In Collaboration with

Middle East Forum on Quality & Safety in Healthcare **2023**

16-19 March, Doha

B9: Oral QI Presentations on FLOW, SAFETY, VALUE IMPROVEMENT (Session 2)

Healthcare Resilience in Extraordinary Times

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Middle East Forum on Quality & Safety in Healthcare **2023**

16-19 March, Doha

Patients Safety and Value Improvement Approach in HGH Dialysis units

Farrukh Ali Farooqi

Healthcare Resilience in Extraordinary Times

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Conflict of Interest

I have no conflict of interest or disclosure in relation to this presentation.

Patients Safety and Value Improvement Approach in HGH Dialysis units

(Shajahan joseph k, Farrukh Ali Farooqi, Mohd Afsar sheriff, Alaa Fouda, Kaithackal Paul, Binoop Jacob, Johnson kochudevassy, Fasiur Rahman, Jobi joseph, Blesson Varghese, Shakeb Ahmad, Savio Martin, Murtaza Khan, Haseen Ahmad, Rajarathinam Balamukundan, Sahar Ismail, Teha Dham, Hoda Tolba, Wafa Ali, Mohd Dawood, Dr Fadwa Al-Ali, Dr Mosab Ahmed, Dr Tarek Fouda, Dr Abdullah Hamad, Dr Hassan Al-Malki)

Presented by : Farrukh Ali Farooqi

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Learning Objectives

At the end of this session, participants will be able to:

1. **Objective 1:-** To ensure the safety and quality of dialysis water by monthly testing chemical/microbiology/endotoxin levels and reviewing the results according to AAMI & ISO standards (Association for the Advancement of medical instrumentation & International Organization for Standardization). To keep the HMC Standard match with international standards.

2. **Objective 2 :-** To achieve a better treatment time management , effective utilization of resources and patients satisfaction by reducing or maintain dialysis machine failure rate (as per international ISQUA standard < 0.01 episode /hr.) during the treatment hours.

3. **Objective 3 :-** To Confirm the patients are getting adequate efficient dialysis treatment as per international standard measuring hemodialysis adequacy (Kt/V ≥1.2 or URR ≥ 65%) Program Goal - 90% of dialysis patient population.

4. **Objective 4 :-** To Restrict/ Stop the practice to add injection Heparin in Sodium chloride solution (Normal Saline) to prime th extra-corporeal dialysis circuit. Thereby reducing post hemodialysis bleeding, and improve cost effective management and hence value improvement.

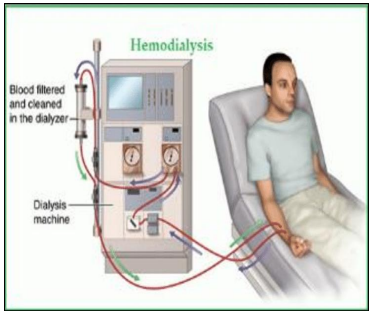
(Objective # 1)

To ensure the safety and quality of dialysis water by monthly testing chemical/microbiology/endotoxin levels and reviewing the results according to AAMI & ISO standards (Association for the Advancement of medical instrumentation & International Organization for Standardization). To keep the HMC Standard match with international standards.

Background :- we have almost 680 patients on maintenance hemodialysis, each patient needs minimum thrice weekly of 4 hrs. Hemodialysis.

You know one dialysis dependent patient consuming more water than a healthy person per week, ok let me explain,

"Normal healthy person drinking 12-18 liters water per week (Approx. 1.5-3.0 liter/day) while dialysis patient using an average of 300-600 liters treated water per week during hemodialysis treatment"

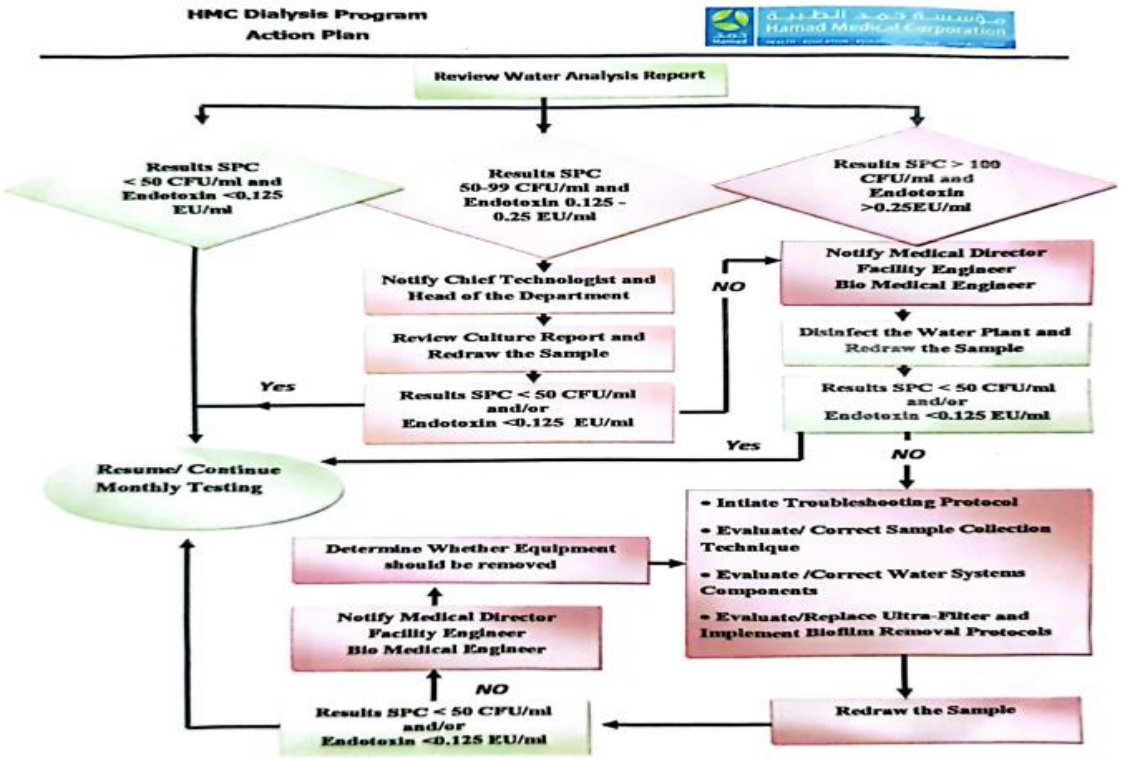


Poor Quality of water can Impact on Dialysis patients:

- Abnormalities in Chemical contaminant & Microbiology can cause Anemia, hemolysis, hypertension, bone disease, Bacterial infection, septicemia, muscles weakness, neurological disorder, nausea/vomiting, liver disease and death.
- Unnecessary load on emergency department and increase financial burden.
- Increase morbidity and mortality rate
- Decrease quality of life for long term dialysis patients

Interventions:

- We have Multidisciplinary team for water quality management consisted of Facility director, Technical director, Director of nursing, Head Nurse, Dialysis Technologist, Engineering team, Quality Reviewer.
- We have Hemodialysis water Quality Emergency Action Plan if incase any incident happens or water analysis result abnormalities noted.


