



مستشفى الملك فيصل التخصصي ومركز الأبحاث
King Faisal Specialist Hospital & Research Centre

Quality and Safety Report



Second Quarter 2024



King Faisal Specialist Hospital and Research Centre

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EXECUTIVE SUMMARY

ACCREDITATION		
RIYADH	JEDDAH	MADINAH
5	2	1

MEDICOLEGAL		
RIYADH	JEDDAH	MADINAH
11	4	0

New process developed for the medicolegal cases with Ministry of Justice

SENTINEL EVENTS		
RIYADH	JEDDAH	MADINAH
2	5	0

MORTALITY			
CATEGORY	RIYADH	JEDDAH	MADINAH
Category (4)*	3	1	0
Category (2)**	3	0	1

* Category (4) (Unexpected preventable death).
** Category (2) (Expected death, with omission or commission).

MORBIDITY			
CATEGORY	RIYADH	JEDDAH	MADINAH
Major	1	1	1
Serious	0	0	0

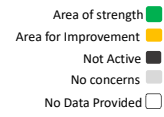
CORRECTIVE ACTIONS (EFFECTIVENESS/STATUS)	
Riyadh:	20% of the actions are strong.
Jeddah:	24% of the actions are strong.

Sentinel Events Corrective Actions Backlog



KPIs Areas of Strength & Areas for Improvement

Domain	KPI	R	J	M
Safety	Serious Safety Event Rate (SSER) per Adjusted Patient Days	Area of strength	Area of strength	Area of strength
	A Percent of surveyed patient with Hospital Acquired pressure injury (stage 2 and above)	Area of strength	Area of strength	Area of strength
	Pressure Injury Rate	Area of strength	Area of strength	Area of strength
	Falls with Injury	Area of strength	Area of strength	Area of strength
	Central Line (CLABSI) Rate	Area of strength	Area of strength	Area of strength
	Catheter-Associated Urinary Tract Infection (CAUTI) Rates	Area of strength	Area of strength	Area of strength
	Surgical Site Infection (SSI) Rate	Area of strength	Area of strength	Area of strength
	Multi-Drug Resistant Organism (MDRO) Rate	Area of strength	Area of strength	Area of strength
	Hand Hygiene	Area of strength	Area of strength	Area of strength
	% Near Miss Events	Area of strength	Area of strength	Area of strength
	Number of Safety Reports	Area of strength	Area of strength	Area of strength
	# HA-VTE Preventable Events	Area of strength	Area of strength	Area of strength
	% Medication Override from the Automated Dispensing Cabinets (ADC)	Area of strength	Area of strength	Area of strength
	% Admission Medication Reconciliation	Area of strength	Area of strength	Area of strength
	% Discharge Medication Reconciliation	Area of strength	Area of strength	Area of strength
	Rate Reported Medication Errors per 1000 adjusted patients days	Area of strength	Area of strength	Area of strength
	% Medication Errors Reaching the patient	Area of strength	Area of strength	Area of strength
	Access	Outside referral to decision waiting time "hr"	Area of strength	Area of strength
Emergency Room (ER) waiting time to be seen "min."		Area of strength	Area of strength	Area of strength
Emergency Room (ER) Boarding Time "hr."		Area of strength	Area of strength	Area of strength
New Patient (NP) first encounter < 2 weeks		Area of strength	Area of strength	Area of strength
Emergency Room (ER) Left without seen		Area of strength	Area of strength	Area of strength
All Radiology studies average waiting time for Priority 1		Area of strength	Area of strength	Area of strength
Fluoroscopy average waiting time for Priority 1		Area of strength	Area of strength	Area of strength
CT average waiting time for Priority 1		Area of strength	Area of strength	Area of strength
NM average waiting time for Priority 1		Area of strength	Area of strength	Area of strength
MRI average waiting time for Priority 1		Area of strength	Area of strength	Area of strength
US average waiting time for Priority 1		Area of strength	Area of strength	Area of strength
PET/CT average waiting time for Priority 1		Area of strength	Area of strength	Area of strength
Mammography average waiting time for Priority 1		Area of strength	Area of strength	Area of strength
Efficiency		% Operating Room (OR) utilization rate	Area of strength	Area of strength
	Average Length of Stay (ALOS)	Area of strength	Area of strength	Area of strength
	Bed Occupancy Rate	Area of strength	Area of strength	Area of strength
	Operating Room (OR) Cancellation	Area of strength	Area of strength	Area of strength
Effectiveness	Readmission Rate < 7 days	Area of strength	Area of strength	Area of strength
	Door To Balloon Time	Area of strength	Area of strength	Area of strength
	100-day patient mortality rate for allogenic stem cell transplants for pediatrics	Area of strength	Area of strength	Area of strength
	100-day patient mortality rate for autologous stem cell transplants for pediatrics	Area of strength	Area of strength	Area of strength
	100-day patient mortality rate for allogeneic stem cell adult patients	Area of strength	Area of strength	Area of strength
Appropriateness	100-day patient mortality rate for autologous stem cell transplant adult patients	Area of strength	Area of strength	Area of strength
	Active Clinical Pathways	Area of strength	Area of strength	Area of strength
	Crossmatch : Blood Transfusion Ratio (C:T ratio) New	Area of strength	Area of strength	Area of strength
Experience	Pediatric Pain Cycle Indicator (Assessment / Intervention / Reassessment (AIR))	Area of strength	Area of strength	Area of strength
	% Blood Transfusions outside the Guidelines	Area of strength	Area of strength	Area of strength
	Overall-Adult Inpatient (Press Ganey)	Area of strength	Area of strength	Area of strength
	Inpatient Pediatrics Experience	Area of strength	Area of strength	Area of strength
	Outpatients Experience	Area of strength	Area of strength	Area of strength
	Emergency Room Experience	Area of strength	Area of strength	Area of strength
	Ambulatory Care Experience	Area of strength	Area of strength	Area of strength
	Oncology Outpatient Experience	Area of strength	Area of strength	Area of strength
Dental Services Experience	Area of strength	Area of strength	Area of strength	
Patient Complaints	Area of strength	Area of strength	Area of strength	



EXECUTIVE SUMMARY

Issues and Activities to Highlight

1) Internal Events and Activities

- Clinical Risk Management Focused Risk Assessment Riyadh-3; Jeddah-2; Madinah-1
- Corporate Robust Performance Improvement Program-Window #1 (Completed):
 - o Riyadh: 76 projects; Jeddah: 59 projects; Madinah: 91 projects
- Active Clinical Pathway: Riyadh: 70; Jeddah: 13; Madinah: 12
- Great Catch Ceremony: Riyadh:24 Staff ; Jeddah: 14 Staff ; Madinah: 57 Staff.

2) External Collaborations and Events

- Saudi Patient Safety Center Award webinar presentation for (The Daily Improvement Coach Program: Enhancing Patient Safety through Continuous Improvement)

This report has been reviewed by executive leaders, members of the Quality Committees, and distributed to all hospital staff. We ensure full transparency and encourage collaboration across all levels of our organization to continuously improve our standards of care and patient safety.



Hisham Alomran, MD, MPH, MBA, CPHQ, FACEP
Chief Quality Officer
Quality Management Group

Date: 22 July 2024

RIYADH SENTINEL EVENTS EXECUTIVE SUMMARY

2* Sentinel Event were reported in KFSH&RC-Riyadh.



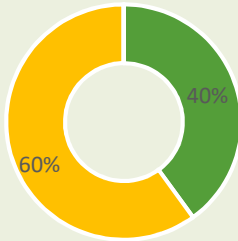
*1 an ongoing RCA meeting not yet finalized

1

Corrective Actions

A total of **5** Corrective Actions were established. The Actions are classified using the Classifications of VA – NPS Hierarchy of actions as below.

Action status:



■ Complete 59% ■ InProcess 41% ■ Overdue 0%

Standardization
ICIS Enhancement
Forcing Function
New Device
Automated
Technology
Architectural
changes
Simplify Process

Staffing
Redundancy
Check List
Standardized
Communication
Simulation

Training
Warning
Policy
New Procedure



■ strong ■ Intermediate ■ Weak

Patient Fall

Incident Date: 12/5/2024

A 56-year-old male with a history of decompensated liver cirrhosis recently transplanted. The patient fell standing up from his wheelchair inside his room. Imaging revealed a minimally displaced, impacted fracture of the right femoral neck. He underwent fixation the same day.



Root Causes	Corrective Actions	Effectiveness Measurement	Status
<ul style="list-style-type: none"> • Insufficient fall risk assessment tool. • Lack of consistent communication between the patient's fall score and their history. • There were significant fluctuations in the patient's fall assessment score during the hospital stay. 	<ul style="list-style-type: none"> ● ICIS Enhancement: Explore with adding history of fall: <ul style="list-style-type: none"> a. Within 6 months and during hospitalization as a required fields Responsibility: HITA & Nursing Affairs 	Auditing	In Process
	<ul style="list-style-type: none"> ● Education and Training: Reinforce the in-service training on Adults Fall Risk Assessment and Management, ensuring proof of completion. Responsibility: Nursing Affairs	Auditing	Completed
	<ul style="list-style-type: none"> ● Assessment Tool: Identify clear date for John Hopkins tool to be implemented. Responsibility: Nursing Quality	Auditing	In Process
<ul style="list-style-type: none"> • The wheelchair footrests contributed to the fall. 	<ul style="list-style-type: none"> ● Policy: Review and share policies and regulation related to the usage of the wheelchair inside patient room and reinforce it among nursing units. Responsibility: Nursing Affairs	Auditing	Completed
	<ul style="list-style-type: none"> ● Equipment: Explore the ability to utilize a user friendly wheelchairs in the future. Responsibility: Nursing Affairs		In Process

JEDDAH SENTINEL EVENTS EXECUTIVE SUMMARY



The number of Sentinel Events:

5* Sentinel Events (SE) were reported in KFSHRC-Jeddah.

*2 an ongoing RCA meeting not yet finalized

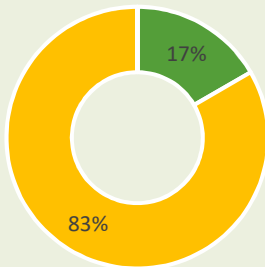
3

Corrective Actions

A total of 20 Corrective Actions were established. The Actions are classified using the Classifications of VA –NPS Hierarchy of Actions as below.

Action status:

ACTION STATUS



Complete 17% InProcess 83% Overdue 0%

Standardization
Automation
New Devices
Technology
Simplify Process

Check List
Documentation
Standardized
Communication
Redundancy

Warning
Policy
New Procedure

24%

33%

33%

Strong Intermediate Weak

Patient Suicide

Incident Date: 1/4/2024

A 47-year-old male patient with metastatic pancreatic cancer planned for palliative chemotherapy after correcting his electrolytes. His family reported behavioral changes and signs of depression and requested psychiatric support. The medical team referred the patient immediately for psychiatric consultation, and a resident assessed the patient. After a brief conversation, the patient was found to be restless and uncooperative and requested to leave the room to smoke outside. The resident asked the sitter to follow the patient, but the sitter failed to locate the patient. During this time, the patient had jumped from the 3rd-floor staircase. The patient succumbed to his injuries and died.



Root Causes	Corrective Actions	Effectiveness Measurement	Status
Inadequate psychological assessment to identify high-risk of suicide for patients of no previous mental disease in the admission assessment.	<ul style="list-style-type: none"> ● Software enhancements, modifications Enhance the "Psychosocial Assessment" in admission note, so as to link to a set of actions and be more easy to select Responsibility: Medical and Clinical Affairs 	Implementation	In Process
	<ul style="list-style-type: none"> ● Standardize on equipment or process Establishing a psychological support program with appropriate resources To establish such a program for oncology patients and adopting Distress Thermometer / Edmonton Symptom Assessment System (ESAS). Responsibility: Medical and Clinical Affairs 	Implementation	Completed
	<ul style="list-style-type: none"> ● Standardize on equipment or process Develop a comprehensive management protocol/pathway for Patients identified as high risk for suicide. Responsibility: Medical and Clinical Affairs, Nursing Affairs 	Auditing	In Process
•Inconsistencies in nursing screening tools which are insensitive in detecting patient at risk and triggering a referral to social services or psychology	<ul style="list-style-type: none"> ● Standardize on equipment or process Re-evaluate the nursing screening tools for "Psychosocial and Mental Status" to include the following: 1. Standardize the screening tools based on best practices. 2. Automate the appropriate referral process based on the screening outcome. Responsibility: Nursing Affairs 	Auditing	In Process
• The staircase's handrails were not high enough to prevent climbing over.	<ul style="list-style-type: none"> ● Double Checks Conduct safety checks for all staircases and blind spots for safety and availability of CCTV. Responsibility: Safety and Security 	Implementation	Completed
	<ul style="list-style-type: none"> ● Double Checks Explore and apply safety elements/precautions to prevent falling down or jumping over the staircases and/or elevated platforms. Responsibility: Safety and Security 	Implementation	Completed
	<ul style="list-style-type: none"> ● Architectural/physical plant changes Explore having access control for public staircases. Responsibility: Safety and Security 	Implementation	Completed

Procedural

Trans-catheter Aortic Valve Implantation (TAVI) complicated by hematoma lead to hemorrhagic shock

Incident Date: 30/4/2024

An elderly female patient, underwent a Trans-catheter Aortic Valve Implantation TAVI procedure electively after which the patient was received in the telemetry unit. The patient was noted to be hypotensive and with a large hematoma at the groin site. She required transfer back to the ICU. The vascular team did an emergency hematoma evacuation and femoral repair. Eventually, the patient developed cardiac arrest due to multi organ failure.



