

Multiple Myeloma maintenance therapy improvement project

Dr Stella Rwezaura, MD, Clinical Hematologist
Head, Hematology Unit
Muhimbili National Hospital (MNH)

December 10, 2021

Revision date: 12/10/2021

Institutional Overview- MNH

- National referral Hospital, research centre and university teaching hospital
- 1,500 bed capacity
- 2000 outpatients per day
- Attending all hemat oncology patient
- Located in Dar Es Salaam city with 6 mil. population



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Team members

Name	Role	Organization
Peter Muhoka, MD	Team Lead	Head, Oncology Unit
Stella Rwezaura, MD	Team Lead	Head, Hematology Unit
Ramdhani Abdul, RN	Member	Oncology Nurse
Agness Shayo, MD	Member	Physician

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Problem Statement

Between June 2020 – June 2021, an **average of 29 patients/per month stopped their MM treatment**; which led to relapse within 1-year (post 1st induction) requiring a second induction and a 50% MM mortality our hospital.

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Outcome Measure

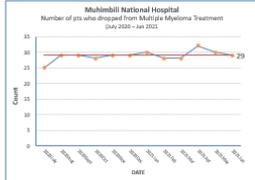
Baseline data summary

Item	Description
Measure:	Incomplete Multiple Myeloma treatment
Patient population: (Exclusions, if any)	All patients diagnosed with Multiple Myeloma at Muhimbili National Hospital who started maintenance treatment.
Calculation methodology: (This is a count not a percentage)	Patients who do not complete their Multiple Myeloma Treatment
Data source:	- Hospital files - IVA electronic system
Data collection frequency:	- Monthly
Data limitations: (if applicable)	- Poor file documentation - Lack patient's registry

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Outcome Measure Baseline data



LEARNING:
The data is consistent along the average... which led us to suspect there may be a common root cause to the problem.

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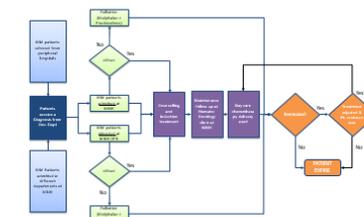
Aim Statement

To reduce the number of patients at Muhimbili National Hospital who do not complete their Multiple Myeloma maintenance therapy from an average of **29/ per month** to **16 per/ month** (50% reduction), by December 2021.

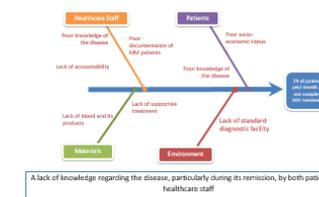
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Process Map



Cause & Effect



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Process Measure

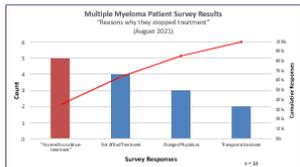
Diagnostic Data summary

Item	Description
Measure:	Patient survey
Population: (Exclusions, if any)	Patients with Multiple Myeloma who dropped out of treatment
Calculation methodology:	Count
Data source:	Survey
Data collection frequency:	Once
Data limitations: (if applicable)	Small sample (14) & rely on patients as source of truth

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Process Measure Diagnostic Data



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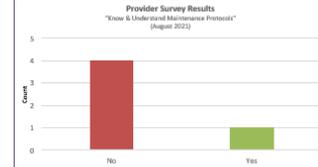
Process Measure Diagnostic Data summary

Item	Description
Measure:	Provider survey
Population: (Exclusions, if any)	General Practitioners
Calculation methodology:	Count
Data source:	Survey
Data collection frequency:	Once
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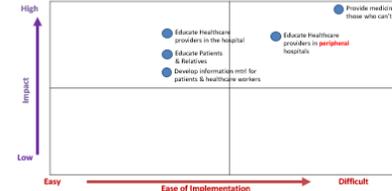
Process Measure Diagnostic Data



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Priority / Pay-off Matrix Countermeasures



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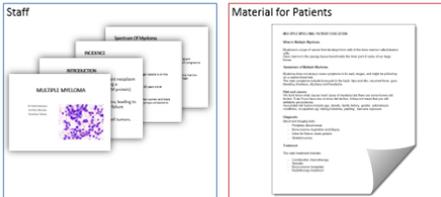
Test of Change PDSA Plan