HMC Dialysis Program
Action Plan
Review Water Analysis Report
Results SPC < 50 CFU/ml and Endotoxin <0.125 EU/ml
Results SPC 50-99 CFU/ml and Endotoxin 0.125 - 0.25 EU/ml
Results SPC > 100 CFU/ml and Endotoxin >0.25EU/ml
Notify Chief Technologist and Head of the Department
Review Culture Report and Redraw the Sample
Results SPC < 50 CFU/ml and/or Endotoxin <0.125 EU/ml
Yes
NO
Notify Medical Director Facility Engineer Bio Medical Engineer
Disinfect the Water Plant and Redraw the Sample
Results SPC < 50 CFU/ml and/or Endotoxin <0.125 EU/ml
Yes
NO
Resume/ Continue Monthly Testing
- Intiate Troubleshooting Protocol
- Evaluate/ Correct Sample Collection Technique
- Evaluate /Correct Water Systems Components
- Evaluate/Replace Ultra-Filter and Implement Biofilm Removal Protocols
Determine Whether Equipment should be removed
Notify Medical Director Facility Engineer Bio Medical Engineer
NO
Results SPC < 50 CFU/ml and/or Endotoxin <0.125 EU/ml
Redraw the Sample

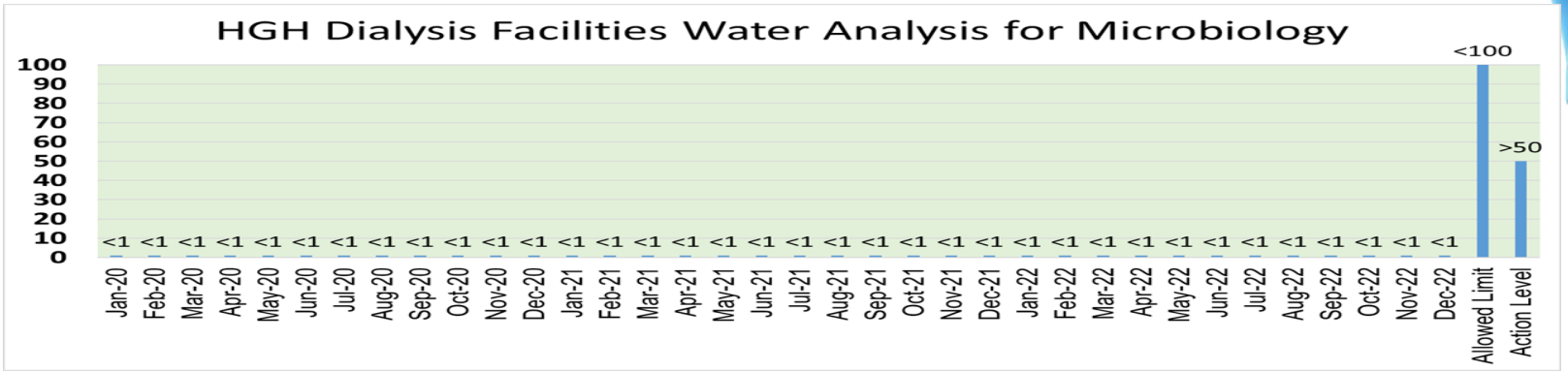
Interventions:

- Train the technical staff for water sampling techniques.
- Monitoring the technical staff's performance and competency validation.
- Update Dialysis Technical protocol according to international standard (AAMI & ISO) and strictly following in all HGH Dialysis Facilities.
- Daily checking and testing for Chlorine, Chloramine, hardness in each shift.
- Monthly water analysis scheduling for Microbiology, chemical contamination, endotoxin) report collection and enter in monthly data sheet.
- Water treatment Plant cleaning and disinfection (RO & Loop) planning monthly basis, our technical team performing disinfection procedure as per dialysis technical protocol.
- Monthly data collection for all technical indicators, Chlorine, Microbiology, Chemical contaminants, Endotoxin result analyze and reporting by technical quality lead.

Allowable Limits for microbiology & Endotoxin as per international standard (ANSI/AAMI/ISO 13959:2014)

	Microbiology	Endotoxin
Viable count	< 100 CFU/ml	< 0.25 EU/ml
Action Level	≥ 50 CFU/ml	≥ 0.125 EU/ml

Results :-


HGH Dialysis Facilities Water Analysis for Microbiology
100
90
80
70
60
50
40
30
20
10
0
<1
<100
>50
Jan-20
Feb-20
Mar-20
Apr-20
May-20
Jun-20
Jul-20
Aug-20
Sep-20
Oct-20
Nov-20
Dec-20
Jan-21
Feb-21
Mar-21
Apr-21
May-21
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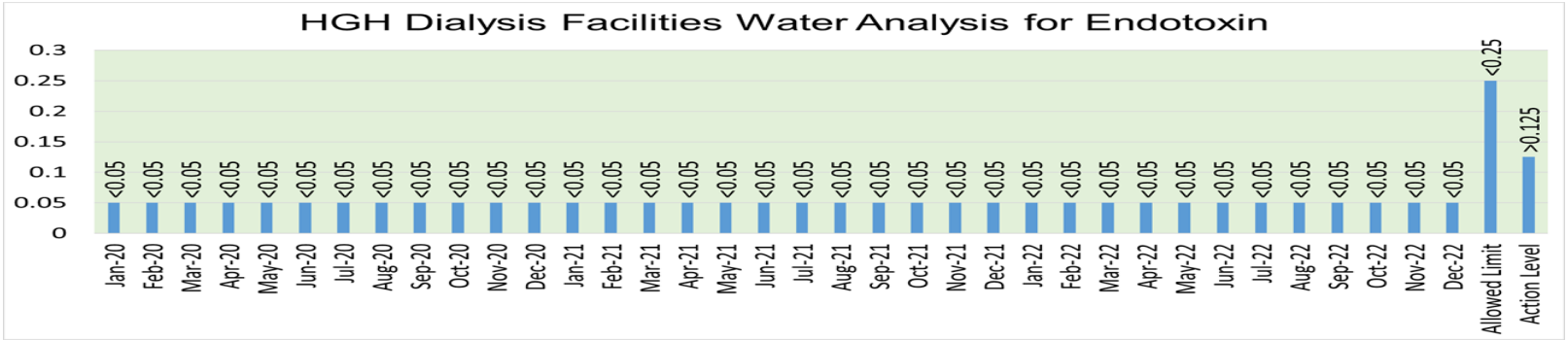
Oct-22
Nov-22
Dec-22
Allowed Limit
Action Level


HGH Dialysis Facilities Water Analysis for Endotoxin
0.3
0.25
0.2
0.15
0.1
0.05
0
<0.05
<0.25
>0.125
Jan-20
Feb-20
Mar-20
Apr-20
May-20
Jun-20
Jul-20
Aug-20
Sep-20
Oct-20
Nov-20
Dec-20
Jan-21
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Mar-22
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Oct-22
Nov-22
Dec-22
Allowed Limit
Action Level

(Objective # 2)

To achieve a better treatment time management effective utilization of resources and patient's satisfaction by reducing or maintain HD machine failure rate through periodic preventive maintenance program on time.

