORTHO	AIIMS/JDH/2020/12/008220	BL KNEE OA	RT TKA	12.3	9.9	9.9	1.1.21	30.12.20	7.1.21	8	6	0	0	NO
403	52	M	CTVS	AIIMS/JDH/2020/01/023784	myxomatous mitral valve		13.5		11.9	1.1.21	30.12.20	6.1.21	7	5	3	1	NO
404	30	M	ORTHO	AIIMS/JDH/2020/10/000717	O/C/O PCL, MCL, ACL TEAR	ARTHROSCOPIC REPAIR	12.6	12.9	12.9	4.1.21	2.1.21	6.1.21	4	2	0	0	NO
405	30	M	ORTHO	AIIMS/JDH/2020/10/000717	O/C/O PCL, MCL, ACL TEAR	ARTHROSCOPIC REPAIR	12.6	12.9	12.9	4.1.21	2.1.21	7.1.21	5	3	0	0	NO

S. No	Age	Gender	DEPT	UID	Diagnosis	Surgery	Preop Hb	Postop Hb	Hb At Discharge	DOSx	DOA	DOD	Total Duration of stay	Duration of stay postop	ICU	Transfusion	Intervention
406	25	M	ORTHO	AIIMS/JDH/2021/01/010565	ACL WITH MEDIAL MENISC	ARTHROSCOPIC REPAIR	NA	15	15	4.1.21	1.1.21	6.1.21	5	2	0	0	NO
407	25	M	ORTHO	AIIMS/JDH/2021/01/010565	ACL WITH MEDIAL MENISC	ARTHROSCOPIC REPAIR	NA	15	15	4.1.21	2.1.21	7.1.21	5	3	0	0	NO
408	65	F	ORTHO	AIIMS/JDH/2020/12/002566	L2-3 INFECTIVE DISCITIS	POSTERIOR FUSION AND INS	11.9	NA	NA	4.1.21	29.12.20	7.1.21	9	3	0	0	NO
409	65	F	ORTHO	AIIMS/JDH/2020/12/002566	L2-3 INFECTIVE DISCITIS	POSTERIOR FUSION AND INS	11.9	NA	NA	4.1.21	25.12.20	6.1.21	12	2	0	0	NO
410	20	F	CTVS	AIIMS/JDH/2020/06/000712	RHD		12.8	8.2	8.2	5.1.21	24.12.20	12.1.21	19	7	3	0	NO
411	71	F	ORTHO	AIIMS/JDH/2020/12/003622	NON-UNION IT FEMUR#	THA RT	13.3	8.9	8.9	6.1.21	3.1.21	9.1.21	6	3	0	0	NO
412	71	F	ORTHO	AIIMS/JDH/2020/12/003622	NON-UNION IT FEMUR#	THA RT	13.3	8.9	8.9	6.1.21	4.1.21	11.1.21	7	5	0	0	NO
413	43	M	ORTHO	AIIMS/JDH/2020/11/003063	O/C/O INTRAART DISTAL F	EXTERNAL FIXATOR REMOVA	12.0	NA	NA	6.1.21	4.1.21	9.1.21	5	3	0	0	NO
414	22	F	CTVS	AIIMS/JDH/2017/09/002407	RHD		13.8	9.4	9.4	7.1.21	31.12.20	13.1.21	13	6	3	0	NO
415	20	M	ORTHO	AIIMS/JDH/2020/09/009917	POST TB ANKYLOSIS HIP	THA	9.4	6.6	8	8.1.21	5.1.21	15.1.21	10	7	0	0	YES
416	65	M	ORTHO	AIIMS/JDH/2020/12/009633	CLOSED TRAUMATIC ANTE	POST+ ANT FIXATION	12.0	10.9	10.9	11.1.21	4.1.21	18.1.21	14	7	0	0	NO
417	65	M	ORTHO	AIIMS/JDH/2020/12/009633	CLOSED TRAUMATIC ANTE	POST+ ANT FIXATION	12.0	10.9	10.9	11.1.21	9.1.21	16.1.21	7	5	0	0	NO
418	23	M	ORTHO	AIIMS/JDH/2020/12/005543	PARTIAL ACL TEAR	RECONSTRUCTION	14.7	13.6	13.6	11.1.21	9.1.21	13.1.21	4	2	0	0	NO
419	23	M	ORTHO	AIIMS/JDH/2020/12/005543	ACL TEAR RT KNEE	ARTHROSCOPIC REPAIR	14.7	13.6	13.6	11.1.21	7.1.21	16.1.21	9	5	0	0	NO
420	23	M	ORTHO	AIIMS/JDH/2020/12/005543	ACL TEAR RT KNEE	ARTHROSCOPIC REPAIR	14.7	13.6	13.6	11.1.21	9.1.21	14.1.21	5	3	0	0	NO
421	26	M	ORTHO	AIIMS/JDH/2020/12/006040	ACL + MED MENISCUS TEA	ARTHROSCOPIC RECONSTRU	16.0	14.5	14.5	11.1.21	7.1.21	13.1.21	6	2	0	0	NO
422	26	M	ORTHO	AIIMS/JDH/2020/12/006040	ACL + MED MENISCUS TEA	ARTHROSCOPIC RECONSTRU	16.0	14.5	14.5	11.1.21	9.1.21	14.1.21	5	3	0	0	NO
423	25	M	CTVS	AIIMS/JDH/2019/02/001567	RHD		10.5	8	8	12.1.21	11.1.21	18.1.21	7	6	3	0	YES
424	50	F	ORTHO	AIIMS/JDH/2018/08/013524	BL KNEE OA	LT TKA	10.8	9	9	13.1.21	3.1.21	20.1.21	17	7	0	0	NO
425	50	F	ORTHO	AIIMS/JDH/2018/08/013524	BL KNEE OA	LT TKA	10.8	9	10.1	13.1.21	10.1.21	19.1.21	9	6	0	0	NO
426	23	F	ORTHO	AIIMS/JDH/2020/01/033370	LT SI JT INFECTIVE ARTHRI	DEBRIDEMENT	12.4	10.7	10.7	13.1.21	11.1.21	16.1.21	5	3	0	0	NO
427	51	M	ORTHO	AIIMS/JDH/2020/08/007576	ACL TEAR LT KNEE	ACL RECONSTRUCTION	14.6	13.9	13.9	13.1.21	11.1.21	16.1.21	5	3	0	0	NO
428	51	M	ORTHO	AIIMS/JDH/2020/08/007576	ACL TEAR LT KNEE	ACL RECONSTRUCTION	14.6	13.9	13.9	13.1.21	11.1.21	16.1.21	5	3	0	0	NO
429	62	M	ORTHO	AIIMS/JDH/2020/12/003862	OA KNEE	TKR	15.6	13.2	13.1	18.1.21	15.1.21	26.1.21	11	8	0	0	NO
430	49	M	CTVS	AIIMS/JDH/2020/10/003721	RHD		12.3	9	9	19.1.21	14.1.21	25.1.21	11	6	3	1	NO
431	69	M	ORTHO	AIIMS/JDH/2020/11/008951	OA KNEE	TKR	14.1	13.2	13.4	20.1.21	17.1.21	26.1.21	9	6	0	0	NO
432	55	M	CTVS	AIIMS/JDH/2020/11/002435	SEVERE AS CHB		13.9	9.5	11.7	21.1.21	18.1.21	15.2.21	28	25	4	2	NO
433	22	F	ORTHO	AIIMS/JDH/2021/01/017682	D11-L4 EPIDEURAL HEMAT	POSTERIOR DECOMPRESSION	9.5	NA	8.8	25.1.21	21.1.21	2.2.21	12	8	0	0	NO
434	42	M	CTVS	AIIMS/JDH/2020/12/007476	Pseudomyxoma peritonei		11.5	10.4	9	25.1.21	28.12.20	28.1.21	31	3	3	4	NO
435	22	F	ORTHO	AIIMS/JDH/2021/01/017682	D11-L4 EPIDEURAL HEMAT	POSTERIOR DECOMPRESSION	9.5	9.5	9.5	25.1.21	22.1.21	2.2.21	11	8	0	0	NO
436	67	F	ORTHO	AIIMS/JDH/2014/04/001124	BL OA KNEE	TKA RT	11.8	10.8	10.8	25.1.21	19.1.21	27.1.21	8	2	0	0	NO
437	67	F	ORTHO	AIIMS/JDH/2014/04/001124	BL OA KNEE	TKA RT	11.8	10.8	10.8	25.1.21	22.1.21	30.1.21	8	5	0	0	NO
438	73	M	ORTHO	AIIMS/JDH/2020/10/000717	BL KNEE OA	BL TKA	14.3	13.1	13.1	25.1.21	22.1.21	30.1.21	8	5	0	0	NO
439	40	M	ORTHO	AIIMS/JDH/2020/12/009759	BL HIP AVN	RT THA	13.9	NA	NA	25.1.21	19.1.21	27.1.21	8	2	0	0	NO
440	73	M	ORTHO	AIIMS/JDH/2020/12/009760	BL KNEE OA	BL TKA	11.6	NA	NA	25.1.21	21.1.21	29.1.21	8	4	0	0	NO
441	40	M	ORTHO	AIIMS/JDH/2020/12/009759	BL HIP AVN	RT THA	13.9	NA	NA	25.1.21	22.1.21	30.1.21	8	5	0	0	NO
442	24	F	CTVS	AIIMS/JDH/2020/12/001016			14.4	14.0	9.4	29.1.21	26.1.21	8.2.21	13	10	0	0	NO
443	46	M	CTVS	AIIMS/JDH/2021/01/020167			11.5	11.5	10.0	29.1.21	26.1.21	15.2.21	20	17	3	1	NO
444	60	F	CTVS	AIIMS/JDH/2020/09/010039			9.3	10.7	10.0	1.2.21	30.1.21	11.2.21	12	10	0	3	NO
445	74	M	CTVS	AIIMS/JDH/2020/11/008784			12.4	10.5	9.4	2.2.21	30.1.21	20.2.21	21	18	3	0	NO
446	61	F	ORTHO	AIIMS/JDH/2019/12/015859	OA KNEE	TKR	13.8	12.9	12.9	3.2.21	1.2.21	10.2.21	9	7	0	0	NO
447	70	M	CTVS	AIIMS/JDH/2021/01/018613			14.6	14.6	12.1	4.2.21	1.2.21	15.2.21	14	11	3	1	NO
448	61	M	CTVS	AIIMS/JDH/2016/10/010455			13.1	14.2	9.2	5.2.21	1.2.21	12.2.21	11	7	3	1	NO
449	4	F	CTVS	AIIMS/JDH/2021/02/002235			18.0	18.0	12.1	8.2.21	5.2.21	18.2.21	13	10	0	0	NO
450	21	M	ORTHO	AIIMS/JDH/2021/01/010474	AVN	THA	15.7	8.5	NA	9.2.21	7.2.21	18.2.21	11	9	0	0	NO
451	66	F	ORTHO	AIIMS/JDH/2016/03/004446	OA KNEE	TKR	12.8	11.2	11.4	10.2.21	9.2.21	15.2.21	6	5	0	0	NO
452	43	M	CTVS	AIIMS/JDH/2020/12/003789			14.6	14.4	10.4	12.2.21	9.2.21	24.2.21	15	12	1	0	NO
453	56	M	ORTHO	AIIMS/JDH/2020/01/024476	OA KNEE	TKR	14.7	12.1	11.7	12.2.21	10.2.21	18.2.21	8	6	0	0	NO
454	62	F	ORTHO	AIIMS/JDH/2017/03/005284	OA KNEE	TKR	14.9	13.4	12.8	12.2.21	11.2.21	16.2.21	5	4	0	0	NO
455	72	F	ORTHO	AIIMS/JDH/2015/10/005026	OA KNEE	TKR	15.2	13.8	13.2	12.2.21	10.2.21	16.2.21	6	4	0	0	NO
456	60	F	ORTHO	AIIMS/JDH/2020/01/026256	OA KNEE	TKR	13.7	12.7	12.3	13.2.21	10.2.21	18.2.21	8	5	0	0	NO
457	76	M	ORTHO	AIIMS/JDH/2019/12/008060	FEMUR #	ORIF	13.1	8.5	10	14.2.21	5.2.21	19.2.21	14	5	0	0	NO
458	20	F	CTVS	AIIMS/JDH/2020/08/007281			12.0	12.0	9.0	15.2.21	10.2.21	20.2.21	10	5	4	0	NO
459	42	M	CTVS	AIIMS/JDH/2021/02/003648			10.0	10.3	9.6	16.2.21	14.2.21	26.2.21	12	10	7	1	NO
460	50	F	ORTHO	AIIMS/JDH/2018/07/020412	OA KNEE	TKR	16.1	13.4	12.9	17.2.21	16.2.21	23.2.21	7	6	0	0	NO
461	74	M	ORTHO	AIIMS/JDH/2020/02/000028	OA KNEE	TKR	11.2	9.8	8.2	18.2.21	17.2.21	24.2.21	7	6	0	0	YES
462	62	M	ORTHO	AIIMS/JDH/2016/10/003451	OA KNEE	TKR	10.7	9.5	9.4	19.2.21	17.2.21	26.2.21	9	7	0	0	NO
463	15	M	CTVS	AIIMS/JDH/2021/01/018548			14.5	14.5	9.6	19.2.21	16.2.21	28.2.21	12	9	2	0	NO
464	42	F	ORTHO	AIIMS/JDH/2019/09/017411	RA KNEE	TKR	11.4	10.9	9.7	19.2.21	18.2.21	24.2.21	6	5	0	0	NO
465	47	F	ORTHO	AIIMS/JDH/2019/11/001491	OA KNEE	TKR	10.8	9.3	9.3	20.2.21	19.2.21	25.2.21	6	5	0	0	NO
466	83	F	ORTHO	AIIMS/JDH/2021/01/021655	AVN	IMPLANT REMOVAL	9.6	9.2	10.4	22.2.21	20.2.21	18.3.21	26	24	0	1	NO
467	60	F	ORTHO	AIIMS/JDH/2020/02/009853	OA KNEE	TKR	12.5	11.3	11.2	26.2.21	24.2.21	4.3.21	8	6	0	0	NO
468	69	M	CTVS	AIIMS/JDH/2021/01/018449			16.8	16.8	11.8	26.2.21	24.2.21	10.3.21	14	12	0	0	NO
469	46	M	CTVS	AIIMS/JDH/2021/02/005969			15.2	15.2	12.5	1.3.21	26.2.21	9.3.21	11	8	3	5	NO
470	28	F	CTVS	AIIMS/JDH/2020/03/012935			14.3	11.7	9.5	2.3.21	27.2.21	11.3.21	12	9	3	0	NO
471	51	M	CTVS	AIIMS/JDH/2021/01/022760			15.1	15.6	10.3	3.3.21	1.3.21	22.3.21	21	19	3	0	NO
472	50	M	CTVS	AIIMS/JDH/2021/02/000525			13.4	13.4	9.8	4.3.21	1.3.21	16.3.21	15	12	1	0	NO
473	39	F	CTVS	AIIMS/JDH/2019/07/013053			12.2	12.2	9.8	5.3.21	1.3.21	18.3.21	17	13	0	0	NO

S. No	Age	Gender	DEPT	UID	Diagnosis	Surgery	Preop Hb	Postop Hb	Hb At Discharge	DOSx	DOA	DOD	Total Duration of stay	Duration of stay postop	ICU	Transfusion	Intervention
