Chapter 3

Filling-up IPC's ADR Reporting Form and Perform Causality Assessments Using Various Scales (2 Cases)

Adverse drug reaction: According to WHO "any response to a drug which is noxious and unindended that occurs at doses, normally used in man for prophylaxis, diagnosis or therapy of disease or for modification of physiological functions".

Adverse event: Medical occurrence temporarily associated with the use of a medical product but not necessarily causally related.

- **Causality assessment:** It is the assessment of relationship between a drug treatment and occurrence of an adverse event.

Types of ADR

- **Type-A—**acute, predictable, related to mechanism of action, e.g. side effects, toxic effects, secondary effects
- **Type-B—**acute, unpredictable, idiosyncratic, not known mechanism, e.g. allergy
- **Type-C—**chronic effects, e.g. Cushing syndrome due to corticosteroids
- **Type-D—**delayed effects, e.g. teratogenic effects
- **Type-E—**end-of-treatment effects, e.g. withdrawal syndrome of phenytoin, rebound hypertension by propanolol
- **Type-F—**when drug does not produce any therapeutic effect, e.g. genetic variability, drug interactions

On the Basis of Severity

- **Minor—**no need of medication or hospitalization
- **Moderate—**require medication and hospitalization
- **Severe—**life-threatening, permanent damage and prolonged hospitalization
- **Lethal—**lead to death.

Role of Community Pharmacist in ADR Monitoring

- Post-marketing surveillance
- Reporting ADR, improving patient health and economic outcomes
- Monitor the safety of medicines
- Close contact to patients
- Increasing the frequency and the quality of submitted report

Steps Involved in ADR Monitoring

- **Identifying—**ADR
- **Assessing causality—**between drug and suspected reaction by using various algorithms
- **Documentation—**of ADR in patient's medical records
- **Reporting—**serious ADR to pharmacovigilance centres/ADR-regulating authorities

Process After Submitted Information

- The causality assessment is carried out at adverse drug reaction monitoring centres (AMCs) by using WHO-UMC scale.
- The analyzed forms are forwarded to the national coordination centre.
- Finally, the data is analyzed and forwarded to the global pharmacovigilance database managed by WHO Uppsala monitoring centre in Sweden.
- The report is periodically reviewed by the national coordination centre (PvPI).

Causality assessment (grading)	
Catagory	*Explanation*
Probable	Evidence for causality assessment, effect of other factors uncertain
Possible	Evidence for causality assessment, effect of other factors also contributes
Unlikely	Little evidence for causality assessment
Not related	No evidence
Unclassifiable	There is less information about ADRs to allow for an causality assessment

