

INTRO / OBJECTIVES

UMMC previously attempted to establish a PM&R residency in 2018 but was unable to proceed due to limited stakeholder alignment, insufficient rotation structure, and lack of administrative infrastructure.

In 2025, a renewed initiative using Quality Improvement (QI) methodology was launched to evaluate and rebuild the educational, administrative, and clinical framework necessary to support residency accreditation.

Objective:

To build a sustainable PM&R residency infrastructure by December 2025 by strengthening stakeholder engagement, establishing clinical rotations across 10+ training domains, developing administrative pathways (funding + program coordinator), drafting the ADS application, and initiating early implementation workflows.

METHODS

A PDSA Cycle 1 framework guided development:

- PLAN
- Identify cause of the 2018 failure, map institutional needs, design stakeholder strategy, outline curriculum domains, and create administrative workflow.
- DO
- Conducted 16 structured stakeholder meetings across 7 departments (Neurology, Emergency Medicine, Pediatrics, Neurosurgery, NeuroSpine, MMRC, PM&R).
 - Confirmed rotations in Neurology (consults, stroke, ICU), Emergency Medicine, Sports Medicine (pending), Pediatrics (Clark Center + outpatient), and NeuroSpine (procedures, MSK, EMG).
 - Redesigned medical student rotation.
 - Established Program Coordinator pathway and confirmed UMMC funding.
 - Began drafting ADS application.

- STUDY
- Stakeholders increased from 3 → 16 with ~95% support.
 - Curriculum map expanded beyond target (10+ domains).
 - Administrative barriers from 2018 addressed.
 - Enhanced interdepartmental alignment.

- ACT
- Finalize pediatric and sports medicine rotations.
 - Build didactic schedule and evaluation system.
 - Complete ADS application for January '26 GMEC review.
 - Prepare Cycle 2 (implementation & evaluation tools).

BEFORE QI (2018 – Early 2025)	AFTER QI (Mid-Late 2025)
✗ Stakeholders Only 3 active stakeholders	✓ Stakeholders 16 engaged stakeholders across 7 departments - Strong cross-specialty alignment
✗ Clinical Rotations - No Emergency Medicine - No Sports Medicine - No Pediatrics - No NeuroSpine/EMG - No Neurology partnership	✓ Clinical Rotations Secured - Emergency Medicine (confirmed) - Neurology Stroke/ICU/Consults (confirmed) - NeuroSpine MSK/EMG/Procedures (confirmed) - Pediatrics: Clark Center + outpatient + inpatient consults (in progress) - Sports Medicine (connection established, rotation in progress)
✗ Administrative Barriers - Funding unclear - No program coordinator pathway - No ADS preparation - No GMEC-ready structure	✓ Administrative Infrastructure - Residency funding secured - Program Coordinator pathway formalized - ADS draft initiated - GMEC review scheduled for January 2026
✗ Failed 2018 Attempt - No sustainable momentum - No workflow or governance structure	✓ Leadership Structure Sustainable system-wide momentum
✗ Educational Gaps - Curriculum not mapped - MSK/Ultrasound/EMG unstructured - Outdated student rotation - No pipeline development	✓ Educational Infrastructure 10+ training domains mapped - Inclusion of MSK, Ultrasound, EMG, Spasticity, Procedures - Redesigned medical student rotation - PM&R interest group engagement strengthened