474	74	F	CTVS	AIIMS/JDH/2021/02/001479			11.5	11.5	10.4	5.3.21	2.3.21	17.3.21	15	12	3	0	NO
475	40	M	ORTHO	AIIMS/JDH/2021/01/014701	AVN	THA	14.5	13.1	13.1	11.3.21	6.3.21	17.3.21	11	6	0	0	NO
476	58	M	CTVS	AIIMS/JDH/2021/02/012886			13.1	12.4	8.4	12.3.21	9.3.21	22.3.21	13	10	0	0	NO
477	40	M	CTVS	AIIMS/JDH/2021/01/019544			10.5	10.1	9.2	12.3.21	11.3.21	18.3.21	7	6	9	0	NO
478	30	M	ORTHO	AIIMS/JDH/2021/01/010509	SSI	DEBRIDEMENT	9.8	9.1	10.1	12.3.21	3.3.21	4.4.21	32	23	0	2	NO
479	77	M	CTVS	AIIMS/JDH/2020/12/002694			11.5	11.5	9.1	14.3.21	11.3.21	25.3.21	14	11	2	2	NO
480	34	M	ORTHO	AIIMS/JDH/2021/01/019124	TRAUMATIC OA	THR	11.2	9.8	10.1	15.3.21	12.3.21	22.3.21	10	7	0	0	YES
481	21	F	CTVS	AIIMS/JDH/2021/02/008543			12.6	12.6	10.2	17.3.21	13.3.21	23.3.21	10	6	3	0	NO
482	67	M	CTVS	AIIMS/JDH/2021/02/013300			11.6	11.6	9.5	19.3.21	16.3.21	30.3.21	14	11	2	1	NO
483	66	M	CTVS	AIIMS/JDH/2021/03/006086			12.4	12.4	NA	23.3.21	19.3.21	30.3.21	11	7	0	0	NO
484	38	F	CTVS	AIIMS/JDH/2021/02/003356			12.5	12.5	10.4	24.3.21	15.3.21	5.4.21	21	12	6	0	NO
485	30	M	CTVS	AIIMS/JDH/2021/01/016337			12.7	12.5	7.7	30.3.21	27.3.21	12.4.21	16	13	3	0	YES
486	22	F	CTVS	AIIMS/JDH/2021/03/006733			12.2	12.2	8.2	30.3.21	27.3.21	13.4.21	17	14	3	0	NO
487	72	M	CTVS	AIIMS/JDH/2021/03/013164			14.7	14.7	9.2	30.3.21	28.3.21	10.4.21	13	11	3	0	NO
488	58	M	ORTHO	AIIMS/JDH/2021/06/004029	OA HIP	THR	12.9	11.2	11.4	30.3.21	29.3.21	5.4.21	7	6	0	0	NO
489	48	M	ORTHO	AIIMS/JDH/2021/02/012096	AVN	THR	13.6	11.8	11.6	30.3.21	28.3.21	4.4.21	7	5	0	0	NO
490	50	F	CTVS	AIIMS/JDH/2021/02/003355			12.6	12.1	9.3	31.3.21	27.3.21	7.4.21	11	7	5	4	NO
491	32	M	CTVS	AIIMS/JDH/2021/03/002707			13.8	11.7	10.1	1.4.21	27.3.21	16.4.21	20	15	7	2	NO
492	49	M	CTVS	AIIMS/JDH/2021/01/020008			14.4	14.4	11.6	1.4.21	30.3.21	17.4.21	18	16	0	0	NO
493	47	F	CTVS	AIIMS/JDH/2020/12/010286			13.8	13.9	9.0	3.4.21	1.4.21	16.4.21	15	13	0	0	NO
494	57	M	CTVS	AIIMS/JDH/2021/03/007722			12.4	12.4	8.4	7.4.21	2.4.21	17.4.21	15	10	3	1	NO
495	34	F	CTVS	AIIMS/JDH/2021/04/002018			11.1	11.9	7.2	15.4.21	10.4.21	27.4.21	17	12	3	1	YES
496	57	M	CTVS	AIIMS/JDH/2021/04/008259			13.5	13.1	12.9	16.4.21	12.4.21	24.4.21	12	8	0	0	NO
497	45	F	CTVS	AIIMS/JDH/2021/05/005844			11.6	11.6	10.2	17.5.21	14.5.21	24.5.21	10	7	3	0	NO
498	57	M	CTVS	AIIMS/JDH/2021/02/000028			12.7	12.7	10.7	12.6.21	8.6.21	19.6.21	11	7	3	0	NO
499	48	M	CTVS	AIIMS/JDH/2021/04/004640			14.5	13.1	9.6	15.6.21	11.6.21	29.6.21	18	14	3	0	NO
500	53	M	CTVS	AIIMS/JDH/2021/04/009912			10.4	11.7	10.3	16.6.21	14.6.21	1.7.21	17	15	3	1	NO
501	30	F	ORTHO	AIIMS/JDH/2016/07/001680	AVN	THR	12.8	12.1	11.5	21.6.21	20.6.21	3.7.21	13	12	0	0	NO
502	37	F	CTVS	AIIMS/JDH/2021/06/002878			10.8	10.9	8.8	24.6.21	20.6.21	13.7.21	23	19	3	3	NO
503	30	F	ORTHO	AIIMS/JDH/2016/07/001680	AVN	Sciatic nerve exploration	13.7	11.8	11.3	27.6.21	20.6.21	3.7.21	13	6	0	0	NO
504	36	M	CTVS	AIIMS/JDH/2021/06/011216			6.6	6.6	6.2	29.6.21	1.7.21	7.7.21	6	8	7	4	YES
505	25	F	CTVS	AIIMS/JDH/2021/06/013580			12.4	11.3	8.3	29.6.21	25.6.21	13.7.21	18	14	3	2	NO
506	27	F	CTVS	AIIMS/JDH/2021/05/007230			12.4	12.0	9.4	29.6.21	17.6.21	5.7.21	18	6	2	3	NO
507	30	F	ORTHO	AIIMS/JDH/2016/07/001680	AVN	CLOSED REDUCTION	11.6	10.2	10.2	29.6.21	20.6.21	3.7.21	13	4	0	0	NO
508	45	F	CTVS	AIIMS/JDH/2021/06/014777			7.6	7.6	6.6	30.6.21	1.7.21	6.7.21	5	6	6	4	YES
509	19	M	CTVS	AIIMS/JDH/2018/01/027974			12.6	13.2	NA	30.6.21	27.6.21	2.7.21	5	2	0	0	NO
510	18	F	CTVS	AIIMS/JDH/2021/04/002054			10.9	10.9	9.4	2.7.21	28.6.21	12.7.21	14	10	2	0	NO
511	18	M	ORTHO	AIIMS/JDH/2021/06/001315	SSI	DEBRIDEMENT	9.8	8.4	8.1	3.7.21	2.7.21	19.7.21	17	16	0	0	YES
512	53	F	CTVS	AIIMS/JDH/2021/06/007595			13.0	13.0	10.8	9.7.21	6.7.21	22.7.21	16	13	3	0	NO
513	44	M	CTVS	AIIMS/JDH/2018/09/012671			16.6	14.7	11.2	9.7.21	8.7.21	23.7.21	15	14	4	0	NO
514	70	F	ORTHO	AIIMS/JDH/2021/06/014666	Closed Cervicotrochanteric	IMPLANT REMOVAL	10.8	10.6	10.6	14.7.21	12.7.21	20.7.21	8	6	0	0	NO
515	65	F	CTVS	AIIMS/JDH/2021/04/007260			12.2	12.2	10.9	15.7.21	11.7.21	27.7.21	16	12	3	2	NO
516	58	F	CTVS	AIIMS/JDH/2020/09/003283			10.9	11.7	8.8	19.7.21	14.7.21	30.7.21	16	11	3	0	NO
517	47	F	CTVS	AIIMS/JDH/2016/07/009870			10.0	10.0	9.9	27.7.21	15.7.21	31.7.21	16	4	0	0	NO
518	64	M	GEN	AIIMS/JDH/2020/11/007736	BK AMPUTATION		9.7	8.2	8.4	29.12.20	25.12.20	3.1.21	9	5	0	1	NO

MASTER CHART (POST - PBM)

S. NO.	DEPT	AGE	SEX	UID	DIAGNOSIS	SURGERY	DOSx	DOA	DOD	Duration of stay	Duration of stay I	PRE-OP HB	POST-OP HB	HB AT DISCHA	IRON GIVEN?	TRANSFUSION	AICU STAY
1	ONCO	26	F	2020/10/004408	CA BUCCAL MUCOSA	MRND	18.10.21	9.10.21	24.10.21	15	6	11	10.1	9.4	NO	2	2
2	GEN	34	F	2018/11/014492	CHOLELITHIASIS	LAP/OPEN CHOLECYSTECTOMY	22.10.21	21.10.21	22.10.21	1	0	12.5	NA	NA	NO	0	0
3	GEN	48	M	2019/08/008199	FISTULA WITH FISSURE IN	EXAMINATION UNDER GA +/- FISTULEC	22.10.21	21.10.21	22.10.21	1	0	15.1	14.6	14.6	NO	0	0
4	ONCO	51	F	2021/05/006067	CARCINOMA RIGHT BREA	RIGHT MRM	22.10.21	20.10.21	26.10.21	6	4	10.7	9.9	9.8	NO	0	0
5	GEN	61	M	2021/08/009641	B/L INGUINAL HERNIA	B/L LAP /OPEN HERNIOPLASTY	22.10.21	20.10.21	23.10.21	3	1	15.1	14.5	14.5	NO	0	0
6	GEN	50	M	2021/09/010200	MUCORMYCOSIS RT LUN	RT LOWER LOBECTOMY/BILOBECTOMY	22.10.21	7.10.21	27.10.21	20	5	12.4	12.3	10.6	NO	0	8
7	GI	61	M	2021/10/003220	LOCALLY ADVANCED CA	STAGING LAPROSCOPY+RADICAL CHOL	22.10.21	6.10.21	24.10.21	18	2	10.6	9.3	9.3	YES	0	2
8	ONCO	81	M	2021/10/007962	LEFT ADNEXAL MASS	TAH + BSO+FROZEN SECTION AND PR	22.10.21	20.10.21	27.10.21	7	5	10.2	9.4	9.6	NO	0	0
9	GEN	22	M	2021/10/008531	CIRCUMFERENTIAL CON	CIRCUNCISION WITH FRENULOPLASTY	22.10.21	15.10.21	22.10.21	7	0	15.2	NA	NA	NO	0	0
10	ONCO	48	F	2021/10/011171	CARCINOMA ENDOMETR	STAGING LAPAROTOMY	22.10.21	20.10.21	29.10.21	9	7	11.8	9.3	9.2	NO	2	1
11	GEN	41	F	2021/10/013734	CHOLELITHIASIS	LAP /OPEN CHOLECYSTECTOMY	22.10.21	21.10.21	24.10.21	3	2	11.2	11	11	NO	0	0
12	URO	52	M	2019/10/012144	RIGHT SOLITARY FUNCTI	CPE+/- LEFT URSL +/- RIGHT RIRS	25.10.21	20.10.21	26.10.21	6	1	13.4	NA	NA	NO	0	0
13	URO	40	M	2021/06/004858	RIGHT PUJO	LAP RIGHT PYELOPLASTY	25.10.21	24.10.21	26.10.21	2	1	14.7	NA	NA	NO	0	0
14	ONCO	61	F	2021/06/012255	CA OVARY	SECONDARY CYTOREDUCTION SURGER	25.10.21	20.10.21	30.10.21	10	5	12.2	10.5	11.3	NO	0	0
15	ONCO	51	M	2021/07/002229	CA RT LATEREL BORDER T	WLE+ RT MRND + FREE FLAP RECONST	25.10.21	16.10.21	2.11.21	17	8	10.7	9.5	10.3	NO	2	2
16	URO	64	M	2021/07/002903	SUBMEATAL STENOSIS	ENDO ASSESSMENT AND PROCEED	25.10.21	23.10.21	26.10.21	3	1	15.5	NA	NA	NO	0	0
17	NEURO	36	M	2021/07/011376	LEFT INSULAR GLIOMA	LEFT FRONTO-TEMPORAL CRANIOTOM	25.10.21	22.10.21	28.10.21	6	3	15	13.6	9.8	NO	0	2
18	GEN	16	M	2021/07/016014	S/P EXPLORATORY LAPA	STOMA CLOSURE	25.10.21	24.10.21	26.10.21	2	1	12.5	9.6	9.6	NO	0	0
19	GEN	21	M	2021/08/007868	CHRONIC APPENDICITIS	DIAGNOSTIC LAPROSCOPY AND PROCE	25.10.21	24.10.21	25.10.21	1	0	16	NA	NA	NO	0	0
20	ONCO	70	F	2021/08/008705	CA ENDOMETRIUM	ROBOTIC HYSTERECTOMY	25.10.21	16.10.21	29.10.21	13	4	4.4	7.6	9.7	YES	3	2
21	URO	78	M	2021/10/001684	GRADE 4 PHIMOSIS	CIRCUMCISION	25.10.21	25.10.21	26.10.21	1	1	12	NA	NA	NO	0	0
22	URO	53	M	2021/08/014115	RIGHT RENAL PELVIC CA	RIGHT PCNL	25.10.21	24.10.21	27.10.21	3	2	16	15.1	15.1	NO	0	0
23	GEN	35	M	2021/08/016439	POST TRAUMATIC {R} TH	VATS/THORECOTOMY WITH DECORTIC	25.10.21	12.10.21	30.10.21	18	5	10.2	8.8	8.1	YES	0	0
24	ONCO	46	M	2021/08/019415	CA RT LOWER GBS	WLE+ RT SEGMENTAL MENDIBULECTO	25.10.21	19.10.21	30.10.21	11	5	11.6	9.5	10.4	NO	0	0
25	GI	40	M	2021/10/001014	CHRONIC PANCREATITIS	ROBOTIC/OPEN LPJ	25.10.21	4.10.21	28.10.21	24	3	11.5	9.1	9.1	YES	0	0
26	GI	61	F	2021/10/005670	LOCALLY ADVANCE CA G	STAGING LAPAROSCOPY+ RADICAL CH	25.10.21	14.10.21	2.11.21	19	8	10.6	10.1	7.7	YES	0	2
27	URO	41	F	2021/10/008108	LEFT RENAL CALCULUS S	LEFT RELOOK PCNL	25.10.21	19.10.21	26.10.21	7	1	12.5	NA	NA	NO	0	0
28	NEURO	70	F	2021/10/008567	C5,6 AND D2,3 PIVD,D7-	DORSAL LAMINECTOMY AND DECOMP	25.10.21	19.10.21	26.10.21	7	1	12.2	11.8	11.8	NO	0	0
29	GEN	28	M	2017/09/014113	GRADE III HAEMORRHOI	MILIGAN MORGAN OPEN HAEMORRH	26.10.21	24.10.21	26.10.21	2	0	14.8	11.4	11.4	NO	0	0