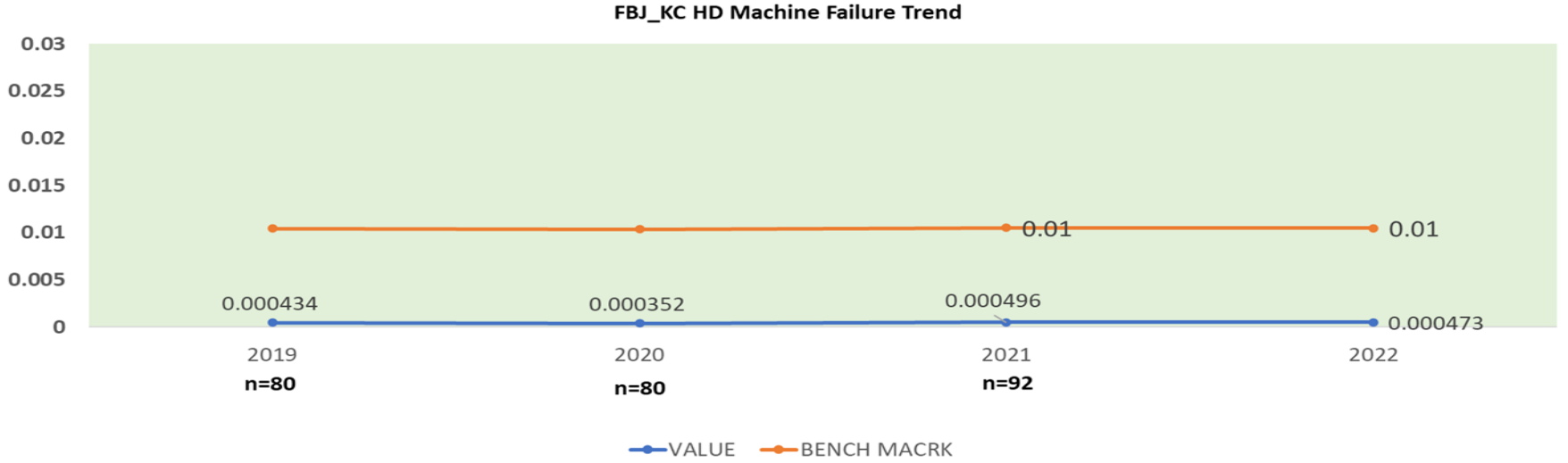
Poor management can Impacts:

- Decrease patient's satisfaction
- Patient will spend more time in facility
- Stress on dialysis staff which can lead to poor performance
- Extra load on biomedical engineering team can impact on patient's safety.
- In-total patient waiting time increased due to one failure.

Intervention: we have Multidisciplinary team for HD machine failure management consisted of Facility Director, Technical Director, Director of Nursing, Dialysis Technologist, Biomedical Engineer, Patient Educator, and Dialysis Nurse.

- We have almost 138 Hemodialysis machines in HGH Dialysis facilities, approx. 300-350 Hemodialysis performing per day in three shifts.
- Asper international standard for periodic preventive maintenance (PPM) all HD machine to be finished PPM before due date.
- Monitoring the machine working hours monthly basis.
- Internal and External disinfection procedure after each use.
- Daily monitoring of machine performance in mixing electrolyte to ensure the accurate electrolyte in dialysate.
- Monthly Data collection for HD machine failure & causes, specially machine repair date to be note down, then we can calculate no of days HD machine was on failure mode
- If any machine on failure mode up to or more than 5 days due to unavailability of parts, remove machine from total machine count for machine failure rate calculation.
- If more HD machine failure observed in current month. Root Cause analysis to be initiated to find out causes

Results :-



- After continuing same practice, we found our machine failure rate was 0.000474 episode/hr in 2019.
- Which is sustained and reduce to 0.000473 episode/hr in 2022, while our bench mark is 0.01 episode/hr(international machine failure rate 0.01 from ISQUA –healthcare equipment failure rate)

(Objective # 3)

To confirm the efficiency of HD treatment which are getting HD patients as per international standard by measuring hemodialysis adequacy (KT/v ≥ 1.2 or URR ≥ 65%)

Poor Adequacy management can Impacts: Inadequate hemodialysis can cause nausea or vomiting, lack of appetite, fluid overload, hypertension or hypotension, hyperkalemia (high serum potassium which can lead to heart problems including arrythmia, heart attack, and death) high phosphorus which can weaken your bones overtime and increase risk for heart disease, uremic encephalopathy hyper or hyponatremia.

All above mentions problems can increase hospitalization and increase financial budget.

Background: In 2012 we found percentage of patients who achieved adequacy target were very low 79%.

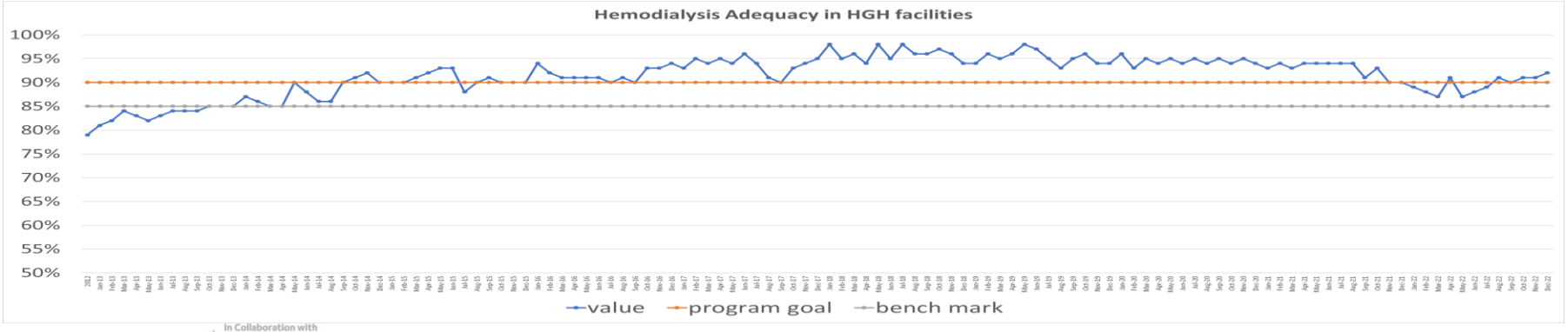
Intervention: Multidisciplinary team formulated, Facility Director, Technical Director, Head Nurse, Dialysis Nurse, Dialysis Technologist, Patient Educator, Dietician, Quality reviewer, Vascular coordinator.

- HGH dialysis adequacy protocol updated.
- Our intervention started in the last quarter of 2012; Monthly MDT team meeting organized to discuss about the patients who were not getting adequacy target goal.
- Developed a patient specific care plan for all patients who are not meeting adequacy goal to address barriers and issue impacting their adequacy, target group found in which some patients were non-compliance to time and some due to overweight.
- Patient educator assigned to educate patients and their relative about importance of completing prescribed time, for overweight patients (patients more than 100KGs) updated dialysis order for filter size as per their body surface area and increase 30 minutes extra hemodialysis time, extra fourth dialysis session to achieve adequacy target.
- Dialysate flow rate also updated at least 1.5 times of current blood flow rate during hemodialysis, it will directly effects on clearance during dialysis.
- Anti-coagulant protocol updated as per patient weight and comorbidities

Intervention:

- Vascular access is most important thing for dialysis, it's also called lifeline for dialysis patient.
- We need free blood flow during hemodialysis to achieve good adequacy if any abnormalities found in access, patient transferred to vascular coordinator for further management.
- Arrange in service classes or reorientation for all dialysis staff to adhere towards dialysis policy and protocol updating as per international protocol and guidelines.

Result:



(Objective # 4)

To restrict/stop the practice of adding injection heparin in normal saline to prime dialysis extra corporeal bloodlines and dialyzer, thereby reducing post hemodialysis bleeding, and improve cost effective management and hence value improvement.

Poor Management can Impact: Heparinized normal saline can lead to post hemodialysis access bleeding decrease INR for high risk patient vascular access hematoma-gastro intestinal bleeding etc. can lead to hospitalization,
It will increase load in emergency department and financial budget

Background:

- In 2018 we were using injection heparin 2000IU in priming of dialysis extra corporeal bloodline and dialyzer, we experienced some cases of post hemodialysis access bleeding and related complication post hemodialysis
- Using heparinized priming in all HGH Dialysis facilities was also high cost consuming approximately 225000 Qtrs. in a year.

