



Adverse Drug Reaction Reporting Patterns in Indian Healthcare Settings: A Meta-Analysis of Barriers and Facilitators

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Abstract

Pharmacovigilance (PV) is the process of identifying, evaluating, comprehending, and preventing adverse drug reactions (ADRs), which occur when a medication is put on the market and administered under various physiological circumstances. The quality of healthcare and patient safety is seriously threatened by adverse drug reactions (ADRs). These are commonly known as "side effects." These unexpected outcomes are typically attributed to either overdosing or improper medication supplied by the attending specialists or the doctor. Depending on the taxonomic categorisation employed, the undesirable effects can be classified into a variety of categories, including toxic effects, side effects, adverse medication events, and adverse responses. ADRs are one of the top 10 causes of morbidity and death in several nations. With an ADR reporting rate of only 1% compared to 5% worldwide, India lacks a systematic culture for tracking and reporting ADRs. To reduce risks and improve patient outcomes, a strong culture of ADR reporting is essential. It can be difficult to give the pharmacovigilance system momentum and guarantee a strong reporting procedure, but with careful planning, workable solutions, and concentrated efforts, the ultimate goal of pharmacovigilance ensuring patient safety can be achieved. This article looks at the importance of creating a supportive atmosphere for ADR reporting, identifies typical obstacles to efficient reporting, and suggests all-encompassing methods to establish a proactive reporting culture.

Keywords: Pharmacovigilance, PvPI, Adverse Drug Reaction, ADR reporting, Barriers and Facilitators

Introduction

India is a country with many different ethnic groups, a diverse spectrum of illnesses, and a range of medical systems, from ancient, antiquated to modern, scientific. The economic viability of the Indian population varies significantly due to variances in socioeconomic status (1). India has one of the largest pharmaceutical industries in the world, with a value of more than \$18 billion. It expands at a pace of 12–14% each year and exports 40% of its generic drugs to other nations (2). The Indian pharmaceutical sector, which is rated fourth in the world with over 6000 licensed drugs, is expanding every day (3). However, India's adverse drug reaction (ADR) reporting rate is less than 1%, compared to 5% globally, and the nation lacks a structured culture for monitoring and reporting ADRs (4,5).

Pharmacovigilance

Pharmacovigilance involves systematic activities aimed at identifying, evaluating, understanding, and minimizing adverse effects or any other problems associated with drug use. It plays a critical role in ensuring that pharmaceuticals remain safe and effective after being introduced into the market and used by the general population. According to the World Health Organization (WHO), pharmacovigilance is defined as the science and practice related to detecting, assessing, understanding, and preventing adverse effects or any other drug-related issues. The scope of pharmacovigilance extends beyond conventional drugs to include herbal products, biological and biotechnological agents, vaccines, blood-derived products, and medical devices. The global emphasis on pharmacovigilance emerged in response to the thalidomide tragedy of the early 1960s, which highlighted the necessity for rigorous post-marketing surveillance. In the wake of this event, the WHO launched the International Drug Monitoring Programme. Through its Collaborating Centre in Uppsala, Sweden, the WHO actively promotes pharmacovigilance to strengthen patient safety and support continuous evaluation of the benefit–risk balance of marketed medicines(6,7).

Importance of Pharmacovigilance (PV) (7)

1. For Patient Safety

- It recognises unfavourable effects that were previously unknown.
- It prevents damage by making it possible to identify safety signs early on.
- PV Encourages sensible drug use and safer prescription practices.
- It increases patient trust in the safety of medications.

2. For Public Health

- It prevents extensive drug-related harm to communities.
- It supports health policies that are grounded in evidence.

- It promotes the safe use of medications in vulnerable populations, such as children, the elderly, and pregnant women.
- Through ongoing safety monitoring, healthcare systems are strengthened.

3. For Drug-Risk Monitoring

- PV assists in revising drug labels, warnings, or even removing dangerous drugs.
- It monitors the risk-benefit ratio of drugs throughout their lifecycle.
- Endorses clinical guidelines and regulatory choices.

Healthcare professionals (HCPs)

Pharmacovigilance systems primarily rely on healthcare professionals (HCPs), such as doctors, pharmacists, nurses, and other allied health practitioners. The careful and safe use of medications is ensured by their active involvement in the diagnosis, evaluation, recording, and prevention of adverse drug reactions (ADRs). In India, healthcare personnel are integral to the Pharmacovigilance Programme of India (PvPI), which enhances drug safety monitoring at all levels of healthcare delivery and improves both the volume and quality of adverse drug reaction reports.(7,8)

Roles and Responsibilities of HCPs (8)

A. Detection of ADRs

1. HCPs are often the first to observe unexpected or undesirable effects of drugs during patient care.
2. They assess whether a patient's symptoms are due to a disease progression, drug interaction, or true ADR.
3. Timely recognition of ADRs helps prevent complications, hospitalizations, or mortality.