30	NEURO	57	F	2021/01/018337	O/C/O PITUITARY MACR	ENDONASAL ACF REPAIR	26.10.21	15.10.21	31.10.21	16	5	9.2	9.7	9.7	NO	0	0
31	URO	59	M	2021/02/009009	RIGHT MALROTATED KID	RIGHT RIRS	26.10.21	24.10.21	27.10.21	3	1	9.7	NA	NA	YES	0	0
32	NEURO	23	M	2021/06/006691	RESIDUAL CRANIOPHARY	RE-EXPLORATION, LEFT FTOZ CRANIOT	26.10.21	23.10.21	28.10.21	5	2	11.8	11.3	9.6	NO	5	0
33	ONCO	57	M	2021/06/007601	CARCINOMA STOMACH	TOTAL GASTRECTOMY +D2LN DISECTI	26.10.21	18.10.21	4.11.21	17	9	13.5	11.8	11.7	NO	0	0
34	GEN	26	M	2021/08/017496	[L] SIDED LOCULATED PL	VATS DECORTICATION	26.10.21	16.10.21	2.11.21	17	7	12.5	12	12	NO	1	0
35	URO	39	F	2021/09/013426	VVF UNDER EVALUATION	CPE	26.10.21	25.10.21	27.10.21	2	1	12	NA	NA	NO	0	0
36	URO	32	M	2021/09/018354	NON FUNCTIONING RIGH	LAPAROSCOPIC RIGHT SIMPLE NEPHRE	26.10.21	24.10.21	27.10.21	3	1	15.1	NA	NA	NO	0	0
37	GI	53	M	2021/10/006994	AMPULLARY ADENOMA	AMPULLECTOMY+ INTRA OP FROZAN +	26.10.21	12.10.21	1.11.21	20	6	12.1	8.9	9.4	YES	1	0
38	GI	70	F	2021/10/009030	CARCINOMA RECTOSIGM	LAP/OPEN ANTERIOR RESECTION +HYS	26.10.21	15.10.21	2.11.21	18	7	8.7	8.2	6.6	YES	3	4
39	URO	54	M	2021/10/009582	RIGHT RENAL MASS WIT	LAPAROSCOPIC/OPEN RIGHT RADICAL	26.10.21	19.10.21	27.10.21	8	1	12.5	13.7	13.7	NO	0	0
40	GI	51	F	2021/10/011165	ADHESIVE SUBACUTE IN	DIAGNOSTIC LAPROSCOPY AND PROCE	26.10.21	23.10.21	31.10.21	8	5	13.5	11.6	12.5	NO	0	0
41	URO	51	F	2020/08/007077	HIGH GRADE UROTHELIA	OPEN RADICAL CYSTECTOMY WITH B/L	27.10.21	22.10.21	5.11.21	14	9	10.8	10.8	9	YES	2	1
42	URO	56	M	2021/01/013435	B/L RENAL CALCULI S/P L	RIGHT PCNL	27.10.21	22.10.21	30.10.21	8	3	9.4	NA	NA	NO	0	0
43	ONCO	48	M	2021/02/009913	CARCINOMA LEFT GBS	WLE+BITE COMPOSITE+ITF CLEARANC	27.10.21	24.10.21	11.11.21	18	15	9.6	9.6	7.1	YES	3	4
44	GI	24	M	2021/07/007440	CA LOWER 3RD OF RECT	LAP/OPEN APR	27.10.21	13.10.21	30.10.21	17	3	10.7	10.5	10.5	NO	0	0
45	ONCO	61	F	2021/09/004037	RETROPERITONEAL NEU	LAPAROSCOPIC EXCISION	27.10.21	20.10.21	2.11.21	13	6	10.3	10.7	9.8	NO	0	0
46	GEN	33	F	2021/09/013148	CHOLELITHIASIS	LAP/ OPEN CHOLECYSTECTOMY	27.10.21	26.10.21	29.10.21	3	2	11.5	NA	NA	NO	0	0
47	URO	33	F	2021/09/019398	URETHRAL CARUNCLE	URETHRAL CARUNCALE EXCISION/URE	27.10.21	25.10.21	27.10.21	2	0	11.2	11	11	NO	0	0
48	GI	52	M	2021/10/006966	STEROID DEPANDENT UL	LAP/OPEN SUBTOTAL COLECTOMY	27.10.21	13.10.21	1.11.21	19	5	8.8	8.1	7.7	YES	2	1
49	GI	70	M	2021/10/010593	CA ASCENDING COLON	LAP/OPEN RIGHT HEMICOLECTOMY	27.10.21	20.10.21	5.11.21	16	9	7.7	9.4	11.4	NO	3	3
50	GEN	61	F	2021/10/013429	MORBID OBESITY	LAPAROSCOPIC SLEEVE GASTRECTOMY	27.10.21	22.10.21	28.10.21	6	1	10.8	10.6	10.9	YES	0	1
51	GEN	41	M	2016/02/004317	CHRONIC ITP	ROBOTIC SPLENECTOMY	28.10.21	24.10.21	31.10.21	7	3	10.2	8.6	8	YES	0	0
52	URO	43	M	2018/05/006424	B/L RENAL CALCULI WITH	RIGHT URSL+ LEFT PCNL	28.10.21	28.10.21	31.10.21	3	3	12.8	10.7	10.8	NO	0	0
53	ONCO	40	F	2021/06/000533	METASTATIC CARCINOM	PALLIATIVE MASTECTOMY	28.10.21	25.10.21	28.10.21	3	0	10.7	9.1	9.1	YES	0	0
54	NEURO	31	F	2021/07/002656	RIGHT FTP CALVARIAL DE	AUTOLOGOUS CRANIOPLASTY	28.10.21	26.10.21	30.10.21	4	2	12.8	11.4	11.4	NO	0	0
55	ONCO	32	M	2021/07/003239	CARCINOMA LEFT LOWE	WLE+EXTENDED LEFT HEMIMANDIBUL	28.10.21	25.10.21	9.11.21	15	12	11.8	9.8	9.2	NO	3	8
56	ONCO	65	F	2021/07/005050	CARCINOMA OVARY	INTERVAL CYTOREDUCTION	28.10.21	25.10.21	30.10.21	5	2	10.8	9.4	9.5	NO	0	0
57	URO	71	M	2021/08/006061	METASTATIC ADENOCAR	B/L ORCHIDECTOMY	28.10.21	26.11.21	29.11.21	3	32	10.8	NA	NA	NO	0	0
58	ONCO	75	F	2021/08/009674	ACRAL MELANOMA OF L	WIDE LOCAL ECCISION + SPLIT SKIN GR	28.10.21	22.10.21	30.10.21	8	2	12.1	10.9	11	NO	0	0
59	GI	26	F	2021/08/016894	STATUS SUBTOTAL COLE	LAP/OPEN IPAA+/- DIVERSION ILEOSTO	28.10.21	24.10.21	2.11.21	9	5	9.1	9.9	11	YES	1	0
60	GEN	67	M	2021/09/002291	CHOLELITHIASIS WITH CI	LAPAROSCOPIC /OPEN CHOLECYSTECT	28.10.21	27.10.21	1.11.21	5	4	11.5	11.4	11.4	NO	0	0
61	URO	23	M	2021/09/011961	RIGHT LOWER URETERIC	RIGHT URSL	28.10.21	28.10.21	1.11.21	4	4	11.5	11.1	11.1	NO	0	0
62	GEN	52	M	2021/10/001177	GRADE 3 HAEMORRHOID	MILIGAN MORGAN OPEN HAEMORRH	28.10.21	27.10.21	29.10.21	2	1	9.5	8.2	8.2	YES	0	0

S. NO.	DEPT	AGE	SEX	UID	DIAGNOSIS	SURGERY	DOSx	DOA	DOD	Duration of stay	Duration of stay I	PRE-OP HB	POST-OP HB	HB AT DISCHA	IRON GIVEN?	TRANSFUSION	AICU STAY
63	GI	58	M	2021/10/007715	CA HEAD OF PANCREAS	WHIPPLES PROCEDURE WITH INTRA O	28.10.21	13.10.21	5.11.21	23	8	11.8	8.2	9.5	NO	0	0
64	GEN	60	M	2021/10/008100	RTA WITH MAXILLOFACI	FEEDING JEJUNOSTOMY	28.10.21	18.10.21	8.11.21	21	11	8.3	8.7	10.1	NO	0	0
65	NEURO	51	F	2021/10/012102	D7-D8 CPMPRESIVE MYE	D7-D8 LAMINECTOMY AND CORD DEC	28.10.21	25.10.21	30.10.21	5	2	12.9	10.4	10.4	NO	0	0
66	ONCO	32	F	2021/03/010941	RIGHT BREAST LUMP	LUMPECTOMY +FROZEN SECTION &PR	29.10.21	25.10.21	30.10.21	5	1	12.3	NA	NA	NO	0	0
67	ONCO	54	F	2021/07/013102	RIGHT BUCCAL MUCOSA	WLE +RIGHT+RECONSTRUCTION	29.10.21	22.10.21	2.11.21	11	4	10.1	8.4	8.8	YES	0	0
68	ONCO	66	M	2021/08/018717	LEFT GBS SCC	WLE +SEGMENTAL MANDIBULECTOMY	29.10.21	25.10.21	2.11.21	8	4	13.4	11.6	11.8	NO	0	0
69	GEN	36	M	2021/10/010744	POCO RIGHT HIP DISART	RE-DEBRIDEMENT+/- RECONSTRUCTIO	29.10.21	23.10.21	15.11.21	23	17	8.6	6.1	8.2	YES	11	0
70	GI	70	F	2021/10/011899	CHOLELITHIASIS WITH CI	LAP/OPEN CHOLECYSTECTOMY+CBD E	29.10.21	20.10.21	5.11.21	16	7	7.1	9	8.9	YES	1	0
71	NEURO	10	F	2021/10/012509	D3-D6 EXTRADURAL SOL	D3-D6 LAMINECTOMY AND TUMOR DE	29.10.21	26.10.21	29.10.21	3	0	11.1	8.4	8.4	YES	0	0
72	GEN	69	M	2014/08/007087	RT INGUINAL HERNIA	RT OPEN HERNIOPLASTY	1.11.21	27.10.21	1.11.21	5	0	13.5	NA	NA	NO	0	0
73	GI	51	M	2015/09/007725	CA ESOPHAGUS STATUS	OPEN COLONIC PULL UP	1.11.21	18.10.21	6.12.21	49	35	11.1	13.9	8.5	YES	2	14
74	NEURO	38	F	2021/01/012427	RECURRENT RIGHT FRON	RIGHT FRONTAL CRANIOTOMY AND EX	1.11.21	26.10.21	13.11.21	18	12	8.3	9.6	9.6	NO	1	0
75	NEURO	66	F	2021/018915	RIGHT CEREBELLAR CON	SUB OCCIPITAL CRANIOTOMY AND EX	1.11.21	31.10.21	3.11.21	3	2	12.3	11.5	11.5	NO	0	0
76	ONCO	56	F	2021/03/010282	CARCINOMA LEFT BREAS	LEFT MRM	1.11.21	25.10.21	2.11.21	8	1	13.3	12.4	11.9	NO	0	0
77	GI	60	M	2021/07/015880	CA ESOPHAGUS STATUS	ROBOTIC/OPEN ESOPHAGECTOMY WI	1.11.21	19.10.21	8.11.21	20	7	9.8	8.2	8.3	YES	0	1
78	ONCO	41	F	2021/08/014879	CARCINOMA LEFT LOWE	WLE + SEGMENTAL MANDIBULECTOM	1.11.21	31.10.21	3.11.21	3	2	13.2	10.6	10.1	NO	0	0
79	ONCO	61	M	2021/09/014219	CARCINOMA RIGHT BUC	WLE + BITE COMPOSITE + RIGHT MRN	1.11.21	27.10.21	3.11.21	7	2	11.7	9.5	9.3	NO	0	0
80	GEN	20	M	2021/10/004284	S/P EXPLORATORY LAPR	MIDLINE CLOSURE	1.11.21	24.10.21	1.11.21	8	0	11.3	NA	NA	NO	18	0
81	ONCO	46	F	2021/10/008565	CARCINOMA OF LEFT BR	LEFT MRM	1.11.21	29.10.21	3.11.21	5	2	14.5	13.3	13.3	NO	0	0
82	GEN	61	F	2017/06/008346	INVASIVE DUCTAL CARCI	MODIFIED RADICAL MASTECTOMY	2.11.21	28.10.21	3.11.21	6	1	12.9	12.6	12.6	NO	0	0
83	URO	43	M	2021/03/011223	F/C/O RIGHT UPPER URE	RIGHT DJ REPLACEMENT	2.11.21	1.11.21	2.11.21	1	0	7.9	7.3	7.3	YES	0	0
84	ONCO	65	M	2021/03/015120	CA RIGHT UPPER ALVEOL	WLE+RT INFERIOR MAXILLECTOMY+/-	2.11.21	25.10.21	6.11.21	12	4	11	8.8	8.4	YES	0	0
85	URO	70	M	2021/06/001040	FUC OF BILATERAL URET	RIGHT URSL WITH LEFT DJ STENT REM	2.11.21	1.11.21	19.11.21	18	17	10.8	NA	NA	NO	0	0
86	ONCO	70	F	2021/07/018371	RT. OVARIAN MASS	STAGING LAPAROTOMY	2.11.21	30.10.21	8.11.21	9	6	10.1	9.2	10.4	YES	0	0
87	NEURO	52	M	2021/08/018151	NON FUNCTIONING PITU	TRANSNASAL - TRANSSPHENOIDAL EX	2.11.21	28.10.21	3.11.21	6	1	13.3	12.3	12.3	NO	0	0
88	URO	45	M	2021/08/018898	RIGHT RENAL MASS WIT	ROBOT ASSISTED RIGHT PARTIAL NEPH	2.11.21	1.11.21	5.11.21	4	3	13.2	12.7	11.8	NO	0	0
89	GI	60	M	2021/09/004720	HILAR CHOLANGIO CARC	LT. HEPATECTOMY WITH CAUDATECTO	2.11.21	27.10.21	6.11.21	10	4	11.9	11.8	9.4	NO	0	0
90	GEN	17	M	2021/09/009780	RIGHT GYNECOMASTIA	SUBCUTANEOUS MASTECTOMY	2.11.21	28.10.21	3.11.21	6	1	14.2	NA	NA	NO	0	0
91	URO	38	M	2021/09/014652	?URETHRAL STRICTURE	CPE +/- URETHRAL DIALATION	2.11.21	30.10.21	4.11.21	5	2	9.7	NA	NA	NO	0	0
92	ONCO	58	F	2021/10//018436	RIGHT RCC	LAPAROSCOPIC RIGHT RADICAL NEPHR	2.11.21	30.10.21	6.11.21	7	4	13.4	11.5	11.8	NO	0	0
