ASCO's Quality Training Program

Project Title: Improving Time to Initiation of Bone Modifying Agents in Patients with Newly Diagnosed Multiple Myeloma

Presenters: Sarah Lee, MD and Nathaniel Rosko, PharmD, BCOP

Institution: Cleveland Clinic Taussig Cancer Institute

Date: December 6, 2018

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Institutional Overview

- The Cleveland Clinic Taussig Cancer Institute is a NCCN and NCI-designated comprehensive cancer center

- Cleveland Clinic offers a multidisciplinary approach to patient care and bring together the expertise of different specialists to bring customized, patient centered care in disease specific groups

- Tertiary care referral center

- Main Campus is the hub for the cancer institute with 20 satellite, or regional locations throughout Northern Ohio and Weston, Florida

- There are approximately 10,000 multiple myeloma (MM) visits per year across the enterprise
  - Approximately 6,000 visits per year at Main Campus
  - There are approximately 20-30 newly diagnosed multiple myeloma patients per month

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Institutional Overview

Team Members

| Role	Name	Job Function
Project Sponsor	Jason Valent, MD	Oversees role of team leader; Myeloma program director; staff representative
Team Leader & Facilitator	Sarah Lee, MD	Primary data collection; provide project direction. Facilitate team meetings; delegate and coordinate individual team members' role
Core Team Member & Facilitator	Nathaniel Rosko, PharmD, BCOP	Data collection; provide project direction. Facilitate team meetings. Myeloma clinical pharmacist
Other Team Member	Christy Samaras, MD	Myeloma staff physician; staff representative
Other Team Member	Beth Faiman, PhD, CNP	Outpatient myeloma nurse practitioner
Other Team Member	Saveta Mathur, CNP	Outpatient myeloma nurse practitioner
Other Team Member	Mary Ann Karam, RN	Outpatient myeloma practice nurse
Other Team Member	Janice Reed, RN	Outpatient myeloma practice nurse
Other Team Member	Craig Savage	Finance manager; provide billing data
Other Team Member	Alicia Monroe, MA	Redcap data analyst; build database
Other Team Member	Joseph Hooley, MBA, CPHQ, CPPS	Quality director; institute liaison and representative
Patient Advocate		
QTP Improvement Coach	Laurie Kaufman, MSN, RN, CPHQ, CMQ	Provide remote support to the team on methodology of quality improvement and participation in QTP
QTP Improvement Coach	Ronda Bowman, MHA, RN, OCN	Provide remote support to the team on methodology of quality improvement and participation in QTP

Problem Statement

- Current ASCO guidelines recommend that all patients on active anti-myeloma therapy be receiving concurrent supportive care treatment with a bone modifying agent (BMA) to decrease the risk of skeletal related events (SRE).

- At Cleveland Clinic, the average time difference between the start date of anti-myeloma therapy and the start date of a BMA in newly diagnosed patients is 10.5 weeks.