Intervention:

- Multidisciplinary team formulated, Facility Director, Technical Director, Head Nurse, Dialysis Nurse, Dialysis Technologist, Patient Educator, Dietician, Quality reviewer, Vascular coordinator.
- Program initiated in 2018, randomized trial done on 36 hemodialysis patients into 2 groups (Group A used heparinized normal saline for priming, Group B used non heparinized normal saline for priming).
- Monitored 4 weeks, variables related to the coagulation of the circuit and efficiency of the dialyzer were analyzed, there were no significant difference found in the result related to coagulation and efficiency.
- Educate the staff on the new practice and encouraging them to report any incident of extra corporeal clotting.
- Updated dialysis policy and protocol after success the practice was expanded to cover all HGH dialysis facilities.

Water Quality

- Review the current performance
- Create Emergency action plan
- Train the staff in water sampling techniques
- Monitoring the staff performance and competency validation
- Schedule water treatment plant disinfection plan monthly
- Daily monitoring for chlorine , chloramine and hardness
- Monthly monitoring for chemical contaminant , microbiology and endotoxin
- Compare the result with AAMI standard and MOPH guidelines
- Update the protocol accordingly

Machine Failure

- Periodic preventive maintenance schedule
- Monitoring the machine working hours
- Reporting any hydraulic test failure
- Internal and external Disinfection procedure after each use
- Monthly monitoring of machine performance in mixing Electrolyte . To ensure the accurate electrolyte in dialysate

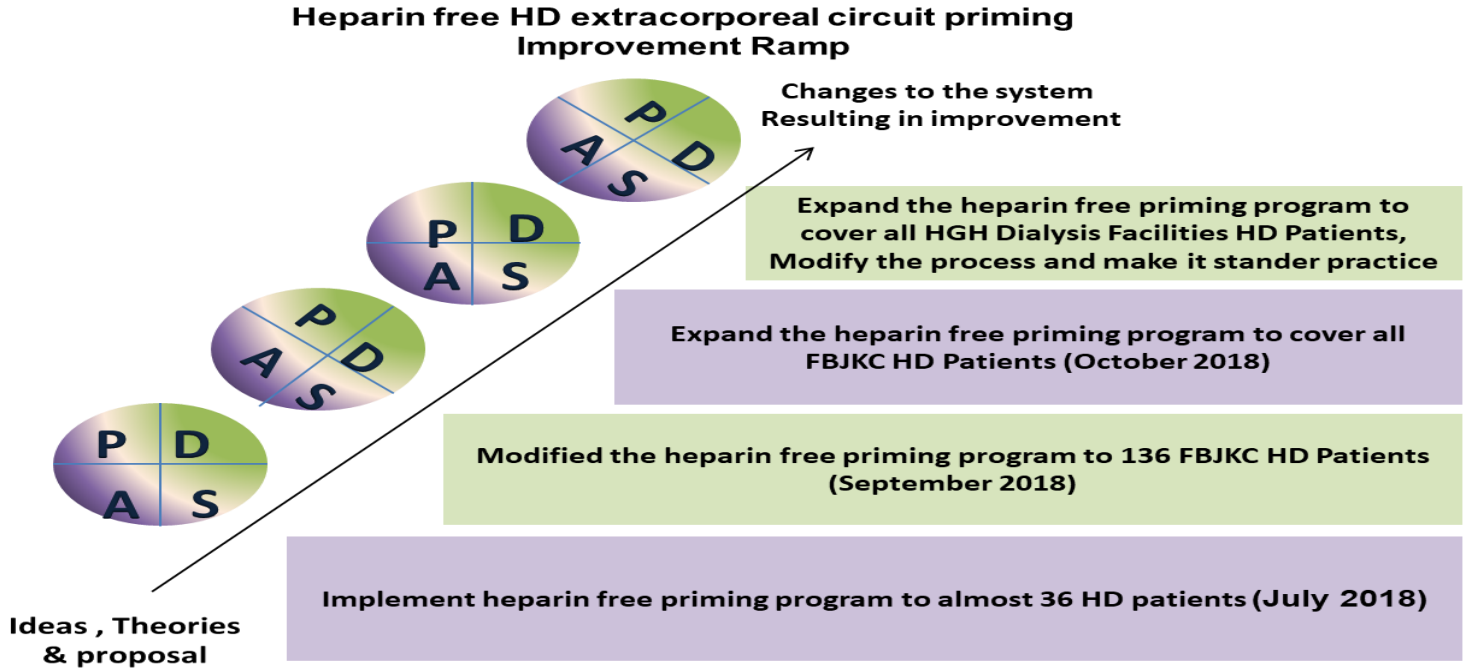
Haemodialysis Adequacy

- Implemented of New action steps and strategies to address root cause analysis
- Reviewed monthly adequacy lab data
- identify patients not meeting adequacy goal
- Arranged monthly adequacy multidisciplinary team meeting to discuss action plan
- Developed a patient specific care plan for all patients who are not meeting adequacy goal to address barrier an issue impacting their adequacy
- Reviewed the care plan with patients and patients caregivers.

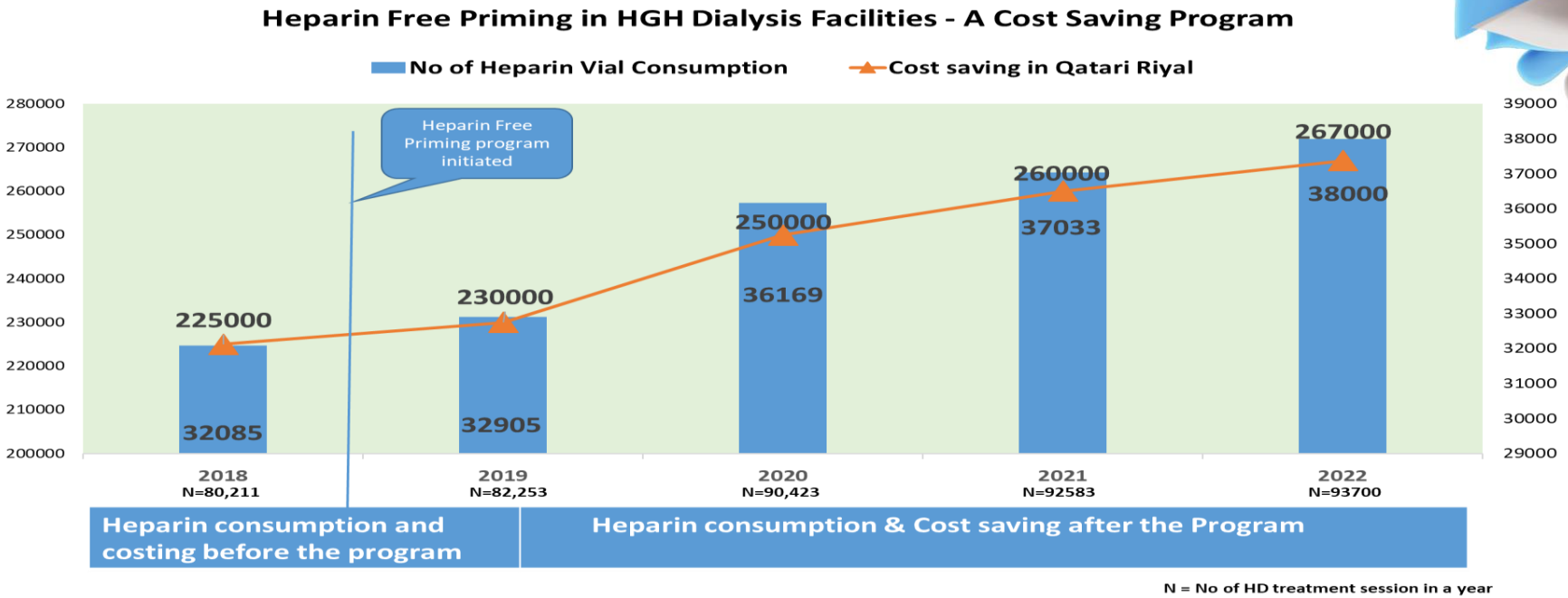
Heparin Free Priming

- Review the current performance
- Initiate a trail on 36 dialysis patient
- Educate the staff on the new practice and encouraging them to report any incident of extracorporeal clotting
- Data collection & analyzer
- Cost analysis done
- After success the practice was expended to cover all dialysis population In HGH dialysis facilities

PDSA for Heparin free priming project :-



Results:-



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Conclusion:-

This Project aimed to emphasize the importance of patients safety & value improvement in the clinical setting of HD units. The qualitative and quantitative analysis of the data collected ensures excellent patient safety & high quality of treatment at HGH dialysis units. Thereby achieving value improvement of resources.