B. Documentation and Reporting

1. HCPs must document relevant clinical details (drug name, dose, route, duration, onset time, and reaction type).
2. ADRs are reported through the "Suspected Adverse Drug Reaction Reporting Form", ADR PvPI mobile app, or online systems.
3. Both serious and non-serious, known and unknown reactions should be reported to enhance the data pool.

C. Assessment and Causality Analysis

1. Using instruments like the Naranjo algorithm or the WHO-UMC scale, HCPs help determine the likelihood that a medication is the cause of the reaction.
2. Accuracy and objectivity are ensured through collaborative evaluation by physicians, chemists, and nurses.

D. Management of ADRs**1. Immediate Patient Care:**

- a. Stop or replace the suspected drug when necessary.
- b. Provide symptomatic or specific treatment.
- c. Monitor the patient's progress.

2. Prevention of Recurrence:

- a. Document ADRs in medical records.
- b. Educate patients to avoid the suspected drug in the future.

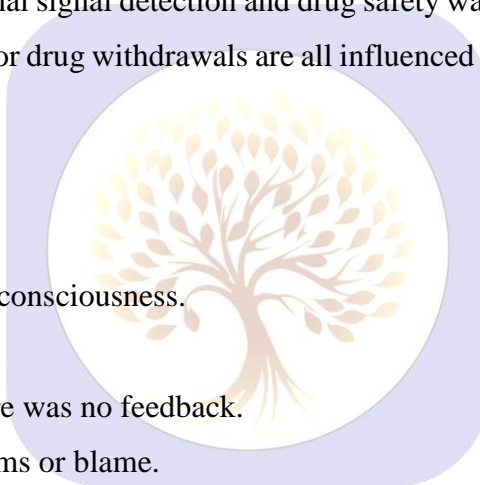
E. Education and Communication

1. Educating patients about possible drug side effects, early recognition, and when to seek medical help.
2. Sharing ADR experiences among peers to promote a safety culture.
3. Encouraging other HCPs and students to actively participate in pharmacovigilance.

F. Contribution to Public Health and Policy: Research and educational programs to encourage safer prescribing practices, national signal detection and drug safety warnings, and regulatory decisions like label modifications, limits, or drug withdrawals are all influenced by ADR data provided by healthcare professionals.

Challenges for HCPs

1. Insufficient time or consciousness.
2. Causality is unclear.
3. After reporting, there was no feedback.
4. Fear of legal problems or blame.
5. Insufficient pharmacovigilance training.



Pharmacovigilance revolves around healthcare providers. They can avoid injury, enhance therapy outcomes, and fortify the country's drug safety system with their diligence, correct reporting, and patient-centered attitude.

Adverse Drug Reaction (ADR)

All pharmaceutical products introduced into the market are expected to produce certain adverse effects when administered to patients outside controlled clinical trial conditions. An Adverse Drug Reaction (ADR) refers to an unexpected or harmful response to a medication taken at normal therapeutic doses for disease prevention, diagnosis, or treatment. The World Health Organization (WHO) defines an ADR as a harmful and unintended reaction that occurs at doses typically used in humans for therapeutic or physiological modification purposes. Common examples include hypoglycemia associated with insulin therapy, gastrointestinal bleeding due to nonsteroidal anti-inflammatory drugs (NSAIDs), and allergic manifestations such as rashes from penicillin

administration. India became a participant in the WHO Programme for International Drug Monitoring in Uppsala, Sweden, in 1997. Following this, three regional pharmacovigilance centers were initially established in New Delhi, Mumbai, and Aligarh. However, these early efforts did not achieve the desired long-term outcomes. Subsequently, the National Pharmacovigilance Programme (NPvP) of India was officially launched on January 1, 2005, with support from the World Bank and endorsement from the WHO. The program marked a significant advancement in India's pharmacovigilance framework, aligning the country's drug safety monitoring activities with international standards.(5)

Table 1: Classification of ADRs (9)