Current State Process Map
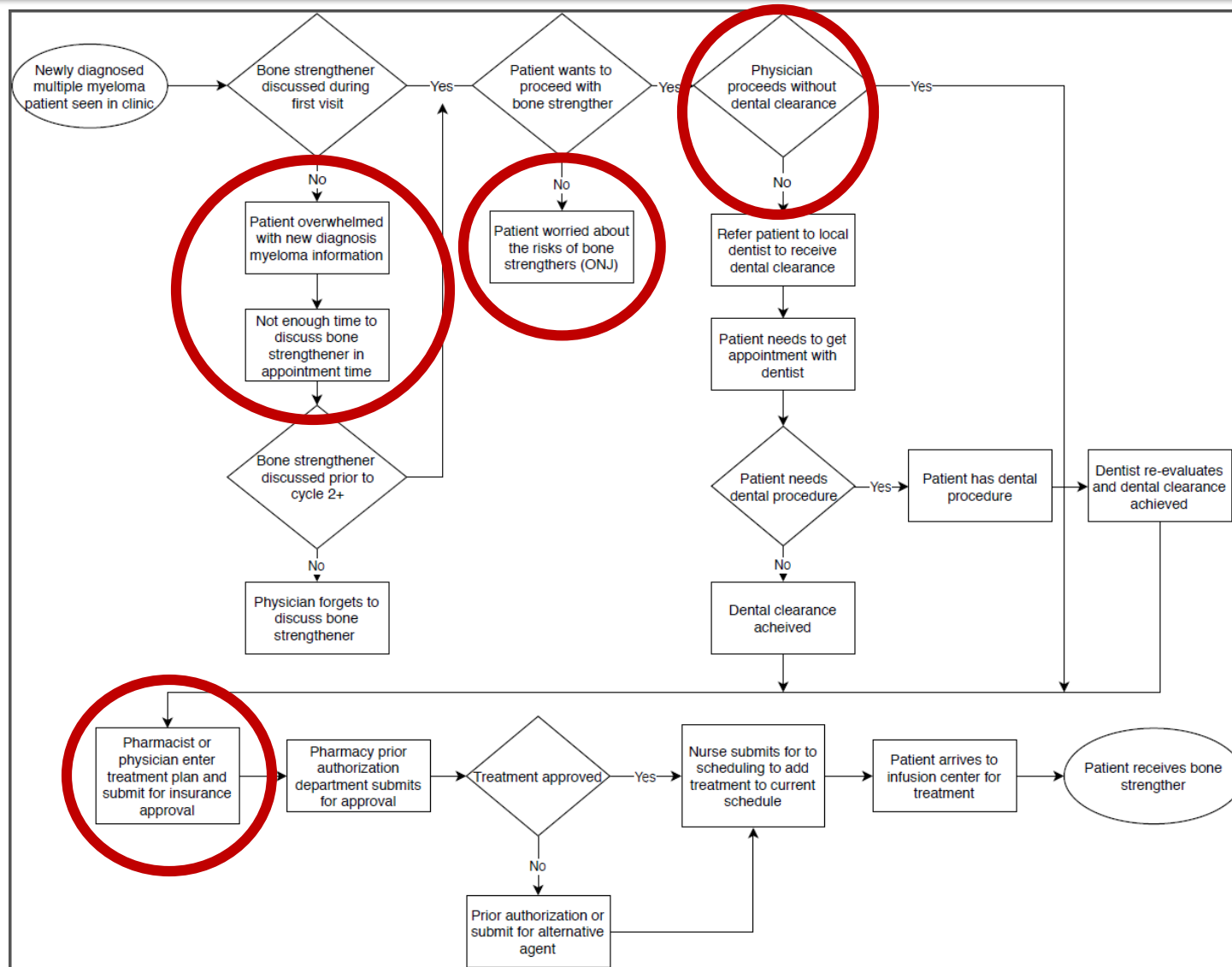