ANDROID APPLICATION: ADR REPORTING APP

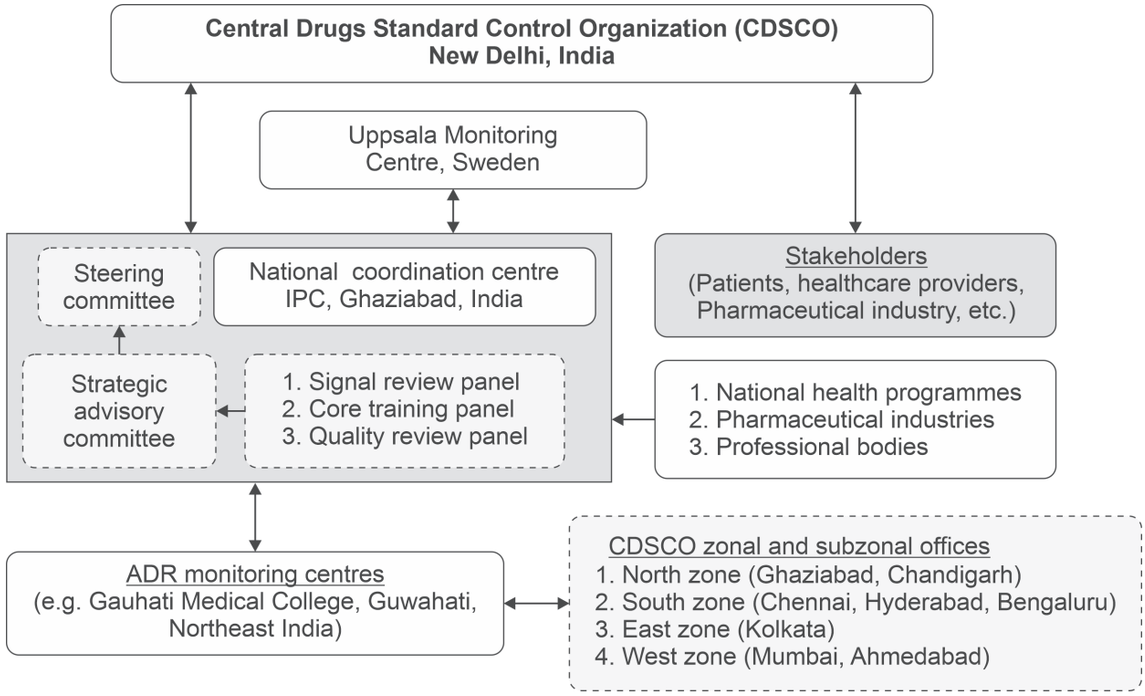
It is indigenously (ADR PvPI) developed mobile app which can be downloaded from google play store by all healthcare professionals to report ADR.

Benefits of ADR Monitoring

- Safety of drug therapy
- Prevent ADR related to pharmaceutical products
- Introduction about ADR to pharmacists, nurses, doctors, healthcare providers

Haematopoietic toxicity		
S. No.	*Drugs*	*ADRs*
1.	Quinine, rifampicin, sulfonamide, thiazide	Thrombocytopenia
2.	Carbamazepine, sulfonamide, carbimazole, clozapine granulocytopenia	Fatal neutropenia, drug allergy (type II reaction)
3.	Chloramphenicol	Aplastic anemia
4.	Anti-cancer, cytotoxic drugs	Direct bone morrow depression
5.	Primaquine, quinine, chloroquine, depsone, sulfonamids	Hemolytic anemia

Hepatotoxic	
Drugs	*ADRs*
Chloroform, hepatotoxic, enflurone	Hepatotoxicity—jaundice
Chlorpromazine erythromycin, androgen	Cholestatic jaundice
INH, rifampicin, methyldopa	Hepatocellular necrosis jaundice
Methotrexate, alcohol	Cirrhosis of liver
Paracetamol overdose	Hepatocellular necrosis
Minocycline	Chronic active hepatitis



Renal toxicity
• Sulfonamide—glomerulonephritis
• Aminoglycoside—acute tubular necrosis
• NSAID—acute interstitial nephritis
• ACE inhibitors—nephrotic syndrome

SUSPECTED ADVERSE DRUG REACTION REPORTING FORM

For VOLUNTARY reporting of Adverse Drug Reactions by Healthcare Professionals

INDIAN PHARMACOPOEIA COMMISSION
(National Coordination Centre-Pharmacovigilance Programme of India)
Ministry of Health & Family Welfare, Government of India
Sector-23, Raj Nagar, Ghaziabad-201002

FOR AMC/NCC USE ONLY

AMC Report No. :

Report Type □ Initial □ Follow up

Worldwide Unique No. :

A. PATIENT INFORMATION

1. Patient Initials _____

2. Age at time of Event or Date of Birth _____

3. M □ F □ Other □

4. Weight_____Kgs

12. Relevant tests/ laboratory data with dates

B. SUSPECTED ADVERSE REACTION

5. Date of reaction started (dd/mm/yyyy)

6. Date of recovery (dd/mm/yyyy)

7. Describe reaction or problem

13. Relevant medical/ medication history (e.g. allergies, race, pregnancy, smoking, alcohol use, hepatic/renal dysfunction etc.)

