REAL TIME DASHBOARD SUPPORTING SPECIALTY PHARMACIST MANAGEMENT OF HYDROXYUREA ADHERENCE BARRIERS IN PEDIATRIC SICKLE CELL DISEASE

Nevonda Jackson Pharm.D.,[1] Linda Schiff Pharm.D.,[1] PJ Barker Pharm.D.,[1] Brooke Bernhardt Pharm.D., MS [1], Tiffany Nason Pharm.D.[1]

[1]Department of Pharmacy and Pharmaceutical Sciences, St. Jude Children's Research Hospital, Memphis, Tennessee, USA

BACKGROUND

- A standardized interdisciplinary process was developed to assess and document medication adherence, identify barriers, track interventions, and evaluate patient outcomes including children with sickle cell disease (SCD).
- The MEDS for Me[1] program incorporates a validated pediatric and adolescent adherence barrier survey administered electronically.
- In patients with SCD, poor adherence to hydroxyurea is associated with increased complications and hospitalizations.[2]
- A real-time electronic health record (EHR)-based dashboard was implemented to proactively identify adherence concerns.
- Because nonadherence is multifactorial, systematic assessment offers an opportunity to improve outcomes in pediatric patients taking hydroxyurea.

OBJECTIVES

An interdisciplinary team of physicians, advanced practice providers, psychologists, pharmacists, nurses, social workers, and informatics analysts designed and implemented an EHR-embedded dashboard to identify patients at risk for nonadherence.

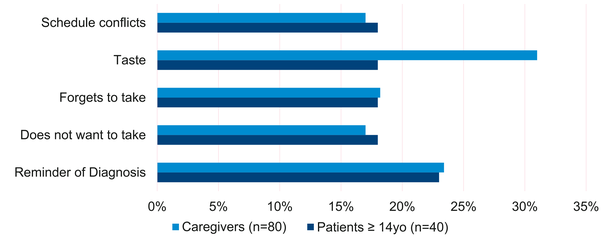
- Track common adherence barriers and opportunities for targeted interventions.
- Integrate real-time analytics and pharmacist-driven actions into routine care to improve medication adherence in patients with SCD.

DESCRIPTION

- MEDS for Me EHR dashboard designed by an interdisciplinary team integrates refill data, barrier surveys, and clinician documentation into a single governed view.
  - Provides dynamic risk stratification based on proportion of days covered (PDC), barrier identification, and actionable insights.
- Single center retrospective review of EHR Dashboard used to identify the top five patient/caregiver reported medication barriers via a validated pediatric and adolescent survey in patients living with SCD from January 1st, 2025 until December 31st, 2025.
  - The barrier survey is assigned electronically to patient and/or caregiver of a patient with SCD every 3 months.