References:-

1) Guideline CP. Guideline on water treatment Systems, dialysis water and dialysis fluid quality for hemodialysis and related therapies Clinical Practice Guideline Prepared on behalf of The Renal Association 1 and The Association of Renal Technologists 2 January 2016 Re. 2020;1–48.

1) “Do we need heparin in the dialyser priming solution” onhttps://www.researchgate.net/publication/289894729_Do_we_need_heparin_in_the_dialyser_priming_solution.October 2011 Revista de la Sociedad Espanola de Enfermeria Nefrologica 14(4):215-221DOI:10.4321/S1139-13752011000400002

1) Jardine M, Zuo L, Gray N. Impact of extended weekly hemodialysis hours on quality of life and clinical outcomes: ASN Annual Meeting, November 11, 2014; Philadelphia,PA.

1) Vichek DL, Pressly N. Quality Assurance Guidelines for Hemodialysis devices. chapter 4,P3. Med Device Technol. 17(9):16–8

Sustainability:- In-service classes and on time PPM by biomedical

Thank you

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16-19 March, Doha

Bed crisis: Too few or too misused, strategies to reduce length of stay(LOS) in OBGYN inpatients, AWH.

Rohini Puttegowda

Healthcare Resilience in Extraordinary Times

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CONFLICT OF INTEREST

I have no conflict of interest or disclosure in relation to this presentation

BED CRISIS: TOO FEW OR TOO MISUSED!

REDUCING LOS IN OBSTETRICS &

GYNECOLOGY INPATIENTS- AL WAKRA HOSPITAL.

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LEARNING OBJECTIVES

- Different strategies to reduce the length of stay of postnatal patients.
- Measures to prevent bed crisis.
- Measures to streamline the patient flow and safety in our department .

BACKGROUND

- BED CRISIS: A situation in which the emergency demand exceeds the capacity of vacant beds.

J Accid Emerg Med 1999;16:145-146

- LENGTH OF STAY (LOS): It is a clinical metric that measures the length of an inpatient episode of care, calculated from the day of admission to the day of discharge.
- LOS in one of key performance indicator in the UK NHS.
- It is a key indicator of how efficiently hospitals are being managed – a shorter stay means that more beds are available for more patients.
- The clear message from the UK Department of Health is that reductions in LOS are expected to be achieved year on year and represent “efficiency” of local health services.

A Clarke , Length of in-hospital stay and its relationship to quality of care , Qual Saf Health Care 2002;11:209–210

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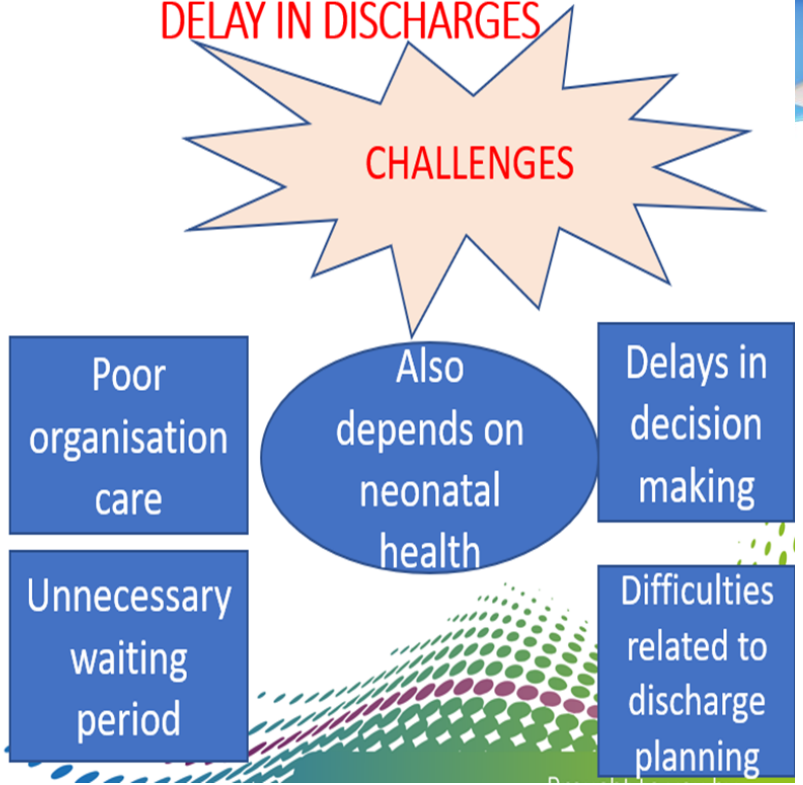
IMPACT OF LENGTH OF STAY (LOS)

LONGER LOS

- Unnecessary high cost of care causing burden on patients and health care system
- Inadequate utilisation of resources to indicated patients
- Increased risk of infections
- More risk of medical errors
- Less time with family
- Can negatively affect patient and staff experience

WHAT COULD BE THE REASONS FOR DELAY IN DISCHARGES



THE PROJECT..

- LOCATION : Postnatal ward , Al Wakra hospital , HMC, Doha , Qatar.
- AIM: To reduce the LOS of postnatal patients to 55% in Normal Vaginal Delivery (NVD) and to 85% in post Caesarean Section (CS) .
- We aimed at reducing the LOS for post CS patients from 72 hrs to 48 hrs and for post NVD patients from 48hrs to 24 hrs.
- Percentage of LOS for NVD for < 24hrs and percentage of LOS for post CS <48hrs has been used as the one of the key performance indicators (KPI).
- Numerous strategies have been tested to improve the efficiency and safety of patient recovery and discharge, but hospitals continues to face challenges.

OBJECTIVES

1)To reduce the number of beds occupied in postnatal ward. (To prevent bed crisis).

2)To reduce the length of stay.

3)To streamline the patient flow and safety in our department.

- Data was collected prospectively from January 2021 to December 2022.
- The main contributory factors for long LOS in OBGYN inpatients was long postnatal stay in the ward.

- **OUTCOME MEASURES**

- Percentage of LOS for NVD < 24hrs

-Percentage of LOS for post CS <48hrs

- **BALANCE MEASURES**

-Percentage of readmission of the discharged patients.

- Cerner was used as source of data, in depth analysis was done to understand trends in data and identify root causes for long stay in hospital.

- We identified LOS before implementation of these measures were
  For NVD within 24hrs – 49%
  For LSCS within 72hrs – 85%

PROCESS MEASURES IMPLEMENTED:

1)Changing the discharge criteria according to patient current obstetric status.

2) Daily evening baby circumcision which helped in early discharge the next day morning.