14. Seriousness of the reaction: No ☐ if Yes ☐ (please tick anyone)

☐ Death (dd/mm/yyyy) ☐ Congenital-anomaly
☐ Life threatening ☐ Required intervention to Prevent permanent
☐ Hospitalization/Prolonged impairment/damage
☐ Disability ☐ Other (specify)

15. Outcomes

☐ Recovered ☐ Recovering ☐ Not recovered
☐ Fatal ☐ Recovered with sequelae ☐ Unknown

C. SUSPECTED MEDICATION(S)

S.No	8. Name (Brand/Generic)	Manufacturer (if known)	Batch No. / Lot No.	Exp. Date (if known)	Dose used	Route used	Frequency (OD, BD etc.)	Therapy dates		Indication	Causality Assessment
								Date started	Date stopped		
i											
ii											
iii											
Iv											

S.No as per C	9. Action Taken (please tick)						10. Reaction reappeared after reintroduction (please tick)			
	Drug withdrawn	Dose increased	Dose reduced	Dose not changed	Not applicable	Unknown	Yes	No	Effect unknown	Dose (if reintroduced)
i										
ii										
iii										
iv										

11. Concomitant medical product including self-medication and herbal remedies with therapy dates (Exclude those used to treat reaction)

S.No	Name (Brand/Generic)	Dose used	Route used	Frequency (OD, BD, etc.)	Therapy dates		Indication
					Date started	Date stopped	
i							
ii							
iii							

Additional Information:

D. REPORTER DETAILS

16. Name and Professional Address:_____
_____
Pin:_____E-mail_____
Tel. No. (with STD code)_____
Occupation:_____ Signature:_____

17. Date of this report (dd/mm/yyyy):

Confidentiality: The patient's identity is held in strict confidence and protected to the fullest extent. Programme staff is not expected to and will not disclose the reporter's identity in response to a request from the public. Submission of a report does not constitute an admission that medical personnel or manufacturer or the product caused or contributed to the reaction.

ADVICE ADR REPORTING

National Coordination Centre
Pharmacovigilance Programme of India
Ministry of Health & Family Welfare,
Government of India
Sector-23, Raj Nagar, Ghaziabad-201002
Tel.: 0120-2783400, 2783401, 2783392
Fax: 0120-2783311
www.ipc.nic.in

A. What to Report

- Report serious adverse drug reactions. A reaction is serious when the patient outcome is:
  - Death
  - Life-threatening
  - Hospitalization (initial or prolonged)
  - Disability (significant, persistent or permanent)
  - Congenital anomaly
  - Required intervention to prevent permanent impairment or damage
- Report non-serious, known or unknown, frequent or rate adverse drug reactions due to medicines, vaccines and herbal products.

B. Who can Report

- All healthcare professionals (clinicians, dentists, pharmacists and nurses) can report adverse drug reactions.

C. Where to Report

- Duly filled suspected adverse drug reaction reporting form can be sent to the nearest adverse drug reaction monitoring centre (AMC) or directly to the national coordination centre (NCC).
- Call on helpline (toll free) 1800 180 3024 to report ADRs.
- Or can directly mail this filled form to pvpi@ipc.gov.in, http://www.ipc.gov.in/PvPI/pv_home.html

D. What Happens to the Submitted Information

- Information provided in this from is handled in strict confidence. The causality assessment is carried out at AMCs by using WHO UMC scale. The analyzed forms are for warded to the NCC through ADR database. Finally the data is analyzed and formwarded to the blobal pharmacovigilance database managed by WHO uppsala monitoring centre in sweden.
- The reports are periodically reviewed by the NCC, PvPI. The information generated on the absis of these reports helps in continuous assessment of the benefit-risk ratio of medicines.
- The information is submitted to the steering committee of PvPI constituted by the Ministry of Health and Family Welfare. The committee is entrusted with the responsibility to review the data and suggest any interventions that may be required.

E. Mandatory Field for Suspected ADR Reporting Form

- Patient initials, age at onset of reaction, reaction term(s), data of onset of reaction, suspected medication(s) and reporter information.