Root Causes	Corrective Actions	Effectiveness Measurement	Status
The Cardiologist assumed that the breast surgery was imminent and would not be performed unless the patient was cleared; therefore, they performed the TAVI without exploring other treatment options and without discussing the case in the Cardiovascular Department meeting.	<ul style="list-style-type: none"> ● New procedure/memorandum policy Reinforce and mandate the discussion of each case in the Cardiovascular multidisciplinary meeting with a thorough review of case acceptance, treatment plans, techniques, and choice of device. Responsibility: Medical and Clinical Affairs	Implementation	In Process
The developing hematoma was underestimated initially after a successful TAVI procedure. Moving the patient from the table to the bed may have increased pressure in the vasculature, exacerbating the bleeding. The interventionist assumed the hematoma was controllable and did not trigger further inspection.	<ul style="list-style-type: none"> ● Double Checks Review the management of hematoma in the Invasive Cardiac Catheterization Lab based on best practices to achieve a target complication rate of less than 5%. Responsibility: Medical and Clinical Affairs	Implementation	In Process
	<ul style="list-style-type: none"> ● Standardize on equipment or process Improve the collaboration between cardiology and cardiothoracic surgery in managing TAVI cases, addressing complications Responsibility: Medical and Clinical Affairs	Auditing	In Process
	<ul style="list-style-type: none"> ● New procedure/memorandum policy Create a task force to develop guidelines for monitoring hematomas and preventing hemorrhagic shock. Responsibility: Medical and Clinical Affairs	Implementation	In Process
	<ul style="list-style-type: none"> ● Double Checks Enforce the interventionist's physical assessment of the access site immediately before transferring the Patient out of the Invasive Cardiac Catheter Labzation Lab. Responsibility: Medical and Clinical Affairs	Auditing	In Process
Insufficient documentation leading to gaps in intra-procedural monitoring and post procedural handoff. Intra-procedural vital signs and patient transfer order were not documented.	<ul style="list-style-type: none"> ● Standardize on equipment or process Ensure that Cath Lab procedural booking is standardized using the Surgical Case Manager System. Responsibility: Nursing Affairs	Auditing	In Process
	<ul style="list-style-type: none"> ● Enhanced documentation, communication Grant all nursing staff unrestricted access to Apollo, HeartNet, and SurgiNet to ensure that documentation is visible and accessible. Responsibility: Medical and Clinical Affairs	Implementation	In Process
	<ul style="list-style-type: none"> ● Enhanced documentation, communication Reinforce the entry of transfer/communication orders before transferring patients from the cath lab Responsibility: Medical and Clinical Affairs	Auditing	In Process

Patient Management

Delayed CT scan for Management of bleeding

Incident Date: 5/6/2024

An ICU patient with hemorrhagic shock had an order for a CT abdomen with contrast to rule out active bleeding. Multiple failed attempts at peripheral line insertion led the ICU attending to request using the femoral central venous catheter. A communication order was entered into the system as per policy, mentioning the CVC's compatibility with the CT machine. The Radiology department refused to perform the study using the CVC. To overcome this delay, the ICU attending escalated the matter to the radiology chairman. The CT was performed after a 24-hour revealing active bleeding and a drop in hemoglobin, with deterioration in hemodynamics on maximum treatment. The patient developed cerebral infarction, leading to cardiorespiratory failure and the patient's unfortunate demise.



Root Causes	Corrective Actions	Effectiveness Measurement	Status
Lack of Radiologist and Technologist awareness regarding the new compatible CVC guideline. The CT scan was not initiated upon request and it took around 24 hours to complete the exam.	<ul style="list-style-type: none"> ● New procedure/memorandum/policy Updated the policy administration of contrast media with power injectable new guideline. Responsibility: Medical and Clinical Affairs 	Implementation	In Process
	<ul style="list-style-type: none"> ● Enhanced documentation, communication Communicate the new CVC power injectable contrast media guideline with all Medical Department. Responsibility: Medical and Clinical Affairs 	Implementation	In Process
	<ul style="list-style-type: none"> ● Standardize on equipment or process Standardize the CVC line insertion to a power injector-compatible in Critical Care Medicine. Responsibility: Medical and Clinical Affairs 	Implementation	In Process
Inadequate Communication and handoffs between ICU and Radiology. The patient was unstable to be transferred to the Radiology Department, the primary physician ordered to hold the CT scan until the patient completed the massive blood transfusion protocol	<ul style="list-style-type: none"> ● Enhanced documentation, communication Reinforce adding a communication order in ICIS by ICU physicians prior sending the patient to the Radiology Department for urgent cases (unstable patients). Responsibility: Medical and Clinical Affairs 	Implementation	In Process
Failure to escalate an urgent CT scan by the primary physician to the Radiology chairman assuming that the CT order was sufficient and assumed the knowledge of Radiologists and Technicians of the CVC compatibility guidelines.	<ul style="list-style-type: none"> ● Enhanced documentation, communication Reinforce the importance of timely/ immediate escalation for unresolved disagreements for urgent procedures. Responsibility: Medical and Clinical Affairs 	Implementation	In Process

MORTALITY AND MORBIDITY REVIEWS

Riyadh

Mortality Cases	Recommendations
<p>1. Cat 4</p> <p>15-year-old known heart transplant patient presented to the EMS 6 days after a cardiac biopsy. While awaiting admission she had worsening shortness of breath, collapsed and coded in the corridor.</p> <p>Issues:</p> <ul style="list-style-type: none"> • The pathology (heart transplant expertise) consultant was on leave during that period with no alternative coverage. • The patient presented to the EMS one day earlier. She was discharged by Pediatric Cardiology with the plan of outpatient follow up. • The Emergency physician accepted the plan of the Pediatric Cardiology and did not intervene to stop the discharge. • The patient returned shortly to the Emergency room, and decision was made to admit her in a monitored bed with high suspicion of rejection. • The patient was kept in the Emergency corridor bed with no consultation for Cardiac Intensive care. 	<ul style="list-style-type: none"> • The Heart Center to update the M&M Department on the proposed list of actions and provide copy of the Just Culture application to the M&M department for reference. <ul style="list-style-type: none"> o The physician who did the Cath and read the echo and the o the physicians (specialist and consultant) who discharged the patient should be counseled. o The consultant who saw the patient prior to code should be counseled for not giving high dose steroid and not identifying the urgency of the patients and obtaining official ICU consultation and finding proper bed placement for the patient. o Pediatric Cardiology to develop a policy to standardize the echocardiogram and cardiac catheterization for post heart transplantation patient. o As well as a clinical pathway for management of patient with heart transplantation including endomyocardial biopsies o To plan for coverage in case the single pediatric transplantation consultant on leave or is sick. Additional Pediatric Transplant consultant should be hired. o The Heart Center to provide education for all pediatric cardiology staff about management of heart transplantation patient. o If the patient needs critical care bed, it should be escalated through the chain of command. • The Heart Center to submit a copy of the developed Pathway to the M&M Department upon its completion (in-process). • The Heart Center to ensure a safe and timely transfer of the pediatric patients to the adult service as per the hospital standards • To apply the Just Culture policy to the physician who allowed patient's discharge in the first visit. • The Emergency Department to escalate through the chain of command if disagreement with the consulted service concerning patient's management and disposition.
<p>2) Cat 4</p> <p>69-year-old male, with gastric cancer was planned for total gastrectomy. However, due to surgical complication of iatrogenic tracheal injury, he developed mediastinitis and septic shock and did not survive.</p> <p>Issues:</p> <ul style="list-style-type: none"> • There was a delay in surgical intervention as the patient initially refused surgery and requested a second opinion internationally, though he then later agreed to undergo surgery. • Given he was staged as Siewert II, it was believed that gastrectomy and gastroesophageal resection would be adequate. However, the operating surgeon continued to obtain positive surgical margin, which required reconstruction. Having consulted thoracic surgery intraoperatively, it was decided to delay the reconstruction and plan and prep the patient accordingly for a second stage surgery. • Due to lack of appropriate preoperative planning and preparation by the primary hepatobiliary surgery team, the patient required a second surgery to undergo reconstruction that was complicated by iatrogenic tracheal injury. • There is major deviation from the standard of care since such patient from the onset should have been consented and prepared for all possibilities as part of the initial surgery including total esophagectomy and colonic interposition. Furthermore, the case also required appropriate multidisciplinary involvement of the thoracic surgery team for the initial surgery. • Had appropriate preoperative planning and preparation been carried out, this may have changed the patient's outcome. • There is no well-defined criteria regarding which cases are referred to Hepatobiliary Surgery and Surgical Oncology. • There is an overlap of cases between Hepatobiliary Surgery and Surgical Oncology since this is a gastric cancer case, which should have been at least seen or discussed with an experienced surgical oncologist with significant experience in dealing with such cases. 	<ul style="list-style-type: none"> • Hepatobiliary Surgery and Surgical Oncology should identify criteria about cases are referred to each section. in order to consolidate experience, provide optimal care, and avoid delay in management. • The Patient Safety Section to re-review and determine whether this case meets the criteria for a potential sentinel event.

Mortality Cases	Recommendations
<p>3. Cat 4 4-year-old child with complicated single ventricle physiology, Status post Fontan procedure. He had uneventful PA stent dilatation. He was transferred to PICU, intubated, and ventilated. Post-cath that he had a high-grade fever, tachycardia, and septic shock picture required inotropic support and frequent boluses. He showed durations of ectopic atrial tachycardia with HR reaching 240, accompanied by hemodynamic instability, received two boluses of amiodarone infusion, and was then put on esmolol infusion with incremental adjustments. The patient was transferred to P-CSTICU, and nitric oxide started. The code status changed to DNAR, and later in the day, he was pronounced dead.</p> <p>Issues:</p> <ul style="list-style-type: none"> • He sustained Protein-losing enteropathy, which is considered one of the complications of Fontan circulation. • He underwent RPA/LPA stent dilatation with an expected mortality of <1%. • No multidisciplinary meeting was held prior to the procedure. • The team failed to discuss the case with the ECMO team in anticipation of the possible need. • There is no clear policy for the disposition of pediatric patients with complex congenital cardiac disease after Cardiac Catheterization; it depends on the case and the opinion of the primary cardiologist. Usually, the decision is made after the procedure, but for a patient with complex anatomy and history, the Cardiac ICU is the most appropriate disposition. • There was no clear disposition plan for the patient after the procedure despite the complex anatomy and history and the clear anesthetist's recommendation for same-day Intensive Care Unit admission. • ECMO was the best approach at the time of the early signs of deterioration. Unfortunately, ECMO was considered very late (during the code), and he was deemed not a candidate as his INR was 10. • The team failed to consider nitric oxide to improve the cardiac output. • There was a delay in involving the primary team with the early signs of deterioration. • There was an unexplained delay in transferring the patient from the PICU to the cardiac ICU. <p>The case showed that there was poor communication among the involved services of the PICU and the Cardiology team during patient management.</p>	<ul style="list-style-type: none"> • Multidisciplinary discussions should be held regularly and whenever there is a procedure or elective admission for a procedure, minor surgery, or intervention. • The discussion should be held closer to the date of the procedure/ intervention. • The detailed planning for pre and post-procedure, including the appropriate disposition for the patient, should be documented clearly in the patient's file. • For future complicated cases, we highly recommend that the intensivist team involve the primary team in patient care at the early signs of deterioration to optimize patient care.
<p>4. Cat 2 61-year-old male, with dilated cardiomyopathy, with pacemaker and an ICD presented with 3 syncope events with multi-ICD shocks. CT showed right parieto-temporal acute subarachnoid hemorrhage extended to the Sylvian fissure. Neurosurgery were consulted and decided no neurosurgical intervention could be offered to the patient and recommended neuro monitoring.</p> <p>Issues:</p> <ul style="list-style-type: none"> • No documentation in the patient's file regarding the prognosis, plan of management, discussion with the family regarding the patient's condition, and code status of the patient. • The traumatic subarachnoid hemorrhage that the patient sustained didn't require any neurosurgical intervention. • It was documented clearly in the patient's file that the CCU cannot perform neurological monitoring despite that neurological monitoring is considered one of the patient's core standards of care in critical care areas. • The Emergency Medicine Department has a very clear, robust policy in case there is a conflict of ownership between services. However, this has not been followed in this particular case. The conflict was not raised to higher management. • The patient had an unsalvageable disease, and the care he received prior to his demise did not meet the standards of care. • Although a meeting was held with all stakeholder where it was agreed that cardiac patients would be admitted under neurosurgical care if they required any surgical intervention. Unfortunately, there are no approved meeting minutes available for this meeting. 	<ul style="list-style-type: none"> • We highly recommend the intensivist team involve the primary team in patient care at the early signs of deterioration for all complicated cases. • The Director of the Emergency Medicine Department has to reemphasize the need to escalate the conflict between the teams regarding patient disposition to the hospital administration. • Nursing Affairs to review the nursing practice in the CCU regarding neurological monitoring, especially since these patients are at risk at any time of developing neurological issues as they are on antiplatelet and anticoagulant therapy. • Heart Center and the Neuroscience Center to collaborate to provide a clear guideline for cardiac patients with neurological diseases.
<p>5. Cat 2 68-year-old female, with locally advanced pancreatic cancer. Underwent surgery which was aborted due to metastases, and she later died.</p> <p>Issues:</p> <ul style="list-style-type: none"> • She started on systemic chemotherapy but was deemed unresectable after imaging by surgical oncology, so the case was referred to hepatobiliary surgery for a second opinion. • Hepatobiliary surgery advised to continue chemotherapy since the tumor was initially considered unresectable due to disease burden. • She continued to receive chemotherapy and was re-evaluated by hepatobiliary surgery and in view of her stable disease and acceptable functional status, it was indicated to proceed with surgical exploration since such locally advanced disease with vascular encasement is operable but the outcome is unknown. • Unfortunately, due to proven disseminated peritoneum metastases identified during the surgical exploration the procedure was aborted. • The committee disagree with the feedback from abdominal transplant & hepatobiliary surgery that palliative care was uncooperative in such case, since there was no palliative care consult requested by the primary hepatobiliary team throughout her hospital course. 	<ul style="list-style-type: none"> • Since there is an overlap between Hepatobiliary Surgery and Surgical Oncology, they should agree on the scope of disease that should be referred directly to each.

Mortality Cases	Recommendations
<p>6. Cat 2</p> <p>71-year-old male, with interstitial lung disease, oxygen and BiPAP dependent, accepted for lung transplantation but arrested at time of anesthesia induction, requiring ECMO initiation to restore cardiopulmonary circulation. He sustained severe anoxic brain injury and died one month later.</p> <p>Issues:</p> <ul style="list-style-type: none"> • Although he arrested after induction and had extended time of no ECMO flow/low flow, CPR was started immediately and ECMO started within thirty minutes of the arrest. • The patient had multiple admissions before his transplant because of worsening respiratory status and it would have been more appropriate if he was evaluated again by the anesthesia team as his risk may have changed. • There was no anesthesia evaluation before transplant for such a complex case to assess the need for ECMO, especially as his respiratory status has worsened prior to the transplant. • It was advisable to involve the critical care team/ECMO team prior for management planning. • There was poor and inaccurate CPR documentation in the OR; there was no clear duration of the arrest or pulse restoration. • The OR was not equipped with various types and sizes of ECMO cannulas and other relevant tools to be ready for any unexpected emergency situation. • The patient and family were not properly consented about the 5-year survival rate, and the cardiac risks intra or post operatively. 	<ul style="list-style-type: none"> • The Lung Health Center surgical team to ensure, while consenting, listing all risks of cardiac complications and mortality intra and post operatively. • The Lung Health Center surgical team to consider, in similar complex cases, a multidisciplinary pre-transplant evaluation approach in order to timely involve the ICU and the Anesthesia team. • The OR management to ensure the availability of various types and sizes of cannulas and other tools/equipment needed for ECMO placement in case of emergencies.
Morbidity Cases	Recommendations
<p>1. Major</p> <p>36-year-old male, with MEN1 syndrome with pituitary microadenoma not on treatment, status post total parathyroidectomy with reimplantation in the left forearm in 2022, and bronchopulmonary carcinoid was on chemotherapy as neoadjuvant therapy; subsequent images showed regression. Admitted electively for thymic mass resection. On the 1st of Feb, he underwent VATS exploration from left side, Sternotomy, Thymectomy, and Left upper lobe wedge resection. After resection of the left innominate vein, there was some bleeding coming from the stapler lines at the confluence with SVC. The repair was done. Later, stenosis was noted at the stapler line where the stitches were placed, and then it was removed. A pericardial patch was put on to cover the defect area. Postoperatively, he developed RT upper limb edema and face edema and he was started empirically with heparin infusion then switch to Clexane. On the 3rd Feb, he had a Chest CT, which confirmed SVC thrombosis with bilateral sub-segmental PE. He was seen by neurology and their impression that Patient had left cerebellar stroke that consistent with embolic in nature and not related to SVC obstruction. On the 7th Feb, he had MRI, which showed bilateral proptosis with diffusion restriction of the optic nerves, concerning acute optic ischemic neuropathy. He was seen by ophthalmology team, and it was recommended to follow the primary team's plan and continue lubricating drops and lid-taping for both eyes.</p> <p>Issues:</p> <ul style="list-style-type: none"> • The surgery started at 1500H, which was considered late for a big surgery. Such surgeries would be better in the morning, but this did not affect the outcome. • During the intraoperative assessment, it was found that the tumor was quite extensive; accordingly, the decision was to proceed with an extensive resection. This decision was probably right at that time. • During the resection of the left innominate vein, some bleeding came from the stapler lines at the confluence with the SVC. • The vascular surgery team was not consulted at this time, and the surgeon decided to repair the injury with stitches and a haemopatch. Subsequently, the repair did not provide normal flow but provided thrombosis. • The members agreed that the vascular surgery team should be involved when stenosis was found at the stitches' site. • The members feel that the repair process, the time taken during the repair (Clamp/unclamp), and PFO contributed to the patient's postoperative complications. • The patient was under deep sedation after the immediate surgery, and therefore, it was unable to pick up early signs of brain insult. • The high-dose heparin infusion had suboptimal dosing. • There was a delay in consulting the Thrombosis team after the surgery. • The vascular surgery team was consulted after the surgery, and based on the patient's condition at that time, the involved specialties agreed to treat the patient conservatively as the patient improved. • There was a delay in consulting the ophthalmology team after the surgery. The consultation was requested almost 19 days after the surgery. • The assessment was the patient had optic atrophy in both eyes, which was most likely 	<ul style="list-style-type: none"> • All major and complex elective surgeries should be started during working hours when full support is available. • For such cases, a vascular surgery consultation should be obtained prior to the surgery as a potential backup to prevent similar incidents.

