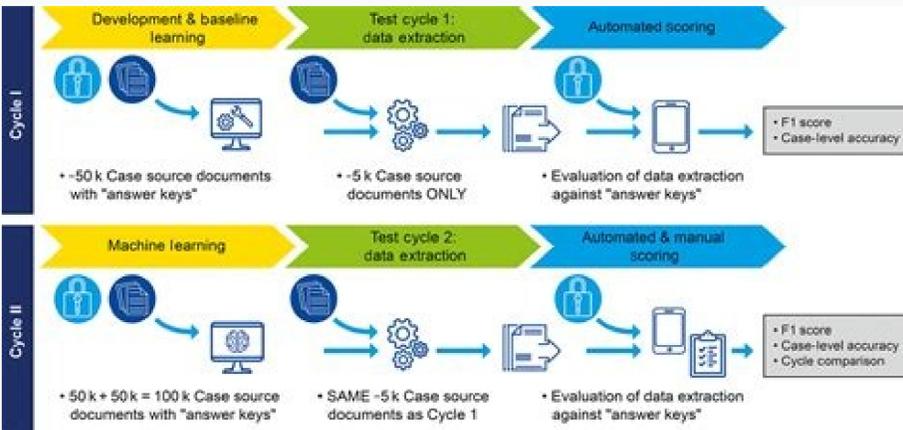


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ARTICLE

## Pharmacovigilance and expedited drug approvals

**Matthew Linger**  
Associate lecturer  
School of Medicine  
University of Queensland  
Basic physician trainee  
Royal Brisbane and  
Women's Hospital

**Jennifer Martin**  
Chair  
Discipline of Clinical  
Pharmacology  
School of Medicine and  
Public Health  
University of Newcastle  
Senior staff specialist  
Hunter New England Health  
Newcastle  
New South Wales

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### SUMMARY

Pharmacovigilance is the detection and assessment of adverse events related to any drug used in clinical practice.

In Australia adverse events can be reported to the Therapeutic Goods Administration. Reports are encouraged, even if the drug is old or the prescriber is only suspicious of an adverse event.

Australian information about adverse events can be found online in the Database of Adverse Event Notifications and in the publication *Medicine Safety Update*.

The Therapeutic Goods Administration is currently exploring expedited approval pathways to enable some drugs to reach the market quickly. As there will be limited clinical data about these drugs, postmarketing pharmacovigilance will be of increased importance.

### Introduction

Pharmacovigilance is the science and activities relating to the detection, assessment, understanding and prevention of adverse effects or any other drug-related problem.<sup>1</sup> Most reporting of adverse effects occurs after a drug is marketed. Postmarketing pharmacovigilance is essential as adverse events often only become apparent after a drug enters clinical practice. Premarket clinical trials are limited by short duration and small sample sizes. The patients are tightly selected, with strict inclusion and exclusion criteria. This limits the power of the trials to detect adverse events that occur rarely, after a protracted period of time, or in patients who are different from the study population.

### Pharmacovigilance in Australia

Pharmacovigilance formally began in Australia in 1963, as a response to reports of thalidomide embryopathy, with the formation of the Australian Drug Evaluation Committee. Despite multiple policy and committee name changes, data on adverse events have been collected constantly since then. As of January 2017, the Advisory Committee on Medicines, a subcommittee of the Therapeutic Goods Administration (TGA), is responsible for pre- and postmarketing surveillance, including pharmacovigilance.

In the past, adverse events were reported to the TGA by the submission of a 'blue card'.<sup>2</sup> These cards are no longer available in a physical form. Clinicians can now notify the TGA of adverse events via the online Australian Adverse Drug Reactions Reporting

System.<sup>3</sup> Alternatively reports can be made via telephone, post, fax and email. Anyone, including the general public (on a separate online consumer portal), can report adverse events to the TGA.

