

Early Redirection and System-Level Impact

Why Better First Decisions Matter in Chronic Pain Care

EtioLinks White Paper

Dr. Nirupa Shah, MD, MPH and Dr. Kim du Preez, PhD

April 2026

Executive Summary

Chronic pain is one of the most common, costly, and operationally difficult conditions in healthcare. It is associated with high rates of repeat consultations, imaging, specialist referral, medication escalation, work disability, and long-term healthcare utilisation. [1,2] Yet many of these downstream costs are not inevitable consequences of pain itself. They are often the downstream effects of early pathway decisions.

In chronic pain, the most expensive decisions are often the earliest ones. Initial interpretations of symptoms influence investigations, treatment expectations, referral patterns, patient beliefs, and the likelihood of recovery. When these decisions are poorly aligned with the processes maintaining symptoms, patients may enter trajectories of escalation that become progressively harder and more expensive to reverse.

This paper explores the concept of early redirection: identifying patients at risk of pathway mismatch and guiding care toward more appropriate, evidence-aligned

pathways before inefficient patterns become established. In chronic pain, modest improvements in early pathway alignment may generate disproportionate downstream benefits.

The opportunity extends beyond symptom improvement alone. Better first decisions can reduce unnecessary utilisation, preserve specialist capacity, support primary care clinicians, improve patient understanding, and create more predictable cost trajectories for healthcare systems.

The future of chronic pain management may depend less on what happens late in the pathway, and more on what happens first.

1. Chronic Pain Is Often Managed Too Late

Chronic pain is frequently approached as a treatment problem long after it has become a pathway problem. By the time patients reach advanced intervention, repeated investigations, multiple failed treatments, escalating distress, and entrenched disability may already be present.

Yet the foundations of these later trajectories are often laid much earlier. The first explanations given to patients, the initial investigations ordered, the treatments introduced, and the referral pathways selected can significantly influence what follows.

Pain presentations are commonly marked by uncertainty. Structural findings may be incidental or only partially explanatory, symptoms may fluctuate, and emotional distress may be high. In these contexts, clinicians must make decisions quickly, often with incomplete information. When the default response is repeated investigation, passive treatment, or escalation without clear rationale, the pathway itself may begin to reinforce persistence rather than recovery. [3,4]

Patients also form beliefs early. They interpret clinician language, scan findings, and treatment responses as signals about danger, prognosis, and identity. These beliefs can shape fear, avoidance, confidence, and engagement with rehabilitation.

For these reasons, the first phase of care represents one of the highest-leverage opportunities in chronic pain management.

2. Why Delay Becomes Expensive

Once patients enter a poorly aligned pathway, redirection becomes progressively more difficult. Repeated consultations may reinforce uncertainty. Additional imaging may increase focus on incidental findings. Escalating treatments may imply severity without restoring function. Multiple unsuccessful interventions can diminish hope and reduce trust in recovery.

Costs accumulate across several domains. Direct healthcare expenditure may include repeated visits, investigations, procedures, medication use, and specialist consultations. [1] Indirect costs may include absenteeism, presenteeism, disability claims, reduced productivity, and caregiver burden. [2] Human costs may include distress, family strain, reduced participation, and growing pessimism about improvement.

These trajectories are often self-reinforcing. The longer ineffective care continues, the more likely future utilisation becomes. What begins as uncertainty can mature into chronicity, dependency, and avoidable system cost.

The most expensive pain pathways are rarely created in a single moment. They are built decision by decision over time.

3. The Meaning of Early Redirection

Early redirection does not mean dismissing symptoms, withholding appropriate investigations, or minimising complexity. It means recognising when a patient is moving toward an inefficient pathway and intervening before that pathway hardens.

This may involve identifying cases in which symptoms are being maintained by processes not adequately explained by structural pathology, recognising when further escalation is unlikely to add value, and introducing more targeted strategies earlier in care. It may also involve helping patients reinterpret symptoms in a less threatening way, restoring confidence in movement, and guiding resources toward interventions more likely to improve function.

Early redirection is therefore not about doing less care. It is about doing more appropriate care, sooner.

4. Why Small Early Changes Can Create Large System Gains

Healthcare costs in chronic pain are not evenly distributed. A relatively small proportion of patients often account for a disproportionate share of utilisation through repeated visits, imaging, specialist referral, chronic medication pathways, and prolonged disability. [5]

This creates an important strategic reality: small improvements in early pathway alignment may produce outsized downstream savings.

If even a subset of patients can be redirected earlier toward more appropriate management, systems may reduce unnecessary investigations, lower avoidable medication escalation, decrease repeat consultations driven by unresolved uncertainty, and preserve specialist capacity for cases that genuinely require advanced care.