S. No.	Type of Reaction	Key Characteristics	Illustrative Examples	Recommended Management
1	Dose-dependent (Augmented)	Frequently seen; directly linked to the drug's pharmacological activity; predictable; often mild; rarely fatal	Dryness of mouth with tricyclic antidepressants, respiratory suppression by opioids, increased bleeding tendency with warfarin, serotonin syndrome due to SSRIs, digoxin toxicity	Lower the dose or temporarily stop the drug; assess for interacting medicines
2	Non-dose-dependent (Bizarre)	Rare; not related to pharmacological properties; unpredictable in nature; may be severe or life-threatening	Allergy to penicillin causing anaphylaxis, malignant hyperthermia after general anesthesia	Stop the offending drug; ensure it is avoided in the future
3	Dose and time-dependent (Chronic)	Uncommon; associated with prolonged or cumulative dose exposure	HPA axis suppression from long-term corticosteroid use, jaw osteonecrosis from bisphosphonates	Gradually lower dose or discontinue; slow withdrawal may be necessary
4	Time-dependent (Delayed)	Rare; may appear after some time of continued drug use; sometimes dose related	Cancer induction, tardive dyskinesia, birth defects (teratogenesis), leukopenia from lomustine	Often difficult to reverse; supportive care advised
5	Therapeutic inefficacy (Failure)	Common; usually dose-related; often occurs due to drug-drug interaction	Reduced effectiveness of oral contraceptives with enzyme inducers, antibiotic resistance	Adjust dosage; evaluate possible interacting agents

6	Withdrawal-related (End-of-use)	Uncommon; appears soon after stopping a long-term medicine	Opiate or benzodiazepine withdrawal presenting as anxiety or sleeplessness	Restart the drug and taper gradually to avoid recurrence
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The National Coordinating Centre of the Pharmacovigilance Programme of India (PvPI), situated in Ghaziabad, has developed several mechanisms for reporting Adverse Drug Reactions (ADRs) by healthcare providers, patients, consumers, and the general public (12,13). Reporting options include ADR Monitoring Centres (AMCs) that provide standardized forms, which can also be downloaded from the Indian Pharmacopoeia Commission (IPC) and Central Drugs Standard Control Organisation (CDSCO) websites. Additional reporting tools include the ADR-PvPI mobile application and a toll-free helpline (1800-180-3024). Non-AMC healthcare institutions are encouraged to submit voluntary ADR reports via email at icsr.nccpvpi@gmail.com. For wider accessibility, these forms are available in ten regional languages—Marathi, Hindi, Telugu, Gujarati, Odia, Tamil, Malayalam, Bengali, Kannada, and Assamese.

Management of ADRs generally involves measures such as reducing the dosage, discontinuing the offending medication, or substituting it with an alternative drug (12,13). Several factors increase the likelihood of ADRs, including age (especially pediatric or geriatric groups), multiple drug use, genetic predisposition, and breastfeeding status.

Underreporting of ADRs remains a major challenge, particularly in rural areas where awareness and reporting infrastructure are limited (12,13). A survey among 90 AMCs revealed that 68% of physicians and 81% of pharmacists were unaware of the PvPI system. Furthermore, less than 1% of ADR cases are officially documented in India compared to about 5% globally. This highlights the urgent need to evaluate facilitators and barriers influencing reporting behavior among healthcare professionals. Among resident doctors, major causes of underreporting include poor understanding of the reporting process (80%) and lack of time (70%). The study suggested that comprehensive reporting systems and national sensitization campaigns could significantly improve ADR documentation rates.

Monitoring of ADRs involves various strategies for identifying, evaluating, understanding, and minimizing harmful drug-related effects (13–15). Table 2 outlines different methods used for ADR monitoring. Within hospital environments, strong ADR reporting systems are vital to support drug surveillance activities, detect safety concerns, and continuously enhance patient care quality (9).

Despite limitations such as underreporting and incomplete data on patient exposure, spontaneous reporting programs remain effective pharmacovigilance methods for detecting ADRs during routine clinical practice (12). Regular evaluation of hospital ADR datasets enables the recognition of recurring reaction patterns, which can guide the development of safety-improvement strategies. The data collected contribute to national and international ADR databases, helping inform medication safety decisions, revise drug labeling, and strengthen patient education programs (15).