Figure 1. Before vs After QI System Transformation

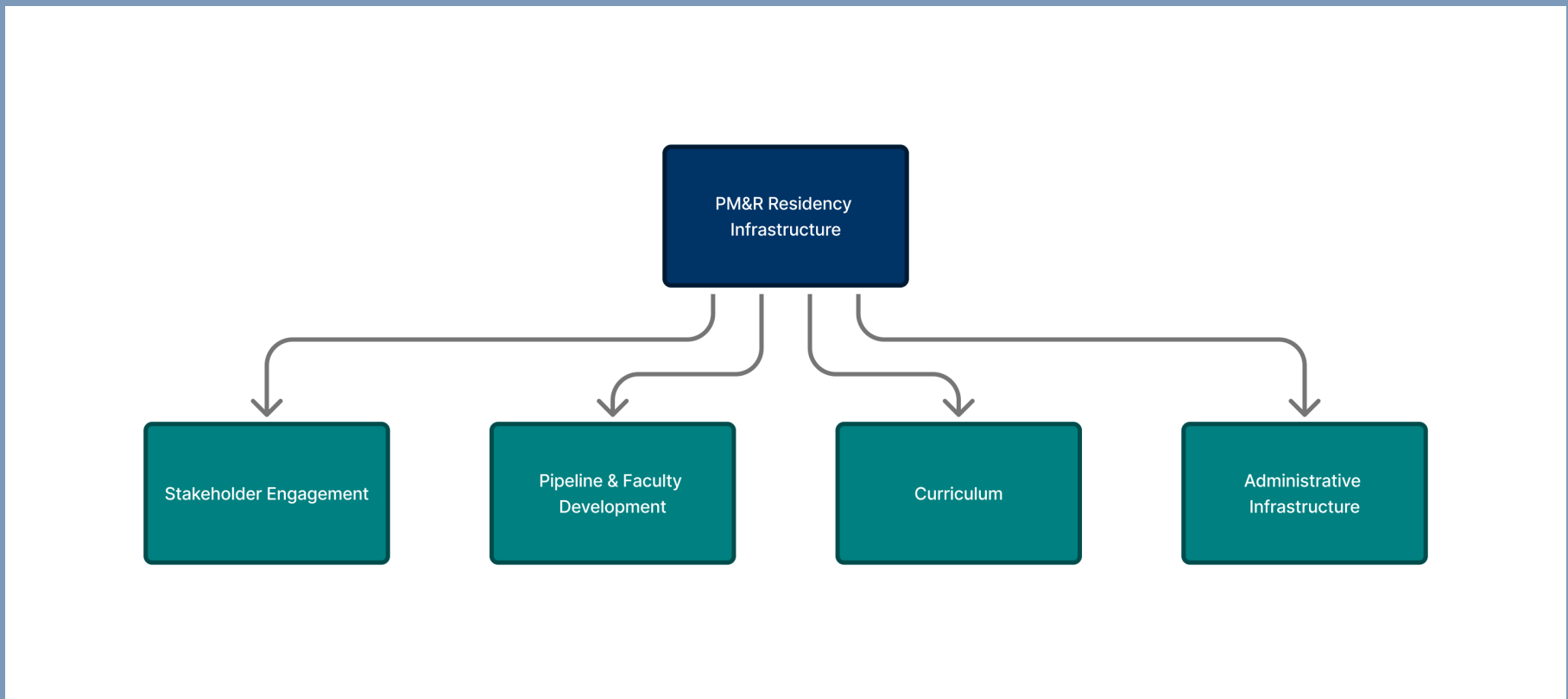


Figure 2. Residency Infrastructure Tree Diagram



Figure 3. Stakeholder Engagement Growth (2018 vs 2025)