MORTALITY AND MORBIDITY REVIEWS

Jeddah

Mortality Cases	Recommendations
<p>1. Cat 4 78 years old female patient underwent a percutaneous aortic valve replacement. Post procedure patient had hematoma and bleeding from the right femoral area in cath lab, the physician advised pressure dressing and transferred to the floor. Later the patient became hemodynamically unstable and required transfer to the ICU. The bleeding was controlled by vascular surgery. The patient continued to deteriorate and died.</p> <p>Issues: No discussion of the case in a multidisciplinary meeting pre Cath intervention. 2. Transferring the patient to the floor while bleeding from the femoral site was incorrect</p>	<p>Referred to the sentinel event committee</p>
Morbidity Cases	Recommendations
<p>1. Major 12 Years old male patient with cerebral palsy and quadriplegia admitted to PICU. While there, the nurse noticed the patient is crying when she removed the BP cuff from the right leg. X-ray showed right distal proximal tibial fracture.</p> <p>Issues: Hospital acquired fracture</p>	<ol style="list-style-type: none"> 1. To add a section under the vulnerable patient policy (on caring and handling of patient prone to fractures. 2.To consult Orthopedic and Physiotherapy on admission of a prone to fracture patients. 3. To develop an individualized plan of care for movement for every patient prone to fracture and document it on admission, to be consistent with international guidelines. 4. Develop a wrist band for easy identification of prone to fracture patients, especially for transfer and procedural areas. 5. Education for nurses to be provided on handling prone to fracture patients.

MORTALITY AND MORBIDITY REVIEWS

Madinah

Mortality Cases	Recommendations
<p>1. Cat 2 A 22-year-old female with stage 4 Hodgkin Lymphoma, status post 8 cycles of chemotherapy presented for severe pain in the lower back and thighs. Laboratory work showed neutropenia and elevated lactate. She was discharged after her pain was relieved by analgesics. She returned to the Emergency Room the same day with the same complaint and was discharged without blood work. On the third visit, within 48 hours of the first ER visit, she was admitted with severe sepsis. The workup showed emphysematous osteomyelitis that rapidly progressed to multiorgan failure and the patient passed away within 12 hours of admission due to refractory septic shock, severe hemolytic anemia, lactic acidosis, DIC, and pulmonary hemorrhage. Later blood culture results showed clostridium perferinges gas gangrene.</p> <p>Issues: 1. Sepsis protocol was not fully followed, leading to delays in sepsis diagnosis, workup & treatment.</p>	<p>1. Educational sessions for all treating physicians on early sepsis identification and treatment, especially in immunocompromised patients. 2. Low threshold for further workup if the patient returns to the ER with similar complaints within 24 hours. 3. An audit should be performed for: a. Recognition of sepsis. b. Response time for repeating lactate after the initial fluid resuscitation. c. Initiation of antibiotics.</p>
Morbidity Cases	Recommendations
<p>1. Major A 57-year-old female presented with a left breast mass on Oct 1st, 2022. The biopsy showed invasive ductal carcinoma. The patient underwent a left mastectomy and sentinel node dissection in December 2022. Pathology showed a 2 mm area of invasive ductal cancer. Margins and lymph nodes were negative. The patient was declared cancer free and no workup was done to rule out metastatic disease. In July 2023, she underwent a right thyroidectomy for papillary thyroid carcinoma. In January 2024, the patient underwent a back pain workup that showed metastatic lesions in the liver and spine with a compression fracture of the L2 vertebra. The patient was also noted to have extensive loco-regional disease in the surgical bed and axillary lymph nodes. A biopsy confirmed it to be breast cancer.</p> <p>Issues: 1. A post-operative tumor board discussion was not held. Oncology services were not involved till the patient developed local, regional, and distant metastasis. 2. Care was provided as per NCCN (National Comprehensive Cancer Network) guidelines for Invasive ductal carcinoma of the breast. Timelines were also followed as per the breast cancer pathway implemented in our hospital. The staging was not indicated at the time of presentation. Molecular testing was not performed due to the tumor size being too small.</p>	<p>1. MDT (multi-disciplinary team) meeting should be held post-operatively and documented in the power chart. 2. If an untoward event happens, like tumor recurrence, the concerns of the patient and the family should be addressed in a disclosure meeting, held as per hospital policy, and the discussion should be documented in the chart in a designated note. 3. As cancer diagnosis and treatment plans require extensive counseling, adequate time and resources should be provided to the physicians. Currently, there are 4 new patients per half-day session. One of the recommendations is to limit the new patients/new follow-up to 2 per half-day clinic. 4. The breast cancer coordinator should coordinate all the meetings and keep a log of the registry.</p>

MEDICOLEGAL REPORT *

Riyadh

This report consists of cases with the following criteria:

1. Cases that were referred to an external legal authority during the quarter.
2. Cases that were closed/settled by the external legal authority during the quarter.

Case Description	Corrective Actions
Complaint Date: 03/07/2021 6-year-old developed sickle cell disease following cord blood transplantation.	<ul style="list-style-type: none"> ● To restructure the cord blood bank processes to perform safely thru an ongoing audit.
Complaint Date: 31/07/2019 A patient presented with perivaginal bleeding which lead to child hypoxic injury	<ul style="list-style-type: none"> ● Revise the policy regarding pregnant patients presenting to the DEM with life threatening conditions. ● Counsel physician for delay in attending consultation in ER
Complaint Date: 04/01/2023 2-year-old was discharged after assessment for fever and seizures and later on developed positive culture and coded during the LP procedure.	<ul style="list-style-type: none"> ● Residents to be certified prior to performing procedural sedation ● To abstain from involving family members, during performing procedure. And to counsel physicians for delayed antibiotics and performing medical practice without the needed qualifications.
Complaint Date: 19/10/2023 24-year-old developed post lung transplant lymphoproliferative disorder. He is not a candidate for re-transplant because of poor outcomes associated with restrictive phenotype and chronic AMR.	N/A
Complaint Date: 11/02/2020 Newborn was discharged home and returned requiring requiring phototherapy and one dose of IVIG.	N/A
Complaint Date: 24/04/2023 28-year-old male with osteogenesis imperfecta. He was mismanaged in regard to his scoliosis.	<ul style="list-style-type: none"> ● Established Spine Surgery program to oversee and follow up similar types of cases.
Complaint Date: 24/10/2022 2-year-old female, with complex congenital cardiac disease who arrested after pacemaker implantation, complicated by neurological sequela.	N/A
Complaint Date: 28/12/2023 68-year-old male developed postoperative hemorrhagic shock after laparoscopic cholecystectomy, due to coagulopathy related to long-term anticoagulation therapy.	<ul style="list-style-type: none"> ● Department of Surgery to emphasize the importance of including such high mortality risk in the consent form and counselling process, among its department staff.
Complaint Date: 03/08/2021 A female, with breast cancer treated with improper chemotherapy based on a false-negative result (HER 2).	<ul style="list-style-type: none"> ● Pathology & Laboratory Department to revise the policy for Immunohistochemical Stain ● The Pathology & Laboratory Department should enforce all staff to <ul style="list-style-type: none"> - Repeat the test on the available slides in case of disagreement - Communicate the discrepancy - Pathologists to discuss tumor results ● Oncology Centre to discussing result discrepancies in the tumor board meeting and documenting it.
Complaint Date: 28/11/2022	

41-year-old male, developed pulmonary edema after surgery requiring ICU admission.	<ul style="list-style-type: none"> • Since postoperative respiratory complications are not uncommon, to share lessons learned by presenting the case in the Department of Anesthesiology to avoid similar incidents in the future. • The Department of Anesthesiology to develop a pathway to anticipate and avoid similar incidents in the future. • Minor morbidity, without health care provider delay, omission, and/or commission identified.
Complaint Date: 20/09/2019	
4-year-old male underwent wound debridement and VAC application. He arrested during the procedure. During and after induction, the anesthesia team failed to recognize signs of deterioration earlier.	<ul style="list-style-type: none"> • Department of Anesthesiology to provide reeducation in regard to appropriate monitoring in anesthetized patients.

Jeddah

Complaint Date: 02/21/2023	
33- years -old patient developed Intravenous infiltration at the left upper limb with the development of first to second degree skin burn, with keloid formation. No significant long-term sequelae.	No deviation from the standard of care
Complaint Date: 31/01/2024	
39 years old patient referred for the management of right obstructive ectopic pelvic kidney. Nephrectomy was done due to persistent urine leaks, the patient experience an iatrogenic ejaculatory disorder following the surgery, attributed to damage to the autoimmune plexus in the retroperitoneal region. Such complication is not uncommon.	No deviation from the standard of care
Complaint Date: 16/10/2023	
12-year-old male patient, who is a known case of Klinefelter syndrome with developmental delay. The complaint was related to : <ul style="list-style-type: none"> • Overcorrection of the left lower extremity deformity: In such cases with complex deformities, it is common for the surgeon to overcorrect the deformity to account for the high risk of recurrence (to avoid the need for revision surgeries). • Delay in screw removal in the right lower extremity: The team may intervene and remove the loose screw and/or relapse if needed; this situation is not an emergency and done on an elective basis. 	No deviation from the standard of care
Complaint Date: 09/08/2023	
71 years old patient presented underwent imaging after a fall. Imaging was reviewed by on-call orthopedic who did not identify a fracture, and the patient was discharged home. CT pelvis reported by radiology to have right hip intertrochanteric fracture.	<ol style="list-style-type: none"> 1. Patients should not be discharged from DEM until the radiology report reviewed by the requesting physician. 2. DEM consultants should adhere to the policy DEM Consultation-Service to be Consulted-Resolution of Potential Disputes 3. Implement just culture as applicable.

* This is based on a new governmental process for patient complaints or legal action in the Saudi Courts.

ACCREDITATION/CERTIFICATION REPORT

RIYADH

Accreditation/Certification Name	Visit Date	Report Received	Remarks (Score, if any)
College of American Pathologists (CAP) re-accreditation for Department of Pathology and Laboratory Medicine (DPLM).	26 – 28 May 2024	Yes	Department of Pathology and Laboratory Medicine re-accredited until 20 April 2026
College of American Pathologists (CAP) re-accreditation for Children Cancer Center Laboratory.	26 – 28 May 2024	Yes	Children Cancer Center Laboratory re-accredited until 20 April 2026
Healthcare Information and Management Systems (HIMSS) EMRAM Stage 6 re-accreditation.	30 April 2024	Yes	This re-accreditation for Riyadh and Jeddah sites. Valid through 30 April 2027.
American Association for Blood Bank (AABB) re-accreditation for the Blood Bank Laboratory	12 & 13 May 2024	Yes	Valid through 12 May 2025
Emergency Management Accreditation Program (EMAP) re-accreditation	6-30 May 2024	No	Virtual Assessment

JEDDAH

Accreditation/Certification Name	Visit Date	Report Received	Remarks (Score, if any)
ISO 22000 Food services	March 2024	Certificate Received	Certification Received with no findings
JCI Reaccreditation Site Visit Hospital-Wide	2-6 Jun 2024	Report Received	Report received with score 98% (8) Strategic Improvement Plan to be submitted before the 10th August

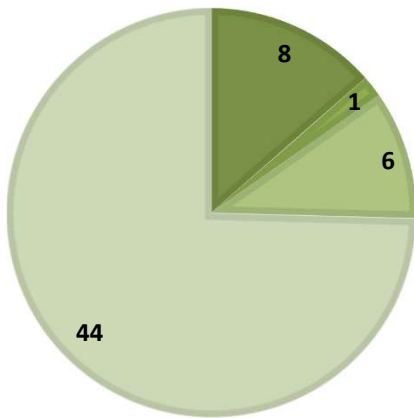
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Accreditation/Certification Name	Visit Date	Report Received	Remarks (Score, if any)
Saudi Central Board For Accreditation of Healthcare Institutions (CBAHI) – Self Assessment	1 April 2024	1 July 2024	Score 98.70%

ENTERPRISE CLINICAL RISK MANAGEMENT

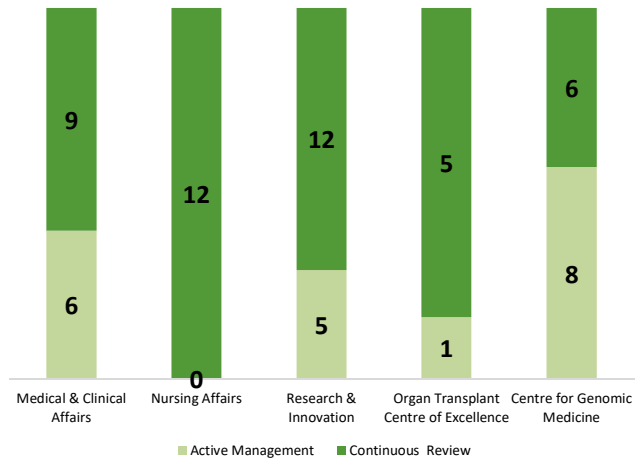
RIYADH

Risk Universe



■ Strategic ■ Financial ■ Compliance ■ Operational

Risk Rating

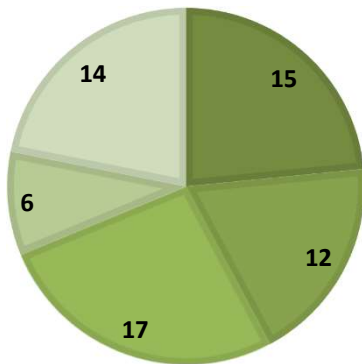


■ Active Management ■ Continuous Review

Definitions:

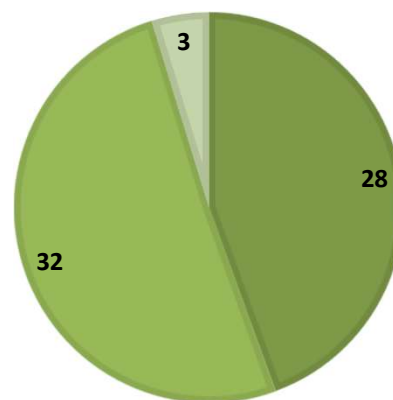
- Active Management: Risks where current treatment options require active review and management.
- Continuous review: Control is adequate, continued monitoring of controls over time (e.g. at least quarterly) is required to confirm this.

