REG.NO:D7635654-AFINJ JOHP-ISSN: 2348-7704

HEB JOHP

Journal of Hospital Pharmacy
An Official Publication of Bureau for Health & Education Status Upliftment
(Constitutionally Entitled as Health-Education, Bureau)

The Potential Role of Community Pharmacist in Implementation of Pharmacogenomics: A Systemic Review

Vijaya Sindhuri. G[1], P. Sai Tejaswini[2], Vasavi Pachika[3]*

[123]Department of Pharmaceutics, St. Mary's College of Pharmacy, Secunderabad, India

Email Id: serviceheb@gmail.com

ABSTRACT: Community pharmacists play a vital role in healthcare by providing accessible services, dispensing medications, and promoting community well-being through expert health advice .With advancements in personalized medicine, some pharmacists are exploring pharmacogenomics to tailor medications based on genetic profiles, ensuring optimal therapeutic outcomes. Pharmacists play a crucial role in pharmacogenomics by ensuring that genetic information is integrated into medication therapy management to optimize drug efficacy and minimize adverse effects. Community pharmacists play a crucial role in the implementation of pharmacogenomics (PGx) by acting as intermediaries between patients and healthcare providers, ensuring that genetic information is used effectively in drug therapy management. Pharmacogenomics test provides valuable pharmacokinetic and pharmacodynamic information for the pharmacist's assessment of drug therapy, especially within medication therapy management (MTM) services.

However, pharmacists face several challenges in the implementation of pharmacogenomics, limiting its widespread adoption. Key obstacles include a lack of standardized protocols and guidelines for PGx testing, insufficient training and education for pharmacy professionals, and the complexity of interpreting genetic data within the context of polypharmacy, cost of genetic testing, reimbursement policies, and data privacy issues pose significant barriers to the practical use of PGX in everyday pharmacy practice. The need for comprehensive strategies to overcome these barriers, include enhanced education, standardized frameworks, and improved infrastructure. The future goals of pharmacists in PGx implementation include pivotal role in navigating ethical, legal, and regulatory challenges, advocating for greater access to PGx testing, development of robust clinical guidelines and addressing disparities in healthcare. Ultimately, pharmacist will serve as a key player in the widespread implementation of pharmacogenomics, bridging the gap between genetic science and patient care to optimize therapeutic outcomes and improve public health.

KEYWORDS: Pharmacogenomics, Genetic profiling, PGx testing, Challenges

Access this Article Online	Quick Response Code:
Website: http://www.journalofhospitalpharmacy.in	
Received on 26/03/2025	
Accepted on 03/04/2025 © HEB All rights reserved	