Date	PDSA Description	Lead	Status
20/08	Schedule healthcare provider training session	Dr Peter	DONE
23/08	Organize to hold a meeting with Administration to discuss providing medicine to those patients who can't afford their medication	Dr Stella	DONE
3-Nov	Develop a training presentation to give to healthcare providers	Dr Peter	DONE
3-Nov	Develop brochure / information material for healthcare providers to give to their patients & relatives (during clinical appointments)	Ramdhani	DONE
21-Nov 23-Nov 26-Nov	Conduct three (3) hospital training sessions, to educate healthcare providers on the MM protocols for treating patients. Speak to the healthcare providers about educating their patients. Provide healthcare provider brochures / information to give to their patients.	Dr Peter	DONE
5-Nov	Meet with administration to discuss providing medicine to patients who can't afford their medication	Them	DONE
24-Nov	All providers will start educating patients & relatives (during their appointments)	Providers	IN PROGRESS
December	Educate healthcare providers in peripheral hospitals	Them	IN PROGRESS

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Education Material

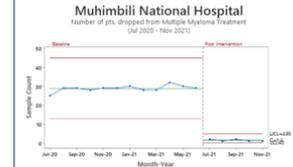


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Outcome Measure

Post Countermeasure



C-Chart
Sigma

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Summary

- Decline in number of pts dropping from treatment due to a combination of:
1. Provider Education
 2. Patient Education
 3. New Bone marrow transplant program

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Next steps

Sustainability Plan

Item	Owner
Continue with regular Physician education	Team and the hospital management
Expand patient education to include all clinics to • Provide all pts with information • Better aware of the impact of stopping their treatment	Team and hospital management
Provide proper medications to patients for the treatment of MM	Hospital management
Continue the Bone Marrow transplant program	Hospital

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Conclusion

1. Due to improved diagnostic instruments and an increase in clinical personnel, the number of patients diagnosed with multiple myeloma is increasing
2. However, a significant number of patients diagnosed with multiple myeloma experience poor clinical outcomes
 - The main factor contributing to the poor treatment outcome among these patients was patient drop out from the treatment
3. Our focus was to improve the knowledge of the disease and its presenting issues, treatment and outcome among the health care workers
 - We recognize that successful patient treatment requires teamwork among health care givers
 - Clinical providers must have a common understanding of how to operate and they need to share knowledge
 - Patient and their relatives must possess enough knowledge on their condition to remain in treatment therapy
4. This will increase patient compliance on their treatment plan and reduce the number of treatment drop out, resulting in improved clinical outcomes for patients diagnosed with multiple myeloma.

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Thank you



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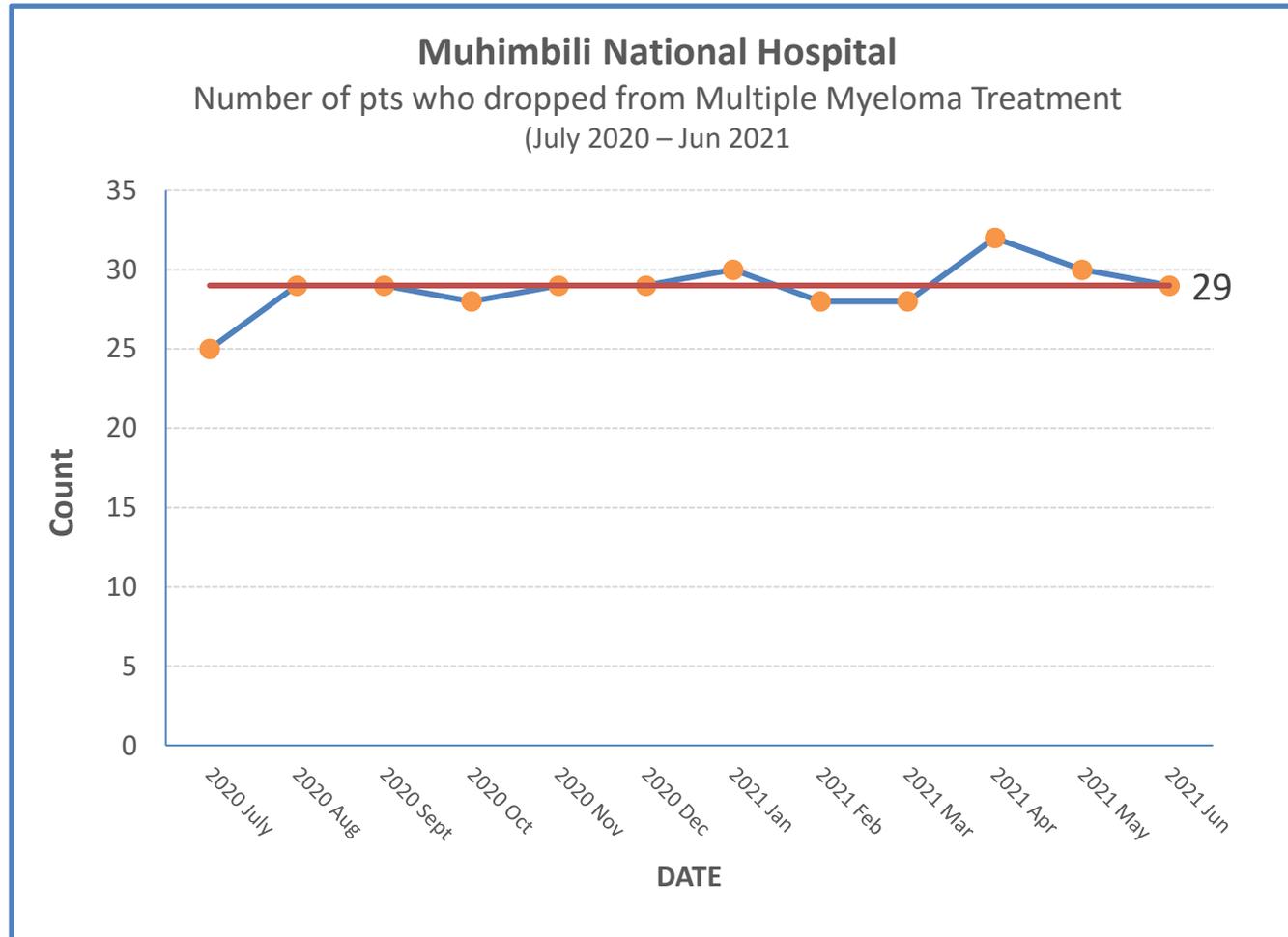
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Outcome Measure