3) Evening round discharges.

4) Reducing observation of newborns from 48hrs to 36hrs of GBS +ve and leaking mothers if they have received Intrapartum Antibiotic Prophylaxis.

5) Activation of bed crisis protocol.

BED CRISIS PROTOCOL

- Early round and early discharge order.
- Daily morning ward rounds by medical team that take precedence over clinics or other discretionary activities.
- To start rounds with the expected discharge patients and complete the discharge process after the decision is made.
- Transferring pending discharges to discharge lounge / daycare so beds can be vacated quickly (when patients are waiting due to some social reasons).
- Review pending admissions in emergency against the admission criteria.
- Daily review of elective surgical cases to be admitted on the day of surgery

- Hospital stays and readmissions can be significantly reduced by using post-discharge support such as nurse home visits, telephone contact , continuous availability of emergency services.





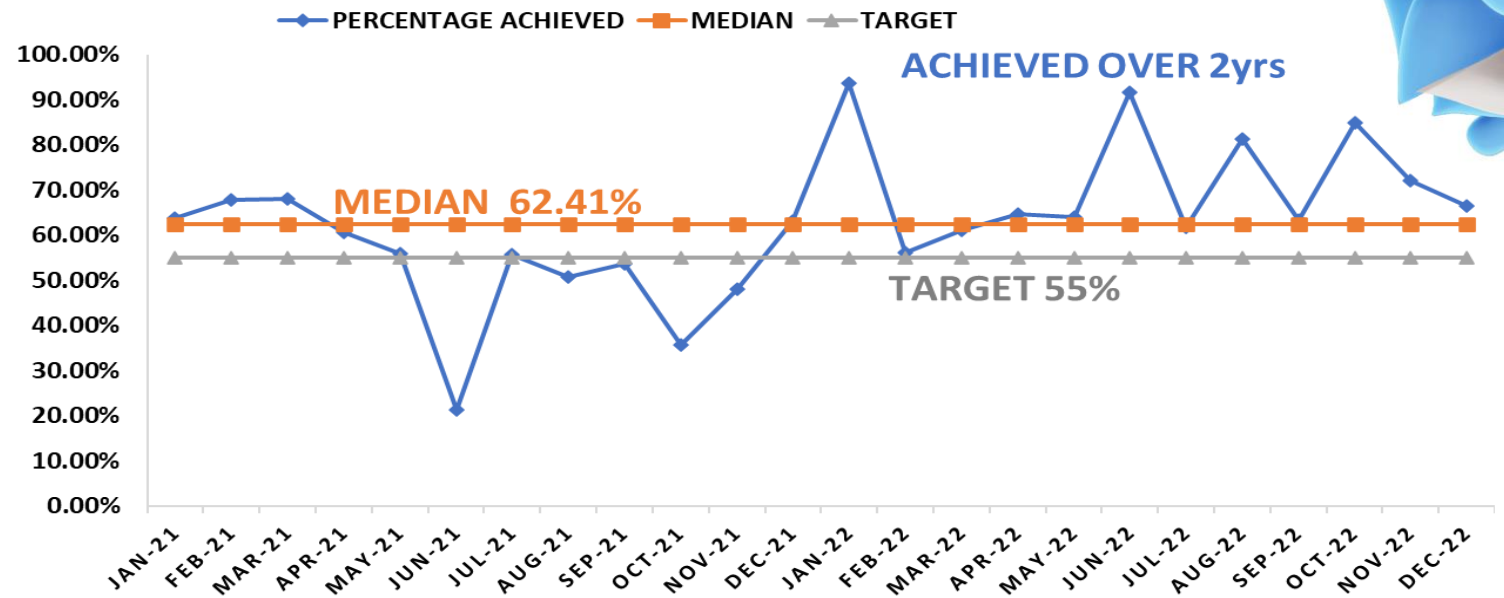

RESULTS

CALCULATION…

FORMULA:
(Total number of discharged patients who delivered by LSCS < 48hours)/(Total number of Delivered by LSCS] x 100

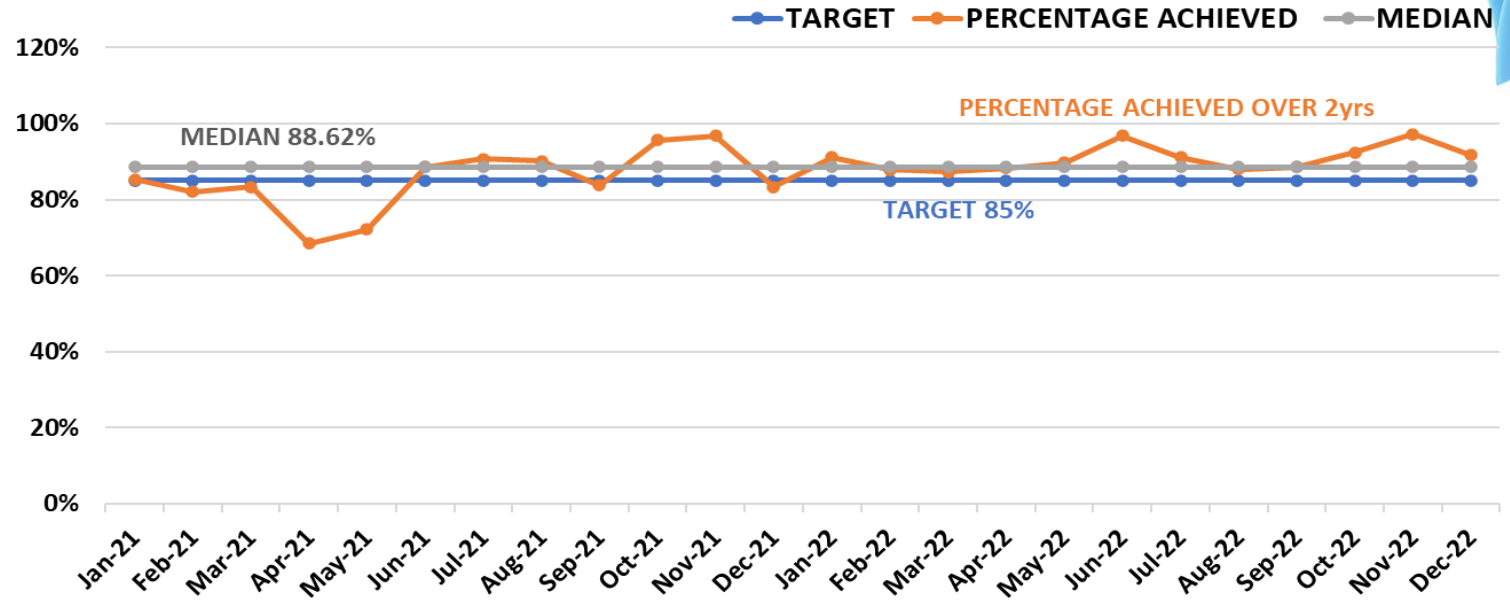
FORMULA:
(Total number of discharged patients who delivered vaginally < 24 hours)/(Total number of Delivered vaginally] x 100

PERCENTAGE OF LOS POST VAGINAL DELIVERY WITHIN 24HRS



	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
PERCENTAGE ACHIEVED	63.81	67.81	68.12	60.71	55.88	21.35	55.60	50.68	53.57	35.78	47.94	63.18	93.72	56.05	61.09	64.77	63.89	91.52	61.64	81.33	63.41	84.89	72.08	66.35
MEDIAN	62.41	62.41	62.41	62.41	62.41	62.41	62.41	62.41	62.41	62.41	62.41	62.41	62.41	62.41	62.41	62.41	62.41	62.41	62.41	62.41	62.41	62.41	62.41	62.41
TARGET	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%