Cause & Effect Diagram
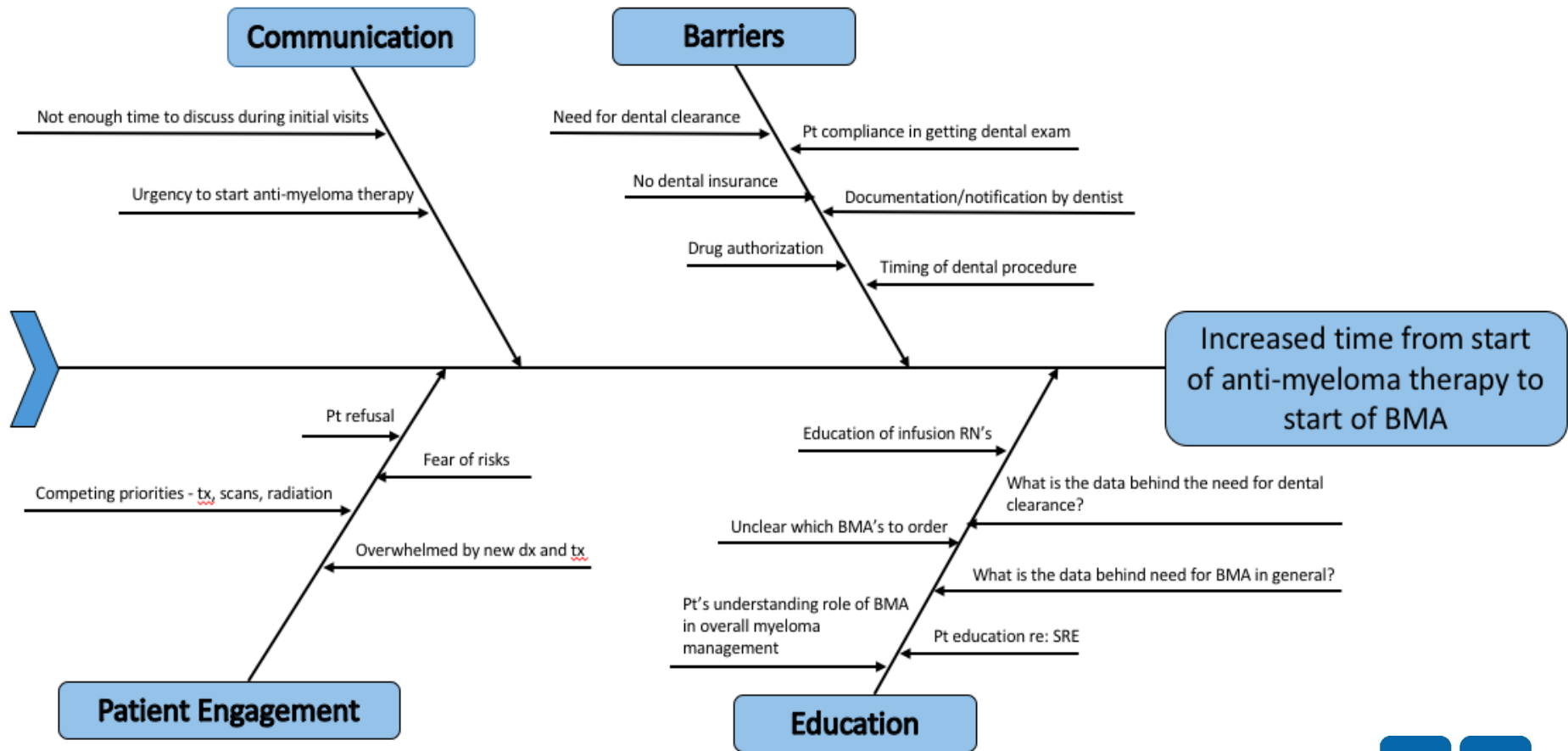
Baseline Measures

