Clinical Pathway Development & Revision Process Design: DESIGN Final A3

Children's Hospital Colorado

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Background:

Clinical pathways (CPs) standardize care and improve outcomes. CHCO's CP Program, launched in 2015, now includes over 80 pathways. Since 2020, pathways have transitioned from PDFs to AgileMD within the EHR, making them subject to a 3-year regulatory revision cycle (previously 4 years). In recent years, the task of mandatory revisions for nearly 80 existing pathways and new pathway requests exceeded the capacity of our pathway program resulting in one-third of pathways becoming outdated and an average development time of 612 days.

Problem Statement:

Clinical Pathway development and revision take too long and the process is unclear for team members facilitating the development or revision of CPs. The pathway program needs to ensure pathways can be developed and revised in a timely manner to meet provider and staff needs/satisfaction and to meet clinical content requirements.

Project AIM:

Global Aim: To redesign the CP program to streamline processes, clarify roles, and strengthen governance while maintaining high-quality clinical content.

Specific Aim: To reduce both revision and new pathway time to completion by 25% from 612 days to 459 days by December 30, 2025

Design/Methods:

We elected to use Design for Six Sigma methodology to develop a new process to meet provider and staff needs. Using a critical to quality tree, fishbone diagram, kano analysis and future state process map the team identified distinct new processes including:

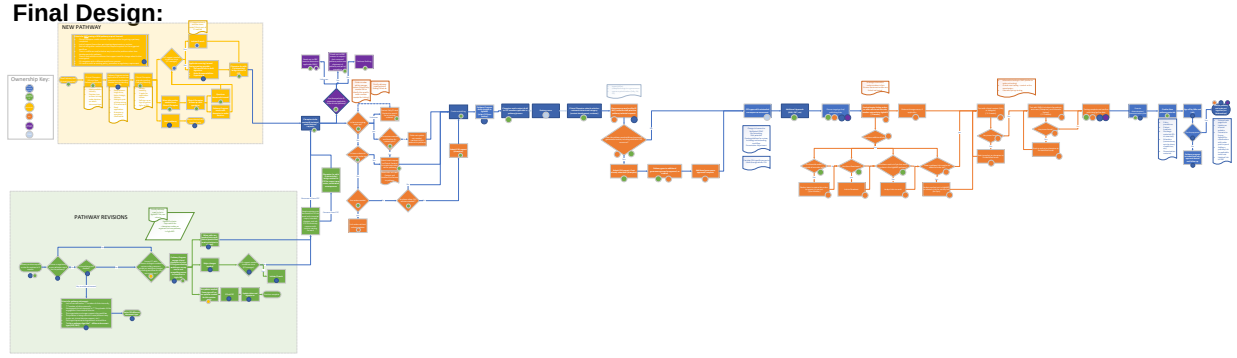
- Assigning clinical champions as primary owners for CP development and revision.
- Reserving process improvement support for pathways requiring major workflow changes.
- Establishing a Clinical Pathways Council to review requests, support development, and approve products.
- Standardized checklists, templates, and project management tools for transparency and tracking.

The outcome measure was mean pathway completion time, and the process measure was percentage of outdated pathways. We used statistical process control charts to evaluate outcomes; Special cause variation was assessed using Nelson's rules. The process measure is a line graph due to limited baseline data for comparison. The balancing measure was stakeholder satisfaction obtained through qualitative feedback.

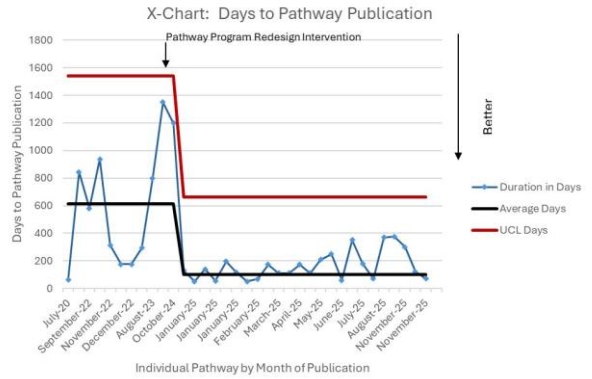
Design Requirements:

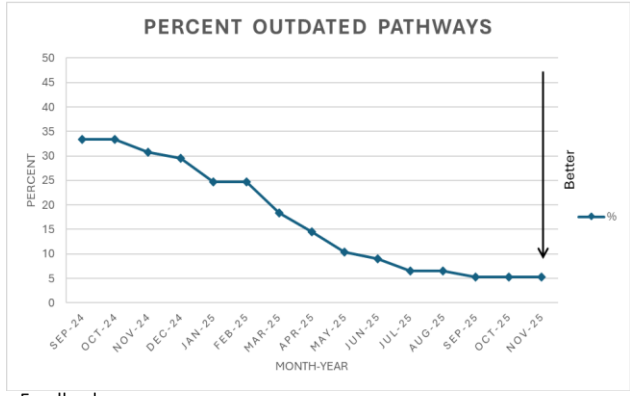
Customer Requirement (what)	CTS Metric (How)	Goal, Spec	Current Performance
Quality of Clinical Pathway	Program meets regulatory requirements	• Revised every 3 years • Medications approved by P&T • Align with order panels, order set, and policy and procedures	• 100% of pathways published with medications approved by P&T • In progress
	Ensure multidisciplinary review and feedback to anticipate and mitigate potential risks	• Pathway team completes an initial review at CPC • Aligns with order set • Aligns with policy and procedure	• 61.8% Completed or scheduled (21/34) • 100% of published pathways aligned with order set (5/5) • 100% of published pathways aligned with P&P (10/10)
Quantity	Pathway intake and review process	• Count pathways deciding to not move forward with process	• 1
Delivery and Timeliness	Ability to create new pathways and revise clinical pathways in a timely manner	• Complete within 6 months • Time to pathway completion & time of each phase	• 60% (6/10) • Phase 1: 122.7 (n=24) • Phase 2: 61.7 (n=6) • Phase 3: 8.4 days (n=5) • Phase 4: 12.1 days (n=7)
	Ensure pathway is available to end user that is consistent and easy to find	• Number of clicks • Available in Epic, Internal and External websites	Number of clicks (9/1/24-8/31/25) • Epic: 27,971 (flowcharts open) • Internal/External website (public links): 87,470 (total views)
Cost	Establish measurement system and program is accountable to goals and measures	• N/A	• N/A

Final Design:



Accomplishments/Results:





Provider Qualitative Feedback:
Preferred the redesigned process
✓ Greater control
✓ Improved clarity

Conclusions:

- Critical conversations to create buy in and engagement in new CPC structure
- Meeting with champions to understand their revision needs was more helpful than filling out an application
- Bringing pathways to CPC early in process to assess for unintended consequences, scope and team roster has helped champions be more autonomous
- Using process improvement staff at top of scope when new workflows are needed instead of project management

Challenges and Barriers:

- Completion of pathway is dependent on clinical champion bandwidth
- Underutilization of the checklist
- Technical linking and testing of pathways in Agile, alignment with order set revision