93	GEN	40	M	2021/10/000460	DERMOID CYST	EXCISION OF CYST	2.11.21	28.10.21	2.11.21	5	0	14.3	NA	NA	NO	0	0
94	GEN	35	M	2021/10/006746	DERMOID CYST OVER TH	EXCISION	2.11.21	29.10.21	3.11.21	5	1	14	NA	NA	NO	0	0
95	GEN	62	M	2021/10/011680	BILATERAL INGUINAL HE	BILATERAL LAPAROSCOPIC/OPEN HERI	2.11.21	28.10.21	2.11.21	5	0	15.3	NA	NA	NO	0	0
96	NEURO	38	F	2021/10/015587	NF-1 WITH SUPRASELLAR	PTERIONAL CRANIOTOMY AND REDO-I	2.11.21	26.10.21	6.11.21	11	4	10.4	8.9	11.3	NO	0	0
97	ONCO	33	M	2021/10/015630	CARCINOMA LEFT LATER	WLE+LEFT EXTENDED SOHND	2.11.21	1.11.21	3.11.21	2	1	15.6	13.5	13.5	NO	0	0
98	GEN	19	M	2021/10/018019	NON HEALING ULCER OV	DEBRIDEMENT+ BIOPSY	2.11.21	29.10.21	2.11.21	4	0	13.2	NA	NA	NO	0	0
99	GEN	20	M	2021/10/018663	SEBACEOUS CYST OVER I	CYST EXCISION	2.11.21	31.10.21	2.11.21	2	0	15.6	NA	NA	NO	0	0
100	ORTHO	25	M	2017/03/014055	CLOSED BOTHBONE # FC	ORIF WITH PLATING	3.11.21	1.11.21	4.11.21	3	1	14.5	12.4	12.4	NO	0	0
101	ORTHO	22	M	2021/10/014712	CLOSED MIDSHAFT FEM	ORIF WITH IMIL NAIL	3.11.21	2.11.21	4.11.21	2	1	11.8	NA	NA	NO	0	0
102	ORTHO	18	M	2021/10/018957	CLOSED SUPRATROCHAN	ORIF	3.11.21	31.10.21	6.11.21	6	3	8.7	5.9	7.1	YES	2	0
103	URO	54	M	2021/10/019006	METASTATIC PROSTATIC	RIGHT PCN WITH B/L ORCHIDECTOMY	5.11.21	31.10.21	6.11.21	6	1	11.9	NA	NA	NO	0	0
104	URO	26	M	2018/09/006577	PBNO	CPE WITH BNI	8.11.21	7.11.21	9.11.21	2	1	14.3	NA	NA	NO	0	0
105	URO	40	M	2019/07/006721	CKD	LEFT RC AVF CREATIO N	8.11.21	6.11.21	10.11.21	4	2	9.6	10.7	10.7	NO	0	0
106	NEURO	46	M	2021/09/018621	NON FUNCTIONING PITU	TRANSNASAL- TRANSSPHENOIDAL EXC	8.11.21	7.11.21	13.11.21	6	5	13.9	12.6	11.8	NO	0	0
107	URO	16	M	2021/10/001203	LEFT PUJO	LEFT PYELOPLASTY	8.11.21	7.11.21	9.11.21	2	1	15.4	NA	NA	NO	0	0
108	GI	48	F	2021/10/019126	CHOLELITHIASIS WITH M	ROBOTIC/OPEN CHOLECYSTECTOMY+	8.11.21	6.11.21	10.11.21	4	2	11.3	10.6	10.6	NO	0	0
109	ORTHO	68	F	2015/04/004536	BL OA KNEE	BL TKA	9.11.21	7.11.21	10.11.21	3	1	13.7	11.9	11.9	NO	0	0
110	ORTHO	51	F	2019/11/009888	FLEXION VALGUS DEFOR	QUADRICEPS AUGMENTATION	9.11.21	8.11.21	11.11.21	3	2	12.8	11.2	11.2	NO	0	0
111	URO	23	F	2020/02/003612	FUCO GENITOURINARY T	CPE +RGP +ROBOT ASSISTED ENTEROC	9.11.21	6.11.21	12.11.21	6	3	9.9	10.5	10.5	NO	0	0
112	ONCO	58	F	2020/11/000412	CARCINOMA OVARY	INTERVAL CYTOREDUCTION	9.11.21	8.11.21	13.11.21	5	4	8.7	7.6	8.3	YES	6	4
113	URO	67	M	2021/03/016393	FUCO LAPROSCOPIC RIG	LAPROSCOPIC LEFT SIMPLE NEPHRECT	9.11.21	7.11.21	10.11.21	3	1	13.6	NA	NA	NO	0	0
114	URO	23	M	2021/06/012089	LEFT VARICOCELE	LEFT VARICOCELECTOMY	9.11.21	8.11.21	9.11.21	1	0	15.8	NA	NA	NO	0	0
115	GEN	20	M	2021/07/005629	RIGHT BREAST FIBROADE	EXCISION OF BREAST FIBROADENOMA	9.11.21	8.11.21	10.11.21	2	1	12.3	NA	NA	NO	0	0
116	ORTHO	69	F	2021/07/017403	BL OA KNEE	RT TKA	9.11.21	7.11.21	11.11.21	4	2	13.2	12.5	12.5	NO	0	0
117	ONCO	64	F	2021/08/013192	CARCINOMA LEFT LOWE	WLE+LEFT SEGMENTAL MANDIBULECT	9.11.21	7.11.21	13.11.21	6	4	9.6	8.6	7.4	YES	0	0
118	GEN	50	M	2021/08/018062	INTERNAL + EXTERNAL H	OPEN HAEMORRHOIDECTOMY	9.11.21	8.11.21	10.11.21	2	1	15	NA	NA	NO	0	0
119	ORTHO	55	F	2021/08/019000	CLOSED TRAUMATIC NO	RT THA	9.11.21	7.11.21	14.11.21	7	5	8.4	7.3	7.3	YES	4	0
120	URO	84	M	2021/09/014792	PROSTATOMEGALY WITH	TURP	9.11.21	7.11.21	12.11.21	5	3	13.7	10.6	10.1	NO	0	0
121	GEN	80	M	2021/09/016138	RIGHT INDIRECT INGUIN	OPEN HERNIOPLASTY	9.11.21	8.11.21	9.11.21	1	0	12.1	NA	NA	NO	0	0
122	GEN	32	M	2021/09/017651	SPLENIC HYDATID CYST	LAP DEROOFING /HYDATID CYST EXCIS	9.11.21	8.11.21	12.11.21	4	3	14.5	11.5	12	NO	0	0
123	GEN	61	F	2021/10/011280	RIGHT BREAST CARCINO	RIGHT MRM	9.11.21	28.10.21	17.11.21	20	8	12.6	11.9	11.6	NO	0	0
124	GI	50	F	2021/10/013560	INCIDENTAL CA GALLBLA	COMPLATION RADICAL CHOLECYSTECT	9.11.21	26.10.21	11.11.21	16	2	12	10.7	9.5	NO	1	0
125	URO	40	F	2021/10/015181	RIGHT LOWER URETERIC	RIGHT URSL	9.11.21	8.11.21	10.11.21	2	1	9.7	9.4	9.4	NO	0	0
126	GI	56	M	2021/10/015521	STATUS DIVERTING ILEO	ILEOSTOMY CLOSURE	9.11.21	8.11.21	19.11.21	11	10	12.8	10.9	9.7	NO	1	1
127	GEN	19	M	2021/10/015528	L VARICOCELE	MICROSCOPIC LIGATION	9.11.21	7.11.21	9.11.21	2	0	15.1	NA	NA	NO	0	0
128	ORTHO	59	M	2021/11/001956	CLOSED FRACTURE RT BO	CRIF	9.11.21	8.11.21	11.11.21	3	2	12.4	12	12	NO	0	0

S. NO.	DEPT	AGE	SEX	UID	DIAGNOSIS	SURGERY	DOSx	DOA	DOD	Duration of stay	Duration of stay I	PRE-OP HB	POST-OP HB	HB AT DISCHA	IRON GIVEN?	TRANSFUSION	AICU STAY
129	NEURO	48	M	2021/11/002051	PITUITARY APOPLEXY	TNTS	9.11.21	6.11.21	11.11.21	5	2	11.2	10.9	11.1	NO	0	0
130	ORTHO	40	M	2021/11/002562	POST DISLOCATION HIP	ORIF	9.11.21	8.11.21	15.11.21	7	6	11.7	6.7	7.9	YES	1	0
131	NEURO	37	M	2021/11/002606	LEFT FRONTAL SOL? HGC	LEFT FRONTAL CRANIOTOMY+ EXCISIO	9.11.21	8.11.21	11.11.21	3	2	12.5	9.4	9.4	NO	0	0
132	GEN	47	M	2013/07/001435	S/P FACIOTOMY	WOUND CLOSURE +/- STSG	10.11.21	6.11.21	12.11.21	6	2	7.8	8	8	YES	0	2
133	ONCO	64	M	2017/10/007317	PRE SACRAL MASS WITH	SEGENTAL RESECTION OF LIVER [MET/	10.11.21	8.11.21	20.11.21	12	10	13.2	12.1	10.9	NO	0	0
134	URO	40	M	2019/07/006721	BPH WITH LUTS	TURP	10.11.21	7.11.21	10.11.21	3	0	9.6	10.7	10.7	NO	0	0
135	ONCO	33	M	2021/06/002222	CA RT. BUCCAL MUCOSA	WLE + RT. SEGMENTAL MANDEBULECT	10.11.21	8.11.21	12.11.21	4	2	11.3	10.1	8.2	YES	0	0
136	GEN	36	M	2021/07/015879	CHRONIC CHOLECYSTITIS	LAP/OPEN CHOLECYSTECTOMY	10.11.21	9.11.21	13.11.21	4	3	9.2	NA	NA	NO	0	0
137	ONCO	61	M	2021/10/007928	CA RT. BUCCAL MUCOSA	WLE + RT. UPEER ALVEOLECTOMY +RT	10.11.21	8.11.21	17.11.21	9	7	14	12.1	10.1	NO	0	0
138	GEN	44	F	2021/10/007961	BREAST LUMP	WIDE LOCAL EXCISION	10.11.21	9.11.21	10.11.21	1	0	13.1	NA	NA	NO	0	0
139	GEN	42	F	2021/10/016291	UMBLICAL HERNIA	LAP/OPEN HERNIOPLASTY	10.11.21	9.11.21	12.11.21	3	2	12.4	NA	NA	NO	0	0
140	ONCO	32	M	2021/10/018930	CA LT. BREAST	LT. MRM	10.11.21	9.11.21	12.11.21	3	2	12.9	11.1	11.1	NO	0	0
141	NEURO	57	M	2021/11/003855	RUPTURED RIGHT MCA B	RIGHT PTERIONAL CRANIOTOMY AND	10.11.21	9.11.21	16.11.21	7	6	9.9	8.9	7.2	YES	0	0
142	GEN	50	F	2021/11/004117	LIPOMA OVER THIGH	EXCISION	10.11.21	9.11.21	10.11.21	1	0	13.8	NA	NA	NO	0	0
143	NEURO	65	F	021/11/003703	RIGHT PCOMM ANEURYS	RIGHT PTERIONAL CRANIOTOMY AND	11.11.21	9.11.21	15.11.21	6	4	11.4	9.5	8.5	YES	0	0
144	GEN	45	F	2016/09/004393	INCISIONAL HERNIA	IPOM	11.11.21	10.11.21	11.11.21	1	0	12.6	NA	NA	NO	0	0
145	ONCO	21	F	2019/06/005710	FOLLICULAR NEOPLASM	TOTAL THYROIDECTOMY + LEFT LATER	11.11.21	9.11.21	13.11.21	4	2	13.6	12.4	12.4	NO	0	0
146	URO	39	F	2021/06/001505	FUCO LT DJ STENTING W	LEFT DJ REPLACEMENT	11.11.21	10.11.21	11.11.21	1	0	9.7	NA	NA	NO	0	0
147	ORTHO	51	M	2021/06/009921	RT NEGLECTED DDH WIT	LT TKA	11.11.21	10.11.21	14.11.21	4	3	13.9	11.9	11.9	NO	0	0
148	ORTHO	45	F	2021/07/017403	BL OA KNEE	BL TKA	11.11.21	10.11.21	15.11.21	5	4	12.5	11	11	NO	0	0
149	URO	62	M	2021/08/007301	LT DISTAL URETERIC STR	LT DJ REMOVAL	11.11.21	10.11.21	12.11.21	2	1	13.2	NA	NA	NO	0	0
150	GEN	23	F	2021/09/004907	ANOVAGINAL FISTULA	EXAMINATION UNDRR GA AND REPAIR	11.11.21	9.11.21	12.11.21	3	1	13	11.8	11.8	NO	0	0
151	GEN	22	F	2021/09/005462	PERITONEAL INCLUSION	DIAGNOSTOC LAPROSCOPIC AND PRO	11.11.21	9.11.21	13.11.21	4	2	12.6	8.9	8.9	YES	0	0
152	GEN	21	M	2021/09/009922	L GYNECOMASTIA	L SIDE SUBCUTANEOUS MASTECTOMY	11.11.21	10.11.21	11.11.21	1	0	15.3	NA	NA	NO	0	0
153	GEN	19	M	2021/09/011160	L HYDROCELE	L HERNIOTOMY	11.11.21	10.11.21	12.11.21	2	1	13.1	NA	NA	NO	0	0
154	GEN	71	M	2021/09/013783	INGUINAL HERNIA	ROBOTIC HERNIOPLASTY	11.11.21	11.11.21	11.11.21	0	0	16.6	NA	NA	NO	0	0
155	GI	47	F	2021/09/016045	SHORT BOWEL SYNDROM	RIGHT PHEOCHROMOCYTOMA EXCISIO	11.11.21	18.10.21	14.11.21	27	3	9.8	12.5	10.6	NO	9	4
156	URO	30	F	2021/09/019834	RT PUJO WITH RECCURE	LAPAROSCOPIC RIGHT PYELOPLASTY	11.11.21	10.11.21	15.11.21	5	4	11.6	NA	NA	NO	0	0
157	GI	30	M	2021/10/000959	EHPVO WITH PORTAL HT	PSRS WITH LIVER BIOPSY	11.11.21	8.11.21	14.11.21	6	3	10.8	10.4	10.3	NO	0	0
158	ONCO	61	M	2021/10/007928	CARCINOMA RIGHT BUC	WLE + RIGHT PBITE COMPOSITE RESE	11.11.21	8.11.21	17.11.21	9	6	14	12.1	10.1	NO	0	0
159	GEN	18	M	2021/10/015915	L INGUINAL HERNIA	L LAPROSCOPICHERNIOPLASTY	11.11.21	11.11.21	12.11.21	1	1	15	NA	NA	NO	0	0