Baseline data



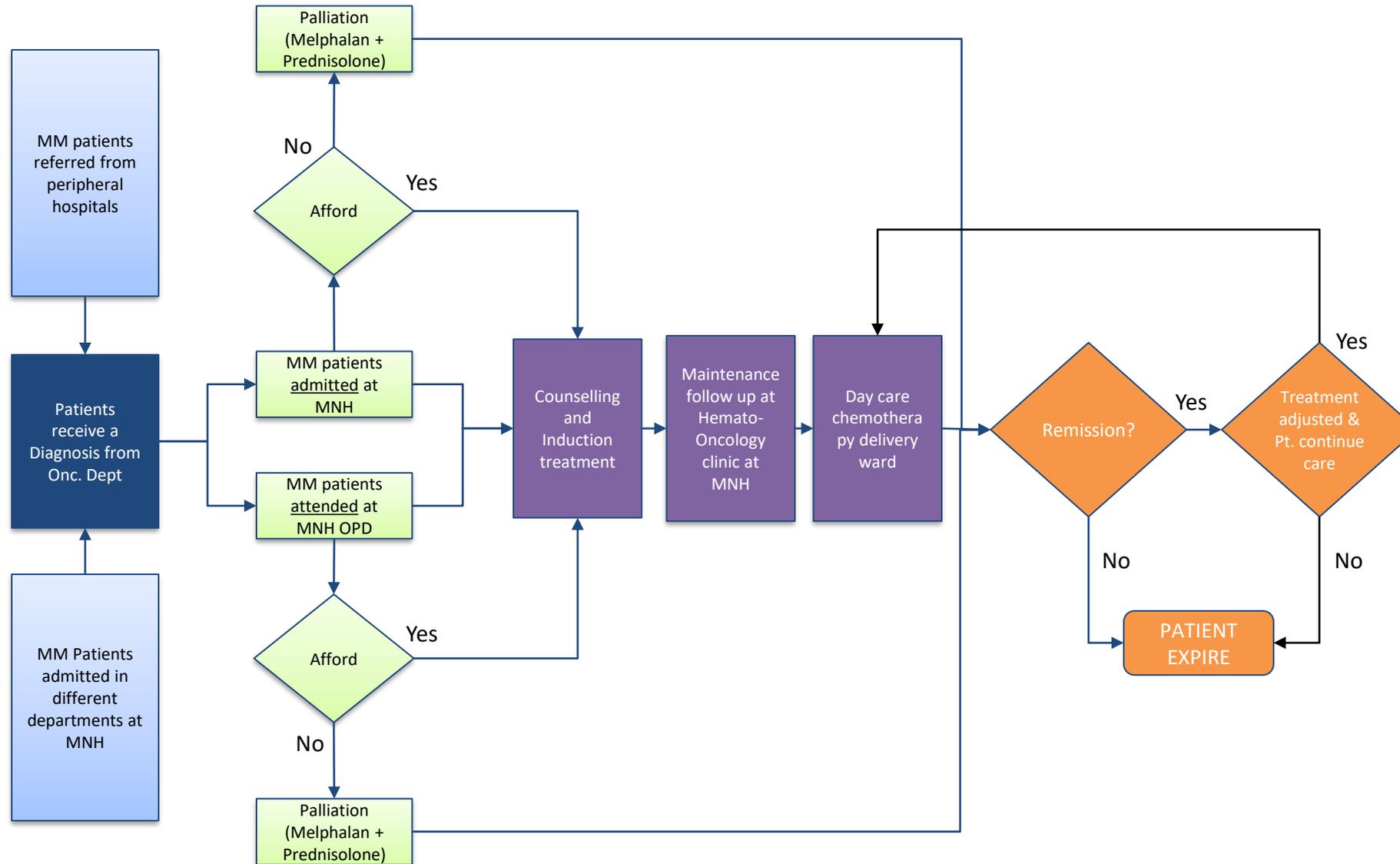
LEARNING:

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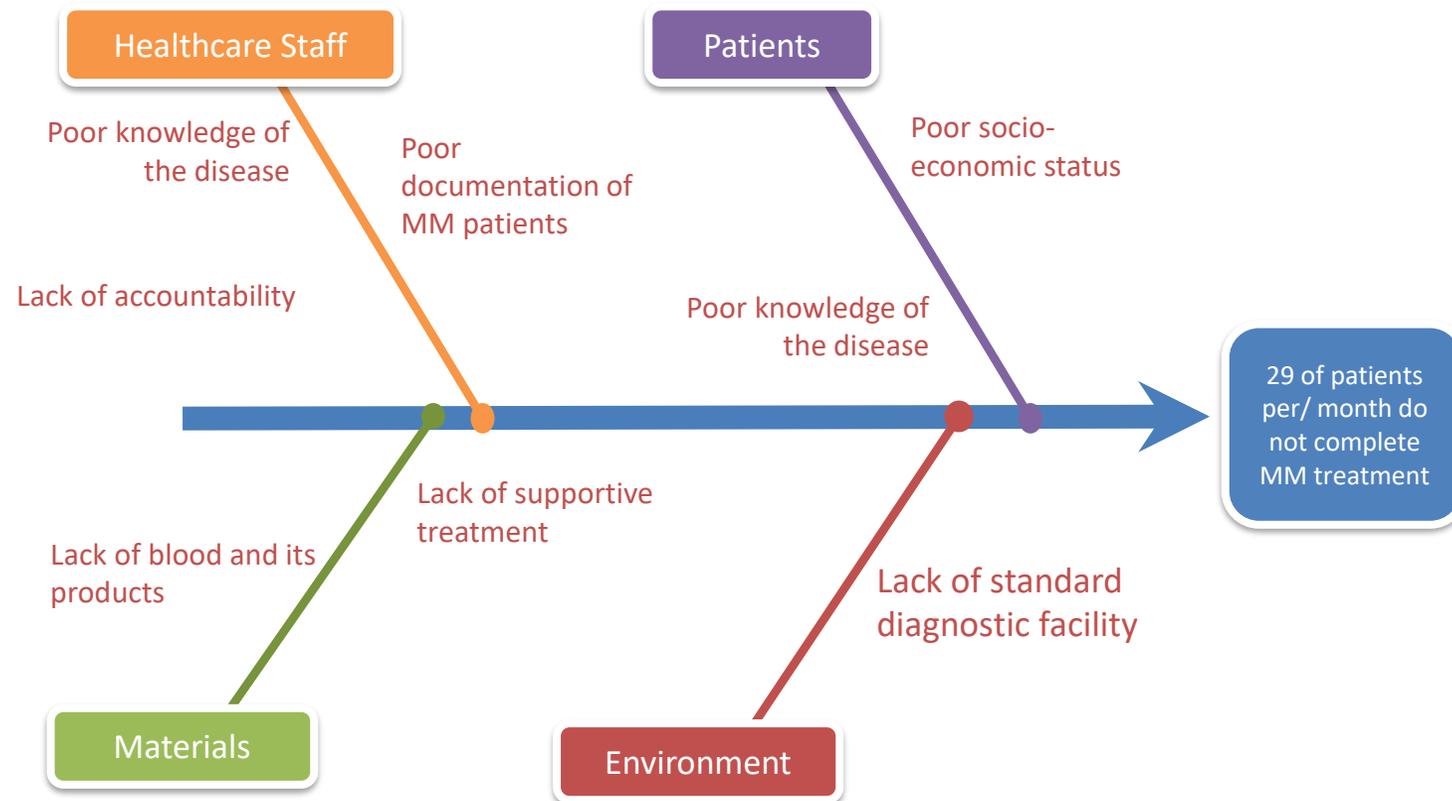
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Process Map