Number of Risks



■ Medical & Clinical Affairs ■ Nursing Affairs
 ■ Research & Innovation ■ Organ Transplant Centre of Excellence
 ■ Centre for Genomics Medicine

Mitigation Plan Status

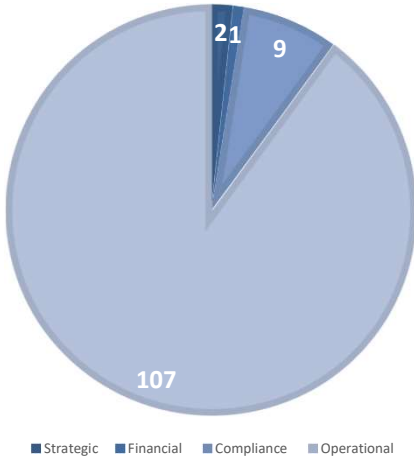


■ Completed ■ In Progress ■ Delayed

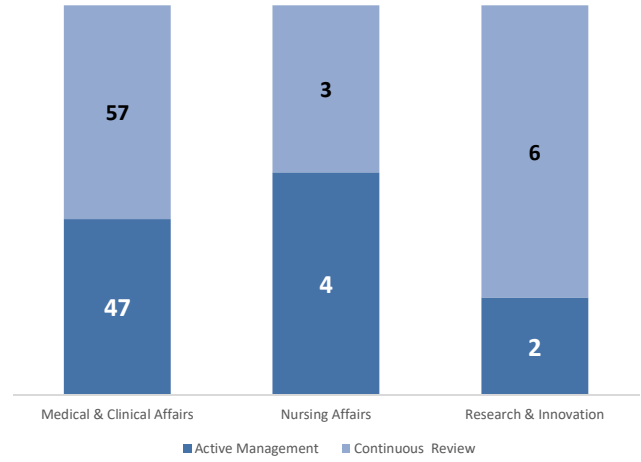
ENTERPRISE CLINICAL RISK MANAGEMENT

JEDDAH

Risk Universe



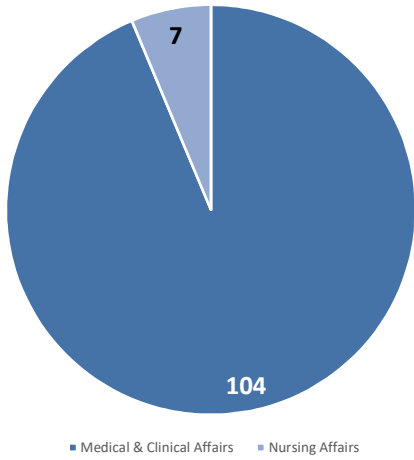
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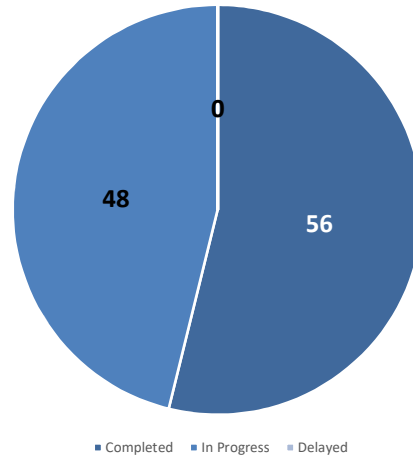
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Number of Risks



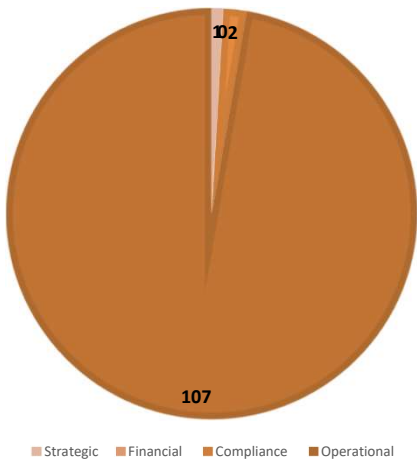
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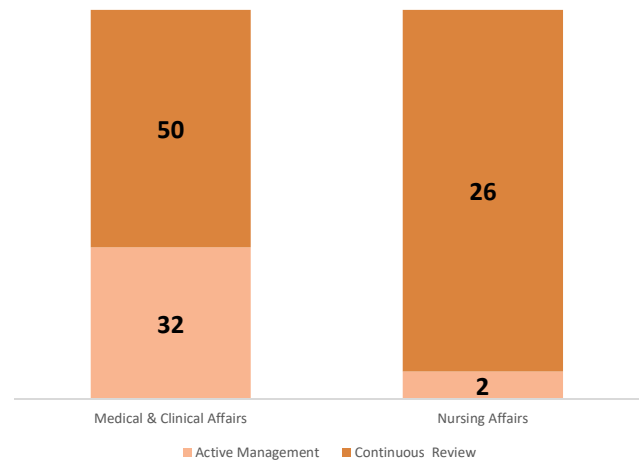
ENTERPRISE CLINICAL RISK MANAGEMENT

MADINAH

Risk Universe



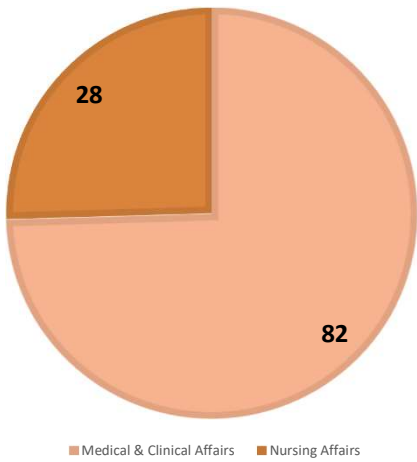
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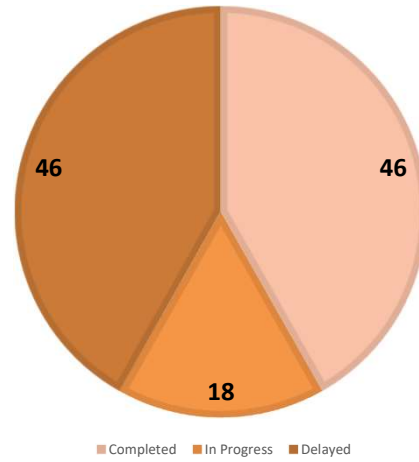
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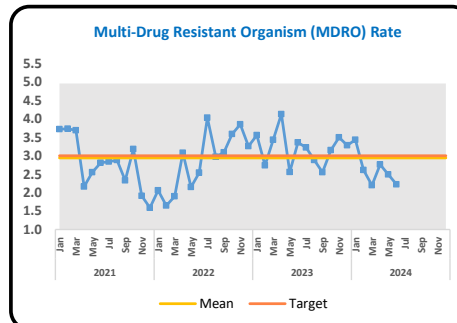
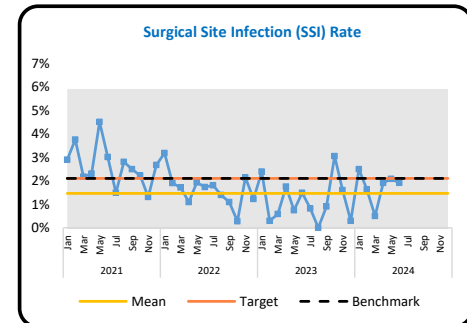
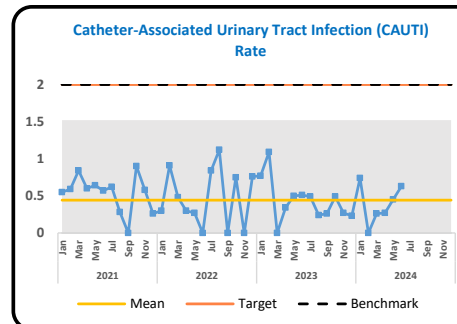
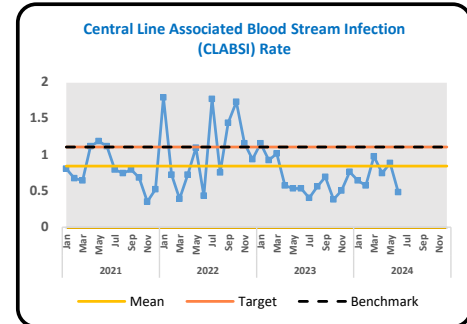
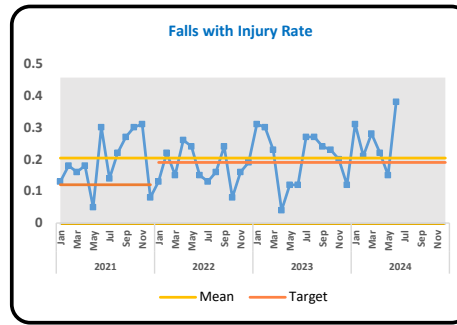
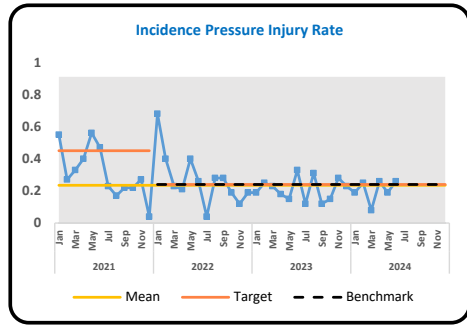
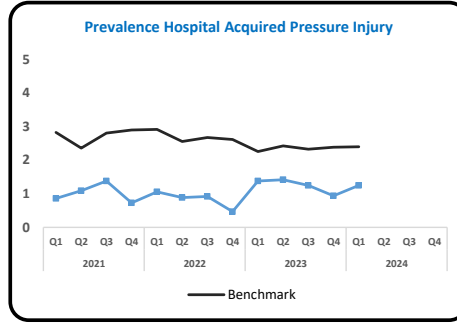
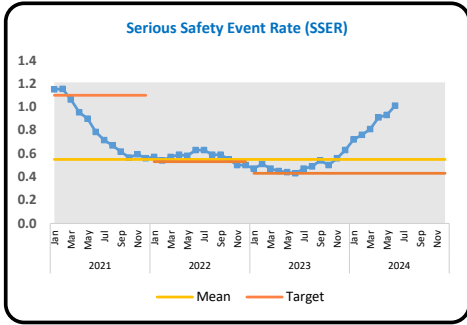
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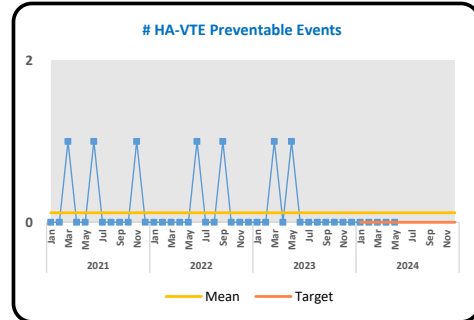
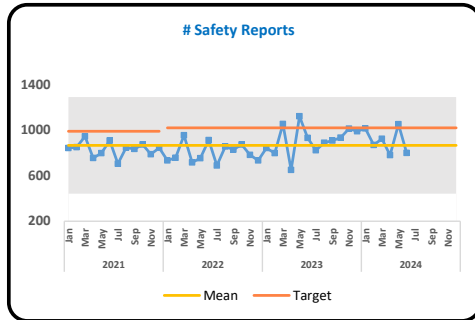
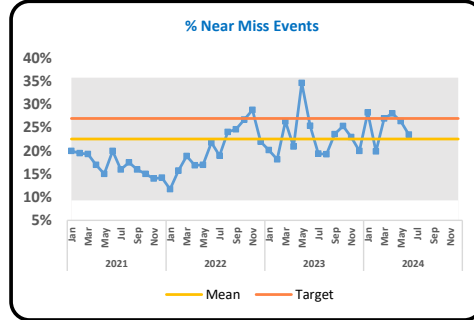
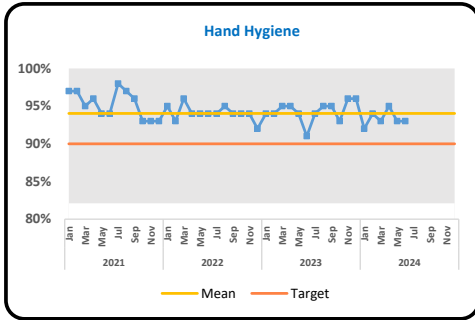
Number of Risks