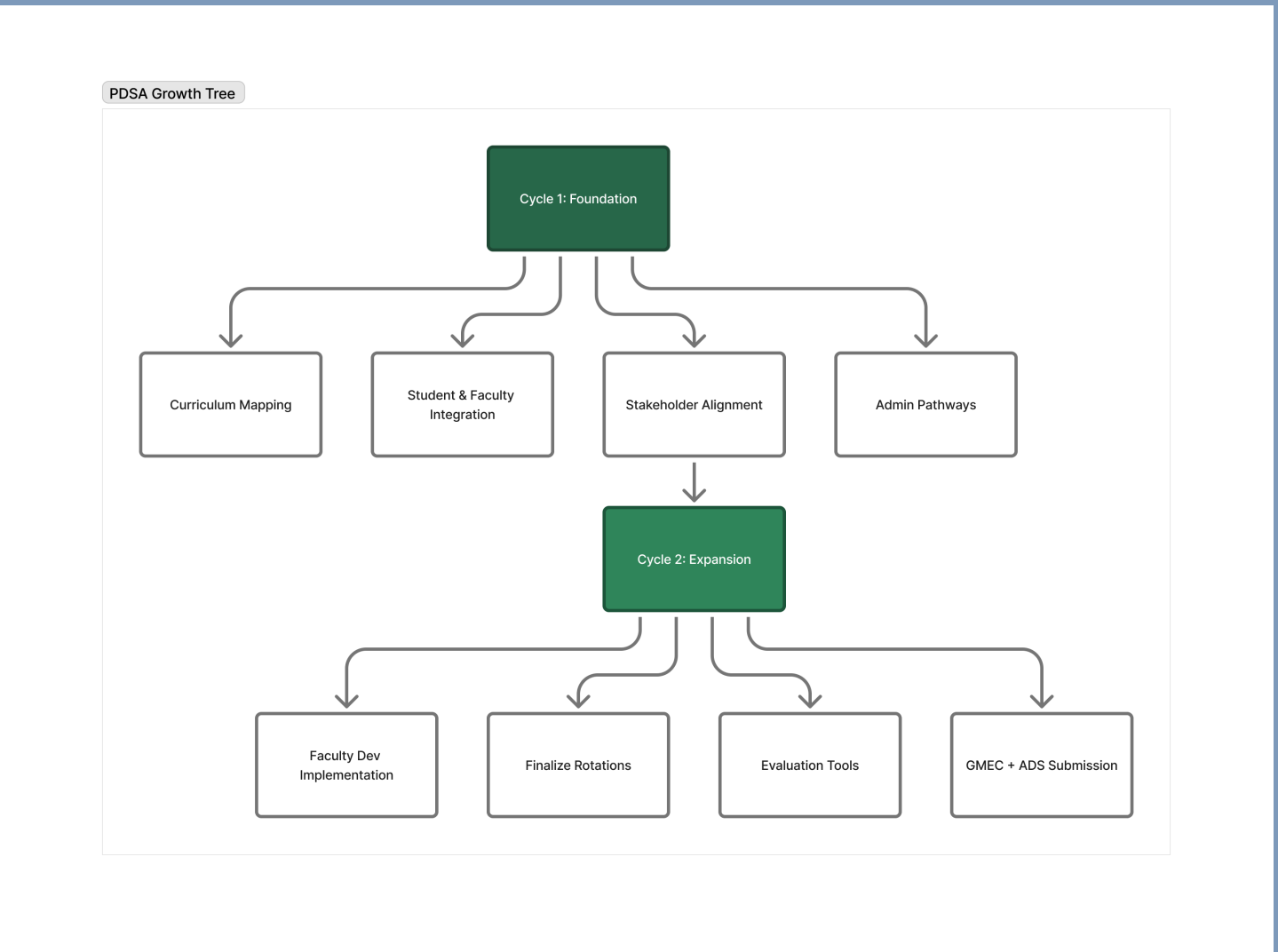


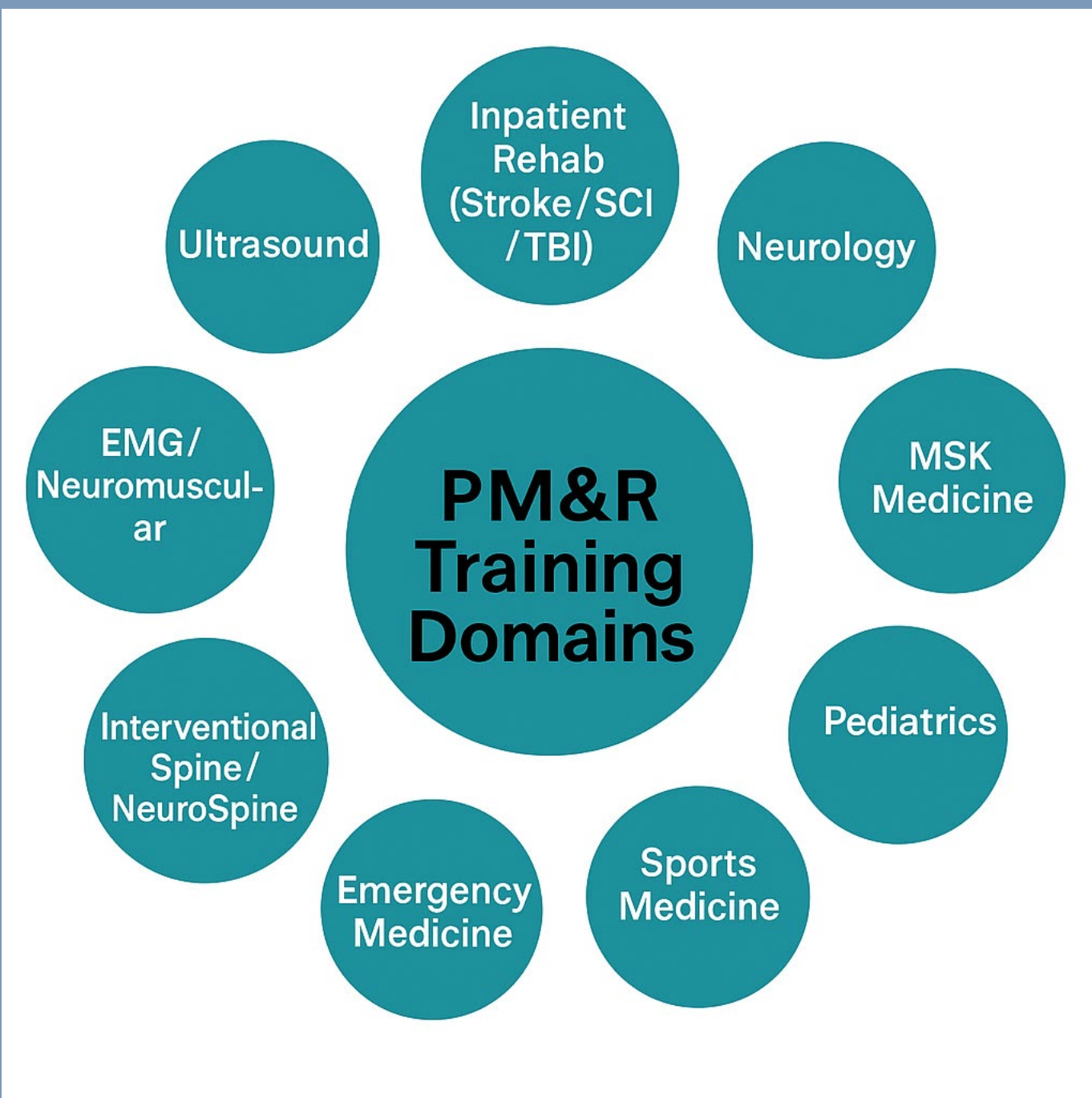
Figure 4. PDSA Cycle 1: Residency Infrastructure Development Vs Planned PDSA Cycle 2: Expansion

RESULTS

- Stakeholder engagement improved 433% (3 → 16).
- 10+ core training domains established.
- Confirmed Emergency Medicine rotation.
- Initiated Sports Medicine collaboration.
- Defined pediatric rehab pathway.
- Confirmed UMMC residency funding and Program Coordinator process.
- Medical student rotation streamlined.
- ADS draft underway.

CONCLUSION

By applying a structured QI process, UMMC was able to overcome barriers that previously limited residency expansion and build a viable foundation for PM&R training. Early stakeholder alignment, thoughtful curriculum design, and clear administrative pathways were key drivers of progress. The resulting framework serves as a model that can be replicated by institutions facing similar challenges in developing new residency programs.



CITATIONS

- Grover L, Garstang S, et al. PM&R Residency Quality Improvement and Research Curriculum: Design and Implementation. Am J Phys Med Rehabil. 2021.
- AAP. Strengthening PM&R Departmental Research: Insights From AAP Research Consulting Program. 2023.
- Garstang SV, et al. Designing the OSCE to Cover All Major Areas of PM&R Over 3 Years. Am J Phys Med Rehabil. 2024.
- ACGME. Program Requirements for Graduate Medical Education in PM&R. 2024 update.
- UMMC Internal Communications supporting residency development, 2025.