- Patient population:
    - 161 newly diagnosed multiple myeloma patients encountered between 2015 – 2018.

- Exclusions:
    - Patients with inadequate records
    - Patients whose initial treatment started at an outside hospital
    - Patients who was previously on BMA for non-myeloma diagnosis prior to MM diagnosis

- Calculation methodology:
    - Average time in weeks between cycle 1 day 1 of first line anti-myeloma treatment and first dose BMA (first date billed).

- Data source:
    - EPIC (electronic health record) and internal billing data

- Data collection frequency:
    - Monthly

- Data quality (any limitations):
    - Retrospective.
    - Treatments administered at various locations.
    - No data if patient started treatment with local oncologist outside of CCF
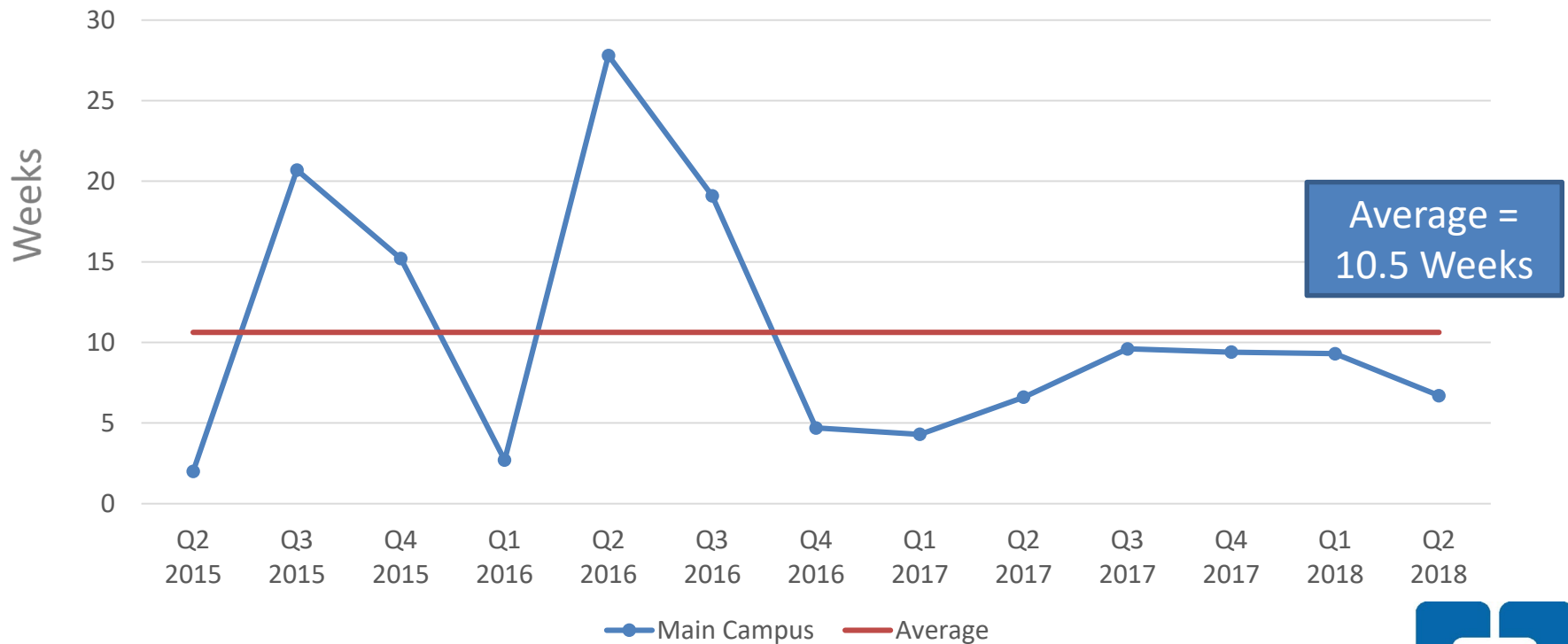
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Diagnostic Data

Data Collection:

- Pt ID
- Date of first clinic visit
- Date of C1D1 frontline anti-myeloma therapy
- Date first BMA billed
- BMA type
- eGFR<30
- Presence of lytic lesions at baseline
- Skeletal related events after start of BMA

Baseline Data

Average Difference in Weeks between C1D1 and First Administration of BMA at CC Main Campus Between 2015 – 2018

