



Improving adherence to endocrine long-term follow-up guidelines in Hematopoietic stem cell transplantation survivors: A Quality Improvement project at Rady Children's Hospital

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BACKGROUND

- Hematopoietic stem cell transplantation (HSCT) survivors are at risk for developing complications secondary to peri-transplantation exposures.
- National guidelines recommend screening for late effects of HSCT, including endocrine disorders.
- At Rady Children's Hospital (RCH), adherence to guidelines was suboptimal.
- Baseline Data:** 1/16 (6%) of pediatric allogeneic HSCT recipients with hematologic malignancy or severe aplastic anemia received recommended screening evaluations/tests at 12 and 24 month follow-up visits between January-September, 2023.

METHODS

Our interprofessional team (oncology, nursing, IT) used Quality Improvement tools (QI): process mapping, fishbone and key-driver diagrams to inform interventions.

Key Driver Diagram

SMART Aim

From July 1st, 2024 to May 31st, 2025, percentage of allogeneic HSCT recipients with hematologic malignancy or severe aplastic anemia at Rady Children's Hospital, who receive all the recommended endocrine screening evaluations at 12 and 24 months after transplant, will increase from 6% to 60%.

Global Aim

Improve endocrine health of HSCT recipients

Key Drivers (THE WHAT)

Standardized process of ordering lab test

Standardized way of documenting test results

Institutional practice adherent to the most up-to-date guidelines

Easy access to the new Epic tools

Interventions (THE HOW)

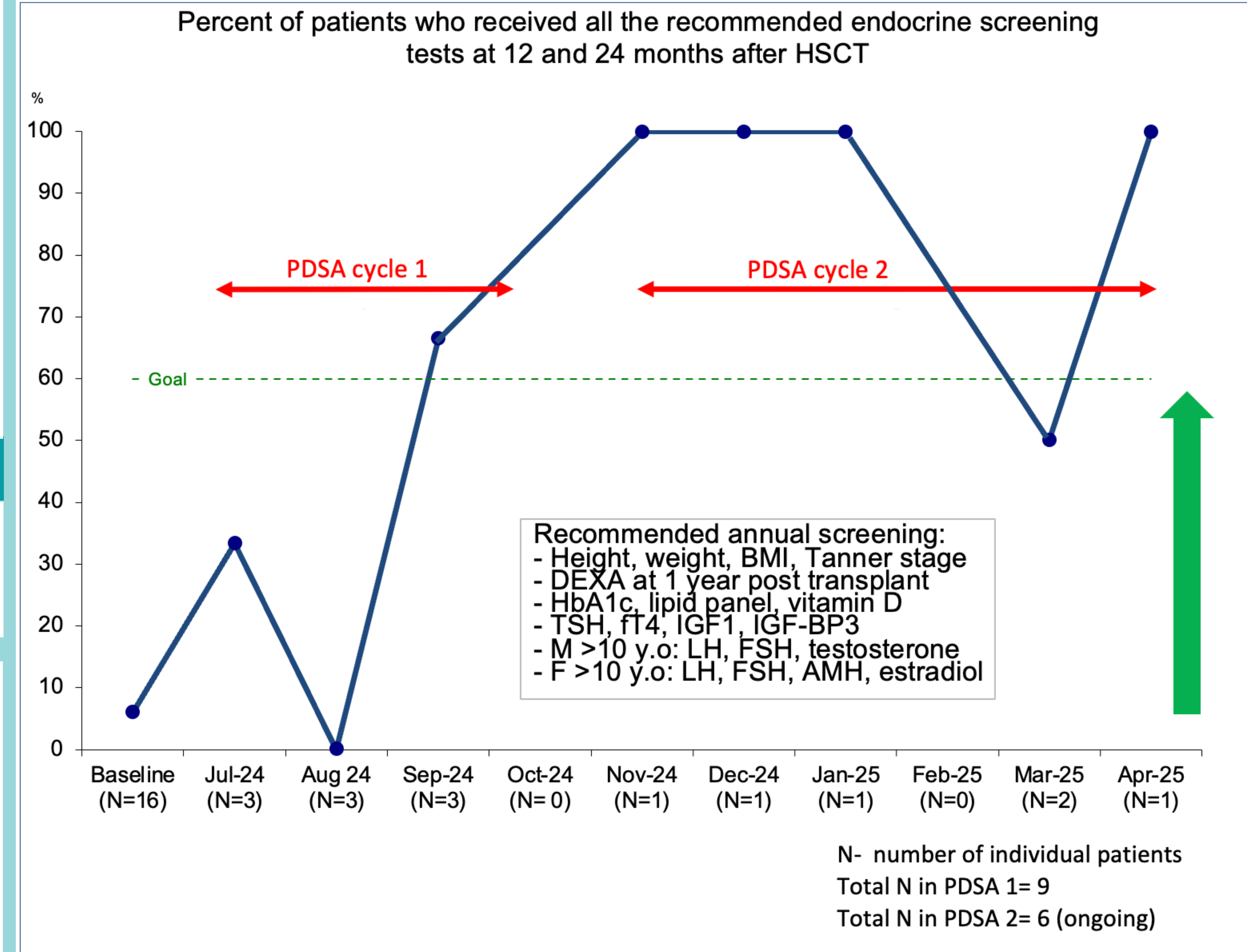
New comprehensive Order Panel in Epic (PDSA1)