Cause & Effect



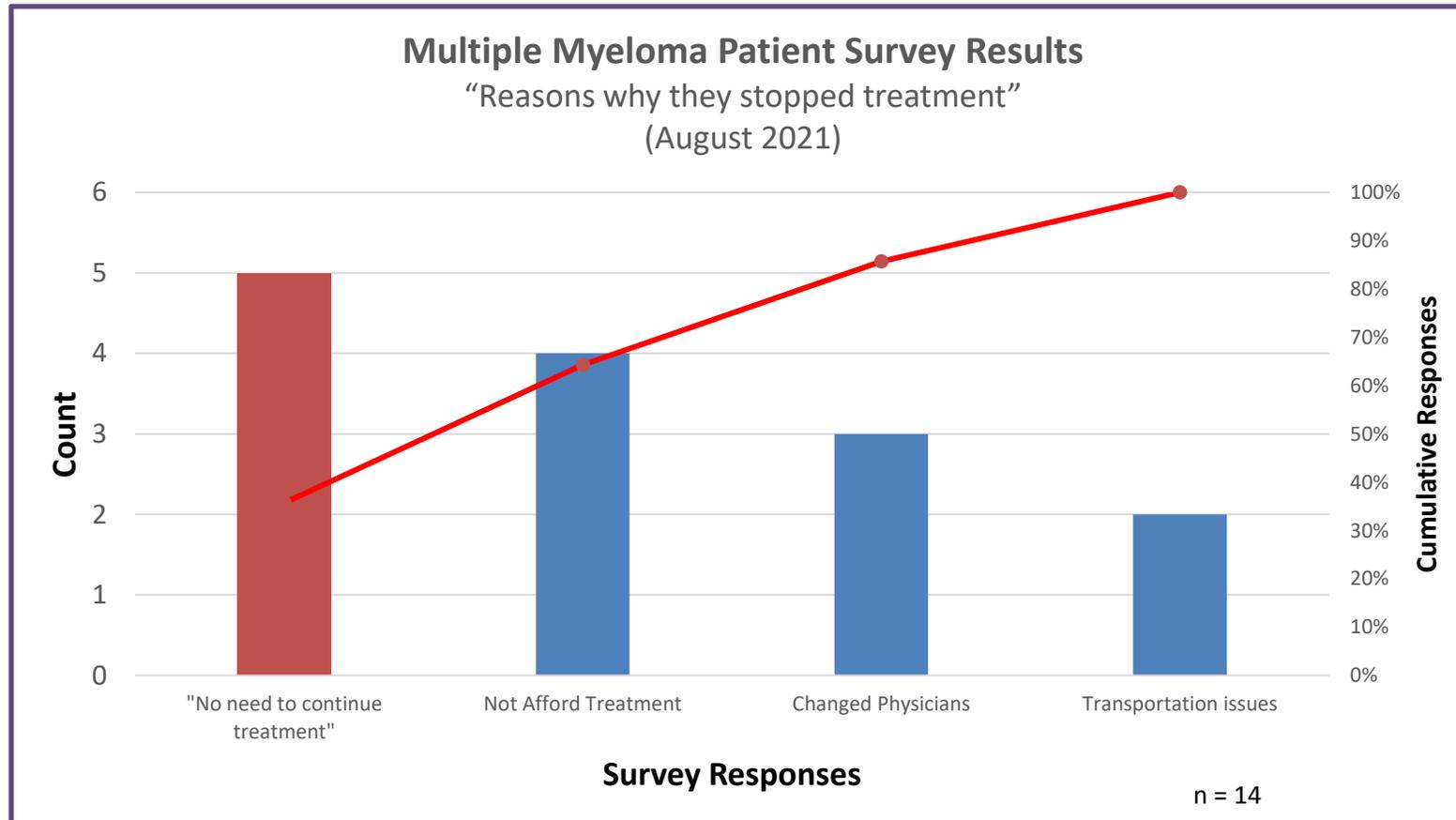
A lack of knowledge regarding the disease, particularly during its remission, by both patients and healthcare staff