For ADRs Reporting Call on PvPI Helpline (Toll Free)

1800 180 3024

(9:00 AM to 5:30 PM, Working Days)

EXPERIMENT 5

(Case 1)

Object: To carry out survey about ADR of given drug/drugs to nearby CHC/PHC/district hospital/private clinics/nursing home and submit the report.

Drugs: Rifampicin, chlorpromazine, sulfonamide, paracetamol, INH, chloramphenicol, erythromycin, quinine, primaquine, chloroquine, carbimazole, methotrexate, dapsone, thiazide, ACE inhibitor, chloroform, halothane, NSAID, aminoglycosides.

One drug is given to one student.

Observation

Patient Information

1. Patient initials:	2. Age at the time of event or date of birth:	3. M ☐ F ☐ Other ☐ 4. Weight ..... kg Date: .....

Types of ADR

- Type-A Yes/No
- Type-B Yes/No
- Type-C Yes/No
- Type-D Yes/No
- Type-E Yes/No
- Type-F Yes/No

On the Basis of Severity

- Minor Yes/No
- Moderate Yes/No
- Severe Yes/No
- Lethal Yes/No

Steps Involved in ADR Monitoring

- **Identifying ADR Yes/No**
- **Assessing causality (Grading)**

Category	*Cross (×) or tick mark (✓) which is applicable*
Probable	
Possible	
Unlikely	
Not related	
Unclassifiable	

- **Documentation** (of ADR in patient's medical records) Yes/No

Reporting (serious ADR to pharmacovigilance centres) Yes/No

Result

Refer to AMC or higher authority (NCC/PvPI) or not

EXPERIMENT 6
(Case 2)

Object: To carry out survey about ADR of given drug/drugs to nearby CHC/PHC/district hospital/private clinics/nursing home and submit the report.

Drugs: Rifampicin, chlorpromazine, sulfonamide, paracetamol, INH, chloramphenicol, erythromycin, quinine, primaquine, chloroquine, carbimazole, methotrexate, dapsone, thiazide, ACE inhibitor, chloroform, halothane, NSAID, aminoglycosides.

One drug is given to one student.

Observation

Patient Information

1. Patient initials:	2. Age at the time of event or date of birth:	3. M ☐ F ☐ Other ☐ 4. Weight ..... kg Date: .....

Types of ADR

- Type-A Yes/No
- Type-B Yes/No
- Type-C Yes/No
- Type-D Yes/No
- Type-E Yes/No
- Type-F Yes/No

On the Basis of Severity

- Minor Yes/No
- Moderate Yes/No
- Severe Yes/No
- Lethal Yes/No

Steps Involved in ADR Monitoring

- **Identifying (ADR)** Yes/No
- **Assessing causality (Grading)**

Category	*Cross (×) or tick mark (✓) which is applicable*
Probable	
Possible	
Unlikely	
Not related	
Unclassifiable	

- **Documentation** (of ADR in patient's medical records) Yes/No

Reporting (serious ADR to pharmacovigilance centres) Yes/No

Result

Refer to AMC or higher authority (NCC/PvPI) or not

EXPERIMENT 7

(If Case 1 or Case 2 *refer to AMC/NCC/PvPI*)

Object: To prepare ADR report on IPC (Indian Pharmacopoeia Commission) Form.

SUSPECTED ADVERSE DRUG REACTION REPORT FORM
For Voluntary Reporting of Adverse Drug Reaction by Healthcare Professionals

INDIAN PHARMACOPOEIA COMMISSION (National Coordination Centre Pharmacovigilance programme of India, Ministry of Health and Family Welfare, Government of India Sector-23, Rajnagar, Ghaziabad-201002	FOR AMC/NCC USE ONLY AMC Report No. ..... Worldwide Unique No. .....
Report type ☐ *Initial* ☐ *Follow-up* ☐	
A. PATIENT INFORMATION	Relevent tests/lab. data with dates
1. Patient initials ..... 2. Age at the time of event or date of birth: ..... 3. M ☐ F ☐ Other ☐ 4. Weight: ..... kg	13. Relevant medical history: .....
B. SUSPECTED ADVERSE REACTION	14. Outcomes ☐ Recovered ☐ Recovering ☐ Not Recovered ☐ Fatal ☐ Unknown
5. Date of reaction started (dd/mm/yyyy):	
6. Date of recovery (dd/mm/yyyy):	15. Seriousness of the reactions ☐ Death (dd/mm/yyyy) ☐ Congenital anomaly ☐ Life-threatening ☐ Required intervention To prevent permanent damage ☐ Hospitalization ☐ Disability ☐ Other (specify)
7. Describe reaction or problem:	