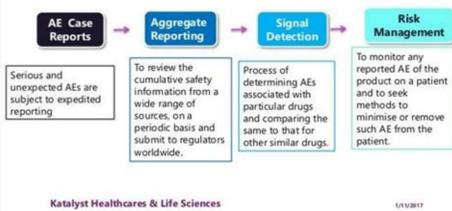
A report can be made even if there is only a suspicion of a drug causing an adverse effect. It is the TGA's responsibility to investigate and determine causality. Ideally, all adverse events should be reported, but the TGA is most interested in those events listed in Box 1. Reporting already known or common adverse events helps the TGA continue to build the 'safety profile' of a drug.

Reporting by clinicians and the general public is voluntary. In contrast, sponsors of both registered and listed drugs are legally mandated to report to the TGA all suspected adverse events they receive or become aware of from any source, even if the sponsor does not agree that there is causality. In 2015, the TGA received 17 000 reports with 54% coming from sponsors and 15% from state and territory health departments (reporting adverse

### Box 1 Adverse events of particular interest to the Therapeutic Goods Administration

- Adverse event related to newly listed or registered drugs
- Adverse event related to medicine or vaccine interactions
- Suspected adverse event not listed in product information or in medical resources
- Adverse event leading to death, admission to hospital, prolonged hospitalisation or birth defects

## Pharmacovigilance Workflow:



## How to report pharmacovigilance.

Each Report Can Make a Difference. If there are several trials going on in that country, the DSUR must be submitted till the last patient's last visit in the last study. This mandatory reporting includes: Expedited Reporting/Periodic Reporting What is Expedited Reporting? This may include additional research (REMS or registries etc..) to evaluate a safety risk or communications to health care providers/consumers to bring attention and emphasize the new information included in the updated product label. In some instances, regulatory authorities may decide to directly communicate with the public. Product withdrawal Not mandatory for non-EU countries. The DIBD of an authorized drug is the IBD (International Birth Date), the date when the product was first authorized in any country of the world. The Heads of Medicines have concluded in this document that a DSUR should be submitted until the last visit of the last patient in the country(ies) concerned. Drug Safety Update Reports (DSUR): A Comprehensive, thoughtful annual review and evaluation of pertinent safety information collected during the reporting period related to a drug under investigation, whether or not it is marketed. A DSUR preparation starts after the first authorization of a clinical trial anywhere in the world. This also creates the Developmental International Birthdate (DIBD) for the drug. In the United States these reports are referred to as a Periodic Adverse Drug Experience Reports (PADERs). Once ICSR assessed for seriousness, causality and labelling, case will be submitted to regulatory authority. Below are types of reports: Spontaneous / Voluntary reports/Clinical trials and Post marketing studies/Regulatory reports/License partner reports/Literature reports Once report is received it is checked for following four parameters to consider it as a valid case: Identifiable patient/Identifiable reporter/The drug suspected of causing Event or fatal result after these conditions are satisfied, an ICSR is filed for the adverse event that occurred. The event is categorized based on the level of severe health effect on the affected patient. The ICSR report deadlines vary primarily based on the severity of an event and the nature of the reporter. In addition, schedules in the use of pharmacovigilance include a concept called calendar days instead of weekdays or weekends. When a healthy / patient volunteer suffers a negative reaction to a drug, an adverse event is reported and archived containing several data on the drug, its dose, its alleged effect, the patient's health Before and after an adverse event, the patient's reaction to the previous drug and after an adverse event among others. The global regulatory authorities require accelerated presentation of individual security reports received by pharmaceutical companies that meet certain specific criteria, including criteria for the severity of a clinical event, whether or not a report previously observed and an evaluation of the event/parentment. Product administration. Decisions on when and how to report individual cases/relatives are based on the requirements of the local law of each country. Periodic Security Reporting Schedules: EU periods: every 6 months to the product marketed for 2 years in the EU, then annually for 2 years, then every 3 years in the US regards: for 3 After the approval, the quarterly periodic report after 3 years, relatives Regulatory authorities around the world review the results of laboratory, animal and human clinical tests made by companies for producing products before approving and monitoring The balance of benefit / risk of drugs marketed, according to local or regional laws and regulations of each country. Regulatory Actions: With separate Amrofni separate Amrofni sa mezilauta sacitu Acamraf sasermpe sa euq odnaticiloS :omoc sep Aa ramot medop sarodaluger sedaditrotua sa )RUSP e RUSD ,RSCI( soir Ataler son The drug rig is an additional risk assessment or minimization activities. Adverse event report sources: adverse event information collected from different sources. If the judgment ended in a particular Member State, DSUR does not have to be submitted "only in the countries where the study is still actively continuing. Registration regulators are submitted to regulatory agencies according to the government regulations. The purpose of these periodic security reports is to provide an aggregate review and analysis of all the relatives of adverse events received during a definite time period. Still, relatives provide a general reassessment security points defined and contribute to the contained assessment of whether the changes should be made to the product information or the risk management plan. The time and the context of the relatives/periodics for products marketed are based on local requirements (that is, every 6 months, year, every 3 years, etc.). In most countries/periodical reports of post-commercialization are referred to as Regulation of peripardic security (PSUs) or periods of risk assessment of periodic benefit (pbr) s. Timelines of accelerated relatives: Globally ICSR are reported in 3 categories: Clinical Death / Life Risk Cases and SUSAR (Unexpected Suspension Severe Reaction) are reported within 7 days of NCA (competent national authorities) / ha (health officials). Clinical essay Other serious cases and security issues are reported in 15 days calendar days timeFrame.Serious post marketing cases are reported within 15 days racing for the NCA (competent national authorities) / ha Saude Non-severe cases are reported within 90 days calendar days for the EU (EMA) health authority. Types of Reportages Regulatory authorities: Pharmaceutical companies are required to report security information to regulatory authorities according to specific timelines. Events are categorized as such as event (AE), Severe adverse event (SAE), Severe adverse reaction (SAR), Suspected unexpected serious adverse reaction (SUSAR), Life-Threatening (LT). The clock starts (day 0) on the date when any personnel of the MAH first receive a case report that fulfill the minimum criteria What is Periodic Safety Reporting? Reporting?