Average = 10.5 Weeks

Aim Statement

Aim: In patients with newly diagnosed multiple myeloma who are being treated at Cleveland Clinic Main Campus, we will decrease the time from start of anti-myeloma therapy to start of a bone modifying agent by 4 weeks in 75% of patients, by December 2018.
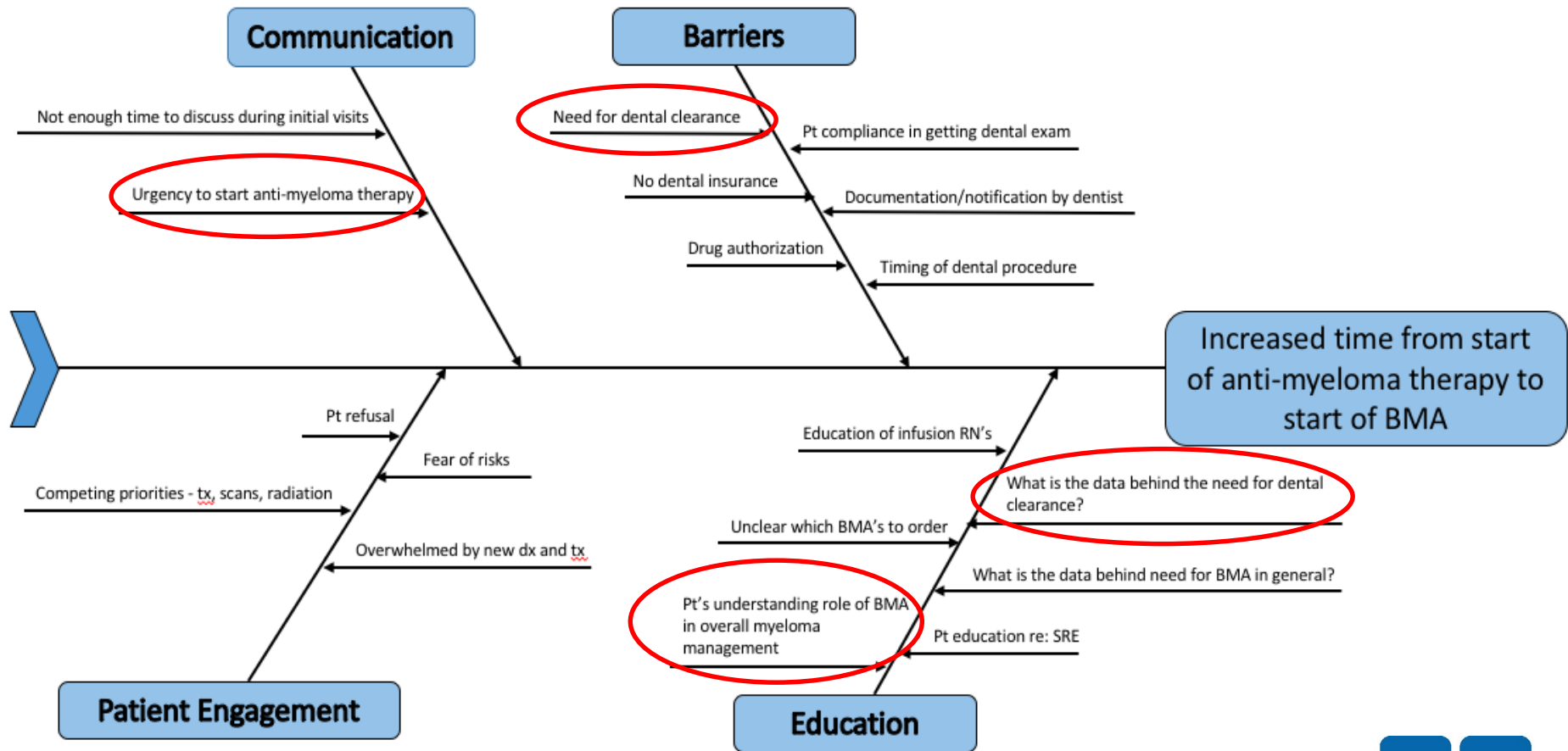
Specific: Decrease by 4 weeks from baseline

Measurable: Average time (by weeks) between the start of anti-myeloma therapy and start of BMA

