

Development and Implementation of Real-Time Dashboards for Specialty Pharmacy Clinical Outcome Measures

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BACKGROUND

Integrated health system specialty pharmacies (HSSPs) deliver coordinated care and have demonstrated positive clinical outcomes (COs) for complex diseases. Monitoring and reporting COs is essential for trend analysis, quality improvement, and cost-effective care.

Automated dashboards facilitate integration and accessibility of data in real-time, however creation of these platforms is challenging. Clinical dashboards present an opportunity to enhance HSSP practices, given limited literature on standardized specialty pharmacy COs.

METHODS

Previously, COs were identified through literature search and committee review for hepatitis C, HIV, rheumatoid arthritis, hyperlipidemia, oncology, multiple sclerosis, and epilepsy. Inclusion and exclusion criteria were established and applied to the data to establish a reproducible framework for calculating each CO. **Figure 1** describes the process utilized for development of CO dashboards to visualize de-identified data. **Figure 2** summarizes the flow of clinical data in the process.

Figure 1: CO Dashboard Development Process

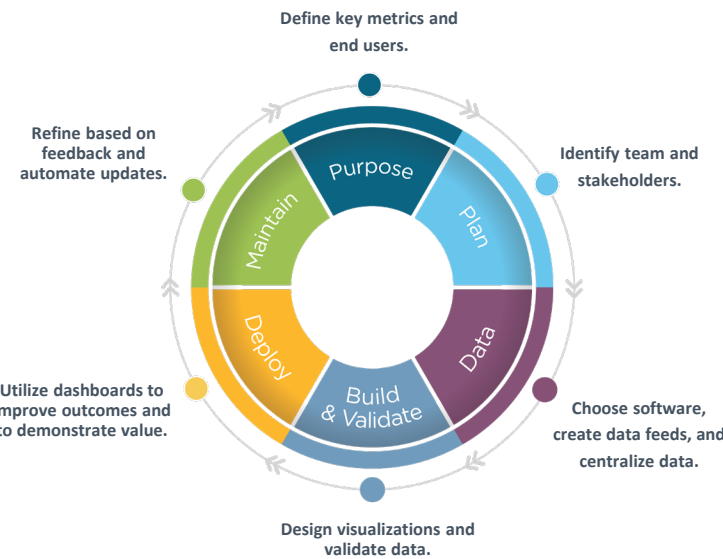
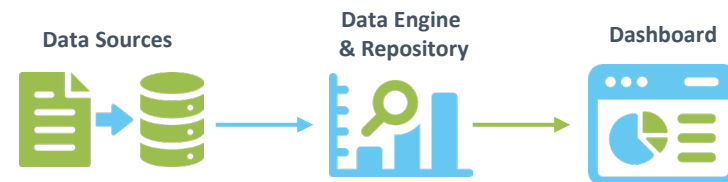


Figure 2: Clinical Data Flow



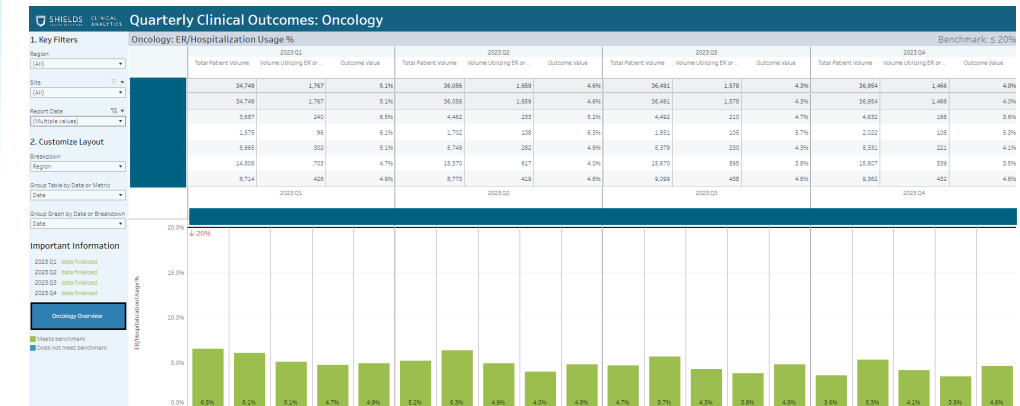
RESULTS

Real-time dashboards were implemented in September 2023 for six therapeutic areas. **Table 1** summarizes the disease state specific outcome measures. **Figure 3** highlights the dashboard design. The dashboards display both historical and live data, updated daily, by quarter. Available filters stratify the COs by care model type, region, health system, and date and compare percentage of patients achieving goal compared to the corresponding benchmark.

Table 1: Clinical Outcomes by Disease State

Disease State	Clinical Outcome	Benchmark
Epilepsy	Clinical Global Impression of Change Score Improvement	≥ 60%
Hepatitis C	Sustained Virologic Response	≥ 95%
HIV	Viral Load Suppression	≥ 89.6%
Hyperlipidemia	Percentage of Patients Below Goal LDL	≥ 75%
Multiple Sclerosis	Annualized Relapse Rate	≤ 0.37
Oncology	Unplanned Emergency Department and Hospital Utilization	≤ 20%
Rheumatoid Arthritis	RAPID 3 Improvement	≥ 50%

Figure 3: Clinical Outcomes Dashboard



CONCLUSIONS

Clinical outcome dashboards are powerful tools that enable real-time monitoring, enhance interdisciplinary communication, and drive continuous quality improvement in health system specialty pharmacies. These versatile dashboards support multiple objectives, such as facilitating research, analyzing patient outcomes data, assessing provider satisfaction, and showcasing impactful patient and provider stories. The implementation of clinical outcome dashboards is essential for healthcare organizations seeking to improve the quality of care, patient satisfaction, and overall organizational performance and capabilities.

REFERENCES

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DISCLOSURES

The authors of this presentation have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.