PERCENTAGE OF LOS FOR LSCS WITHIN 48hrs



	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
TARGET	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
PERCENTAGE ACHIEVED	85.29%	82.14%	83.33%	68.42%	72.22%	88.66%	90.68%	90.16%	83.80%	95.70%	96.77%	83.33%	91.15%	87.93%	87.34%	88.27%	89.71%	96.84%	91.14%	88.02%	88.57%	92.41%	97.22%	91.67%
MEDIAN	88.62%	88.62%	88.62%	88.62%	88.62%	88.62%	88.62%	88.62%	88.62%	88.62%	88.62%	88.62%	88.62%	88.62%	88.62%	88.62%	88.62%	88.62%	88.62%	88.62%	88.62%	88.62%	88.62%	88.62%

BALANCE MEASURE – READMISSION RATE

- We had 9 readmissions out of 2935 discharges – 0.3%

OVERALL RESULTS

	TARGET	2021	2022
LOS for NVDs <24hrs	55%	53.70%	71.72%
LOS for LSCS <48hrs	85%	85.04%	90.85%

CONCLUSIONS

- Overall it is clear that there is no magic bullets to reduce length of stay but involving efficient strategies and effective teamwork could help in reducing the LOS.
- There are solutions which needs effective implementation .
- The new measures which were applied were effective in reducing the LOS of the postnatal patients which is reflected on patient satisfaction and reduced the hospital cost .
- These strategies have facilitated more flexible and dynamic bed management.

TAKE HOME MESSAGE

All hospitals could consider implementing these strategies to improve bed availability and to utilize the beds for those who really need necessary hospital care.

Thank You

Thank You

For Your Attention!

Any Questions

?

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Reducing Major Post-Partum Hemorrhage in High-Risk Obstetric Surgical Cases: AWH OT-OBS Achievement from 2019 to Present

Ms. Farideh Jweihan

Healthcare Resilience in Extraordinary Times

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Conflict of Interest

The speaker/presenter in this session has/have no conflict of interest or disclosure in relation to this presentation.

Learning Objectives

At the end of this session, participants will be able to:

- analyze the impact of new ideas towards on improving patient safety and quality of life in clinical practice.
- integrate the Institute of Health Improvement (IHI) model into future quality projects.
- apply the initiative project into practice if applicable.

Reducing Major Post-Partum Hemorrhage in High-Risk Obstetric Surgical Cases: AWH OT-OBS Achievement from 2019 to Present

Presented By:
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In Collaboration with
Hamad Medical Corporation
Institute for Healthcare Improvement

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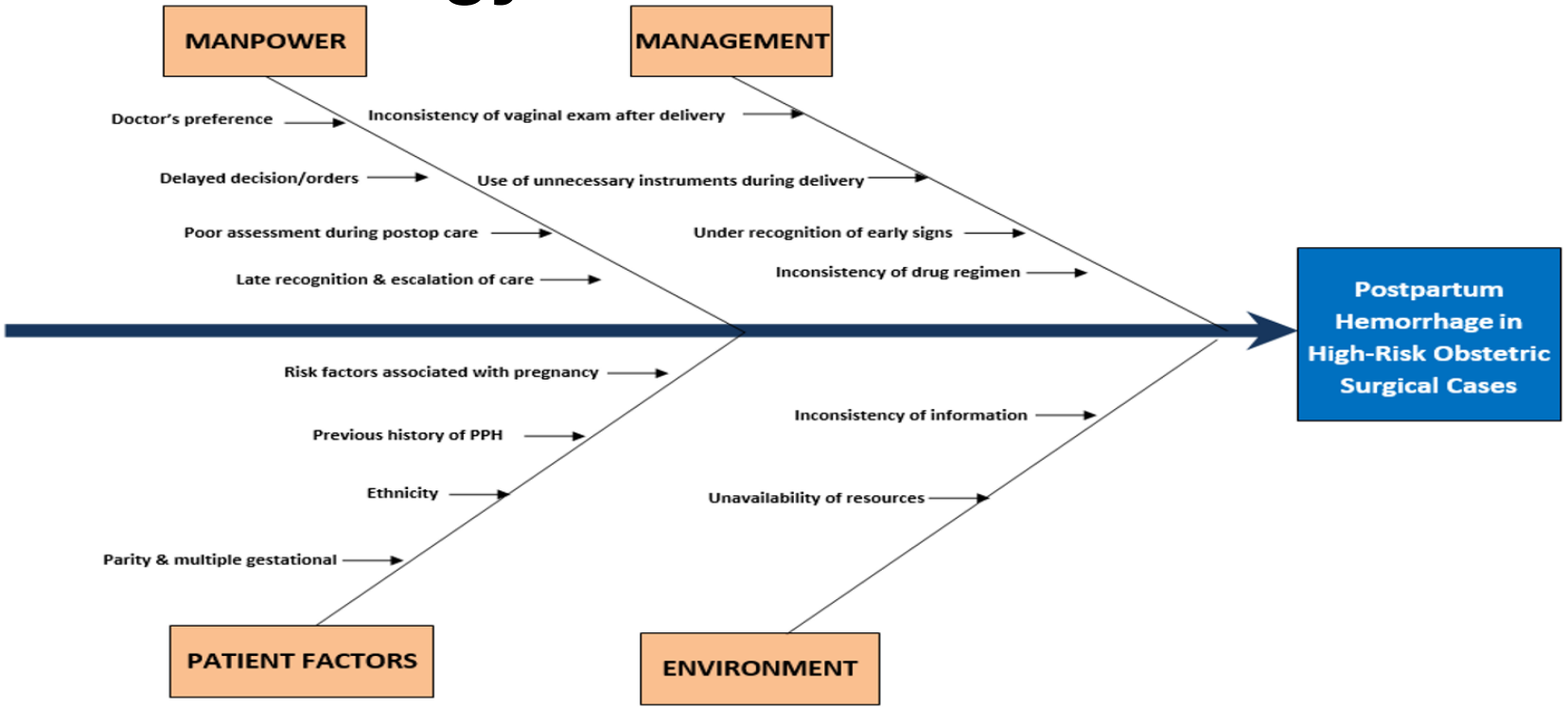
Introduction:

- Postpartum hemorrhage (PPH) remains a major cause of maternal morbidity and mortality with rising incidence worldwide.
- Massive PPH causes 25% of maternal deaths worldwide.
- An initiative by the AWH team introduced the PPH kit, which will provide the first line of management for any obstetrical emergencies such as massive bleeding.

Aim:

- To reduce the incidence of massive PPH amongst patients undergoing surgical obstetric procedures of at least 30% by June 2021 and by 50% by June 2022.