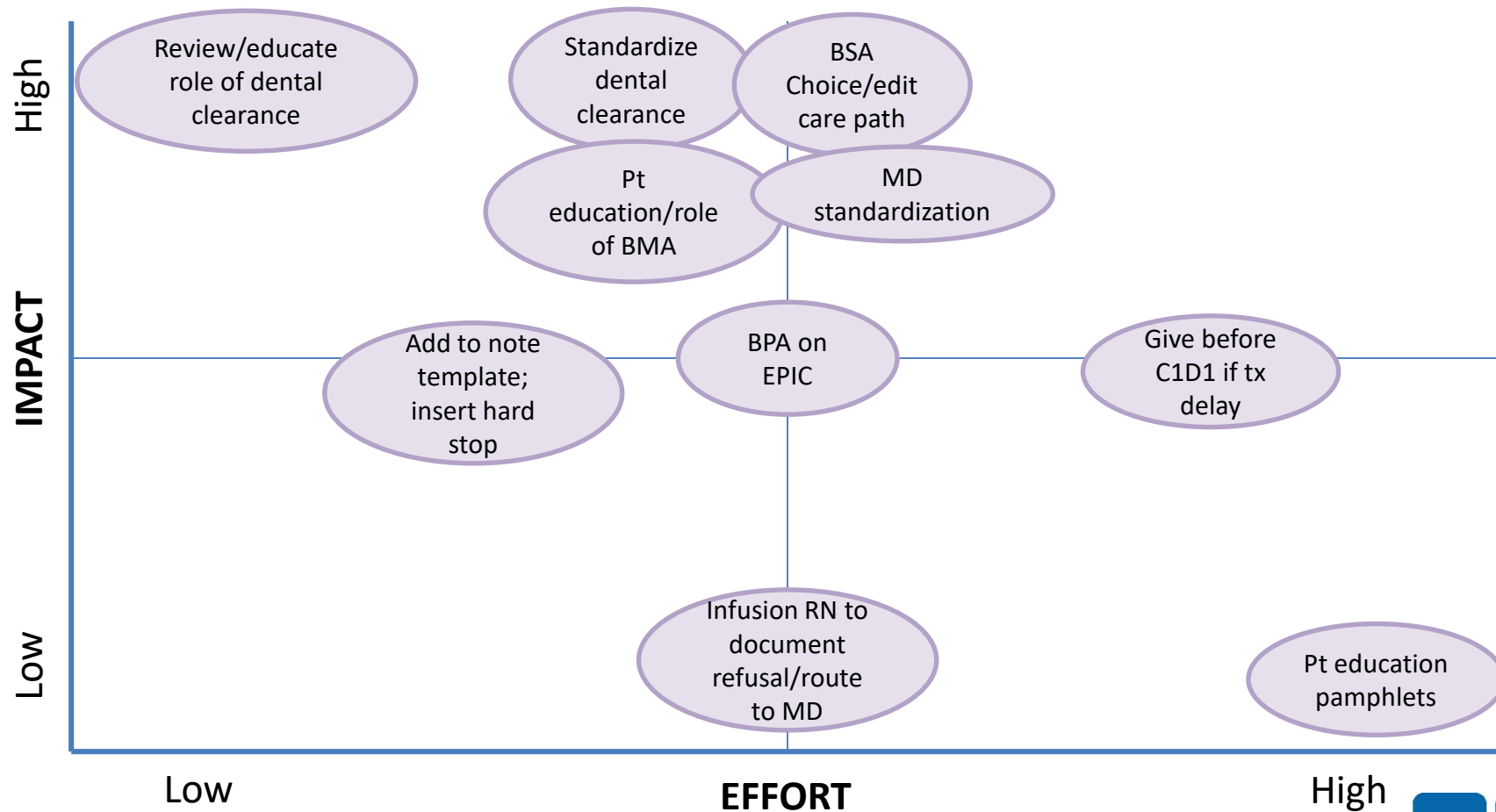**Attainable**: Felt to be appropriate and attainable

Relevant: In accordance with ASCO and International Myeloma Working Group (IMWG) guidelines

Time bound: By December 2018

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Cause & Effect Diagram

Priority Matrix

IMPACT (vertical axis, High to Low)
EFFORT (horizontal axis, Low to High)

- Review/educate role of dental clearance
- Standardize dental clearance
- BSA Choice/edit care path
- Pt education/role of BMA
- MD standardization
- Add to note template; insert hard stop
- BPA on EPIC
- Give before C1D1 if tx delay
- Infusion RN to document refusal/route to MD
- Pt education pamphlets

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PDSA Plan (Test of Change)