C. SUSPECTED MEDICATION(S)

S.No	8. Name (Brand/Generic)	Manufacturer (if known)	Batch No. / Lot No.	Exp. Date (if known)	Dose used	Route used	Frequency (OD, BD etc.)	Therapy dates		Indication	Causality Assessment
								Date started	Date stopped		
i											
ii											
iii											
Iv											

S.No as per C	9. Action Taken (please tick)						10. Reaction reappeared after reintroduction (please tick)			
	Drug withdrawn	Dose increased	Dose reduced	Dose not changed	Not applicable	Unkn-own	Yes	No	Effect unknown	Dose (if reintroduced)
i										
ii										
iii										
iv										

11. Concomitant medical product including self-medication and herbal remedies with therapy dates (Exclude those used to treat reaction)

S.No.	Name (Brand/Generic)	Dose used	Route used	Frequency (OD, BD, etc.)	Therapy dates		Indication
					Date started	Date stopped	
i							
ii							
iii							

Additional Information:	D. REPORTER DETAILS
	16. Name and Professional Address:_____ _____ Pin:_____E-mail_____ Tel. No. (with STD code)_____ Occupation:_____ Signature:_____
	17. Date of this report (dd/mm/yyyy):

VIVA VOCE/ SYNOPSIS

Q1. What is ADR?

Q2. Write the name of different ADR controlling authorities.

Q3. Define causality assessment.

Q4. Write different modules for causality assessment.

Q5. Classify ADR on the basis of severity.

Q6. Write different types of ADR.

Q7. Write patient details in suspected adverse drug reaction report form.

Q8. What is PvPI and where it is located?

Q9. To whom ADR reporting is executed?

Q10. Where international Uppsala Monitoring Centre is located?

MULTIPLE CHOICE QUESTIONS

Q1. Delayed effects are seen in which type of ADR?
(1) Type-A (2) Type-B (3) Type-C (4) Type-D

Q2. When drug does not produce therapeutic effect, it belongs to:
(1) Type-A (2) Type-B (3) Type-D (4) Type-F

Q3. On the basis of severity of ADR, which type needs not to be hospitilized?
(1) Minor (2) Moderate (3) Severe (4) Lethal

Q4. The Uppsala monitoring centre is located in which country/city?
(1) America (2) Paris (3) Sweden (4) London

Q5. NCC (national coordination centre) is located in:
(1) Ghaziabad (2) Lucknow (3) Delhi (4) Ahmedabad

Q6. IPC (Indian Pharmacopoeia Commission) is located in:
(1) Ghaziabad (2) Lucknow (3) Delhi (4) Ahmedabad

Q7. In suspected ADR reporting form, which part consists about suspected medication?
(1) Part-A (2) Part-B (3) Part-C (4) Part-D

Q8. In suspected ADR reporting form, which part consists about patient information?
(1) Part-A (2) Part-B (3) Part-C (4) Part-D

Q9. In suspected ADR reporting form, which part consists about reporter detail?
(1) Part-A (2) Part-B (3) Part-C (4) Part-D

Q10. In suspected ADR reporting form, which part consists about AMC/NCC use only?
(1) Part-A (2) Part-B (3) Part-C (4) None

ANSWERS

Q1. (4) **Q2.** (4) **Q3.** (1) **Q4.** (3) **Q5.** (1) **Q6.** (1) **Q7.** (3)
Q8. (1) **Q9.** (4) **Q10.** (4)