Table 2: Methods of Adverse Drug Reaction (ADR) monitoring (5, 15)

S. No.	Method	Type	Key Features/ Uses
1	Spontaneous Reporting	Passive	Early signal detection; low cost
2	Intensive Monitoring	Active	Detailed clinical data; hospital-based
3	Cohort Study	Observational	Determines risk and incidence
4	Cohort Event Monitoring	Active	Prospective, measures incidence
5	Case-Control Study	Observational	Identifies drug-ADR associations
6	Record Linkage	Data-based	Uses electronic databases
7	Post-Marketing Surveillance	Regulatory	Ongoing safety monitoring after approval
8	Targeted Spontaneous Reporting	Hybrid	Focused on specific drugs/patients

Pharmacovigilance Programme of India (PvPI)

The voluntary reporting of suspected Adverse Drug Reactions (ADRs) to pharmacovigilance centers is crucial for the generation of safety data on licensed medications. National and international regulatory authorities constantly underscore the need of ADR reporting by healthcare providers to mitigate medication-related hazards and protect public health. In 2004, the Central Drugs Standard Control Organisation (CDSCO) of India initiated the national Pharmacovigilance Programme of India (PvPI) to systematically monitor adverse drug reactions (ADRs) and communicate safety-related findings to the WHO-ADR Monitoring Centre in Uppsala, Sweden. To enhance the scope and efficacy of ADR monitoring, the Indian Council of Medical Research (ICMR) and the Drug Controller General of India (DCGI) later formed peripheral pharmacovigilance units in hospitals throughout large urban centers nationwide.

The Pharmacovigilance Programme of India (PvPI) functions as the principal authority overseeing all pharmacovigilance efforts throughout the country. The primary goals include evaluating the risk-benefit balance of authorized drugs, detecting and analyzing novel safety signals from diverse ADR monitoring centers, and advocating for the sensible use of medications. The program was formally started in 2010 under the aegis of the Ministry of Health and Family Welfare (MOHFW). Since 2011, the Indian Pharmacopoeia Commission (IPC), located in Ghaziabad, has functioned as the national coordinating hub for these operations (12).

PvPI Objectives:

- To monitor the safety of medicines used in India.
- To collect, analyse, and report Adverse Drug Reactions (ADRs).
- To promote safe and rational use of medicines.

Meta-Analysis/ Systematic review evidence

In ADR (Adverse Drug Reactions), a meta-analysis is a quantitative systematic review that statistically aggregates findings from several research looking into harmful effects related to drugs. It seeks to obtain a more accurate and trustworthy estimate of the relationship between a medication (or drug class) and a negative consequence than could be obtained from a single study. (8)

Table 3: Meta-analysis in ADR (8)

S. No.	Step	Description
1	Define the question	e.g., <i>Does Drug X increase the risk of hepatotoxicity compared with placebo?</i> Clearly specify population, intervention, comparator, and outcome (PICO).
2	Systematic literature search	Search databases (PubMed, Embase, Cochrane Library, etc.) for relevant studies on ADRs.
3	Study selection	Include studies based on pre-set criteria (e.g., randomized controlled trials, observational studies reporting ADR incidence).
4	Data extraction	Collect details such as study design, sample size, ADR definition, effect estimates, and confounders.
5	Assess quality/risk of bias	Use tools such as the Cochrane Risk of Bias Tool (RCTs) or Newcastle-Ottawa Scale (observational studies).
6	Statistical pooling	Combine effect sizes using a fixed- or random-effects model to estimate an overall effect.
7	Heterogeneity assessment	Use I^2 and Q statistics to measure variability across studies.
8	Publication bias evaluation	Funnel plots, Egger's test, or Begg's test.
9	Sensitivity and subgroup analyses	Explore sources of heterogeneity (e.g., age, dose, study design).
10	Interpretation and reporting	Present pooled results, forest plots, and discuss clinical relevance and limitations.

Below mentioned were the gaps in knowledge, attitude and practice (KAP) of pharmacovigilance among HCPs in India: (8)

- 55.6% (95% Class Interval (CI) 44.4-66.9) of healthcare professionals (HCPs) were not aware of the existence of the Pharmacovigilance Programme of India (PvPI).
- 31.9% (95% CI 16.3-47.4) thought that “all drugs available in the market are safe”.
- 28.7% (95% CI 16.4-40.9) declared they were not interested in reporting ADRs.
- 74.5% (95% CI 67.9-81.9) had never reported any ADR in their professional career.
- Non-availability of ADR reporting forms was cited by 40.8% (95% CI 17.4-64.3) as a reason

Adverse Drug Reaction reporting patterns in Indian healthcare settings over the last 5 years