The minimum criteria for reporting and the format (data elements for inclusion in expedited reports) are available in ICH E2A. References, resources and further reading New Drugs and Clinical Trial Rules, 2019, G.S.R. 227(E), Central Drugs Standard Control Organization, Ministry of Health and Family Welfare, available online (last accessed on 03.04.2019). 12/12/2019 - A PADER is a type of aggregate safety report required to be submitted by a sponsor or marketing authorization holder (MAH) to the US Food and Drug Administration (FDA) after obtaining marketing authorization approval as per 314.80 (C) (2) and 600.80 (C)(2) guidelines. 01/04/2020 - Reports, analysis and ... We are providing expedited scientific advice, ... Pharmacovigilance Relaxation of risk minimisation measures (published 7 ... 31/07/2019 - Regulatory requirements for expedited reporting of serious ICSRs are the same as in other ICH regions where reports must be submitted within 15 calendar days. Generally foreign reports of medicinal products having the same active moiety as a marketed product in the US that are considered to be serious and expected must be reported. 14/01/2022 - There are significant changes to pharmacovigilance requirements in EU Regulations 2019/6. Most notably the move from Periodic Safety Update Reports (PSURs) to place a greater reliance on signal ... Pharmacovigilance Interview Questions and Answers for Freshers & Experienced. 1. What Is Pharmacovigilance? Pharmacovigilance is the science of collecting, monitoring, researching, assessing and evaluating information from healthcare providers and patients on the adverse effects of medications, biological products, herbalism and traditional medicines 24/07/2019 - Clinical trials and pharmacovigilance are parallel processes, whenever any adverse event reported from the patient in trial it will be sent to pharmacovigilance team. Let us see in detail processing of how events experienced in trials gets submitted to regulatory authority.

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