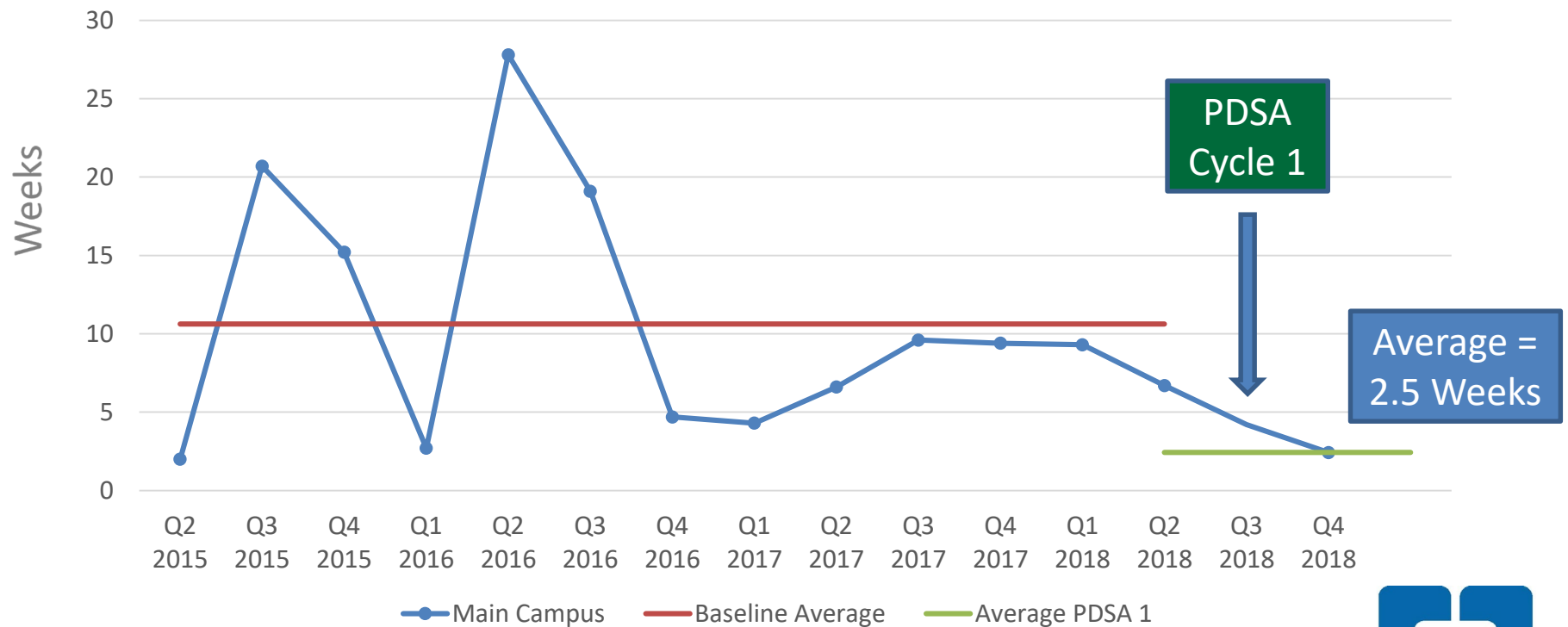| Date of PDSA Cycle	Description of Intervention	Results	Action Steps
PDSA Cycle 1 9/26/2018	1. BSA Education ➢ Reviewed baseline data and goals for improvement ➢ Discussed evidence re: dental clearance 2. Proposed changes to standardized MM Care Path	1. Improved awareness and timeliness of BMA orders ➢ N = 8 ➢ 5/8 patients started BMA within 6 weeks of C1D1 of MM therapy	1. Schedule committee meeting to update MM Care Path

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Change Data (I)

