

EQUIPMENT REVIEW

VIMS Arthritis Registry: Advancing Evidence-based Knee Osteoarthritis Care Through Digital Health Innovation

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Abstract

The growing burden of knee osteoarthritis presents a significant challenge to healthcare systems worldwide, necessitating robust clinical data collection and outcome monitoring mechanisms. The VIMS Knee Arthritis Registry, developed by DVVPF's College of Physiotherapy under the Department of Musculoskeletal Physiotherapy, represents an innovative digital platform designed to support comprehensive assessment, treatment tracking, and evidence-based management of patients with knee arthritis. By integrating standardised clinical evaluation, longitudinal monitoring, and outcome analysis, the registry establishes a valuable foundation for both clinical decision-making and research advancement.

INTRODUCTION

Knee osteoarthritis is among the most prevalent musculoskeletal disorders, contributing substantially to pain, disability, and reduced quality of life. Effective management requires systematic assessment,

individualised treatment planning, and continuous monitoring of patient outcomes. Traditional paper-based documentation systems often limit the ability to collect standardised data and evaluate long-term treatment effectiveness. The VIMS Knee Arthritis Registry addresses these challenges through a

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structured digital framework that enables healthcare professionals to document, analyse, and track patient progress comprehensively and consistently.

REGISTRY DESIGN AND FUNCTIONALITY

The VIMS Knee Arthritis Registry is built around a streamlined workflow consisting of registration, assessment, analysis, and treatment monitoring. Healthcare providers gain access to the platform following administrative approval, ensuring data integrity and professional oversight. The registry incorporates a comprehensive assessment process covering 23 specialised clinical sections, facilitating standardised baseline and follow-up evaluations.

One of the notable strengths of the platform is its ability to transform clinical information into actionable insights. Data entered by clinicians are systematically

analysed to generate detailed reports that support evidence-based treatment planning. The integrated treatment-tracking component enables monitoring of interventions, patient adherence, and clinical progress over time, creating a continuous care pathway for individuals with knee arthritis.

CLINICAL AND RESEARCH SIGNIFICANCE

The registry demonstrates the growing role of digital health technologies in musculoskeletal care. Standardising data collection and outcome measurement, it promotes consistency across providers and improves the quality of clinical documentation. Such registries are increasingly recognised as essential tools for generating real-world evidence, identifying treatment trends, and supporting quality improvement initiatives.

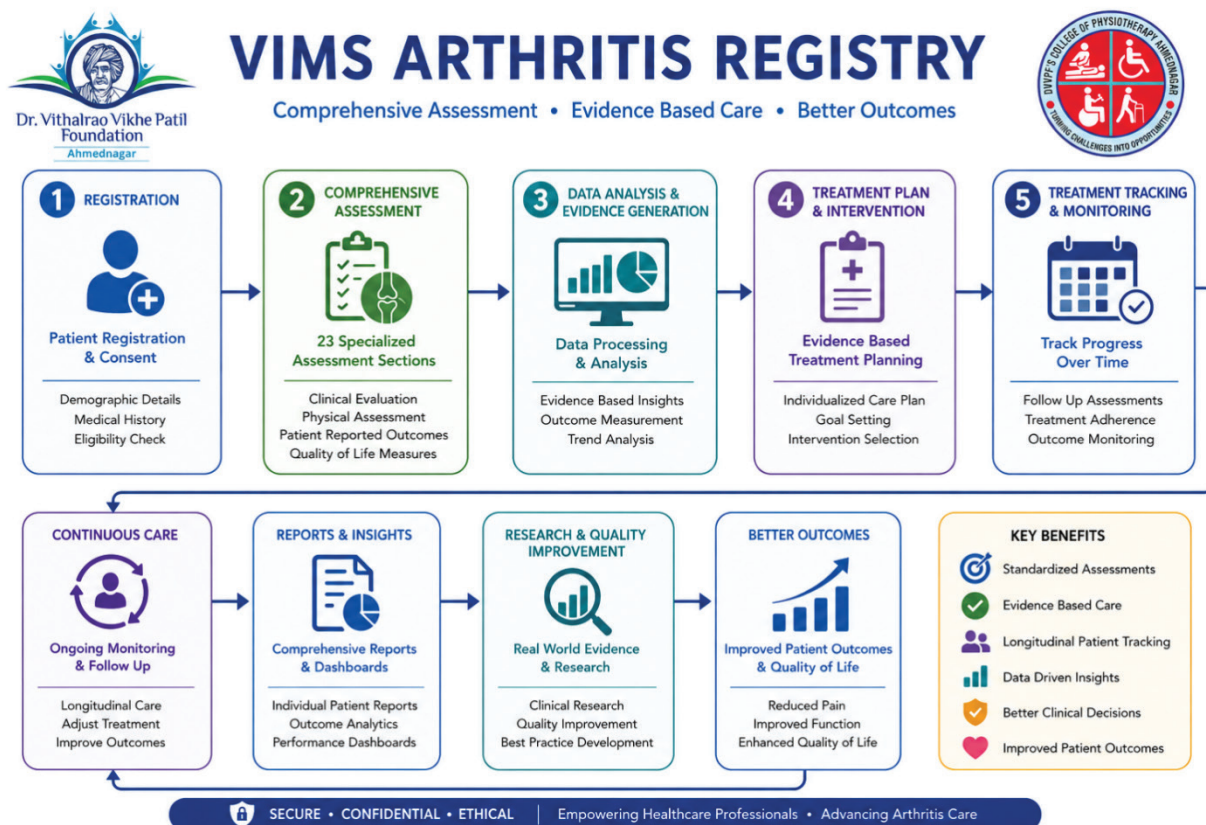


Figure 1. Arthritis registry Flow for patient registration

Furthermore, the longitudinal nature of the VIMS Registry creates opportunities for observational research, outcome studies, and the development of predictive models for patient management. The platform's emphasis on evidence-based insights aligns with contemporary healthcare priorities focused on data-driven clinical practice and patient-centred care.

CONCLUSION

The VIMS Knee Arthritis Registry represents a significant step toward modernising arthritis care through structured digital data management. By

combining comprehensive assessment, treatment monitoring, and outcome analysis within a unified platform, it enhances clinical practice while simultaneously creating a valuable resource for research and quality improvement. As healthcare increasingly embraces data-driven approaches, initiatives such as the VIMS Arthritis Registry are poised to play a pivotal role in shaping the future of musculoskeletal healthcare.

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