- In a recent observational study conducted in a tertiary hospital in western India between July 2022 and December 2023, 125 adverse drug reactions (ADRs) were recorded over an approximately 18-month period. The study found that the domestic ADR reporting rate is still less than 1%, while it is approximately 5% worldwide. (16)
- Media reports state that during the past three years, India's ADR reporting rate (reported ADRs per million population) has nearly doubled to about 40 per million. However, this is still much less than the ~130 per million that is typical in high-income nations. (17).
- According to government data, the following suspected adverse drug reactions have been documented during the past five years in the Ayurvedic, Siddha, Unani, and homoeopathy sectors: (18)

S. No.	Year	Suspected ADRs Reported
1	2021	360
2	2022	324
3	2023	420
4	2024	521
5	June 2025	382

- From a teaching hospital's institutional report from 2017 to 2021: The number of ADR reports varied from 4 in 2017 to 37 in 2018, followed by 23 in 2019, 12 in 2020, and 28 in 2021. (19)

Regulatory Frameworks

- **International Guidelines:** Essential procedures for drug safety monitoring are outlined in the ICH E2E Pharmacovigilance guideline. (20)
National Regulations: Many nations have their own laws, such as the EU Pharmacovigilance Regulation (EU 1235/2010) and the FDA's REMS (Risk Evaluation and Mitigation Strategies) in the United States. (21)
- **Role of Organizations:** Pharmacovigilance activities are overseen by the World Health Organisation (WHO), Food and Drug Administration (FDA), European Medical Agency (EMA), and other national organisations. (21)

Challenges of Regulatory Framework:

- a) Data Completeness and Quality
- b) Signal Detection: Differentiating true signals from noise requires advanced statistical methods and expertise.
- c) Global Variation: Different countries have varying standards and practices, complicating international data sharing.

Emerging Trends in Reporting ADRs (14)

1. Real-World Evidence (RWE): RWE is increasingly being used to inform safety assessments by utilising data from routine clinical settings.
2. Artificial Intelligence (AI): AI and machine learning are being used to more effectively recognise safety alerts and analyse massive information.
3. Patient Engagement: The pharmacovigilance process is improved by involving patients in reporting adverse drug reactions (ADRs) and learning about their experiences.

Importance of ADRs Reporting (22)

1. Enhancing Patient Safety: Clinical recommendations and medication safety monitoring can be informed by safety signals that are identified through effective ADR reporting.
2. Regulatory Requirements: Reporting is crucial for compliance since regulatory authorities use thorough ADR data to assess the safety of marketed drugs.
3. Ongoing Quality Improvement: Analysing ADR reports helps to maintain improvements in medication management and prescription procedures.

Barriers & Facilitators (7)

Lack of knowledge, workload, inadequate systems, inadequate feedback, voluntary reporting, and cultural apathy are the main causes of ADR barriers whereas facilitators include patient involvement, feedback, institutional support, education, streamlined reporting mechanisms, and strengthened regulations.

Example: A cross-sectional study of 80 HCPs in a tertiary care hospital in Tamil Nadu revealed:

Barriers:

- ADR-reporting mechanisms were not understood by 52% of respondents.
- According to 31%, reporting ADRs takes a lot of time.
- 22% were afraid about being punished.
- 16% thought the reporting form was difficult.
- A lack of motivation was mentioned by 36%.

Facilitators:

- 95% suggested ongoing physician education and training about the reporting of adverse drug reactions.
- Other recommended facilitators include reminders, raising awareness through the ADR Monitoring Centre (AMC), and incorporating ADR reporting issues within the curriculum.

Barriers to ADR Reporting (23)

1. Knowledge Gaps: Healthcare professionals might not understand what an adverse drug reaction (ADR) is and how important it is to report it.
2. Perceived Complexity: Healthcare personnel may be deterred from submitting reports due to fears about how complicated the reporting procedure is.
3. Time Restrictions: Immediate patient treatment may take precedence over administrative duties like reporting due to heavy workloads and time constraints.
4. Cultural Resistance: Healthcare professionals may be afraid of a culture that punishes mistakes, which could result in underreporting.
5. Policy and regulatory barriers: It includes non-mandatory reporting, fragmented coordination and delayed signal detection and communication.
6. System and infrastructure related barriers: Lack of ADR monitoring centres, lack of user-friendly reporting systems, poor feedback mechanism and inadequate integration with hospital systems.