Mitigation Plan Status

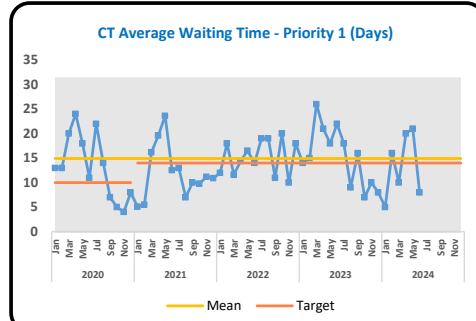
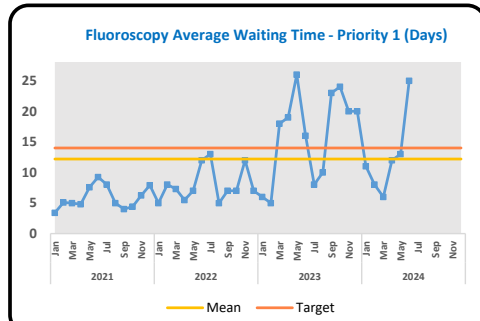
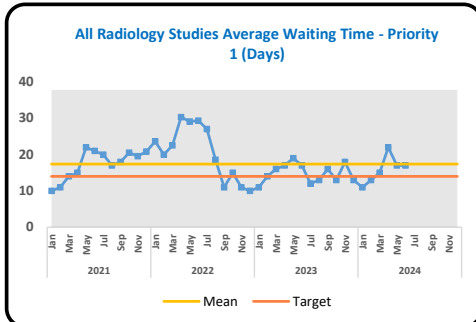
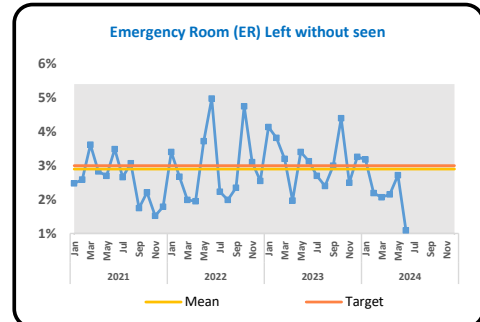
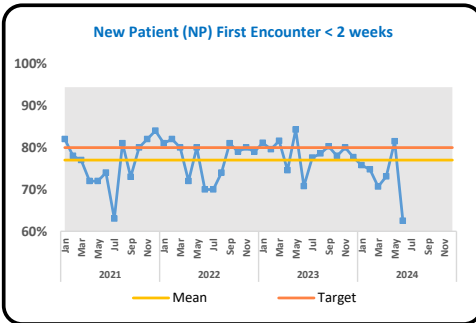
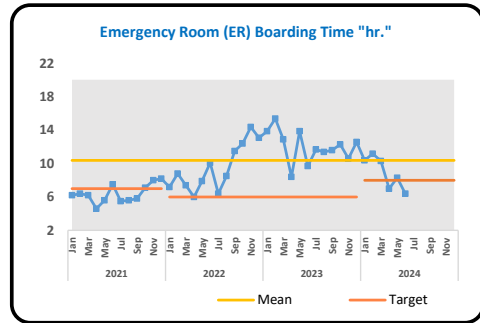
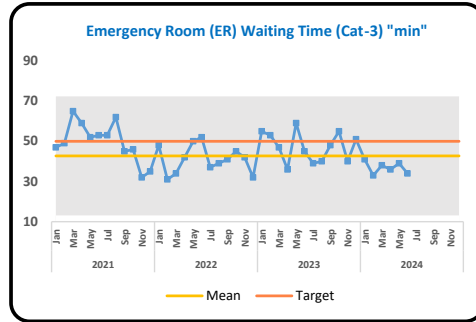
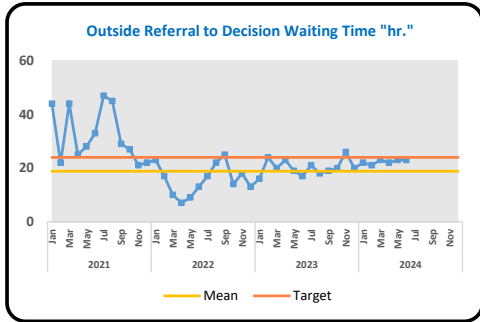








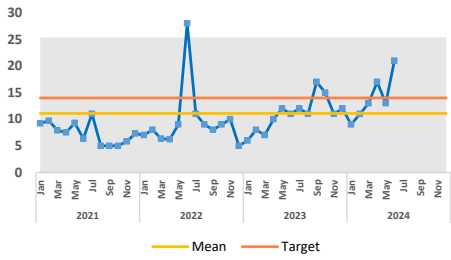
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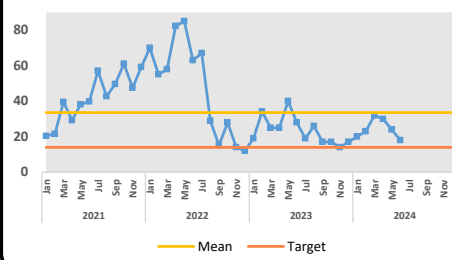


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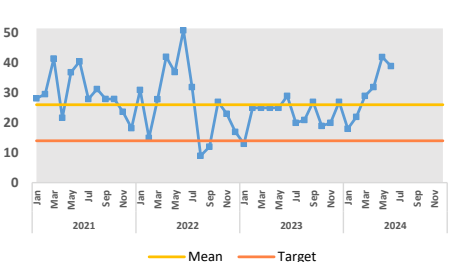
NM Average Waiting Time - Priority 1 (Days)



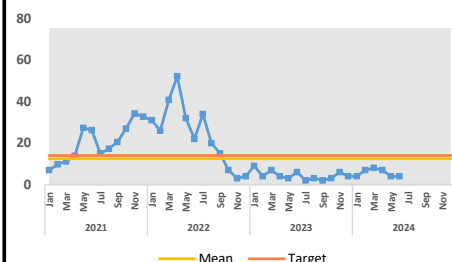
MRI Average Waiting Time - Priority 1 (Days)



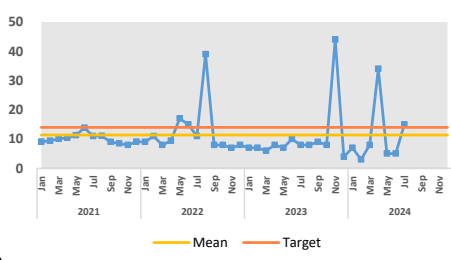
PET/CT Average Waiting Time - Priority 1 (Days)



US Average Waiting Time - Priority 1 (Days)

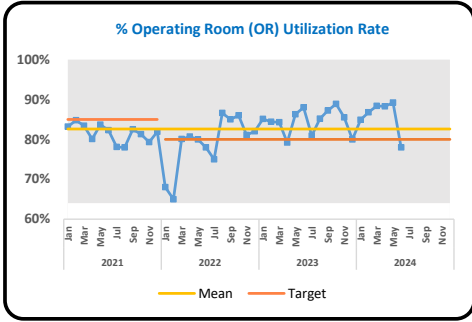


Mammography Average Waiting Time - Priority 1 (Days)

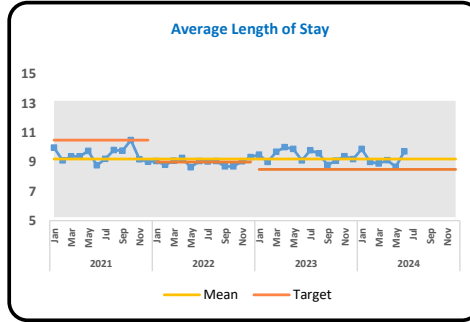




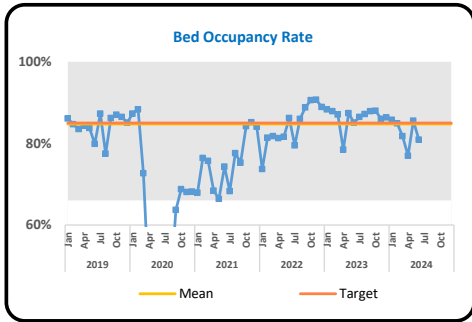
Efficiency



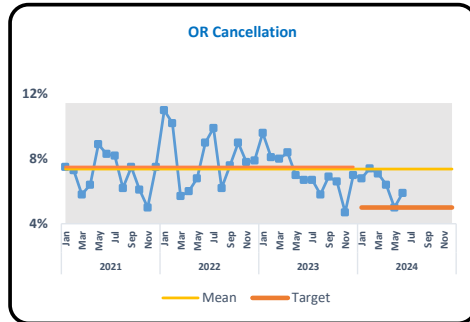
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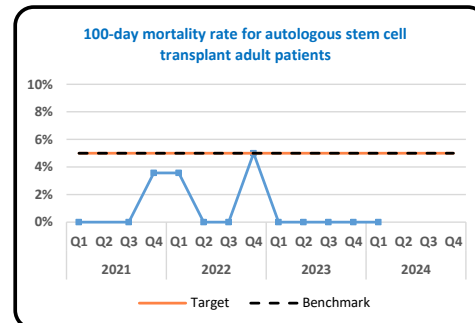
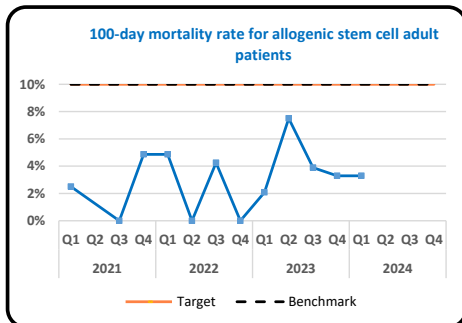
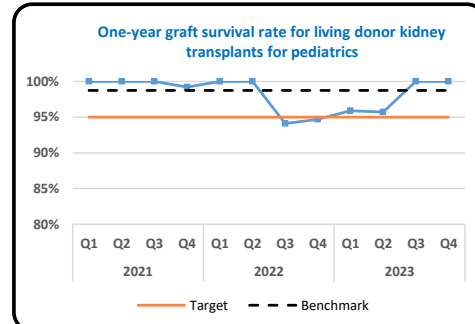
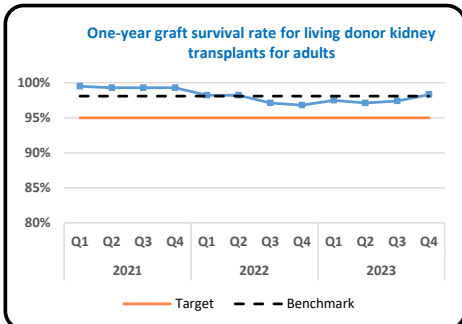
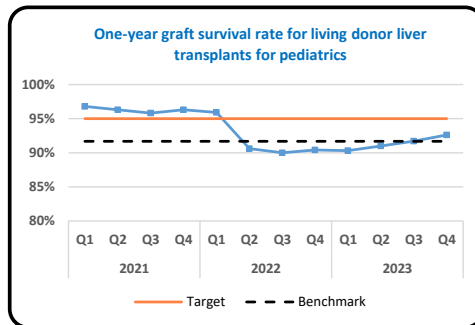
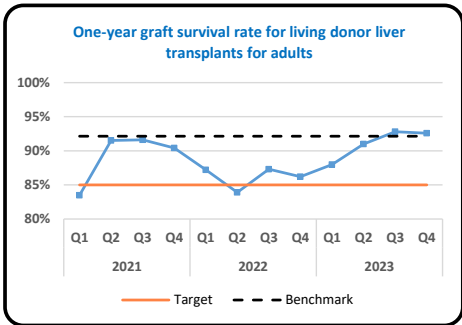
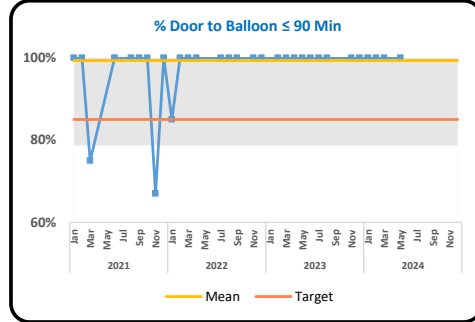
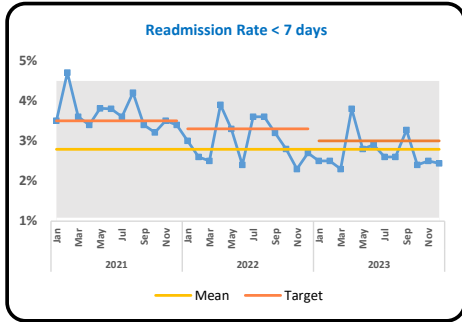
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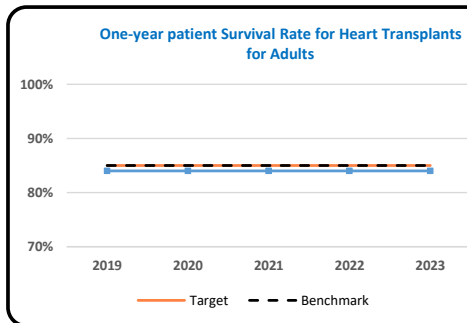
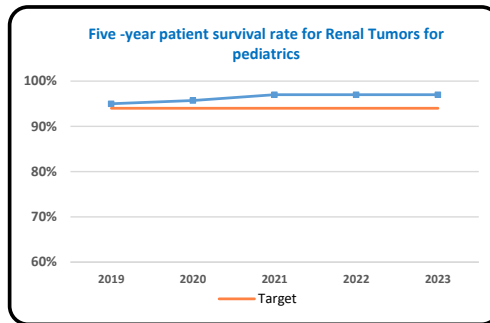
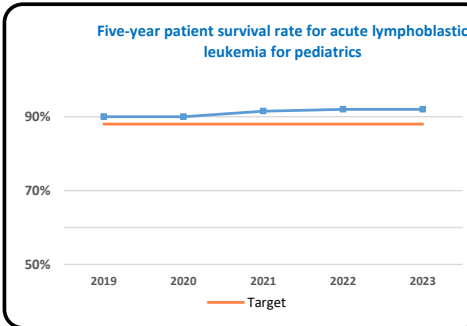
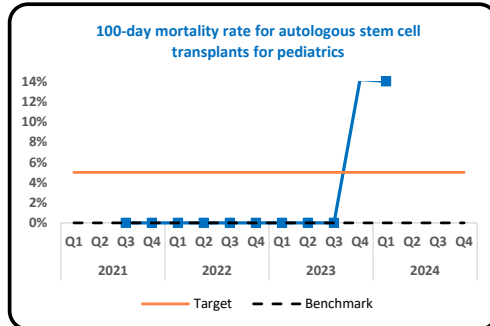
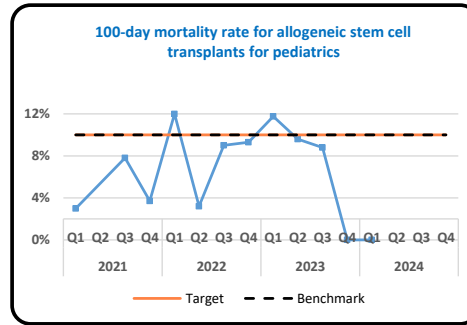
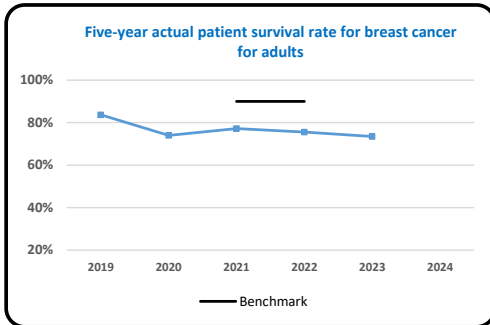
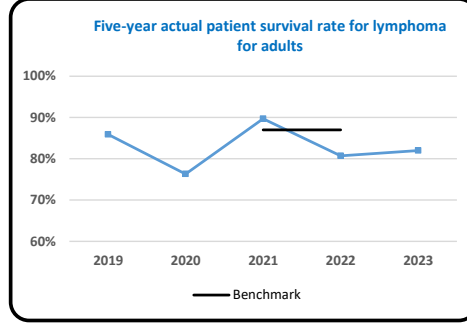
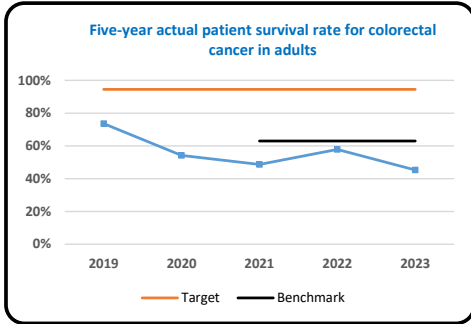