160	GEN	42	M	2021/11/002691	IRREDUCIBLE UMBILICAL	HYBRID IPOM	11.11.21	10.11.21	13.11.21	3	2	13	13.6	13.6	NO	0	0
161	URO	83	M	2021/11/002858	URETHRAL STRICTURE W	CPE+/- OIU + PCCLT /PUCLT+/- SPC	11.11.21	10.11.21	13.11.21	3	2	11.6	NA	NA	NO	0	0
162	GI	20	F	2021/06/000925	CORROSIVE PYLORIC STR	LAP/OPEN JEJUNOSTOMY/ESOPHAGO	12.11.21	10.11.21	17.11.21	7	5	11.6	12.3	11.6	NO	0	0
163	URO	66	F	2021/06/001724	F/U/C/O gutb on ATT wi	RIGHT DJ STENT REMOVAL +/-PUCLT +	12.11.21	8.11.21	21.11.21	13	9	8.3	8.5	7.3	YES	0	0
164	ONCO	55	F	2021/07/002442	SQUAMOUS CELL Carcin	ROBORTIC ASSISTED MCKEOWN'S Esop	12.11.21	11.11.21	16.11.21	5	4	11.8	11.1	10.4	NO	0	0
165	URO	35	M	2021/08/007216	RIGHT PARTIAL STAGHOI	LAPROSCOPIC RIGHT SUBCAPSULAR NI	12.11.21	11.11.21	18.11.21	7	6	13.4	NA	NA	NO	0	0
166	ONCO	38	M	2021/09/012238	CA OF LT LOWER GBS	WLE + LT SEGMENTAL MANDIBULECTO	12.11.21	11.11.21	15.11.21	4	3	12.4	11.2	11.2	NO	0	0
167	GEN	43	F	2021/10/000230	LT INVASIVE CA BREAST	LT MRM	12.11.21	9.11.21	14.11.21	5	2	11	10.7	10.7	NO	0	0
168	GEN	40	F	2021/10/006015	S/P RT BELOW ELBOW A	STUMP CLOSURE	12.11.21	11.11.21	14.11.21	3	2	12.8	12.4	11.5	NO	0	0
169	URO	71	M	2021/10/012891	BPE WITH LUTS WITH SU	ENDO ASSESSMENT +TURP	12.11.21	10.11.21	13.11.21	3	1	11.7	NA	NA	NO	0	0
170	ONCO	18	F	2021/11/001346	GERM CELL TUMOR LT O	FERTILITY PRESERVING STAGING LAPR	12.11.21	10.11.21	16.11.21	6	4	9.8	8.1	8.2	YES	0	0
171	NEURO	45	F	2021/11/003676	CHIARI MALFORMATION	C1 LATERALMASS C2 LAMINAR SCREW	12.11.21	9.11.21	16.11.21	7	4	12.3	10.6	10.6	NO	0	0
172	GEN	40	F	2021/11/004380	SEBACEOUS CYST OVER /	CYST EXCISION	12.11.21	11.11.21	12.11.21	1	0	11.5	NA	NA	NO	0	0
173	GEN	68	M	2015/11/003199	B/L INGUINAL HERNIA	LAP/OPEN HERNIOPLASTY	15.11.21	14.11.21	15.11.21	1	0	14.4	NA	NA	NO	0	0
174	ONCO	40	M	2021/06/002913	CA COLON	EXPLORATORY LAPROTOMY & PROCEE	15.11.21	9.11.21	19.11.21	10	4	8.4	6.3	8.2	YES	2	0
175	GEN	40	M	2021/09/009016	GRADE 3 INTERNAL HAE	MILLIGAN MORGAN HAEMORRHOIDE	15.11.21	14.11.21	15.11.21	1	0	13.4	NA	NA	NO	0	0
176	GEN	22	M	2021/09/011052	S/P EXPLORATORY LAPR	STOMA CLOSURE	15.11.21	14.11.21	19.11.21	5	4	13.8	NA	NA	NO	1	0
177	GEN	22	F	2021/09/014832	CHOLELITHIASIS	LAP CHOLECYSTECTOMY	15.11.21	14.11.21	16.11.21	2	1	10	NA	NA	NO	0	0
178	ONCO	73	F	2021/10/018137	SCC LEFT LOWER GBS	WLE + LEFT SEGMENTAL MANDIBULEC	15.11.21	13.11.21	21.11.21	8	6	11.3	10	9.4	NO	0	0
179	GEN	60	M	2021/11/006891	EPIGASTRIC HERNIA	VENTRAL HERNIA REPAIR	15.11.21	14.11.21	16.11.21	2	1	13	NA	NA	NO	0	0
180	GEN	32	M	2021/11/007031	RIGHT GYNAECOMASTIA	SUBCUATANEOUS MASTECTOMY WITH	15.11.21	14.11.21	16.11.21	2	1	14.8	NA	NA	NO	0	0
181	GI	34	F	2019/09/017256	NCPF WITH PORTAL HYP	HYSTEROSCOPY WITH IUCD REMOVAL	15.11.21	9.11.21	19.11.21	10	4	9.7	9.4	9.6	YES	1	0
182	URO	71	F	2021/08/014189	URETHERAL STRICTURE \	ENDO ASSESSMENT +- TURP	15.11.21	13.11.21	16.11.21	3	1	11.4	NA	NA	NO	0	0
183	NEURO	25	M	2021/10/005798	LEFT SIDE VESTIBULAR S	LEFT TRANSLABYRINTHINE TUMOUR E	15.11.21	8.11.21	21.11.21	13	6	13.6	10.8	11.3	NO	1	0
184	NEURO	45	F	2021/11/003676	CHIARI MALFORMATION	C1 LATERAL MASS -C2 LAMINAR/ PARS	15.11.21	13.11.21	17.11.21	4	2	12.3	10.6	10.6	NO	0	0
185	GEN	48	M	2015/10/003991	CHOLELITHIASIS	LAPROSCOPIC CHOLECYSTECTOMY	16.11.21	15.11.21	18.11.21	3	2	16	NA	NA	NO	0	0
186	GEN	50	F	2016/03/001751	LT. BREAST CARCINOMA	LT. MODIFIED RADICAL MASTECTOMY	16.11.21	14.11.21	19.11.21	5	3	13.2	12.9	12.9	NO	0	0
187	GEN	60	M	2017/05/010410	RT. NECK WELL DIFFEREI	WIDE LOCAL EXCISION	16.11.21	15.11.21	17.11.21	2	1	15.9	NA	NA	NO	0	0
188	NEURO	39	M	2020/07/005391	PITUITTARY MACROADEI	ENDOSCOPIC TRANSNASAL TRANS SPH	16.11.21	15.11.21	24.11.21	9	8	13.7	13	12.9	NO	0	0
189	URO	55	F	2021/01/010864	GUTB POST ATT COURSE	ROBOTIC AUGMENTATION CYSTOPLAS	16.11.21	15.11.21	24.11.21	9	8	11.3	10.5	10.5	NO	0	0
190	ONCO	20	F	2021/06/007311	PARAGANGLIOMA LT SID	WIDE LOCAL EXCISION	16.11.21	11.11.21	17.11.21	6	1	12.6	10.9	12.1	NO	0	0
191	URO	66	M	2021/08/005563	RIGHT RENAL STONE DIS	LEFT PCNL	16.11.21	9.11.21	23.11.21	14	7	8.5	7.5	7.5	YES	0	0
192	ONCO	27	M	2021/08/009524	RIGHT BREAST LUMP	LUMPECTOMY + FROZEN SECTION AN	16.11.21	14.11.21	17.11.21	3	1	13.1	12.8	12.8	NO	0	0
193	GEN	42	M	2021/10/000373	UMBLICAL HERNIA	LAP / OPEN HERNIOPLASTY	16.11.21	15.11.21	18.11.21	3	2	16.2	NA	NA	NO	0	0
194	GEN	69	M	2021/10/011577	CHOLELITHIASIS	LAP / OPEN CHOLECYSTECTOMY	16.11.21	15.11.21	19.11.21	4	3	11.9	NA	NA	NO	0	0

S. NO.	DEPT	AGE	SEX	UID	DIAGNOSIS	SURGERY	DOSx	DOA	DOD	Duration of stay	Duration of stay I	PRE-OP HB	POST-OP HB	HB AT DISCHA	IRON GIVEN?	TRANSFUSION	AICU STAY
195	URO	60	M	2021/10/014174	HEMATURIA UNDER EVA	CPE WITH BLADDER BIOPSY	16.11.21	15.11.21	17.11.21	2	1	10.1	NA	NA	NO	0	0
196	ONCO	34	M	2021/10/015525	SCC RT GBS	WLE+ RT. SEGMENTAL MANDIBULECT	16.11.21	13.11.21	19.11.21	6	3	12.2	10	10	NO	0	0
197	ONCO	30	F	2021/10/017474	PAGETS DISEASE OF RT B	BREAST CONSERVATIVE SURGERY + LD	16.11.21	13.11.21	19.11.21	6	3	12.3	12.8	10.8	NO	0	0
198	GEN	36	M	2021/11/003146	INTUSUSCEPTION WITH	DIAGNOSTIC LAPROSCOPY AND PROCE	16.11.21	9.11.21	18.11.21	9	2	10.8	10.2	10.2	NO	0	0
199	URO	75	M	2021/11/003542	LEFT TESTICULAR MASS	LEFT HIGH INGUINAL ORCHIECTOMY	16.11.21	9.11.21	18.11.21	9	2	9.8	7.7	7.7	YES	0	0
200	GEN	52	M	2021/11/005376	RT. LL CELLULITIS	DEBRIDEMENT + RECONSTRUCTION	16.11.21	14.11.21	28.11.21	14	12	7.8	7.4	7.4	YES	0	0
201	URO	21	M	2021/11/006167	LEFT VUJ CALCULS WITH	LEFT URSL	16.11.21	14.11.21	17.11.21	3	1	11.9	NA	NA	NO	0	0
202	GEN	19	M	2021/11/006593	UMBLICAL SINUS	SINUS TRACT EXCSION	16.11.21	15.11.21	16.11.21	1	0	13	NA	NA	NO	0	0
203	GEN	55	M	2017/07/003985	SEBACEOUS CYST	EXCISION +/- FLAP	17.11.21	16.11.21	17.11.21	1	0	16.5	NA	NA	NO	0	0
204	ONCO	42	F	2021/01/021443	CARCINOMA OVARY	INTERVAL CYTOREDUCTION	17.11.21	16.11.21	21.11.21	5	4	11	10.7	10.3	NO	0	0
205	ONCO	50	M	2021/02/002540	LEFT GBS SCC	WLE+LEFT BITECOMPOSITE+ITF CLEAR	17.11.21	16.11.21	20.11.21	4	3	10.7	9.4	7.9	YES	0	0
206	ONCO	62	F	2021/07/016167	CARCINOMA RECTUM	LAPROSCOPIC LOW ANTERIOR RESECT	17.11.21	13.11.21	21.11.21	8	4	10.8	8.9	9.5	NO	0	0
207	GEN	58	F	2021/08/002281	CHOLELITHIASIS	LAP/OPEN CHOLECYSTECTOMY	17.11.21	11.11.21	18.11.21	7	1	11.9	NA	NA	NO	0	0
208	GEN	40	M	2021/11/004391	LEFT INGUINAL HERNIA	LAP/ OPEN HERNIOPLASTY	17.11.21	17.11.21	17.11.21	0	0	16.2	NA	NA	NO	0	0
209	URO	48	M	2018/12/009007	F/U/C/O GUTB WITH RIG	LAPAROSCOPIC RIGHT SIMPLE NEPHRE	17.11.21	15.11.21	18.11.21	3	1	15	NA	NA	NO	0	0
210	NEURO	65	F	2021/08/010698	O/C/O RIGHT MCA INFR	RIGHT SIDED AUTOLOGOUS CRANIOPL	17.11.21	12.11.21	18.11.21	6	1	12.2	13.5	13.5	NO	0	0
211	NEURO	46	M	2021/09/017099	O/C/O OF PITUITARY MA	RIGHT VENTRICULO-PLUERAL SHUNT	17.11.21	5.11.21	27.11.21	22	10	11.2	11	11.3	NO	0	0
212	URO	65	M	2021/10/004304	HIGH GRADE PLASMACY	RE-STAGE TURBT	17.11.21	14.11.21	19.11.21	5	2	14	13.2	13.2	NO	0	0
213	URO	62	M	2021/11/005576	LEFT RENAL CALCULUS V	LEFT PCNL	17.11.21	13.11.21	18.11.21	5	1	15.4	NA	NA	NO	0	0
214	NEURO	34	F	2021/11/006851	RIGHT POSTERIOR FRON	RIGHT FRONTO-PARIETAL CRANIOTOM	17.11.21	16.11.21	20.11.21	4	3	11.9	10.9	10.9	NO	0	0
215	ONCO	60	M	2015/01/012275	CA OF RIGHT LUNG	DIAGNOSTIC THORACOSCOPY FOLLOW	18.11.21	13.11.21	30.12.21	47	42	11.1	8.4	EXP	NO	8	0
216	ONCO	38	F	2021/06/006781	CA LT. BREAST	LT. MODIFIED RADICAL MASTECTOMY	18.11.21	16.11.21	19.11.21	3	1	12.9	10.9	10.9	NO	0	0
217	ONCO	57	M	2021/09/004462	SCC LT. GBS	WLE+ LT. SEGMENTAL MENDIBULECT	18.11.21	12.11.21	20.11.21	8	2	10.7	10.4	8.4	YES	0	0
218	GEN	54	M	2021/10/019034	CHOLELITHIASIS	LAP/OPEN CHOLECYSTECTOMY	18.11.21	17.11.21	20.11.21	3	2	12.2	NA	NA	NO	0	0
219	GEN	23	M	2021/11/002195	FISTULA IN ANO	FISTULECTOMY	18.11.21	17.11.21	19.11.21	2	1	16.1	NA	NA	NO	0	0
220	GEN	58	M	2021/11/008993	B/L INGUINAL HERNIA	OPEN / LAP HERNIOPLASTY	18.11.21	17.11.21	18.11.21	1	0	14.4	NA	NA	NO	0	0
221	URO	52	M	2019/02/000589	CKD 5D with HTN	Left RC AVF creation	18.11.21	13.11.21	19.11.21	6	1	7.6	NA	NA	NO	0	0
222	NEURO	9	M	2019/09/019557	LEFT TEMPORAL LOW GF	WCOG GUIDED LEFT TEMPORAL CRAN	18.11.21	17.11.21	19.11.21	2	1	12.9	12.9	12.9	NO	0	0