Average Difference in Weeks Between C1D1 and First BMA
September – November 2018
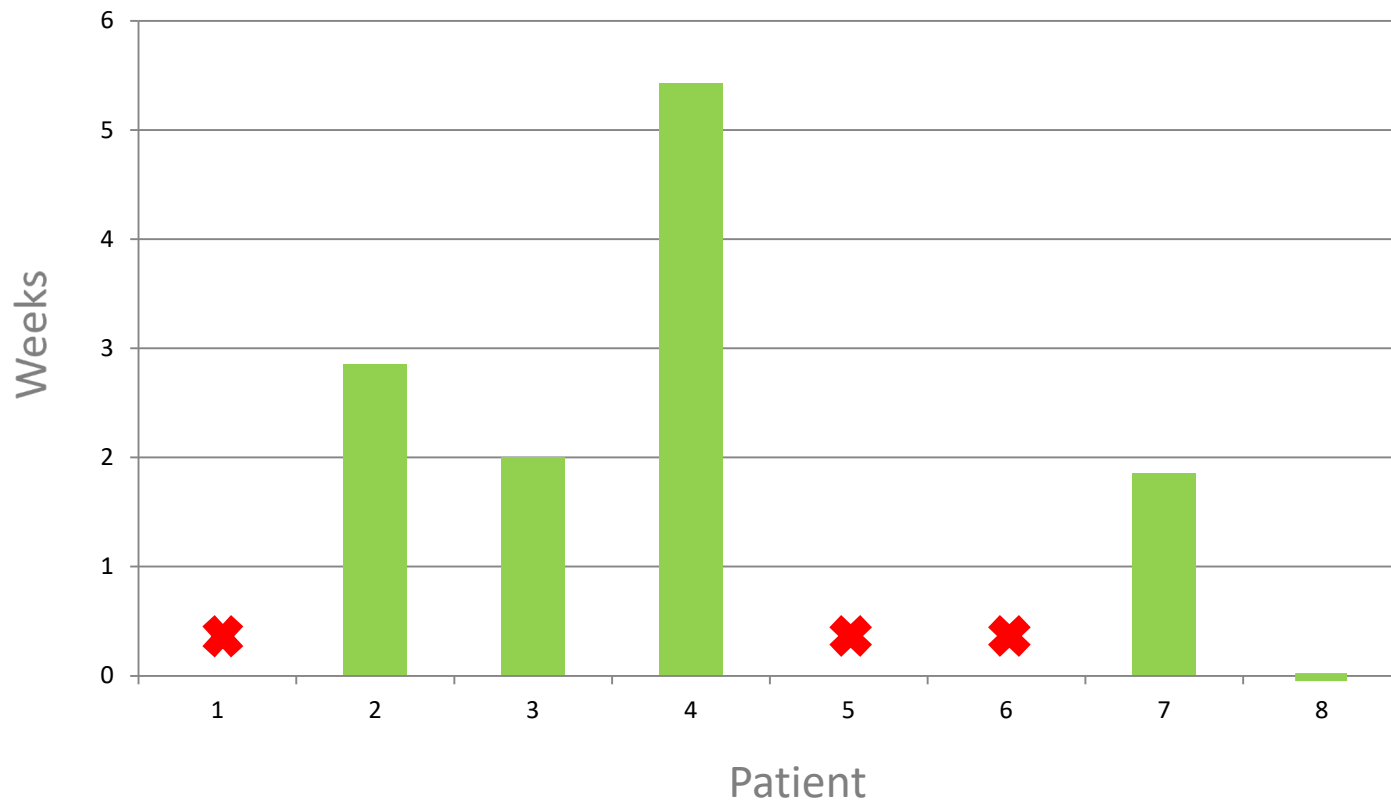
Change Data (II)

Average Difference in Weeks between C1D1 and First
Administration of BMA at CC Main Campus
Between 2015 – 2018

PDSA Cycle 1

Average = 2.5 Weeks

Legend: Main Campus · Baseline Average · Average PDSA 1

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Conclusions

- We were able to achieve our AIM and decreased the time to initiation of BMA from start of anti-myeloma therapy by at least 4 weeks (~10 weeks → ~2.5 weeks) in 75% of newly diagnosed MM patients

- Most impactful inputs: obtaining baseline data, physician/staff engagement, review of literature, and standardization of practice

- Changing practices and behaviors requires consistent feedback, reinforcement, and encouragement based on ongoing data review

Next Steps/Plan for Sustainability

- Ongoing data collection to assess change and long-term impact

- PDSA Cycle 2 – Updating our institutional MM Care Path
  - Create BSA algorithm for patients who are low risk vs. high risk for osteonecrosis of the jaw (ONJ)

- Implement a best practice alert (BPA) in EPIC to increase awareness of BMA

- Create patient education materials to include information on BMA

Thank you

Taussig Leadership

Brian Bolwell, MD

Matt Kalaycio, MD

Michael McNamara, MD

Timothy Gilligan, MD

Myeloma Team Members

Jason Valent, MD

Christy Samaras, MD

Beth Faiman, PhD, CNP

Saveta Mathur, CNP

Mary Ann Karam, RN

Janice Reed, RN

Alicia Monroe, MA

Craig Savage

Joe Hooley, MBA, CPHQ, CPPS

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Laurie Kaufman, MSN, RN, CPHQ, CMQ

Ronda Bowman, MHA, RN, OCN

Our Patients

Questions?

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