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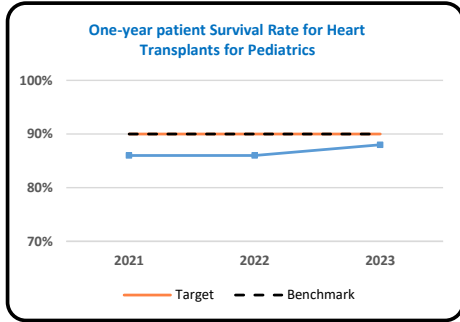
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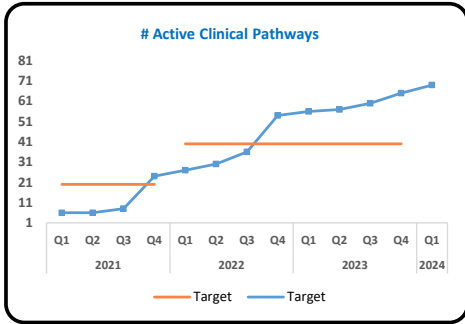
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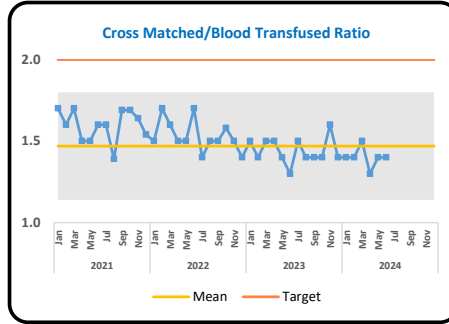
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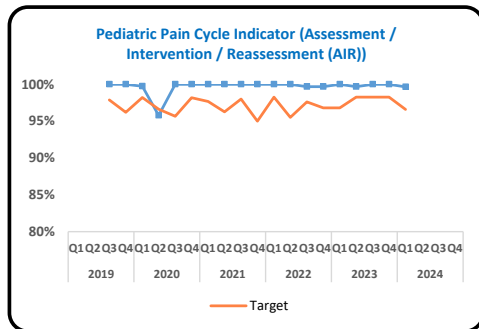
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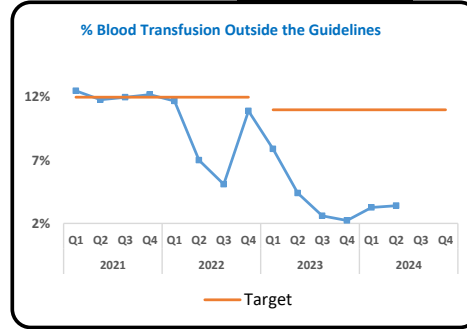
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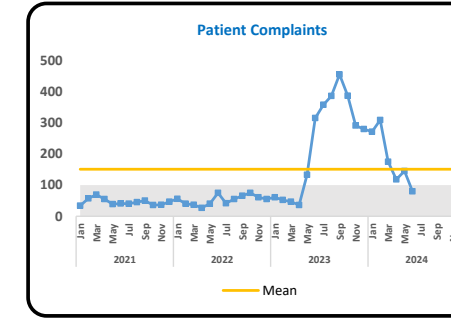
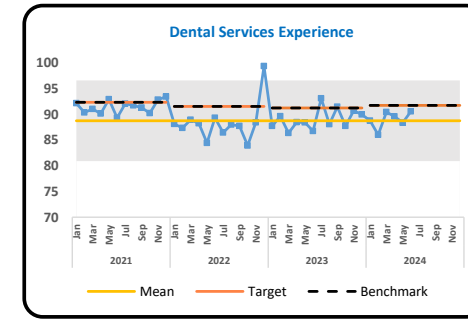
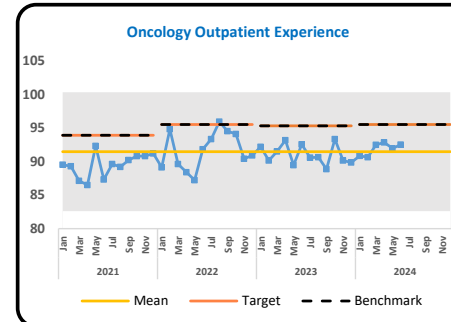
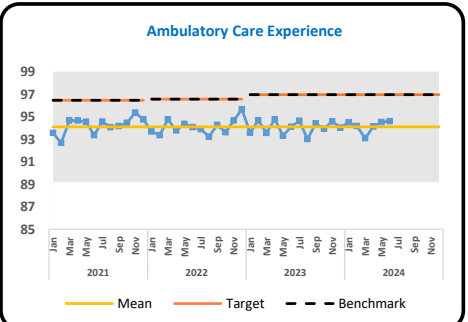
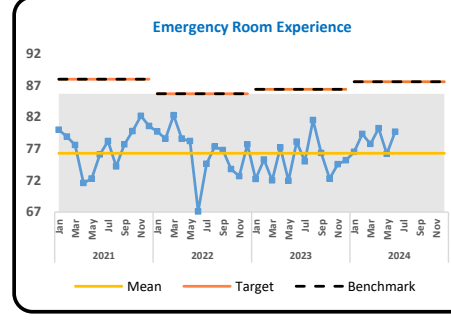
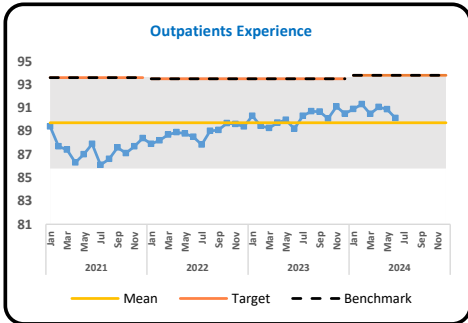
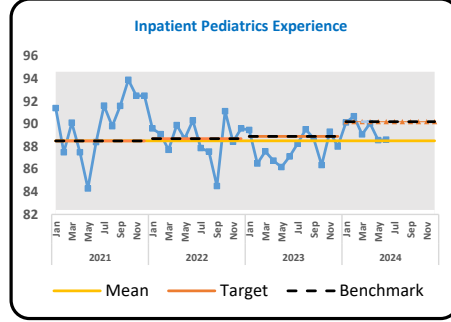
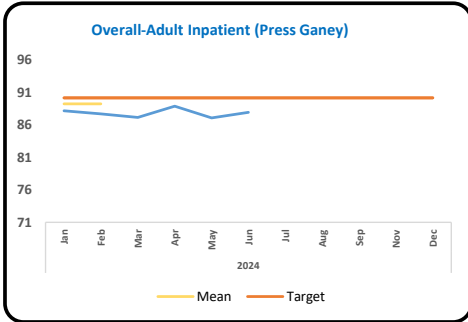
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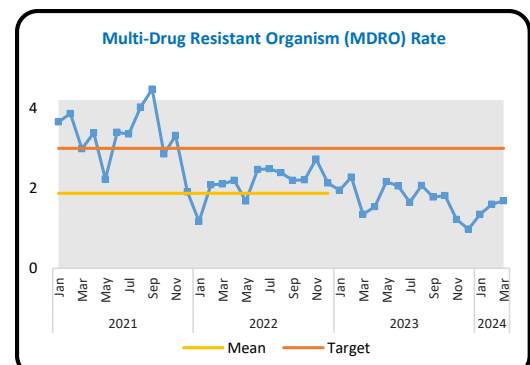
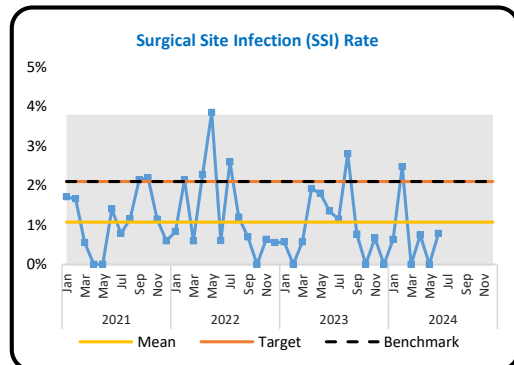
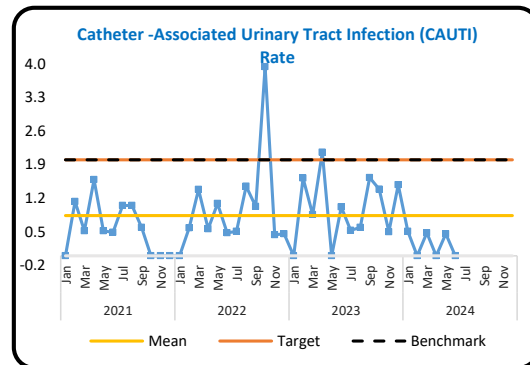
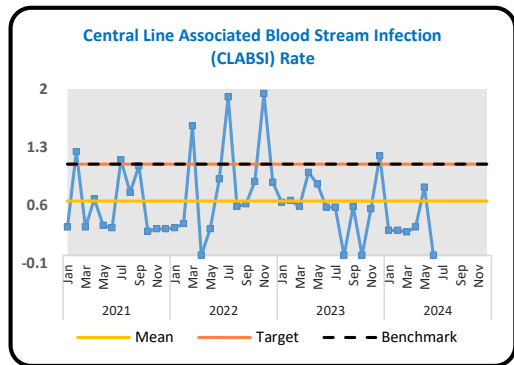
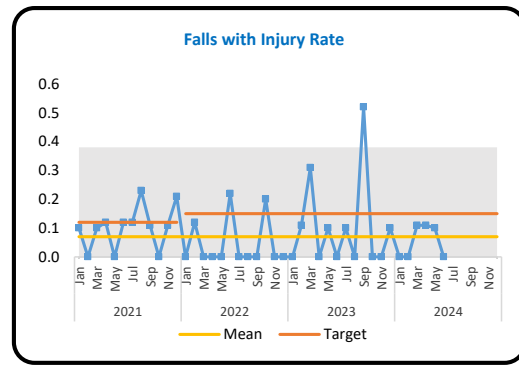
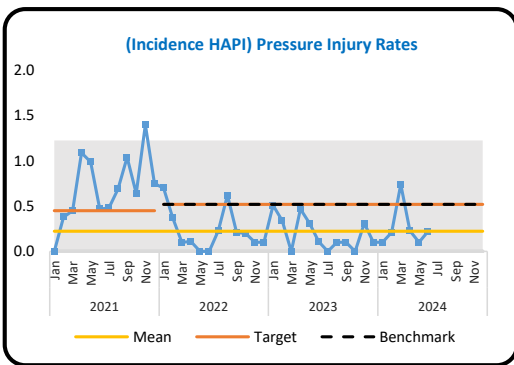
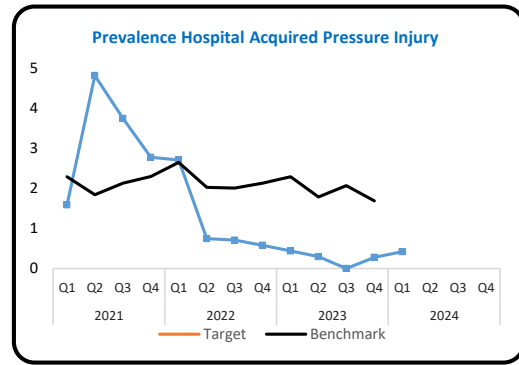
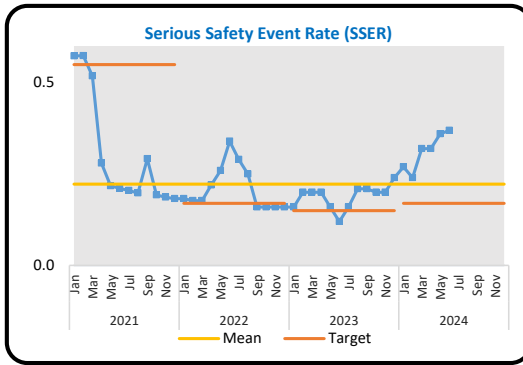


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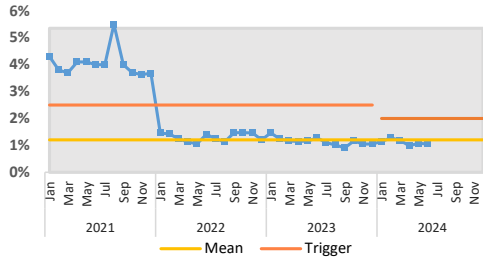
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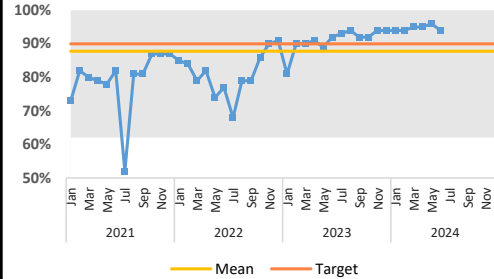




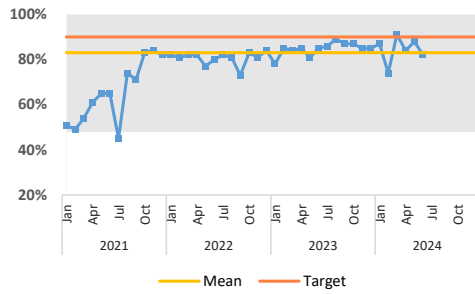
% Medication Override from the Automated Dispensing Cabinets (ADC)