223	URO	70	M	2021/06/001040	F/U/C/O B/L ureteric cal	Laparoscopic left simple nephrectomy	18.11.21	1.11.21	20.11.21	19	2	10.6	NA	NA	NO	0	0
224	URO	66	M	2021/08/005563	Left renal calculi disease	Left PCNL and Right DJ stent removal	18.11.21	9.11.21	23.11.21	14	5	8.5	7.5	7.5	YES	0	0
225	URO	61	M	2021/08/009483	LEFT PARTIAL STAGHORN	LEFT PCNL	21.11.21	20.11.21	28.11.21	8	7	13.8	13.3	NA	NO	0	0
226	ORTHO	73	F	2015/09/006081	BL OA KNEE	RIGHT TKA	22.11.21	18.11.21	24.11.21	6	2	13.4	13.3	13.3	NO	0	0
227	GEN	25	M	2017/01/023495	PILONIDAL SINUS	RHOMBOID FLAP	22.11.21	21.11.21	23.11.21	2	1	15.4	NA	NA	NO	0	0
228	GEN	24	F	2017/05/001952	RECURRENT FIBROEDING	EXCISIONAL BIOPSY	22.11.21	17.11.21	22.11.21	5	0	14.8	14.6	14.6	NO	0	0
229	GEN	56	M	2019/08/010564	B/L HYDROCELE	JABOULAYS PROCEDURE	22.11.21	21.11.21	22.11.21	1	0	14.7	NA	NA	NO	0	0
230	GEN	20	M	2020/02/003115	CERVICAL LYMPHADENO	LYMPH NODE EXCISION AND BIOPSY	22.11.21	21.11.21	22.11.21	1	0	14.7	14.6	14.6	NO	0	0
231	ORTHO	25	M	2020/07/006929	ACL TEAR LEFT KNEE	ARTHROSCOPIC ACL RECONSTRUCTION	22.11.21	21.11.21	24.11.21	3	2	14.5	15.8	15.8	NO	0	0
232	ONCO	43	M	2020/09/005834	CARCINOMA RECTUM PO	ILIOSTOMY CLOSURE	22.11.21	18.11.21	26.11.21	8	4	14.3	14.2	14.2	NO	0	0
233	GEN	61	M	2021/04/004912	LEFT YHYROID FOLLICUL	LEFT HEMITHYROIDECTOMY WITH FRO	22.11.21	19.11.21	24.11.21	5	2	13.8	12	12	NO	0	0
234	ONCO	68	F	2021/04/010780	CARCINOMA OVARY POS	INTERVAL CYTOREDUCTION	22.11.21	9.11.21	24.11.21	15	2	10.2	9.8	9.8	YES	1	0
235	ORTHO	22	M	2021/07/008027	PCL TEAR LEFT KNEE	ARTHROSCOPIC PCL RECONSTRUCTION	22.11.21	20.11.21	24.11.21	4	2	15.6	15.1	15.1	NO	0	0
236	GEN	34	M	2021/08/015457	CA LOWER 1/3 OF RECTU	PROCTOSCOPY AND BIOPSY	22.11.21	21.11.21	23.11.21	2	1	13.3	NA	NA	NO	0	0
237	ORTHO	28	F	2021/08/016596	MULTIPLE PAROSTEAL O	MARGINAL RESECTION	22.11.21	22.11.21	23.11.21	1	1	10.1	9.4	9.4	NO	0	0
238	GEN	23	M	2021/11/001946	S/P MESH LAPAROSTOM	MIDLINE CLOSURE	22.11.21	5.11.21	27.11.21	22	5	7.9	9.1	9.1	YES	1	0
239	ONCO	64	F	2021/11/006637	CARCINOMA CERVIX	RADICAL HYSTERECTOMY	22.11.21	15.11.21	29.11.21	14	7	12.3	8.5	8.6	YES	4	3
240	GEN	59	M	2021/11/009432	K/C/O ULCERATIVE COLT	REVISION STOMA	22.11.21	19.11.21	28.11.21	9	6	14.3	12.1	9.9	NO	0	0
241	GEN	70	M	2021/11/009542	CHOLELITHIASIS	LAP/OPEN CHOLECYSTECTOMY	22.11.21	18.11.21	24.11.21	6	2	13	NA	NA	NO	0	0
242	URO	31	F	2019/04/005926	F/U/C/O GUTB WITH LEF	CPE WITH BCE WITH RGP + NEPHROST	22.11.21	19.11.21	25.11.21	6	3	10	NA	NA	NO	1	0
243	URO	43	M	2019/10/002646	F/U/C/O BMG URETHRO	CPE + ENDOASSESMENT+/- VIU	22.11.21	21.11.21	24.11.21	3	2	14.4	NA	NA	NO	0	0
244	URO	31	F	2020/09/004244	RIGHT RENAL PELVIC CAL	RIGHT PCNL	22.11.21	21.11.21	24.11.21	3	2	11.1	11.5	11.5	NO	0	0
245	NEURO	60	M	2021/01/014171	LEFT SIDE POSTERIOR FO	LEFT SIDE OCCIPITAL CRANIOTOMY AN	22.11.21	20.11.21	25.11.21	5	3	9	8.6	9.1	YES	1	0
246	URO	52	M	2021/04/000640	B/L RENAL CALCULI S/P L	RIGHT PCNL	22.11.21	19.11.21	24.11.21	5	2	11.1	NA	NA	NO	0	0
247	GI	31	M	2021/07/007848	CA LOWER 1/3 OF RECTU	ROBOTIC/OPEN APR	22.11.21	16.11.21	26.11.21	10	4	12.1	11.2	11.2	NO	0	0
248	GI	61	M	2021/09/006070	PERIAMPULLARY TUMOR	ROBOTIC/OPEN PANCREATODUODENE	22.11.21	6.11.21	7.12.21	31	15	11.7	14.3	7.9	YES	0	0
249	URO	85	F	2021/09/007521	K/C/O CA CERVIX STAGE	CPE +/- FULGRATION _B/L DJ STENT RE	22.11.21	19.11.21	24.11.21	5	2	10	NA	NA	NO	0	0
250	URO	40	M	2021/09/016591	Right renal calculi s/p Rig	Nephrostogram + RGP + Right PCNL	22.11.21	21.11.21	23.11.21	2	1	15.2	13.7	13.7	NO	0	0
251	NEURO	45	F	2021/09/017248	ACM WITH SYRINX	FORAMEN MAGNUM DECOMPRESSIO	22.11.21	15.11.21	24.11.21	9	2	13.2	12.3	12.3	NO	0	0
252	URO	42	F	2021/10/004564	URINARY INCONTINENCE	CPE	22.11.21	13.11.21	25.11.21	12	3	13.7	NA	NA	NO	0	0
253	URO	41	F	2021/10/008108	LEFT RENAL CALCULI S/P	LEFT RIRS	22.11.21	19.11.21	27.11.21	8	5	11.4	10.7	10.7	NO	0	0
254	NEURO	51	F	2021/11/004108	INFECTED BONE FLAP (ST	INFECTED BONE FLAP REMOVAL	22.11.21	12.11.21	25.11.21	13	3	10.3	10	10	YES	0	0
255	URO	42	M	2021/11/004371	BILATERAL RENAL CALCU	LEFT PCNL	22.11.21	12.11.21	23.11.21	11	1	11.2	12.1	12.1	NO	0	0
256	NEURO	4	M	2021/11/008084	SUPRASELLER SOL WITH	RIGHT MODIFIED FTOZ WITH TUMOR I	22.11.21	17.11.21	24.11.21	7	2	13.8	9.3	9.3	NO	0	0
257	URO	30	F	2021/11/008404	RIGHT PUJ CALCULUS WI	RIGHT PCNL	22.11.21	17.11.21	24.11.21	7	2	11.5	NA	NA	NO	0	0
258	ONCO	60	M	2016/06/011554	F/U/C SCC LEFT GBS WIT	ELECTROPORATION	23.11.21	22.11.21	24.11.21	2	1	10.1	8.3	8.2	YES	9	0
259	GEN	23	M	2018/07/006931	[R]INGUINAL HERNIA	LAPAROSCOPIC/OPEN HERNIOPLASTY	23.11.21	23.11.21	24.11.21	1	1	14.7	NA	NA	NO	0	0
260	ONCO	44	M	2020/10/003355	F/U/C SCC LEFT GBS WIT	ELECTROPORATION	23.11.21	22.11.21	24.11.21	2	1	13.5	13.3	13.3	YES	1	0

S. NO.	DEPT	AGE	SEX	UID	DIAGNOSIS	SURGERY	DOSx	DOA	DOD	Duration of stay	Duration of stay I	PRE-OP HB	POST-OP HB	HB AT DISCHA	IRON GIVEN?	TRANSFUSION	AICU STAY
261	ONCO	66	F	2021/01/010721	F/U/C CARCINOMA RIGH	ELECTROPORATION	23.11.21	22.11.21	25.11.21	3	2	12	11	11	NO	0	0
262	ONCO	78	F	2021/07/003364	F/U/C CARCINOMA ESOF	ELECTROPORATION	23.11.21	22.11.21	24.11.21	2	1	10.2	9.9	10	YES	0	0
263	ONCO	33	F	2021/08/018578	SOLITARY THYROID NOD	LEFT HEMITHYROIDECTOMY	23.11.21	22.11.21	24.11.21	2	1	11.2	10.7	10.9	NO	0	0
264	GEN	23	M	2021/10/005497	R) LUNG INTACT HYDATI	VATS/OPEN THORSCOTOMYWITH EXC	23.11.21	22.11.21	28.11.21	6	5	12.1	11.8	10.6	NO	0	2
265	GEN	23	M	2021/10/005497	[R] LUNG INTACT HYDAT	VATS/OPEN THORACOTOMY WITH EX	23.11.21	22.11.21	27.11.21	5	4	12.2	10.6	11.3	NO	0	2
266	ORTHO	36	F	2021/10/011077	PIVD AT L3-L4 L4-L5	TLIF	23.11.21	22.11.21	25.11.21	3	2	12.5	NA	NA	NO	0	0
267	ORTHO	32	M	2021/10/015447	O/C/O GULLETINE FRACT	STSG AND ORIF PLATING	23.11.21	25.10.21	24.11.21	30	1	7.9	7.7	7.7	YES	3	0
268	GEN	18	M	2021/10/015594	[R]BREAST GYNECOMAS	[R]SUBCUTANEOUS MASTECTOMY	23.11.21	23.11.21	24.11.21	1	1	13.6	12.8	12.8	NO	0	0
269	ORTHO	20	M	2021/11/003100	CLOSED PRANATION EXT	TBW AND RUSH NAIL FOR FIBULA	23.11.21	21.11.21	25.11.21	4	2	14.7	13.6	13.6	NO	0	0
270	GI	80	M	2021/11/004765	CA SIGMOID COLON MO	LAP/OPEN ANTERIOR RESECTION	23.11.21	11.11.21	1.12.21	20	8	8.6	9	9.2	NO	0	0
271	GI	29	M	2021/11/005943	CORROSIVE PYLORIC STR	LAP/OPEN GASTROJEJUNOSTOMY	23.11.21	16.11.21	28.11.21	12	5	11.7	10.8	10.6	NO	0	0
272	GEN	42	M	2021/11/007987	SUPRAUMBILICAL HERNI	IPOM	23.11.21	22.11.21	23.11.21	1	0	14.5	NA	NA	NO	0	0
273	ORTHO	28	M	2021/11/008159	CLOSED PROXIMAL TIBIA	TBW AND RUSH NAIL FOR FIBULA	23.11.21	18.11.21	25.11.21	7	2	16.1	15.8	15.8	NO	0	0
274	GEN	48	M	2021/11/009112	BILATERAL INGUINAL HE	LAPAROSCOPIC/OPEN HERNIOPLASTY	23.11.21	22.11.21	24.11.21	2	1	15.8	NA	NA	NO	0	0
275	ONCO	29	F	2021/11/009893	PAPILLARY CARCINOMA	TOTAL THYROIDECTOMY+LEFT LATERA	23.11.21	22.11.21	25.11.21	3	2	11.1	10.8	10.7	NO	0	0
276	NEURO	24	F	2020/09/005759	LEFT CALVARIAL DEFECT	AUTOLOGOUS CRANIOPLASTY	23.11.21	19.11.21	25.11.21	6	2	9.5	8.5	8.5	YES	0	0
277	NEURO	45	F	2021/06/014819	LEFT CALVARIAL DEFECT	AUTOLOGOUS CRANIOPLASTY	23.11.21	23.11.21	26.11.21	3	3				NO	1	0
278	URO	37	M	2021/08/011068	OPERATED CASE OF RIGH	CPE+RGP+ROBOTASSISTED LAPROSCO	23.11.21	21.11.21	24.11.21	3	1	14	NA	NA	NO	0	0
279	URO	57	M	2021/10/004529	OPERATED CASE OF LEFT	LEFT DJ STENT REOVEL	23.11.21	21.11.21	24.11.21	3	1	15.8	NA	NA	NO	0	0
280	URO	23	M	2021/10/006876	RIGHT POORLY FUNCTIO	LAPROSCOPIC RIGHT RENAL SIMPLE NE	23.11.21	21.11.21	24.11.21	3	1	13.8	NA	NA	NO	0	0
281	GI	25	F	2021/03/016245	CORROSIVE ESOPHAGEA	COLONIC PULL UP	24.11.21	23.11.21	27.11.21	4	3	11.2	NA	NA	NO	0	0
282	GEN	40	M	2021/04/014391	P/O/C/O RIGHT HEMICO	STOMA CLOSURE	24.11.21	23.11.21	30.11.21	7	6	13.2	13.8	13.8	NO	0	0
283	GEN	71	M	2021/09/017438	RIGHT RECURRENT INGU	LAPAROSCOPIC RIGHT TAPP WITH VEN	24.11.21	23.11.21	26.11.21	3	2	13.4	13.2	13.2	NO	0	0
284	GEN	64	M	2021/10/009103	ANAL STENOSIS POST HE	EXAMINATION UNDER ANAESTHESIA A	24.11.21	23.11.21	25.11.21	2	1	9.7	10.1	10.1	YES	3	0
285	ONCO	46	M	2021/10/013398	CA OF RT LOWER GBS	WLE+SEGMENTAL MEDIBULECTOMY+I	24.11.21	23.11.21	29.11.21	6	5	14.5	14.1	14.1	NO	0	0
286	GEN	45	F	2021/11/008746	CHOLELITHIASIS	LAP/OPEN CHOLECYSTECTOMY	24.11.21	23.11.21	26.11.21	3	2	12.7	NA	12.8	NO	0	0