Facilitators/Implications for Indian Healthcare & Pharmacovigilance (7,24)

1. Programs for Education and Training Frequent Workshops: Educate employees about ADRs and reporting procedures by holding frequent workshops and seminars.
2. Simulation Training: To illustrate the reporting procedure and highlight its significance in enhancing patient safety, use simulations.
3. Establishing a Non-Punitive Setting Culture of Safety First: Promote an environment where reporting is seen as an opportunity for learning rather than a punitive measure and safety is given top priority.
4. Options for Anonymous Reporting: To allay concerns about consequences, offer options for anonymous reporting.
5. Simplified Reporting Procedures User-Friendly methods: To make submissions easier, use streamlined, user-friendly reporting methods (such as online portals and mobile apps).
6. Connectivity to EHRs: Simplify data entry and cut down on effort duplication by integrating ADR reporting with Electronic Health Records (EHR).
7. Feedback Mechanisms Regular Updates: Share summaries of reported ADRs and outcomes with staff to reinforce the importance of their contributions.
8. Recognition Programs: Acknowledge and reward individuals or teams that actively report ADRs, fostering motivation.
9. Include pharmacovigilance in internships, undergraduate programs, and routine CME for healthcare professionals in all contexts.
10. Leadership Engagement Visible Commitment: Leadership should visibly support ADR reporting initiatives, highlighting its importance during meetings and communications

HCP's barriers and facilitators in reporting adverse drug reactions in a tertiary care hospital in India (2025)

- The addition of ADR reporting issues in the curriculum would facilitate reporting, according to 95% of HCPs.
- 92% of respondents approved of the ADR monitoring centre's reminders and raised awareness.
- 96% of respondents believed that support with forms and the reporting process was necessary when reporting ADRs.
- The study found that "updating info on ADR system," "inclusion in curriculum," and "continuous medical education/training" were important facilitators. (7)

The majority of the evidence comes from cross-sectional surveys or single-centre research; there are very few recent meta-analyses (2022–2025) unique to India that combine barrier/facilitator data across many centres. Facilitators are frequently suggested rather than objectively assessed, and many studies concentrate more on barriers than facilitators. Less is known regarding ADR-reporting patterns in primary care, rural settings, and the private sector in India; much of the research comes from tertiary care facilities. Individual characteristics (knowledge, attitude) have received more research attention than institutional elements (leadership support, time allotted, reporting incentives). Future research could benefit from cluster-randomized trials of treatments, a focus on various sectors (private, rural), a meta-analysis of barrier/facilitator data from Indian HCPs, and an assessment of digital reporting methods in India.

Future Directions in Reporting ADRs (17)

Integration of Data Sources: For a more thorough understanding of drug safety, data from multiple sources (clinical trials, EHRs, social media) are combined.

1. **Global Harmonisation:** Aiming for uniformity in pharmacovigilance procedures throughout nations to raise the standard of safety monitoring as a whole.
2. **Emphasis on Personalised Medicine:** Pharmacovigilance will need to change as treatments become more individualised in order to more accurately evaluate safety in a variety of groups.

Discussion and Conclusion

Pharmacovigilance revolves around healthcare providers. They can avoid injury, enhance therapy outcomes, and fortify the country's drug safety system with their diligence, correct reporting, and patient-centered attitude. Adverse drug reaction monitoring is a continuous, never-ending activity. Pharmacovigilance is still relatively new in India; however, it is expected to grow in the future. This is due to the fact that pharmacovigilance is becoming more and more necessary as new medications enter the market. Thus, it is essential to keep an eye on the negative effects of newer medications, especially if they are severe.

The PvPI established a toll-free helpline in 2014 to encourage reporting of any suspected adverse response that might be connected to the medicine taken in an effort to make it easier for patients, consumers, and medical professionals to report ADRs. A smartphone application was also released in May 2015 to give government and private healthcare providers a way to quickly report adverse drug reactions. ADR reporting and identification are impacted by a number of circumstances, including both facilitators and barriers. HCPs frequently find it difficult to give ADR reporting enough attention because to obstacles such time restraints, workload challenges, and conflicting priorities. The procedure may also be hampered by a lack of understanding and awareness of the significance of pharmacovigilance and reporting mechanisms.

Educating HCPs with proactive tactics like in-person seminars with or without mobile applications and frequent phone calls appears to be a successful way to improve ADR reporting. Improving patient safety requires a strong ADR reporting culture. Healthcare companies may promote an atmosphere that promotes proactive reporting by removing obstacles and putting specific initiatives into place. In addition to protecting patients, this helps to continuously raise the standard of healthcare.

Conflict of Interest

No Conflict of Interest

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