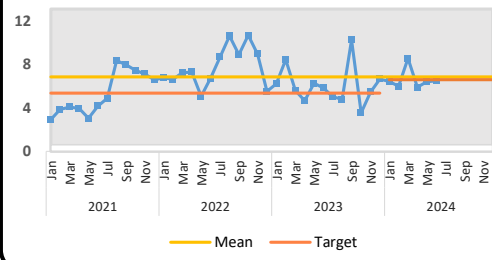
% Admission Medication Reconciliation



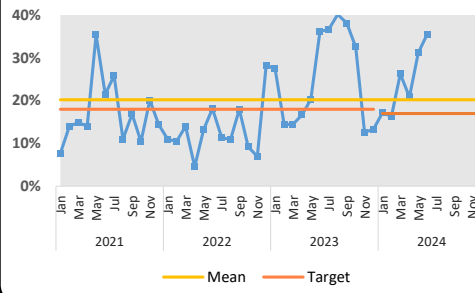
% Discharge Medication Reconciliation



Reported Medication Errors per 1000 adjusted patient days

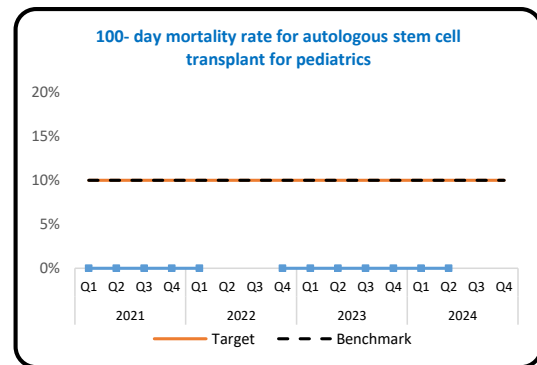
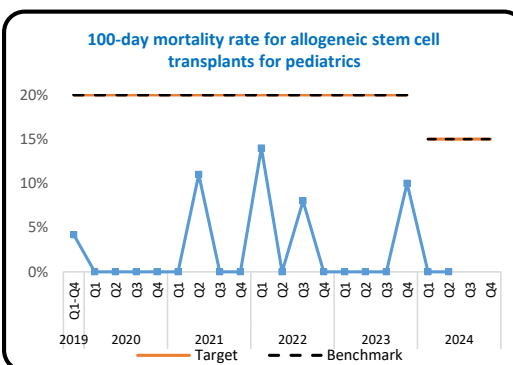
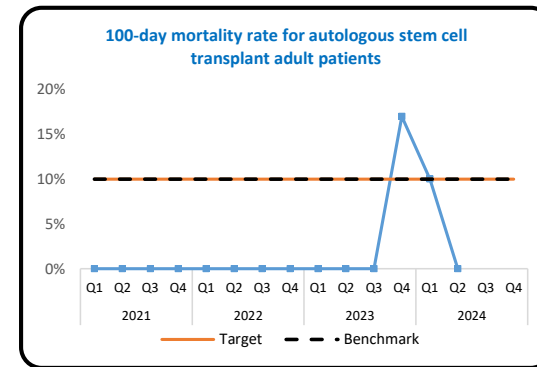
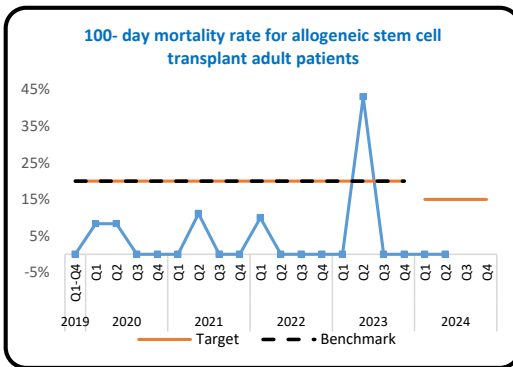
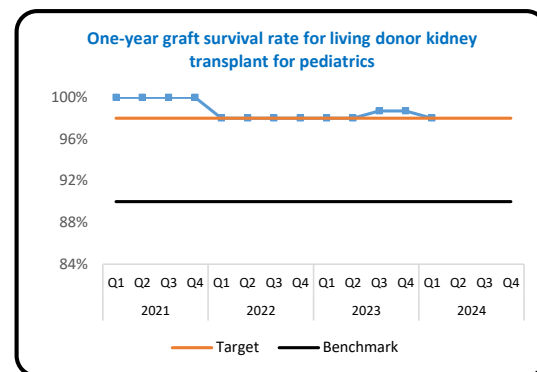
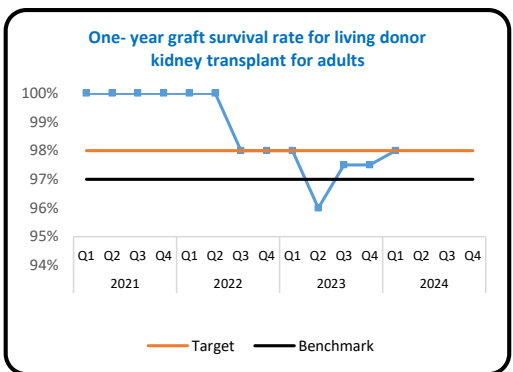
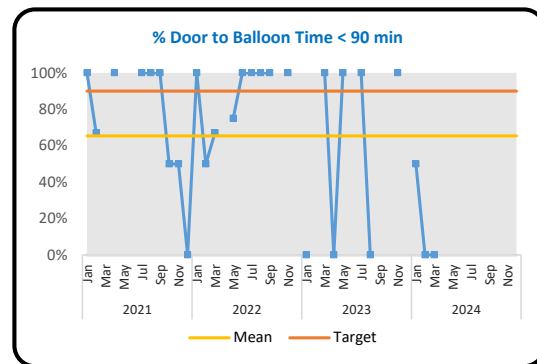
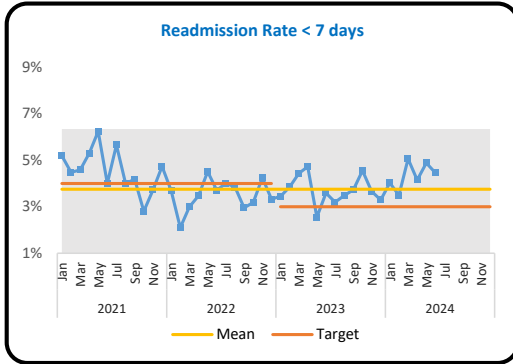


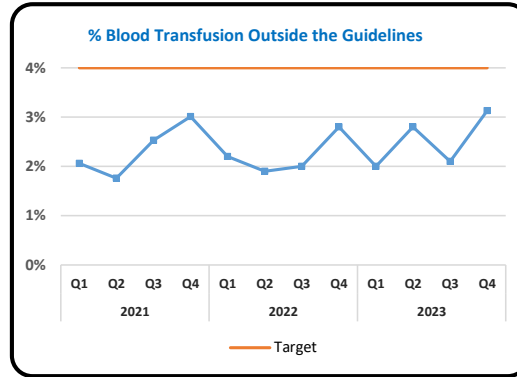
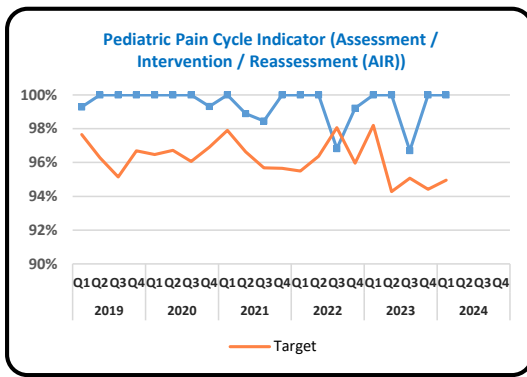
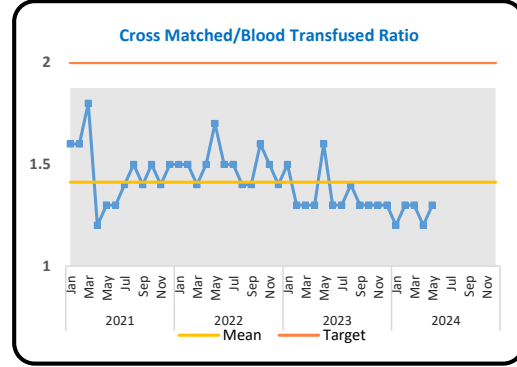
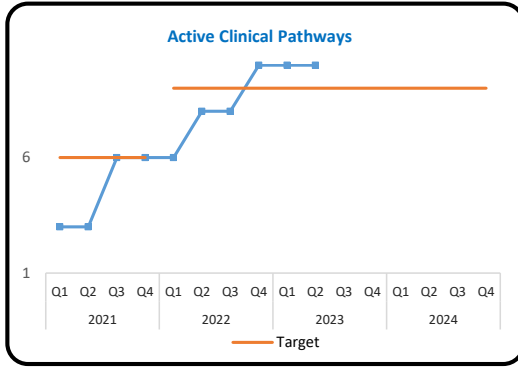
% Medication Errors Reaching the Patient





Effectiveness





Appendix - a 2024

KPIs Definitions

Safety
1. Serious Safety Event Rate (SSER) per Adjusted Patient Days
<p>The Serious Safety Event Rate (SSER) for hospitals is calculated as a rolling 12-month average of Serious Safety Events (SSE) per 10,000 Adjusted Patient Days. Twelve consecutive months of SSE data is required to calculate the initial SSER. Serious Safety Event is defined as a deviation from Generally Accepted Performance Standard (GAPS) that reaches the patient and results in moderate to severe harm or death.</p> <p>Total number of Serious Safety Events during past 12 months/Adjusted Patient Days for past 12 months X 10,000.</p> <p>Target: Riyadh: 0.43, Jeddah Target: 0.17, Madinah: 0.54</p>
2.1 A Percent of surveyed patient with Hospital Acquired pressure injury (stage 2 and above)
<p>The number of patients with a documented pressure injury of Stage 2,3,4, Unstageable or DTI on the day of the NDNQI pressure injury survey that is hospital acquired divided by the total number of patients surveyed and multiplied by 100.</p> <p>Target NDNQI (National Database of Nursing Quality Indicators) hospitals with bed size of 500 staffed bed or more.</p> <p>Benchmark Riyadh and Jeddah: NDNQI</p>
2.2 Pressure Injury Rate
<p>Total number of Hospital acquired Pressure Injury (HAPI) Stage 2 and Above per 1000 patient days. If a patient has more than one HAPI it is counted as one HAPI. Community acquired pressure injuries are excluded.</p> <p>Total No. of PU in a month /Patient Days X 1000.</p> <p>Target: Riyadh: 0.24, Jeddah: 0.52, Madinah 0.52</p>
3. Falls with Injury
<p>Total number of patient falls that result in injury based on the inclusion criteria reported monthly in QIS (Quality Information system). It's a combination of Inpatient and Outpatient. Our internal target is set based on the previous year result and changed based on KFSH strategic objective.</p> <p>Total Number of Falls in a month with inclusion criteria x 1000/Patient Days.</p> <p>Target: Riyadh: 0.19, Jeddah: 0.15, Madinah: 0.15</p>
4. Central Line (CLABSI) Rate
<p>"A laboratory confirmed bloodstream infection (LCBI) where an eligible bloodstream infection organism is identified, and an eligible central line is present on the LCBI date of event or the day before.</p> <p>Incidence Density: the number of new cases within a specified time period divided by the size of the population initially at risk"</p> <p>(# of New CLABSI / # of Central Line Days) X 1000</p> <p>Target: Riyadh: 1.1, Jeddah: 1.1, Madinah: 1.1</p> <p>Benchmark: 1.1 (National Healthcare Safety Network (NHSN))</p>
5. Catheter-Associated Urinary Tract Infection (CAUTI) Rates
<p>A urinary tract infection where an indwelling urinary catheter was in place for >2 calendar days on the date of event, with day of device placement being Day 1, and an indwelling urinary catheter was in place on the date of event or the day before. If an indwelling urinary catheter was in place for more than 2 consecutive days in an inpatient location and then removed, the date of event for the UTI must be the day of device discontinuation or the next day for the UTI to be catheter-associated.</p> <p>(# of New CAUTI / # of Urinary Catheter Days) X 1000</p> <p>Target: Riyadh: 2, Jeddah: 2, Madinah: 2</p> <p>Benchmark: 2 (National Healthcare Safety Network (NHSN))</p>

6. Surgical Site Infection (SSI) Rate

"An infection that occurs after surgery in the part of the body where the surgery took place. Surgical site infections can sometimes be superficial infections involving the skin only. Other surgical site infections are more serious and can involve tissues under the skin, organs, or implanted material. The composite indicator that provides a combined score for the following indicators:

- CABG, Cesarean Section, Colon Surgery, Rectal Surgery, Ventricular Shunt Procedure, Abdominal Hysterectomy, Cardiac Procedure, Craniotomy, Hip Prosthesis, Kidney Transplant, Knee Prosthesis, Liver Transplant, Heart Transplant. Each indicator presents the percentage of surgical procedures included in the surveillance that meets National Healthcare Safety Network (NHSN) benchmark."

of Surgical Site Infections (SSI) of selected operative procedure category for surveillance during the quarter / # of procedures of the same selected operative category for surveillance during the same quarter X 100

7. Multi-Drug Resistant Organism (MDRO) Rate

Incidence rate of Hospital onset MDRO from all inpatient locations includes infection and colonization.

(Total number of hospital onset MDRO / Patient days) * 1000

Target: Riyadh: 3, Jeddah: 3, Madinah: 3

8. Hand Hygiene

The proportion of audited staff that follow hand hygiene procedures before and after contact with patients and their environment.

Number of compliance events before or after contacts/ Total number of audits*100

Target: Riyadh: 90%, Jeddah: 90%, Madinah: 90%

9. % Near Miss Events

The percentage of the incidents reported through the QIS that was about to occur, but was captured before they reach the patient to the total number of reported incidents.

Reported Near Misses/ Total number of Reported Incidents x 100

Target: Riyadh: 27%, Jeddah: 34%, Madinah: 32 %

Benchmark: Not Available (NA)

10. Number of Safety Reports

It is the number of the incidents that are reported through the Quality Information system (QIS) on the last day of the reporting period.

Total incidents reported in QIS (- All rejected incidents).

Target: Riyadh: 1020, Jeddah: 850, Madinah: 230

11. # HA-VTE Preventable Events

Hospital-Acquired Preventable Venous thromboembolism (HA-VTE) is defined as any episode of venous thrombo-embolism during admission and within 60 days after discharge that is not present during admission and were not on appropriate measures.

Target: Riyadh: 0, Jeddah: 0, Madinah: 0

Benchmark: Not Available (NA)

12. % Medication Override from the Automated Dispensing Cabinets (ADC)

Percent of medication removed from the automated dispensing cabinets (ADC) utilizing the override function in relation to the total number of medications removed from the (ADC).

Formula: Medication removed from the automated dispensing cabinets (ADC) utilizing the override function divided by / total number of medications removed from the (ADC) X100

Trigger: Riyadh: 2.5%, Jeddah: 2.5%, Madinah: NA

Benchmark: Not Available (NA)

13. % Admission Medication Reconciliation

Admission Medication reconciliation is the process of creating the most accurate list possible of all medications the patient is taking including drug name, dosage, frequency, and route and comparing that list against the physician's admission orders, with the goal of providing correct medications to the patient at all transition points within the hospital.

The indicator will show the percent of patients who had their medications reconciled upon admission to the hospital out of the total number of admitted inpatients.

Total number of patients with completed admission medication reconciliation / Total number of admitted inpatients x100

Target: Riyadh: 100%, Jeddah: 100%, Madinah: NA

Benchmark: Not Available (NA)

14. % Discharge Medication Reconciliation

Discharge Medication reconciliation is the process of creating the most accurate list possible of all medications the patient is taking including drug name, dosage, frequency, and route and comparing that list against the physician's discharge orders, with the goal of providing correct medications to the patient at all transition points within the hospital.

The indicator will show the percent of patients who had their medications reconciled upon discharge from the hospital out of the total number of discharged inpatients

Total completed Discharge reconciliation / total inpatient discharges x100

Target: Riyadh 100%, Jeddah: 100%, Madinah: NA

Benchmark: Not Available (NA)

15. Reported Medication Errors per 1000 adjusted patient days

Total number of reported medication errors including all levels of harm and all stages of the medication use process, reported through the Quality Information System by incident date per 1000 patient days

Total number of reported medication errors including all levels of harm and all stages of the medication use process in QIS by incident date/Patient Days X 1000

Target: Riyadh: 3.4, Jeddah: 5.38, Madinah: NA

Benchmark: Not Available (NA)

16. % Medication Errors Reaching the Patient

The percent of reported medication errors reaching the patient (non near miss events), from the total number of reported medication errors including all stages of medication use process reported through the Quality Information System per month.