287	GEN	45	M	2021/11/009288	GENERALISED LYMPHYAI	LYMPH NODE BIOPSY	24.11.21	23.11.21	27.11.21	4	3	14	12.3	12.3	NO	0	0
288	ONCO	55	F	2021/11/011104	CA OVARY	PRIMARY CYTOREDUCTIVE	24.11.21	23.11.21	26.11.21	3	2	10.6	10.1	10.2	YES	0	0
289	URO	51	M	2020/09/010778	LT RENAL CALCULI WITH	LAPAROSCOPIC LT SIMPLE NEPHRECTO	24.11.21	22.11.21	25.11.21	3	1	11.9	11.9	11.8	NO	0	0
290	URO	52	M	2021/04/000640	B/L RENAL CALCULI S/P L	RT PCNL	24.11.21	19.11.21	25.11.21	6	1	11.1	NA	NA	NO	0	0
291	URO	72	M	2021/06/006856	METASTATIC HORMONE	B/L ORCHIECTOMY	24.11.21	21.11.21	27.11.21	6	3	9	NA	NA	NO	0	0
292	NEURO	29	M	2021/08/017227	RESIDUAL LEFT LOWER C	LEFT RMSO CRANIECTOMY/FAR LATER	24.11.21	16.11.21	27.11.21	11	3	15.7	14.2	14.2	NO	0	0
293	URO	37	M	2021/10/012919	RIGHT RENAL CALCULI	RIGHT PCNL	24.11.21	23.11.21	25.11.21	2	1	16.1	NA	NA	NO	0	0
294	URO	13	M	2021/11/006530	Right renal calculi with p	Right PCNL	24.11.21	23.11.21	26.11.21	3	2	13.1	NA	NA	NO	0	0
295	URO	30	F	2021/11/008404	RT PUJ CALCULUS WITH	RT PCNL/URSL	24.11.21	17.11.21	25.11.21	8	1	11.5	NA	NA	NO	0	0
296	URO	64	M	2021/11/008404	B/L RENAL CALCULI S/P F	LEFT PCNL +/- RIGHT RIRS	24.11.21	17.11.21	26.11.21	9	2	11.5	NA	NA	NO	0	0
297	NEURO	23	M	2021/11/011411	C3-C4 TRAUMATIC LISTH	REDUCTION AND C3-C4 LATERAL MASS	24.11.21	23.11.21	27.11.21	4	3	11.9	11.6	11.6	NO	0	0
298	URO	78	M	2018/12/012522	BPE WITH LUTS	TURP	25.11.21	24.11.21	26.11.21	2	1	12.5	13.2	13.2	NO	0	0
299	ONCO	66	F	2021/03/013630	CARCINOMA RIGHT BREA	RIGHT MODIFIED RADICAL MASTECTO	25.11.21	22.11.21	28.11.21	6	3	13.6	12.6	12.4	NO	0	0
300	ONCO	68	M	2021/04/010780	RIGHT RENAL CELL CARC	RIGHT RADICAL NEPHRECTOMY	25.11.21	15.11.21	29.11.21	14	4	10.2	10	10.4	NO	1	0
301	URO	61	M	2021/08/009483	LEFT RENAL CALCULI	LEFT PCNL	25.11.21	20.11.21	28.11.21	8	3	13.8	13.3	13.3	NO	0	0
302	ONCO	59	F	2021/08/010092	CARCINOMA OF HEPATIC	RT HEMICOLECTOMY WITH LIVER MET	25.11.21	23.11.21	4.12.21	11	9	10.1	14.6	8.1	YES	1	0
303	URO	24	M	2021/08/016432	RIGHT UNDESCENDED TE	CPE WITH URETEROCELE INCISION WIT	25.11.21	25.11.21	27.11.21	2	2	11.1	NA	NA	NO	0	0
304	URO	72	M	2021/09/019942	RIGHT RENAL MASS WIT	OPEN RIGHT RADICAL NEPHRECTOMY	25.11.21	24.11.21	26.11.21	2	1	7.5	NA	NA	NO	5	0
305	URO	78	M	2021/10/001684	GRADE 4 PHIMOSIS	CIRCUMCISION	25.11.21	25.11.21	26.11.21	1	1	12	NA	NA	NO	0	0
306	URO	60	F	2021/10/009737	B/L URETERIC CALCULUS	B/L URSL /LEFT RIRS	25.11.21	23.11.21	26.11.21	3	1	11.9	NA	NA	NO	0	0
307	NEURO	37	F	2021/10/018848	CVJ ANOMALY WITH BAS	OCCIPITO -C3 FIXATION WITH C1-C2 SF	25.11.21	24.11.21	29.11.21	5	4	13.2	11.3	11.3	NO	0	0
308	NEURO	23	M	2021/11/011411	C3-C4 ANTERIOLISTHESIS	C3-C4 LATERAL MASS SCREW AND ROI	25.11.21	23.11.21	26.11.21	3	1	11.9	11.4	11.4	NO	0	0
309	NEURO	38	M	2017/11/014511	DRUG REFRACTORY EPIL	ANTERIOR TEMPORAL LOBECTOMY WI	26.11.21	25.11.21	28.11.21	3	2	15.7	14.8	14.8	NO	0	0
310	URO	49	M	2021/03/012700	URETHRAL STRICTURE W	ENDO ASSESMENT +/- STAGE 1 URETH	26.11.21	23.11.21	28.11.21	5	2	14.1	13.6	13.6	NO	0	0
311	ONCO	67	M	2021/07/016341	CARCINOMA LEFT BUCCA	WLE+LEFT SEGMENTAL MANDIBULECT	26.11.21	25.11.21	29.11.21	4	3	11.4	11.2	11.2	NO	0	0
312	URO	42	M	2021/08/007270	B/L RENAL CALCULI WITH	PUCLT WITH B/L URSL WITH RIRS	26.11.21	23.11.21	2.12.21	9	6	13.1	NA	NA	NO	0	0
313	ONCO	41	F	2021/08/011403	CARCINOMA RIGHT BREA	RIGHT MODIFIED RADICAL MASTECTO	26.11.21	22.11.21	30.11.21	8	4	11.2	10.5	10.7	NO	0	0
314	ONCO	47	M	2021/08/012829	ADENOCARCINOMA LOV	ROBOTIC ASSISTED MCKEOWNS ESOPH	26.11.21	25.11.21	31.12.21	36	35	10.6	9.8	10.2	YES	4	0
315	GEN	20	M	2021/09/002264	S/P EXPLORATORY LAPR	STOMA CLOSURE	26.11.21	24.11.21	1.12.21	7	5	14.1	NA	NA	NO	0	0
316	GEN	48	M	2021/09/005604	LIPOMA OVER LEFT THIG	EXCISIONAL BIOPSY	26.11.21	25.11.21	26.11.21	1	0	13.3	NA	NA	NO	0	0
317	GI	54	F	2021/09/011965	SYMPTOMATIC CHOLELI	LAP/OPEN CHOLECYSTECTOMY	26.11.21	25.11.21	28.11.21	3	2	12.7	NA	NA	NO	0	0
318	GEN	27	F	2021/09/014825	S/P REEXPLORATION LAP	STOMA CLOSURE	26.11.21	27.11.21	29.11.21	2	3	10.7	10.5	10.5	NO	0	0
319	GEN	72	M	2021/10/002086	RIGHT INGUINAL HERNIA	OPEN HERNIOPLASTY	26.11.21	24.11.21	27.11.21	3	1	13.6	NA	NA	NO	0	0
320	GEN	54	M	2021/10/006967	SUPRAUMBLICAL+ RIGHT	IPOM &LAP/OPEN RIGHT HERNIOPLAS	26.11.21	24.11.21	27.11.21	3	1	16.4	NA	NA	NO	0	0
321	GEN	67	F	2021/10/011259	HYDATIDOSIS -LIVER	DIAGNOSTIC LAP & PROCEED	26.11.21	22.11.21	30.11.21	8	4	10.5	9.6	9.6	NO	0	0
322	GEN	52	M	2021/10/019014	CHRONIC RIGHT TIGH UL	STSG	26.11.21	25.11.21	27.11.21	2	1	11.4	NA	NA	NO	0	0
323	GEN	41	F	2021/11/004991	GIST- GASTROHEPATIC LI	DIAGNOSTIC LAP & PROCEED	26.11.21	18.11.21	30.11.21	12	4	8.9	8.3	8.5	YES	0	0
324	URO	30	F	2021/11/008404	B/L RENAL CALCULI S/P F	LEFT PCNL + /- RIGHT RIRS	26.11.21	17.11.21	27.11.21	10	1	11.5	NA	NA	NO	0	0
325	GEN	27	M	2021/11/009796	PERIANAL FISTULA	FISTULECTOMY	26.11.21	25.11.21	27.11.21	2	1	16	NA	NA	NO	0	0
326	GEN	64	M	2021/11/011959	B/L INGUINAL HERRNIA V	LAP/OPEN CHOLECYSTECTOMY WITH	26.11.21	25.11.21	26.11.21	1	0	10.7	NA	NA	NO	0	0

S. NO.	DEPT	AGE	SEX	UID	DIAGNOSIS	SURGERY	DOSx	DOA	DOD	Duration of stay	Duration of stay I	PRE-OP HB	POST-OP HB	HB AT DISCHA	IRON GIVEN?	TRANSFUSION	AICU STAY
327	GEN	45	F	2021/11/013240	RIGHT INGUINAL HERNIA	LAPROSCOPIC HERNIOPLASTY	26.11.21	25.11.21	26.11.21	1	0	13.2	12	12	NO	0	0
328	ORTHO	26	M	2018/08/003572	CLOSED TRAUMATIC CLA	ORIF WITH PLATING	29.11.21	26.11.21	30.11.21	4	1	13.7	12.9	12.9	NO	0	0
329	ORTHO	22	M	2021/07/001167	F/U/C/O MONTAGGIA FR	ORIG	29.11.21	25.11.21	1.12.21	6	2	12.5	8.6	8.6	YES	6	0
330	ORTHO	32	M	2021/08/020073	F/U/C/O CLOSED SEGME	ILIZAROV EXTERNAL FIXATOR	29.11.21	28.11.21	2.12.21	4	3	14.1	9.7	10	NO	3	0
331	ORTHO	48	F	2021/09/001669	RT OA KNEE	LT TKA	29.11.21	28.11.21	30.11.21	2	1	12.8	NA	NA	NO	0	0
332	ORTHO	46	F	2021/11/003634	ENCHONDROMA	EN BLOC RESECTION	29.11.21	28.11.21	1.12.21	3	2	13.5	NA	NA	NO	0	0
333	NEURO	56	F	2021/11/008363	D9-D11 HLF WITH COMP	D9-D11 LAMINECTOMY AN D DECOMC	29.11.21	26.11.21	30.11.21	4	1	13.4	NA	NA	NO	0	0
334	NEURO	26	M	2021/11/010158	OBSTRUCTIVE HYDROCE	ETV	29.11.21	25.11.21	3.12.21	8	4	15.1	14.3	14.3	NO	0	0
335	ORTHO	32	M	2021/11/012193	BL AVN HIP	LT THA	29.11.21	28.11.21	2.12.21	4	3	14.6	13.8	13.6	NO	0	0
336	ORTHO	14	M	2021/11/014939	ACL AVULSION FRACTUR	ARTHROSCOPIC ACL AVULSION FIXATI	29.11.21	28.11.21	5.12.21	7	6	10.8	9.9	9.9	YES	0	0
337	URO	69	F	2017/11/004110	CARCINOMA URINARY B	CPE	29.11.21	28.11.21	1.12.21	3	2	12.6	12.4	12.4	NO	0	0
338	URO	58	F	2018/02/013044	LEFT RENAL CALCULI WI	LAP LEFT URETEROLITHOTOMY +/- LEF	29.11.21	28.11.21	30.11.21	2	1	12.8	10.2	10.2	NO	0	0
339	NEURO	48	F	2021/08/003718	RIGHT INFERIOR FRONTA	AWAKE RIGHT FRONTOTEMPORAL CRA	29.11.21	25.11.21	1.12.21	6	2	11.4	9.5	9.5	NO	0	0
340	URO	23	F	2021/08/006498	HORSESHOE KIDENEY W	LAP RIGHT MOEITY NEPHRECTOMY	29.11.21	27.11.21	1.12.21	4	2	11.9	NA	NA	NO	0	0
341	URO	49	M	2021/08/007270	RIGHT RENAL CALCULI W	LAP LEFT URETEROLITHOTOMY	29.11.21	23.11.21	2.12.21	9	3	12.3	13.1	13.1	NO	0	0
342	URO	47	M	2021/09/014872	K/C/O CERVICAL DLBCL V	RIGHT PCN PLACEMENT AND LEFT PCN	29.11.21	28.11.21	30.11.21	2	1	8.5	NA	NA	NO	0	0
343	ORTHO	40	F	2021/08/012985	ANTEROLISTHESIS OF L4	TLIF AT L4-L5	30.11.21	29.11.21	1.12.21	2	1	11.2	10.9	10.9	NO	0	0
344	ORTHO	72	F	2021/09/006840	B/L ARTHRITIC KNEES SE	B/L TKA	30.11.21	28.11.21	1.12.21	3	1	9	8.6	8.6	YES	0	0
345	ORTHO	74	M	2021/11/003133	BL OA KNEE	BL TKA	30.11.21	22.11.21	3.12.21	11	3	10.9	9.3	9.3	YES	0	0
346	ORTHO	55	M	2021/11/008342	CLOSED PROXIMAL TIBIA	ORIF WITH PLATING	30.11.21	27.11.21	3.12.21	6	3	14.1	10.2	10.2	NO	0	0
347	ORTHO	19	M	2021/11/015957	PIVD AT L5-S1	DISCECTOMY AT L5-S1	30.11.21	29.11.21	2.12.21	3	2	11.9	11.5	11.5	NO	0	0
348	URO	81	M	2017/06/015409	FUCO CA penis with SPC	perineal Urethrostomy revision	30.11.21	28.11.21	2.12.21	4	2	11.5	NA	NA	NO	0	0
349	NEURO	33	M	2018/01/023888	RIGHT TEMPORAL SOL W	RIGHT FRONTO-TEMPORAL CRANIOTO	30.11.21	27.11.21	3.12.21	6	3	12.1	13.3	13.9	NO	0	0
350	URO	43	M	2021/03/011223	Right Renal calculi with C	Right RIRS / Right PCNL	30.11.21	29.11.21	1.12.21	2	1	7.9	7.3	7.3	YES	0	0