Process Measure

Diagnostic Data summary

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Diagnostic Data

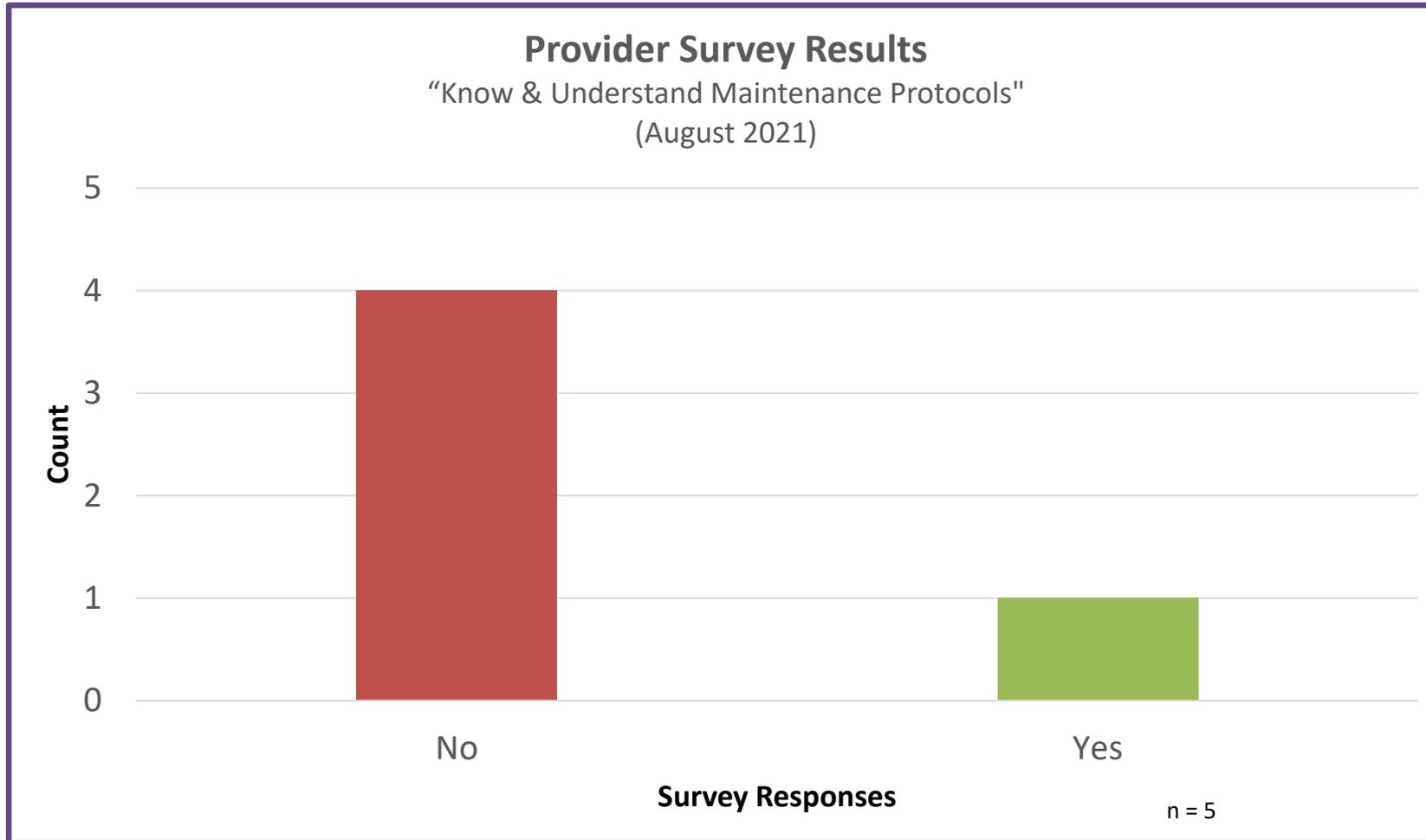


Process Measure

Diagnostic Data summary

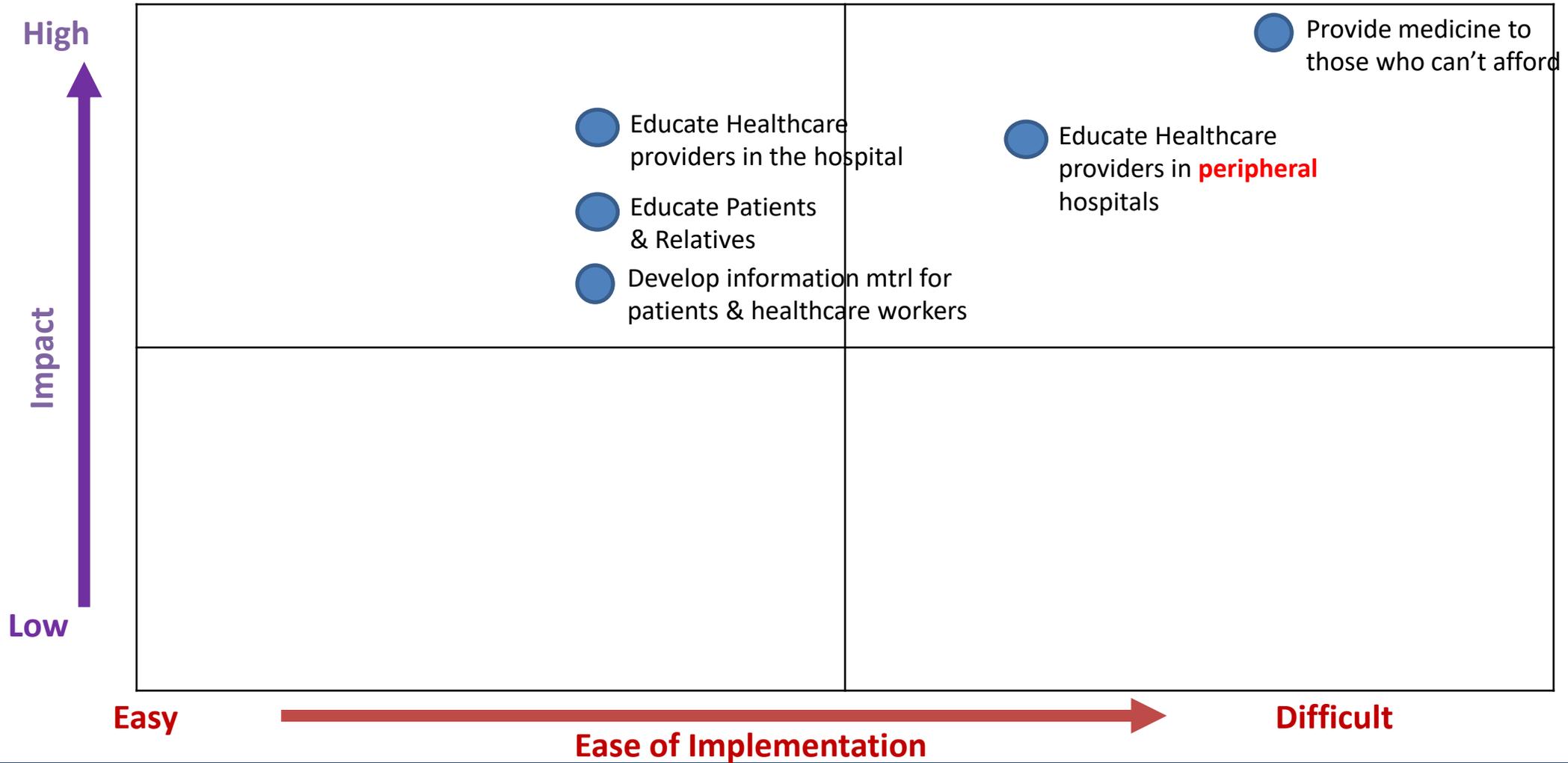
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Diagnostic Data



Priority / Pay-off Matrix

Countermeasures



Test of Change

PDSA Plan

Date	PDSA Description	Lead	Status
29-Oct	Schedule healthcare provider training sessions	Dr. Peter	DONE
29-Oct	Organize/ schedule a meeting with Administration to discuss providing medicine to those patients who can't afford their medication	Dr. Stella	DONE
3-Nov	Develop a training presentation to give to healthcare providers	Dr. Peter	DONE
3- Nov	Develop brochure / information material for healthcare providers to give to their patients & relatives (during clinical appointments)	Ramadhani	DONE
<input checked="" type="checkbox"/> 3-Nov <input checked="" type="checkbox"/> 10-Nov <input checked="" type="checkbox"/> 6-Dec	<ul style="list-style-type: none"> - Conduct three (3) hospital training sessions, to educate healthcare providers on the MM protocols for treating patients. - During the sessions: <ul style="list-style-type: none"> Speak to the healthcare providers about educating their patients Provide healthcare providers brochures / Information to give to their patients 	Team	DONE
5-Nov	Meet with administration to discuss providing medicine to patients who can't afford their medication	Team	DONE
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Education Material

Staff

MULTIPLE MYELOMA

Dr Stella Rwezaula
Dr Peter Muhoka
Ramdhani Mwitwa

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failure

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INCIDENCE

Spectrum Of Myeloma

Material for Patients

MULTIPLE MYELOMA: PATIENT EDUCATION

What is Multiple Myeloma

Myeloma is a type of cancer that develops from cells in the bone marrow called plasma cells. Bone marrow is the spongy tissue found inside the inner part of some of our large bones.

Symptoms of Multiple Myeloma

Myeloma does not always cause symptoms in its early stages, and might be picked up on a routine blood test. The main symptoms include bone pain in the back, hips and ribs, recurrent fever, gum bleeding, tiredness, dizziness and headache.