Number of reported medication errors reaching the patient (non near miss reports) / Total number of reported medication errors including all stages of medication use process and all levels of harm reported through the Quality Information System per month X100

Target: Riyadh: 38%, Jeddah: 18%, Madinah: NA

Access

1. Outside Referral to decision waiting time "hr"

This is the median time (in hours) from when the referred case is uploaded in the referral system to decision (to either accept/not accept/incomplete) by the appropriate medical department/referred medical department during the period under review

Decision time – Case upload time

Target: Riyadh: 24, Jeddah: 24, Madinah: 24

Benchmark: Not Available (NA)

2. Emergency Room (ER) waiting time to be seen (3) "min".

It is the median time (minutes) to be seen by a physician spent in the ER by patients who are categories as a (3). It is computed from time of patient register in the registration desk till been seen by a DEM consultant for that category. (Seen by a DEM consultant is dropped when the consultant claims the case in FirstNet)

"Actual time patients seen by DEM consultant – time patient was register then (Total number of patient +1)/2 "

Target: Riyadh: 50, Jeddah: 50, Madinah: 50

Benchmark: Not Available (NA)

3. Emergency Room (ER) Boarding Time "hr."
<p>"It is the median time (hours) to admission spent in the ER by patients who had a decision to be admitted. It is computed from time of doctor decision to admit patient to the time the patient leaves the emergency room heading to the floor, discharged from DEM or dead in DEM.</p> <p>Actual admission time is the time where patient physically leave DEM to inpatient Unit."</p> <p>Actual patients admission time to floor – DEM doctor decision to admit patient time then (Total # +1) /2= Median</p> <p>Target: Riyadh: 6, Jeddah: 10, Madinah: 6</p> <p>Benchmark: Not Available (NA)</p>
4. New Patient (NP) first encounter < 2 weeks
<p>"Percentage of new patients accepted that have a first encounter before 2 weeks from acceptance for the 5 core services in the Riyadh (Oncology, Heart center, Organ Transplants, Neuroscience, Genetics), in Jeddah (Oncology, Heart center, Neuroscience)."</p> <p>Total number of accepted patients first encounter before 2 weeks as per the inclusion criteria divided by total number of accepted patients in the same period X 100</p> <p>Target: Riyadh: 80% Jeddah: 80%, Madinah: 80%</p> <p>Benchmark: Not Available (NA)</p>
5. Emergency Room (ER) Left without seen
<p>It is the percentage of patients who left the emergency department because of waiting for a long time and before they are been seen by a physician.</p> <p>Total Number of patient who Left Without Being Seen / total emergency visits X 100</p> <p>Target: Riyadh: 3%, Jeddah: 2.58%, Madinah: 3%</p> <p>Benchmark: Not Available (NA)</p>
6. Radiology waiting time Priority 1 (New Patient: Oncology, Cardiac, Transplant, Neuro)
<p>The waiting time (in days) to the third available Radiology appointment slot per Modality.</p> <p>Target: Riyadh: 14 Days, Jeddah 14 Days, Madinah: NA</p> <p>Benchmark: Not Available (NA)</p>
Efficiency
1. % Operating Room (OR) utilization rate
<p>OR Utilization rate is the time (in hours) actually used for patient care plus average turnover time for the reporting period divided by the number of hours available/schedulable.</p> <p>(Utilized time in hours / Available time in hours)</p> <p>Target: Riyadh: 80%, Jeddah: 85%, Madinah: %80</p> <p>Benchmark: Not Available (NA)</p>
2. Average Length of Stay (ALOS)
<p>The length of stay of a patient should be counted as the date of discharge minus the date of admission.</p> <p>(Total Discharge Days / Total Discharges).</p> <p>Target: Riyadh: 8.5, Jeddah: 8.5, Madinah: 7</p> <p>Benchmark: Not Available (NA)</p>
3. Bed Occupancy Rate
<p>Occupancy rate is the average daily census divided by the number of flagged as counted inpatient beds on the last day of the reporting period, expressed as a percentage (Patients are counted at 23:59 every day). Counted beds are beds flagged by the admission office based on Approval of the COO. Counted beds include beds closed on the short term for infection control, staffing or maintenance reasons.</p> <p>Average Daily Census / Inpatient beds (include ICU) X100</p> <p>Target: Riyadh: 85%, Jeddah: 85%, Madinah: 85%</p> <p>Benchmark: Not Available (NA)</p>
4. Operating Room (OR) Cancellation
<p>Percentage of OR cancellation.</p> <p>Target: Riyadh: 7.5%, Jeddah: 7.5%, Madinah: 3%</p> <p>Benchmark: Not Available (NA)</p>

Effectiveness

1. Readmission Rate < 7 days

This is the number of patients who were readmitted within 7 days of discharge during the period under review. (All patients readmitted within 7 days of discharge / All patients discharged) X 100.

Target (Riyadh, Jeddah, & Madinah): 3%

Benchmark: Not Available (NA)

2. Door To Balloon Time

Percentage of Chest pain patients arriving at the DEM with ST elevation who are taken to the CCL for reperfusion in 90 minutes or less.

Target: Riyadh: 85%, Jeddah: 90%, Madinah: NA

Benchmark: Not Available (NA)

3. Transplant Quality Index

A composite index which is a combination of the 4 sub indicators, which are; 1-year graft survival rate for living donor liver transplants for adults, 1-year graft survival rate for living donor liver transplants for pediatrics, 1-year graft survival rate for living donor kidney transplants for adults, and 1-year graft survival rate for living donor kidney transplants for pediatrics. Adults are 18+.

Transplant Quality Index

3.1 1-year graft survival rate for living donor liver transplants for adults. **Riyadh** Target: 85%; Benchmark: 92.14%.

3.2 1-year graft survival rate for living donor liver transplants for pediatrics. **Riyadh** Target: 98%; Benchmark: 91.68%.

3.3 1-year graft survival rate for living donor kidney transplants for adults. **Riyadh** Target: 98.09%; Benchmark: 98.%, **Jeddah** Target: 98%; Benchmark: 97%.

3.4 1-year graft survival rate for living donor kidney transplants for pediatrics. **Riyadh** Target: 95%; Benchmark: 98.74%, **Jeddah** Target: 98%; Benchmark: 90%.

4. Oncology Quality Index for Adults

A composite index which is a combination of the 5 sub indicators, which are; 100-day patient mortality rate for allogenic stem cell transplant adult patients, 100-day patient mortality rate for autologous stem cell transplant adult patients, 5-year actual patient survival rate for colorectal cancer in adults, 5-year actual patient survival rate for lymphoma for adults and 5-year actual patient survival rate for breast cancer for adults. Adults are 18+.

Oncology Quality Index for Adults

4.1 100-day patient mortality rate for allogenic stem cell transplant adult patients. **Riyadh** Target: 10%; Benchmark:10%, **Jeddah** Target: 20%.

4.2 100-day patient mortality rate for autologous stem cell transplant adult patients. **Riyadh** Target: 5%; Benchmark:5%, **Jeddah** Target: 10%.

4.3 5-year actual patient survival rate for colorectal cancer in adults. **Riyadh** Target: 94.5%.

4.4 5-year actual patient survival rate for lymphoma for adults.

4.5 5-year actual patient survival rate for breast cancer for adults.

Benchmark: Not Available (NA)

5. Oncology Quality Index for Pediatrics

A composite index which is a combination of the 4 sub indicators, which are; 100-day patient mortality rate for allogenic stem cell transplants for pediatrics, 100-day patient mortality rate for autologous stem cell transplants for pediatrics, 5-year patient survival rate for Renal Tumors for pediatrics, and 5-year patient survival rate for acute lymphoblastic leukemia for pediatrics.

Oncology Quality Index for Pediatrics

5.1 100-day patient mortality rate for allogenic stem cell transplants for pediatrics. **Riyadh** Target: 10%; Benchmark:10%, **Jeddah** Target: 20%; Benchmark: 10%.

5.2 100-day patient mortality rate for autologous stem cell transplants for pediatrics. **Riyadh** Target: 5%; Benchmark:0%, **Jeddah** Target: 10%; Benchmark: 5%.

5.3 5-year patient survival rate for Renal Tumors for pediatrics. Target: 94%.

5.4 5-year patient survival rate for acute lymphoblastic leukemia for pediatrics. Target: 88%.

Benchmark: Not Available (NA)

Sub Indicator Description (<i>Updated 3rd Q 2021</i>)
<p>100-day patient mortality rate for allogenic stem cell transplants for pediatrics: Measures the percentage of pediatric patients who have received allogenic stem cell transplant which have not survived past the 100 day mark since the procedure. A measurement lag will exist when measuring the 100 day mortality rate to ensure 100 days have elapsed since the patient received the procedure (e.g. reporting in H1 2019 will include only those who received a procedure 100 days before the end of H1 2019).</p> <p>(Number of pediatric patients who received allogenic stem cell transplant which have not survived for more than 100 days / Number of pediatric patients who received allogenic stem cell transplant in the same period) * 100</p>
6. Cardiology Quality Index
<p>Cardiology quality index is the composite of three sub indicators, which are; the 1-year patient survival rate for heart transplants for adults, the 1-year patient survival rate for heart transplants for pediatrics, and the 30-day re-admission rate for heart failures. The patients who are tracked for survival rates do not have to be the same patients for both time horizons. Adults are 18+.</p> <p>Target: Not Available (NA)</p> <p>Cardiology Quality Index</p> <p>6.1 1-year patient survival rate for heart transplants for adults. Riyadh Target: 85%</p> <p>6.2 1-year patient survival rate for heart transplants for pediatrics. Riyadh Target: 90%</p>
Appropriateness
1. Active Clinical Pathways
<p>The total number of active Clinical Pathways.</p> <p>Target: Riyadh:40 per year, Jeddah: 9, Madinah: 3 (To be confirmed)</p> <p>Benchmark: Not Available (NA).</p>
2. Crossmatch : Blood Transfusion Ratio (C:T ratio) New
<p>In the Blood Bank, this is a ratio of crossmatched red blood cell units (RBC) for potential transfusion, versus the number of actual transfused units. By tracking the C:T ratio, the ordering process for the efficient use of red blood cell units is monitored.</p> <p>Target: Riyadh: 2, Jeddah: 2, Madinah: 1.5</p> <p>Benchmark: Not Available (NA).</p>
3. % Blood Transfusions outside the Guidelines
<p>The percentage of the blood transfusion cases outside the guidelines covering all inpatients units in KFSH&RC excluding ICU'S and ER.</p> <p>for RBC < 80 g/l , and for Platelets < 10.</p> <p>Total number of Transfusion outside the guidelines /Total transfusion (within and outside the guidelines) X 100</p> <p>Target: Riyadh: 12%, Jeddah: 12%, Madinah: <2%</p>
4. Pediatric Pain Cycle Indicator (Assessment / Intervention / Reassessment (AIR))
<p>A cross-sectional count of the number of cases with completed pain AIR cycles who exist on the patient care unit at a specific point in time.</p> <p>Target: Riyadh: NDNQI Benchmark, Jeddah: NDNQI Benchmark, Madinah: NA.</p>

Experience

1. Overall Hospital Rating (PG)

The average satisfaction score of all adult patients admitted to KFSH&RC for medical services
Note: Effective Q1-2023 we will transition from the HCAHPS survey to the press ganey survey for our adult inpatient population, thus we will have one inpatient score that measures the experience of all inpatients (adult and pediatric). In addition we will retain the HCAHPS (Adult) inpatient global domains overall rating and LTR
Benchmark/Target (2024): Riyadh: 90.2, Jeddah: 90.2, Madinah: 90.2.

2. Inpatient Pediatrics Experience

Average score of pediatric patient experiences within inpatient hospital stays, Inpatient \leq 14 years old.
Overall Mean score = Patient (1) mean score+...Patient (n) mean score / total # of patients.
Target/ Benchmark (2022): Riyadh:90.2, Jeddah: 90.2. Madinah:90.2

3. Outpatients Experience

Average score of patient experiences with the Outpatient Physician/Nurse Practitioner clinic visits.
Overall Mean score = Patient (1) mean score+...Patient (n) mean score / total # of patients.
Target/ Benchmark (2024): Riyadh: 93.8, Jeddah: 93.8, Madinah: 93.8.

4. Emergency Room Experience

Average score of patient experiences with the emergency department visits, who were treated and discharged.
Overall Mean score = Patient (1) mean score+...Patient (n) mean score / total # of patients.
Target/ Benchmark (2024): Riyadh: 87.6, Jeddah: 87.6, Madinah: 87.6.

5. Ambulatory Care Experience

Average score of patient satisfaction with same day surgical procedures, tests, treatments and programs.
Overall Mean score = Patient (1) mean score+...Patient (n) mean score / total # of patients.
Target/ Benchmark (2024): Riyadh: 97, Jeddah: 97, Madinah: 97.

6. Oncology Outpatient Experience

Average score of patient experiences with the Oncology Outpatient Services (Chemotherapy, Radiotherapy).
Overall Mean score = Patient (1) mean score+...Patient (n) mean score / total # of patients.
Target/ Benchmark (2024): Riyadh: 95.5, Jeddah: 95.5, Madinah: 95.5

7. Dental services Experience

Average score of patient experience during dental practice or orthodontic service visits.
Overall Mean score = Patient (1) mean score+...Patient (n) mean score / total # of patients.
Target/ Benchmark (2024): Riyadh: 91.7, Jeddah: 91.7, Madinah: 91.7.

8. Patient complaints

Total number of received patient written complaints.
 Σ Total number of received patient written complaints.
Target: Not Available (NA)

Appendix B

Mortality Categories

Category 1	Expected death due to terminal illness/end of stage chronic disease. Without health care provider delay, omission and/or commission identified
Category 2	Expected death, with health care provider delay, omission and/or commission identified
Category 3	Unexpected death, without health care provider delay, omission and/or commission identified
Category 4	Unexpected preventable death, with health care provider delay, omission and/or commission identified

Morbidity Categories

SEVERITY ASSESSMENT CODE (SAC)

Adapted from Department of Veterans Affairs, Veterans Affairs National Center for Patient Safety, Ann Arbor, Michigan, USA

Figure 1 Consequences Table

		SERIOUS	MAJOR	MODERATE	MINOR	NEAR MISS
Clinical Consequences	Patient	<ul style="list-style-type: none"> * Cardiac and/or respiratory arrest/ Failure as result of occurrence * Ventilation required or prolonged * Patient with Death unrelated to the nature course of illness and differing from the immediate expected outcome of the patient management * Procedures involving the wrong patient or body part * Possible suicide * Retained instruments/material requiring intervention * Intravascular gas embolism resulting in death or neurological damage * Hemolytic blood transfusion * Medication error leading to death * Maternal death or serious morbidity associated with labor or delivery * Infant abduction or discharge to wrong family 	<ul style="list-style-type: none"> * Cardiac changes requiring intervention as a result of occurrence * Hospital-acquired fractures * Bleeding requiring immediate intervention * Transfer to higher level of care (ICU) as result of occurrence * Change of laboratory values of critical levels * Surgical intervention required as a result of occurrence * Increased length of stay * Hospital admission is Required as result of occurrence 	<ul style="list-style-type: none"> * Vital Signs changed as result of occurrence * Decreased level of consciousness * Additional medication * treatment required * Invasive diagnostic procedures required 	<ul style="list-style-type: none"> * No harm to the patient or person involved * Patient requiring increase level of care including: * Review and evaluation * Additional investigations * Referral to another clinician 	<ul style="list-style-type: none"> * Occurrence did not reach the patient * May have potentially led to harm, but did not actually occur (for example wrong medication prescribed but alerted before dispensed)