351	URO	75	M	2021/06/008426	BPE with LUTS with PUC	Robotic simple prostatectomy	30.11.21	29.11.21	4.12.21	5	4	16.7	14.8	14.8	NO	0	0
352	URO	23	F	2021/08/006498	Horseshoe kidney with R	Robotic Right moeity nephrectomy	30.11.21	27.11.21	2.12.21	5	2	11.9	NA	NA	NO	0	0
353	URO	32	M	2021/09/004162	Bulbar urethra stricture	End to End /BMG urthroplasty	30.11.21	29.11.21	1.12.21	2	1	6.3	7.6	7.6	YES	2	0
354	URO	73	M	2021/10/004270	BPE with LUTS with PUC	Robotic simple prostatectomy	30.11.21	28.11.21	9.12.21	11	9	9.3	9.1	9.1	YES	0	0
355	URO	42	M	2021/11/012433	S/P RARP with ureteric re	CPE + clot evacuation +/- Biopsy	30.11.21	25.11.21	5.12.21	10	5	9.1	5.7	6.3	YES	1	0
356	URO	43	M	2021/11/013650	Left VUJ calculus with Ri	Right URSL	30.11.21	28.11.21	1.12.21	3	1	14.1	NA	NA	NO	0	0
357	GEN	70	M	2019/10/016655	LT INGUINAL HERNIA + P	CIRCUMCISION +/- OPEN LT INGUINAL	1.12.21	30.11.21	2.12.21	2	1	13.5	12.5	12.5	NO	0	0
358	ONCO	50	F	2021/06/008844	CARCINOMA RECTUM	EXTRALEVATOR ABDOMINO-PERINEAL	1.12.21	29.11.21	9.12.21	10	8	9.4	7	8.5	YES	2	0
359	ONCO	55	M	2021/08/015083	ANTERIOR MEDIASTINAL	EXCISION OF ANTERIOR MEDIASTINAL	1.12.21	24.11.21	5.12.21	11	4	14.7	11	9.3	NO	0	0
360	GI	57	F	2021/10/015126	COLOVAGINAL FISTULA V	LAP/OPEN SIGMOIDECTOMY+ CHOLEC	1.12.21	26.11.21	5.12.21	9	4	11.6	10.3	10.3	NO	0	0
361	GEN	39	F	2021/11/011759	B/L INGUINAL HERNIA	LAP/OPEN HERNIOPLASTY	1.12.21	30.11.21	1.12.21	1	0	14.4	13.8	13.8	NO	0	0
362	ONCO	38	M	2018/06/012289	CARCINOMA LEFT LOWE	WLE +_ SEGMENTAL MANDIBULECTON	2.12.21	30.11.21	4.12.21	4	2	14.1	13	12	NO	0	0
363	GEN	62	M	2021/04/006678	(L) LOWER LIMB VARICO	TRENDELENBERG OPERATION WITH GS	2.12.21	1.12.21	4.12.21	3	2	11.5	NA	NA	NO	0	0
364	GEN	57	M	2021/09/014993	CHOLELITHIASIS POST ER	LAPAROSCOPIC CHOLECYSTECTOMY	2.12.21	1.12.21	4.12.21	3	2	14.4	13.7	13.7	NO	0	0
365	ONCO	67	M	2021/10/019499	RIGHT RENAL CELL CARC	LAPROSCOPIC RIGHT RADICAL NPHREC	2.12.21	29.11.21	4.12.21	5	2	16	13.2	12.5	NO	0	0
366	GI	46	M	2021/11/003975	WALLED OF PANCREATIC	LAP/OPEN CYSTO JEJUNOSTOMY	2.12.21	10.11.21	6.12.21	26	4	9.2	7.5	8.6	YES	0	0
367	GEN	41	F	2021/11/006104	(L) BREAST FIBROADENO	(L) FIBROADENOMA EXCISIONAL BIOPS	2.12.21	1.12.21	4.12.21	3	2	11.4	NA	NA	NO	0	0
368	GEN	62	M	2021/11/014192	INCISIONAL HERNIA	OPEN INCISIONAL HERNIA REPAIR	2.12.21	1.12.21	4.12.21	3	2	8	7.7	7.7	YES	0	0
369	ONCO	58	M	2019/11/003029	RETROPERITONEAL SARC	RESECTIONOF RETROPERITONEAL MAS	4.12.21	28.11.21	11.12.21	13	7	10.2	9.2	9.3	NO	0	0
370	ORTHO	64	F	2021/06/012838	BL OA KNEE	RT TKA+LT UKA/TKA	7.12.21	5.12.21	9.12.21	4	2	11.5	12	12	NO	0	0
371	ORTHO	20	F	2021/12/002759	L2 BURST FRACTURE	POST DECOMPRESSION AND PEDICLE S	7.12.21	6.12.21	14.12.21	8	7	10.1	6.5	9.2	NO	0	0
372	ORTHO	50	F	2021/04/001988	BL OA KNEE	ARTHROSCOPIC ACL RECONSTRUCTION	8.12.21	7.12.21	9.12.21	2	1	14	12.9	12.9	NO	0	0
373	ORTHO	69	F	2021/08/006304	BL OA KNEE	BL TKA	8.12.21	7.12.21	10.12.21	3	2	11.1	10.6	10.6	NO	0	0
374	ORTHO	47	M	2021/11/016929	CLOSED PROXIMAL SHAF	ORIF WITH PHILOS	8.12.21	1.12.21	10.12.21	9	2	10.5	9.2	9.2	NO	0	0
375	ORTHO	31	M	2021/12/001010	DEGENERATIVE LT KNEE	HIGH TIBIAL OSTEOTOMY	8.12.21	7.12.21	11.12.21	4	3	17.5	14	14	NO	0	0
376	ORTHO	59	M	2021/12/001143	DISTAL HUMERUS LAT C	ORIF WITH PLATING	8.12.21	7.12.21	9.12.21	2	1	13.5	10.4	10.4	NO	0	0
377	ORTHO	62	M	2021/12/002309	BL OA KNEE	LT TKA	8.12.21	7.12.21	12.12.21	5	4	14.5	13.5	13.5	NO	0	0
378	ORTHO	27	M	2021/12/013265	SSI	DEBRIDEMENT	28.12.21	23.12.21	2.1.22	10	5	14.5	13.7	13.7	NO	0	0
379	ORTHO	24	F	2021/12/015777	CLOSED TIBIA SHAFT #	ORIF WITH PLATING	7.1.22	1.1.22	9.1.22	8	2	13.4	12.6	12.6	NO	0	0
380	ORTHO	30	M	2021/12/016376	CLOSED DISTAL FIBULA #	ORIF WITH PLATING	7.1.22	4.1.22	8.1.22	4	1	13.2	11.1	11.1	NO	0	0
381	ORTHO	22	M	2014/09/004730	ACL TEAR LEFT KNEE	ARTHROSCOPIC ACL RECONSTRUCTION	12.1.22	10.1.22	13.1.22	3	1	14.1	13.2	13.2	NO	0	0
382	ORTHO	24	M	2015/07/002639	HILL SACH LESION	ARTHROSCOPIC REPAIR	12.1.22	11.1.22	13.1.22	2	1	16.1	14.7	14.7	NO	0	0
383	ORTHO	34	M	2021/12/004675	POSTEROSUPERIORSLAP	ARTHROSCOPIC SLAP REPAIR	12.1.22	10.1.22	13.1.22	3	1	15.6	14.4	14.4	NO	0	0
384	ORTHO	20	M	2022/01/025211	CLOSED HUMERUS #	ORIF WITH PLATING	12.1.22	10.1.22	13.1.22	3	1	11.2	11	11	NO	0	0
385	ORTHO	69	M	2020/05/001708	PFN CUT-OUT WITH AVN	IMPLANT REMOVAL+RT THA	19.1.22	14.1.22	21.1.22	7	2	14.5	11.8	10.5	NO	0	0
386	ORTHO	75	M	2021/08/013025	BL OA KNEE	RT TKA	19.1.22	17.1.22	20.1.22	3	1	14.1	12.8	12.7	NO	0	0
387	ORTHO	55	F	2021/11/002078	BL OA KNEE	BL TKR	19.1.22	18.1.22	20.1.22	2	1	13.2	10.5	10.5	NO	0	0
388	URO	44	M	2021/08/014214	O/C OF RARC WITH ILEAL	SECONDARY SUTURING OF MIDLINE W	5.11.21	29.10.21	18.11.21	20	13	8.5	8.3	9.2	NO	2	3
389	CTVS	52	M	AIIMS/JDH/2021/07	CABG	CABG	4.8.21	31.7.21	7.8.21	7	3	11.7			YES	0	0
390	CTVS	54	F	AIIMS/JDH/2021/04	MVR	MVR	29.7.21	22.7.21	8.8.21	17	10	11.1	8.3	7.8	YES	0	6
391	CTVS	54	M	AIIMS/JDH/2021/03	MVR	MVR	3.8.21	23.7.21	9.8.21	17	6	14.2	9.5	9.5	YES	0	3
392	CTVS	45	M	AIIMS/JDH/2021/07	CABG	CABG	5.8.21	2.8.21	13.8.21	11	8	14.0	10.4	9.8	YES	0	3

S. NO.	DEPT	AGE	SEX	UID	DIAGNOSIS	SURGERY	DOSx	DOA	DOD	Duration of stay	Duration of stay I	PRE-OP HB	POST-OP HB	HB AT DISCHA	IRON GIVEN?	TRANSFUSION	AICU STAY
393	CTVS	22	M	AIIMS/JDH/2021/07	Vascular	Vascular	5.8.21	28.7.21	13.8.21	16	8	13.4	8.6	8.6	YES	2	5
394	CTVS	35	M	AIIMS/JDH/2021/04	CABG	CABG	12.8.21	6.8.21	18.8.21	12	6	14.0	9.6	7.1	YES	0	4
395	CTVS	62	M	AIIMS/JDH/2021/06	TOF	TOF	24.8.21	18.8.21	1.9.21	14	8	13.3	7.4	7.5	YES	2	3
396	CTVS	70	M	AIIMS/JDH/2021/03	CABG	CABG	26.8.21	19.8.21	1.9.21	13	6	12.9	9.4	7.8	YES	0	3
397	CTVS	51	F	AIIMS/JDH/2021/07	ASD	ASD	27.8.21	23.8.21	2.9.21	10	6	14.7	12.8	12.8	YES	0	3
398	CTVS	57	M	AIIMS/JDH/2021/07	AVR+MVRepair	AVR+MVRepair	31.8.21	23.8.21	5.9.21	13	5	14.0	12.7	11.0	YES	0	3
399	CTVS	65	M	AIIMS/JDH/2021/08	VSD Closure+ AVRepair	VSD Closure+ AVRepair	1.9.21	27.8.21	7.9.21	11	6	11.4	7.7	9.6	YES	2	5
400	CTVS	46	M	AIIMS/JDH/2021/08	Femoro-Popliteal Bypass	Femoro-Popliteal Bypass	2.9.21	1.9.21	7.9.21	6	5	15.4	11.1	11.1	YES	0	2
401	CTVS	21	F	AIIMS/JDH/2021/08	CABG	CABG	3.9.21	20.8.21	7.9.21	18	4	11.7	9.7	9.5	YES	0	3
402	CTVS	50	F	AIIMS/JDH/2021/08	CABG	CABG	7.9.21	1.9.21	14.9.21	13	7	12.0	9.9	8.2	YES	2	3
403	CTVS	55	M	AIIMS/JDH/2021/07	CABG	CABG	8.9.21	2.9.21	14.9.21	12	6	13.5	11.9	10.2	YES	0	5
404	CTVS	19	M	AIIMS/JDH/2021/04	MVR	MVR	6.9.21	3.9.21	15.9.21	12	9	19.4	11.2	10.1	YES	1	4
405	CTVS	51	F	AIIMS/JDH/2021/08	CABG	CABG	9.9.21	31.8.21	15.9.21	15	6	15.0	11.1	10.1	YES	0	3
406	CTVS	38	F	AIIMS/JDH/2021/08	CABG	CABG	14.9.21	10.9.21	20.9.21	10	6	12.6	10.6	10.2	YES	0	3
407	CTVS	30	F	AIIMS/JDH/2018/11	MVR+TV Repair	MVR+TV Repair	13.9.21	6.9.21	21.9.21	15	8	12.4	10.6	10.1	YES	0	1
408	CTVS	48	F	AIIMS/JDH/2018/06	Right Common iliac inter	Right Common iliac interposition graft	15.9.21	9.9.21	21.9.21	12	6	12.6	10.1	9.1	YES	1	0
409	CTVS	42	F	AIIMS/JDH/2021/09	CABG	CABG	18.9.21	18.9.21	23.9.21	5	5	15.3			YES	0	0
410	CTVS	26	M	AIIMS/JDH/2018/11	Left Brachiobasilic fistula	Left Brachiobasilic fistula	22.9.21	18.9.21	30.9.21	12	8	13.1	9.8	8.3	YES	0	2
411	CTVS	35	F	AIIMS/JDH/2021/07	CABG	CABG	23.9.21	21.9.21	30.9.21	9	7	12.0	10.1	10.1	YES	0	3
412	CTVS	56	M	AIIMS/JDH/2021/08	Femoro-Popliteal Bypass	Femoro-Popliteal Bypass	27.9.21	22.9.21	4.10.21	12	7	13.0	9.2	7.7	YES	1	3
413	CTVS	22	M	AIIMS/JDH/2021/08	MVR	MVR	17.9.21	7.9.21	5.10.21	28	18	13.0	11.5	12.9	YES	0	3
414	CTVS	60	F	AIIMS/JDH/2017/04	AVR	AVR	28.9.21	22.9.21	5.10.21	13	7	11.3	9.5	7.7	YES	0	3
415	CTVS	50	M	AIIMS/JDH/2021/07	Os-ASD	Os-ASD	20.9.21	15.9.21	6.10.21	21	16	12.9	10.0	9.4	YES	1	4
416	CTVS	22	F	AIIMS/JDH/2021/07	DVR	DVR	1.10.21	28.9.21	6.10.21	8	5	13.5	10.1	10.3	YES	0	4
417	CTVS	33	M	AIIMS/JDH/2021/08	CABG	CABG	29.9.21	22.9.21	7.10.21	15	8	13.6	9.0	8.6	YES	1	2
418	NEURO	23	M	2021/11/011411	C3-C4 ANTERIOLISTHESIS	C3-C4 LATERAL MASS SCREW AND ROI	25.10.21	23.10.21	26.10.21	3	1	11.9	11.4	11.4	NO	0	0
419	CTVS	44	M	AIIMS/JDH/2021/02	AVR	AVR	6.10.21	29.9.21	13.10.21	14	7	15.2	11.6	11.5	YES	0	3
420	CTVS	20	M	AIIMS/JDH/2016/06	AVR	AVR	7.10.21	1.10.21	13.10.21	12	6	11.9	10.8	11.2	YES	0	5