Methodology:



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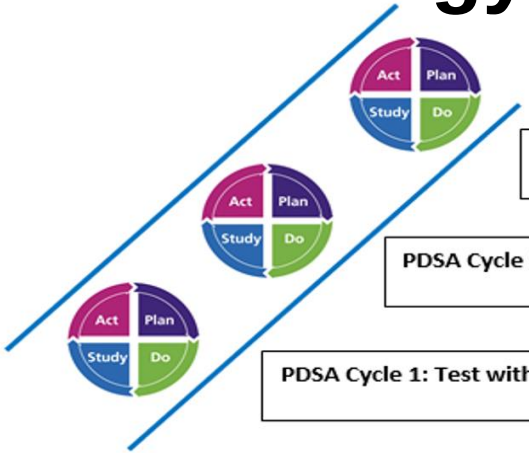
Methodology:



PDSA Cycle 3: Implement permanently

PDSA Cycle 2: Test for one week

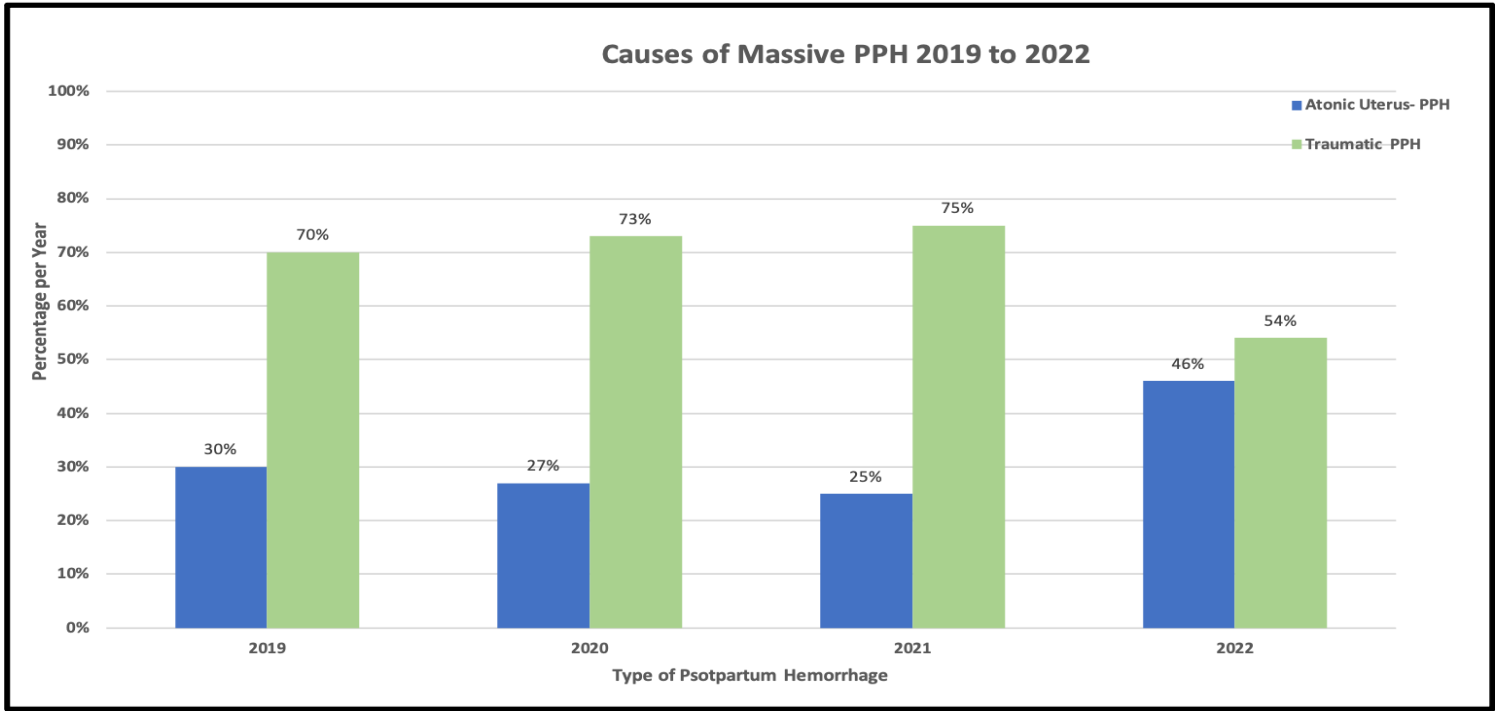
PDSA Cycle 1: Test with one patient

Use of PPH kit in OT-OBS

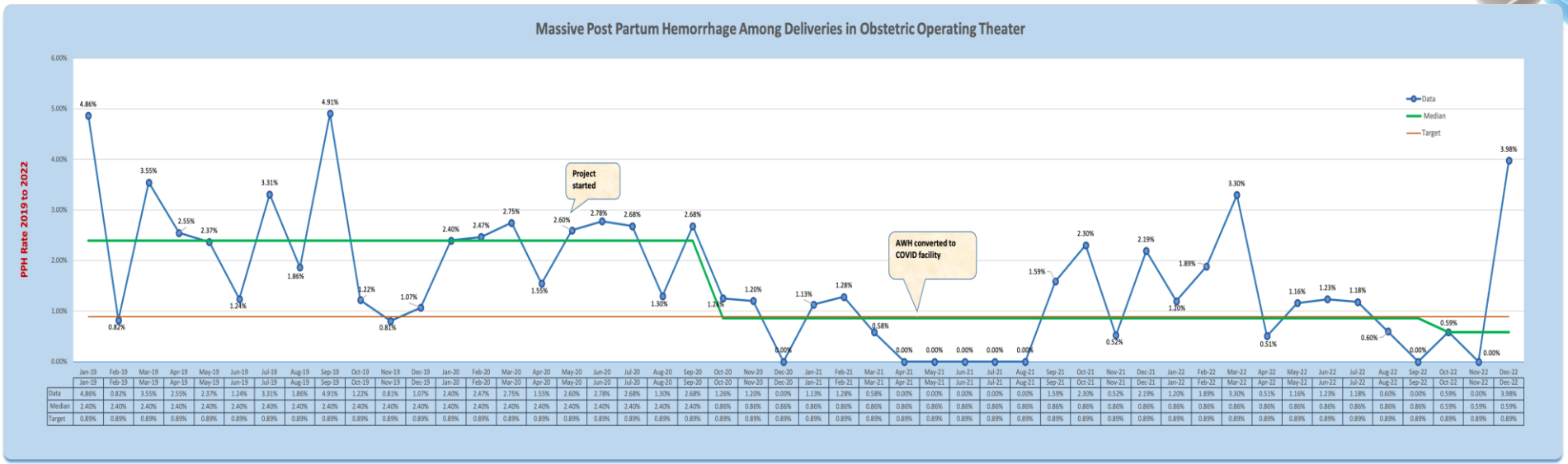
Additional Tasks:

- Departmental morning meeting/report
- Educational sessions on the updated evidence-based practice
- Consultant inside OT during elective cases
- High-risk cases to be done by consultants
- Oxytocin administration for post cs cases
- Call for help early in case of postpartum hemorrhage

Results:


Causes of Massive PPH 2019 to 2022
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage per Year
Atonic Uterus- PPH
Traumatic PPH
30%
70%
27%
73%
25%
75%
46%
54%
2019
2020
2021
2022
Type of Psotpartum Hemorrhage

Results:



	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Data	4.86%	0.82%	3.55%	2.55%	2.37%	1.24%	3.31%	1.86%	4.91%	1.22%	0.81%	1.07%	2.40%	2.47%	2.75%	1.55%	2.60%	2.78%	2.68%	1.30%	2.68%	1.26%	1.20%	0.00%	1.13%	1.28%	0.58%	0.00%	0.00%	0.00%	0.00%	0.00%	1.59%	2.30%	0.52%	2.19%	1.20%	1.89%	3.30%	0.51%	1.16%	1.23%	1.18%	0.60%	0.00%	0.59%	0.00%	3.98%
Median	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	2.40%	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%	0.86%	0.59%	0.59%	0.59%
Target	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%	0.89%

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Conclusion:

- The measures introduced at AWH have resulted in over 50% reduction in major PPH in a high-risk group of obstetric patients.
- The reduction has been sustained over a 2-year period to date.
- Management and prevention of postpartum hemorrhage for high-risk patients can be accomplished through collaboration with consultants for such difficult cases, as well as seeking support if urgently needed.

Thank you…