Risk and causes

We don't know what causes most cases of myeloma but there are some known risk factors. Even if you have one or more risk factors, it does not mean that you will definitely get myeloma. Associated risk factors include age, obesity, family history, gender, autoimmune conditions, occupations eg: mining industries, painting, benzene exposure.

Diagnosis

Blood and imaging tests

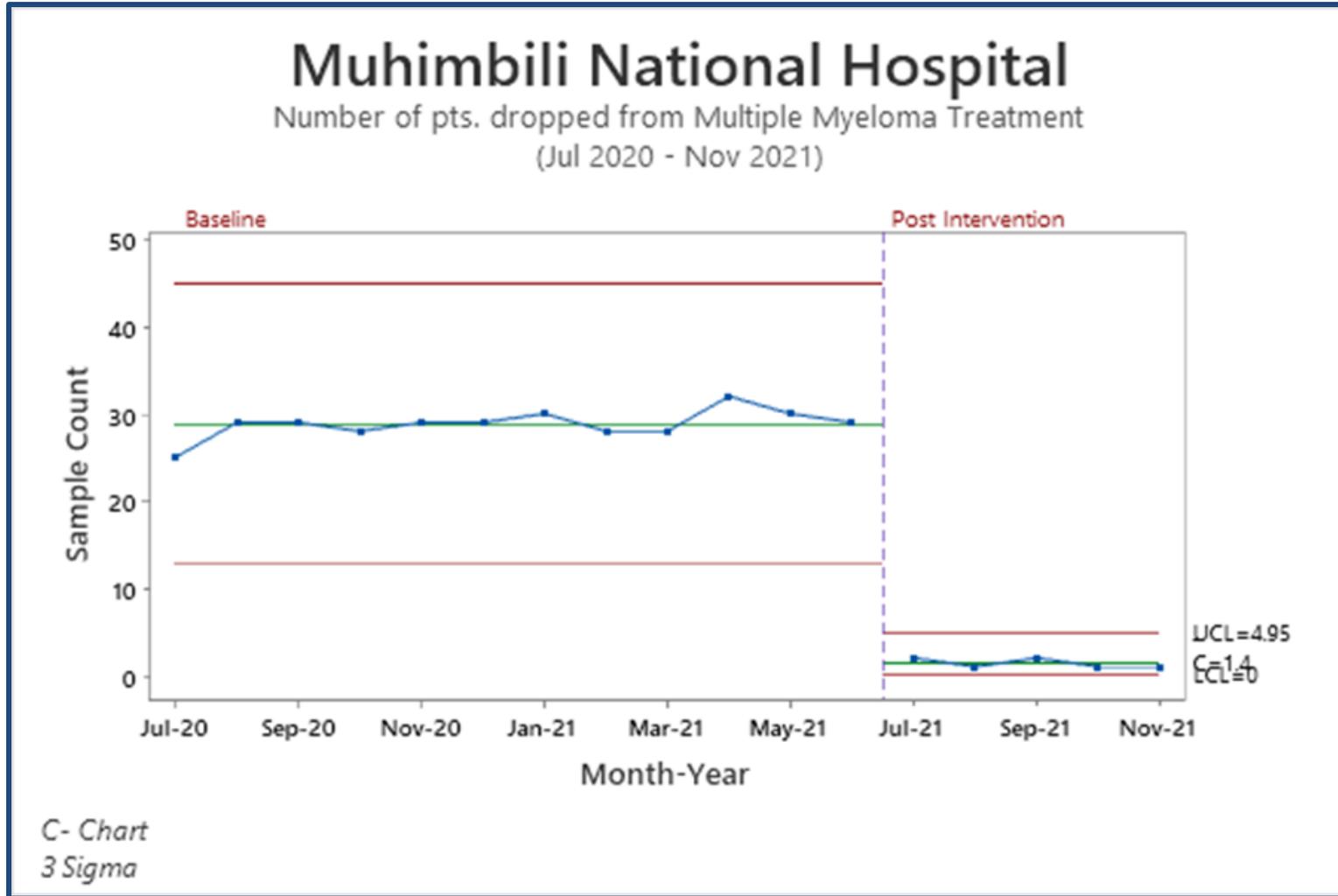
- Periphery blood smear
- Bone marrow Aspiration and Biopsy
- Urine for Bence Jones protein
- Skeletal survey

Treatment

The main treatment includes

- Combination chemotherapy
- Steroids
- Bone marrow transplant
- Radiotherapy treatment

Post Countermeasure



Summary

Decline in number of pts dropping from treatment due to a combination of:

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2. Patient Education
3. **New** Bone marrow transplant program

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Continue the Bone Marrow transplant program	Hospital

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