The value of early redirection lies not only in helping more patients recover. It lies in preventing avoidable complexity from developing in the first place.

5. Primary Care as the Strategic Leverage Point

Primary care is where many chronic pain pathways begin. It is also where some of the greatest pressures are concentrated: brief consultations, competing priorities, limited access to alternatives, and the need to provide immediate answers.

Clinicians are often asked to solve complexity in minutes with tools built for simpler problems. Many recognise the limitations of purely structural models, yet lack practical systems that help translate broader understanding into rapid, confident decisions.

For this reason, primary care should not be viewed merely as the site of early misalignment. It is also the greatest opportunity for system-level improvement. When clinicians are equipped with efficient reasoning tools, early redirection becomes possible at scale. [6]

6. From Concept to Operational Reality

Clinical decision support has demonstrated value across healthcare, yet many systems have struggled to achieve sustained adoption because they were difficult to integrate into workflow, required additional time, or created friction for already burdened clinicians. [7,8]

This lesson is especially relevant in chronic pain. Successful implementation requires more than sound theory. It requires tools that are fast enough for real consultations, clinically interpretable, easy to integrate into existing systems, and focused on decisions rather than documentation.

The next generation of healthcare tools may succeed not because they know more, but because they fit better into the realities of care delivery.

7. PainMAP and Early Redirection

PainMAP was developed in response to this implementation gap. Rather than functioning as a static questionnaire or narrow diagnostic label, it is designed to support early pathway decisions by identifying likely pain-maintaining drivers, contextual modifiers, and dynamic risk signals relevant to care selection.

Its purpose is practical: to help clinicians understand what may be sustaining symptoms, what forms of escalation may be less likely to help, and where earlier redirection may have the greatest value.

In doing so, it seeks to reduce avoidable pathway mismatch before it becomes entrenched.

8. Measuring System-Level Impact

The success of early redirection should not be judged solely by pain intensity. For healthcare systems, equally meaningful outcomes may include reduced imaging rates, fewer repeat visits, lower low-value referral patterns, reduced opioid initiation or escalation, greater clinician confidence, stronger patient engagement, shorter episodes of inefficient care, and lower total cost of care over time.

These measures are clinically relevant, operationally measurable, and aligned with the priorities of payers, provider groups, employers, and public health systems alike.

9. Conclusion

Chronic pain is often treated as a late-stage therapeutic challenge. In practice, it is frequently an early decision-making challenge.

The first decisions made in care can either reduce uncertainty and promote recovery, or reinforce escalation and chronicity. Because costs accumulate over time, the greatest leverage may lie in redirecting care earlier.

System-level improvement in chronic pain may not require entirely new treatments as much as better first decisions: decisions that are faster, clearer, and more closely aligned with what is truly maintaining symptoms.

That is the promise of early redirection.

Selected References

1. Institute of Medicine (US) Committee on Advancing Pain Research, Care, and Education. *Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research*. Washington, DC: National Academies Press; 2011.
2. GBD 2019 Diseases and Injuries Collaborators. Global burden of 369 diseases and injuries in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. *Lancet*. 2020;396:1204–1222.
3. Qaseem A, Wilt TJ, McLean RM, Forciea MA. Noninvasive treatments for acute, subacute, and chronic low back pain: a clinical practice guideline from the American College of Physicians. *Ann Intern Med*. 2017;166(7):514–530.
4. Choosing Wisely. Imaging tests for low back pain in the absence of red flags.
5. Organisation for Economic Co-operation and Development. *Tackling Wasteful Spending on Health*. Paris: OECD Publishing; 2017.
6. Yarnall KSH, Pollak KI, Østbye T, Krause KM, Michener JL. Primary care: is there enough time for prevention? *Am J Public Health*. 2003;93(4):635–641.
7. Balas EA, Boren SA. Managing clinical knowledge for healthcare improvement. In: Bemmel JH, McCray AT, editors. *Yearbook of Medical Informatics 2000*. Stuttgart: Schattauer; 2000. p. 65–70.

8. Sutton RT, Pincock D, Baumgart DC, Sadowski DC, Fedorak RN, Kroeker KI. An overview of clinical decision support systems: benefits, risks, and strategies for success. *NPJ Digit Med.* 2020;3:17.

Citation and Use

Suggested citation:

Shah N, du Preez K. (2026). *Early Redirection and System-Level Impact: Why Better First Decisions Matter in Chronic Pain Care.* EtioLinks.

Copyright:

© 2026 EtioLinks. All rights reserved.

This document is the intellectual property of EtioLinks. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means without prior written permission, except for brief quotations with appropriate attribution.