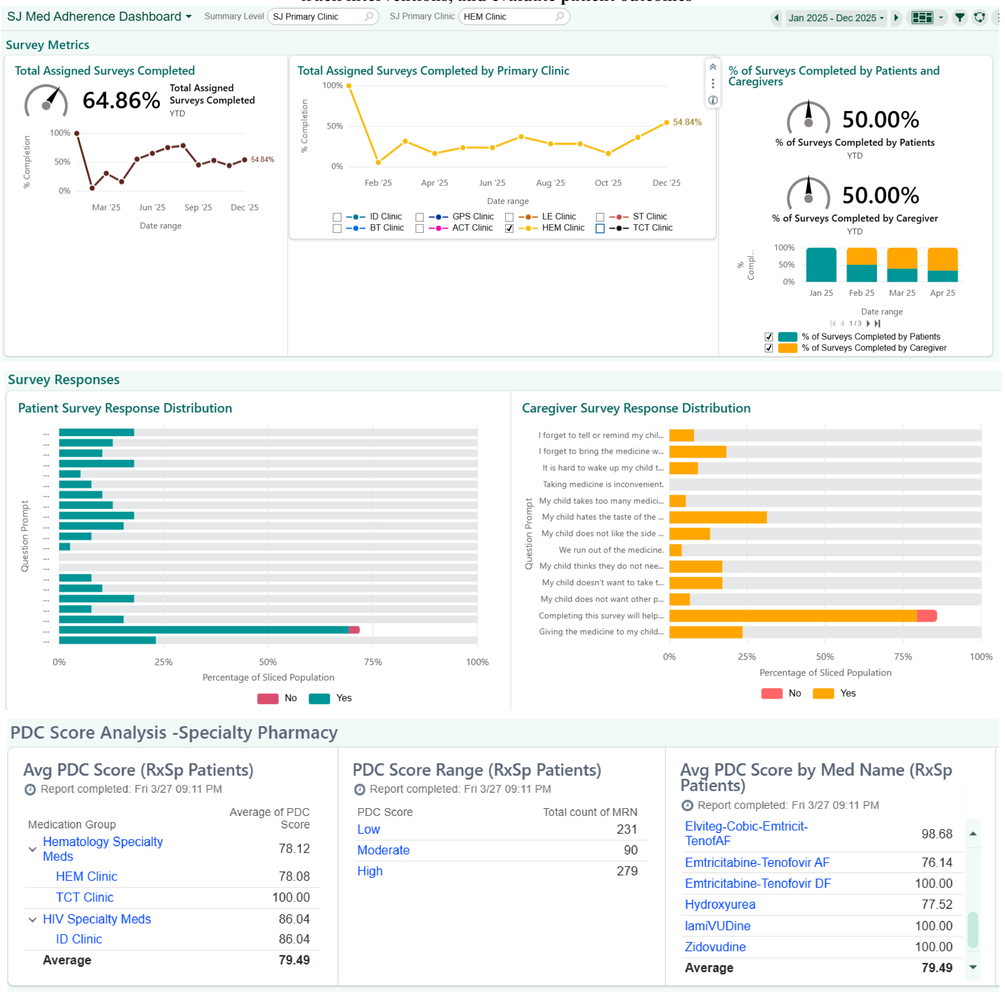
EVALUATION

Figure 1. Top 5 Reported Medication Barriers for Pediatric and Adolescent Patients with Sickle Cell Disease January 1st 2025 through December 31st 2025



EVALUATION

Figure 2. MEDS for Me EHR dynamic dashboard developed to assess and document medication adherence, identify barriers, track interventions, and evaluate patient outcomes



CONCLUSION

- An interdisciplinary team systematically optimized a real-time dashboard (Figure 2) to identify common SCD-specific barriers to hydroxyurea adherence and support clinically actionable insights.
- A limitation of the real-time dashboard is limited ability to distinguish surveys completed during encounters not specific to a primary diagnosis. Enhancements are underway.
- Visualization of the top five adherence barriers among pediatric and adolescent patients with SCD (Figure 1) informs targeted, decentralized pharmacist interventions during clinic visits and follow-up.
- The dashboard tracks survey completion, intervention activity (not shown), and medication-specific adherence trends using PDC averages (Figure 2) for varying chronic disease states at our institution.
- Patients with low or moderate PDC are prioritized for adherence-focused interventions to improve clinical outcomes.

FUTURE DIRECTIONS

- Dashboard displays overall adherence risk, not medication-specific barriers
  - Future work will integrate medication-specific graphics for targeted interventions.
  - Patients may struggle with one therapy but not others. Barrier survey in current state captures medication of interest but not visible on the dashboard in survey response.
- Implement standardized step-wise interventions for the top 5 reported medication barriers for SCD patient population.
  - Step wise interventions prioritized by provider include targeted patient education, memory aides, devices, strategies, and interdisciplinary consults, including pharmacy.
  - Medication nonadherence is multi factorial and requires multi layered approach.

DISCLOSURES

- The authors have no actual or potential conflicts of interest to disclose

REFERENCES

1. St. Jude Children's Research Hospital. MEDS for Me. St. Jude Children's Research Hospital website. https://www.stjude.org/care-treatment/treatment/clinical-initiatives/meds-for-me.html. Accessed March 27, 2026.
2. Reeves SL, Dombkowski KJ, Peng HK, et al. Adherence to hydroxyurea and clinical outcomes among children with sickle cell anemia [published online ahead of print, 2023 Apr 12]. Pediatr Blood Cancer. 2023;e30332. doi:10.1002/pbc.30332

MORE INFORMATION

SCAN QR CODE FOR A COPY OF THE POSTER