Smart Phrase with long term follow up tests results in Epic (PDSA1)

Provider education session (PDSA1 and PDSA2)

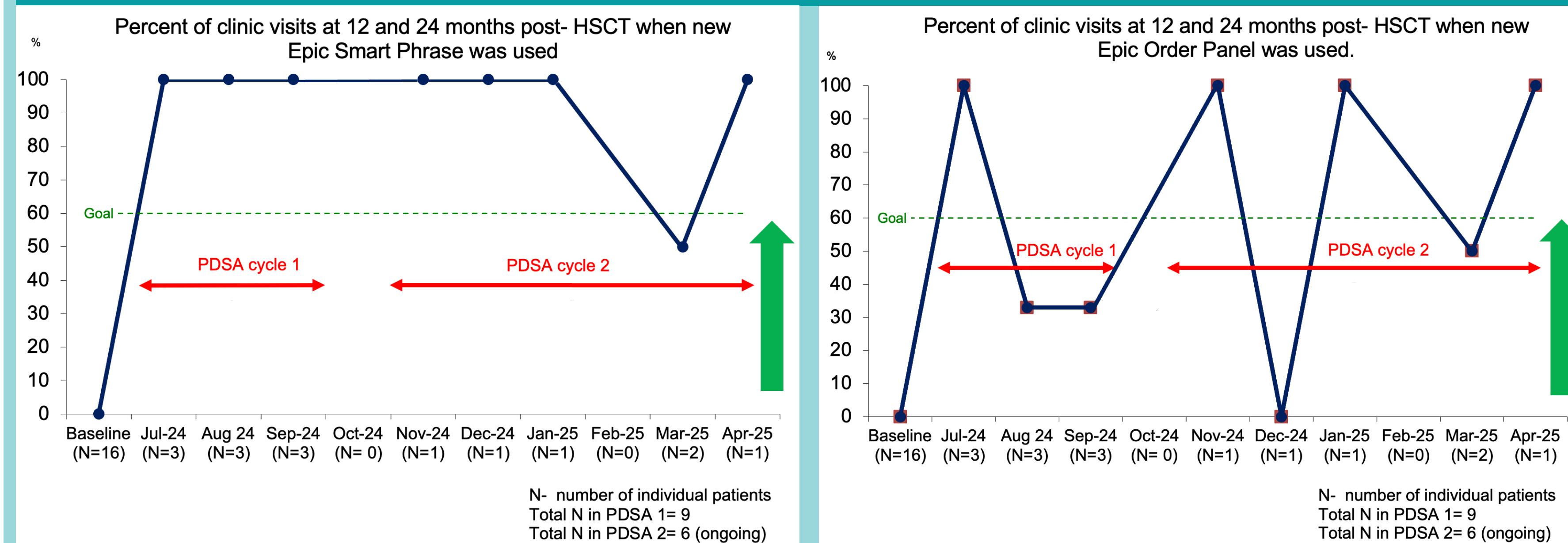
Tip sheet- electronic and posted in clinic (PDSA1 and PDSA2)

Results : Outcome Measures



2: Run-chart of percentage of patients who received all the recommended endocrine screening tests at 12 and 24 months after HSCT.

Results: Process Measures



3: Run-chart, use of new Epic Smart Phrase. 4: Run-chart, use of new Epic order panel.

A. Epic Smart Phrase for females >10 years old

B. Epic Order Panel search

C. Epic Order Panel content for females >10 years old

.BMTENDOLABSFEMALE10PLUS

A. BMT COMP

C. New Discharge Orders

RESULTS

- PDSA1 (July 1- September 30, 2024):** % of HSCT recipients who received all the recommended endocrine screening evaluations/tests at 12 and 24 months post-HSCT **increased from 6% to 33%**.
- Only 3/9 evaluated patients had Tanner stage documented.
- Adherence to all other screening tests **increased from 25% to 100%**.
- The Epic Smart Phrase was utilized in 9/9 (100%) of clinic notes.
- The Epic Order Panel was utilized in 5/9 (56%) of evaluated clinic encounters.
- PDSA2 (November 1, 2024 - May 31, 2025):** % of HSCT recipients who received all the recommended endocrine screening evaluations/tests at 12 and 24 months post-HSCT **increased from 33% to 83%**.
- Adherence to Tanner stage documentation **improved from 33% to 100%**.
- Adherence to all other screening tests was 83%.
- The Epic Smart Phrase was utilized in 5/6 (83%) of clinic notes.
- The Epic Order Panel was utilized in 4/6 (67%) of evaluated encounters.

CONCLUSION

- After PDSA1, we successfully increased adherence to endocrine screening evaluations/tests for HSCT survivors, however we did not reach our goal.
- PDSA2 interventions focused on improving adherence to Tanner stage documentation which enabled achieving the SMART Aim.
- Interprofessional collaboration, provider engagement and use of newly developed Epic tools facilitated success.

1: Key driver diagram