Scaling Low Back Pain Care

Technology-Enabled, Value-Based Transformation

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Introduction

The gap between evidence-based management of low back pain (LBP) and routine clinical practice remains a widespread issue, leading to poor outcomes and high healthcare costs. Although effective interventions exist, scaling them beyond research and pilot settings is challenging. This is due to complex, multi-level barriers involving clinicians, patients, organizations, and health systems, which reinforce fragmented and low-value care.

Transforming LBP management at scale necessitates implementation strategies that integrate solutions for multi-level barriers. Promising approaches center on clear clinical pathways within redesigned care models incorporating stratified care and point-of-care technology. These models are supported by targeted education, audit and feedback, stakeholder engagement, aligned financial incentives, and technology to optimize access, provider workload, and patient self-management.

In Ontario, Canada, the Rapid Access Clinics for Low Back Pain (RAC-LBP) was developed employing a healthcare systems lens and stakeholder engagement. The RAC-LBP program prioritized value (patient, provider, payer), scalability, and sustainability.

Methods

To support effective coordination and quality oversight, the Arthur Health Corporation's CareNexus platform was leveraged to scale the RAC-LBP pilot.

The platform enabled coordinated, standardized care and continuous improvement in key metrics, aiming to transform fragmented LBP care into high-value, guideline-based delivery across Ontario's diverse regions.

Program fidelity and sustainability were assessed through a detailed evaluation of multiple data sources.

Referral / Case Management, Care Team Coordination, and Communication Platform

Cloud Based | Load Sharing | Analytics | Experience | Alerts | Comms

Technology Enabled Care

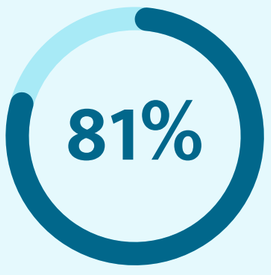
Results

Evaluation data from the five-year pilot (2012–2017) and the subsequent five-year full-scale implementation (2018–2023) demonstrate significant success.

Pilot
Conducted in three diverse Ontario regions the pilot assessed 6,646 patients and expanded Primary Care Provider (PCP) support significantly. Patient satisfaction consistently exceeded 90% across multiple patient experience domains. PCPs reported markedly improved confidence in managing LBP and high satisfaction with the model's impact on care quality. Surgical referral appropriateness improved from ~20-30% pre-program to 96%, with drastically reduced wait times (weeks vs. 6-18 months). System efficiencies included a significant (27-32%) reduction in spine imaging orders by networked PCPs, translating to substantial cost avoidance. These results spurred provincial funding for full-scale implementation in 2018.

Provincial Expansion
By March 2024, the program had scaled to support over 9,200 PCPs and nearly 100,000 referrals. Despite the COVID-19 pandemic, service delivery was sustained through robust digital infrastructure. Key performance indicators—such as median wait times (26 days for Advanced Practice Providers (APP) and 27 days for specialist supported Practice Leads) and patient satisfaction consistently above 90% remained stable. Notably, 81% of patients were managed at the community-based APP level. While the need for imaging was requested in 37,276 referrals, only 12% proceeded, and of 52,689 referrals for specialist intervention, just 15% advanced to assessment.

Driving Value



of patients received care in their community

of patients avoided unnecessary imaging

of patients didn't require specialist care

Conclusion

The RAC-LBP program embodies value-based care through high patient satisfaction, reduced imaging, and appropriate specialist referrals. The program achieved sustainable coordinated care, unprecedented access in Ontario, and significant cost savings for patients, providers, and the system. The Arthur CareNexus Platform's seamless integration of referral intake, triage, evidence-based pathways, and real-time technology coordination was key to bridging care gaps and driving consistently high-quality, value-based care. This adaptable model is now being leveraged in other systems, including workers compensation.

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14 Regional Hubs

>90% Satisfaction

9,200 PCPs Supported

100,000 Referrals

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