دانشگاه علوم پزشکی و خدمات بهداشتی و درمانی ایران

معاونت غذا و دارو

PHARMACOVIGILANCE

Dr. Zahra Forouzan Karimian, PharmD

Pharmacotherapy Consultant –
Genetic & Metabolic Disorders

برنامه سمینار آموزشی فاماکوویژولانس

ساعت	عنوان برنامه
۸:۰۰ – ۸:۳۰	ثبت نام
۸:۳۰ – ۸:۴۵	قرائت قرآن کلام ا... مجید و سرود جمهوری اسلامی
۸:۴۵ – ۹:۰۰	خوشامد گویی (جناب آقای دکتر ولائی)
۹:۰۰ – ۹:۱۵	مقدمه (سرکار خانم دکتر محمدی)
۹:۱۵ – ۹:۴۵	بخش اول برنامه (سرکار خانم دکتر کریمیان)
۱۰:۰۰ – ۱۰:۱۵	پذیرایی
۱۰:۱۵ – ۱۰:۴۵	بخش دوم برنامه (سرکار خانم دکتر کریمیان)
۱۰:۴۵ – ۱۱:۰۰	پذیرایی
۱۱:۰۰ – ۱۱:۳۰	بخش سوم برنامه

دفتر تحقیق توسعه معاونت غذا و دارو دانشگاه علوم پزشکی ایران
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پایگاه اینترنتی: WWW.Fdo.iums.ac.ir

Part one

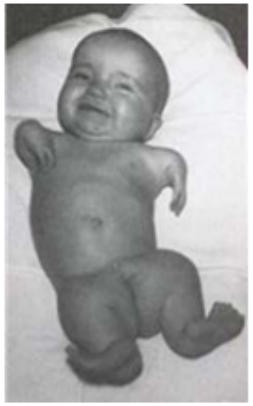
Objectives –

1. The foundations of pharmacovigilance (PV)
2. Terminology and definitions
3. Instructions to complete the yellow form

History

WHO Pharmacovigilance (PV) Programme

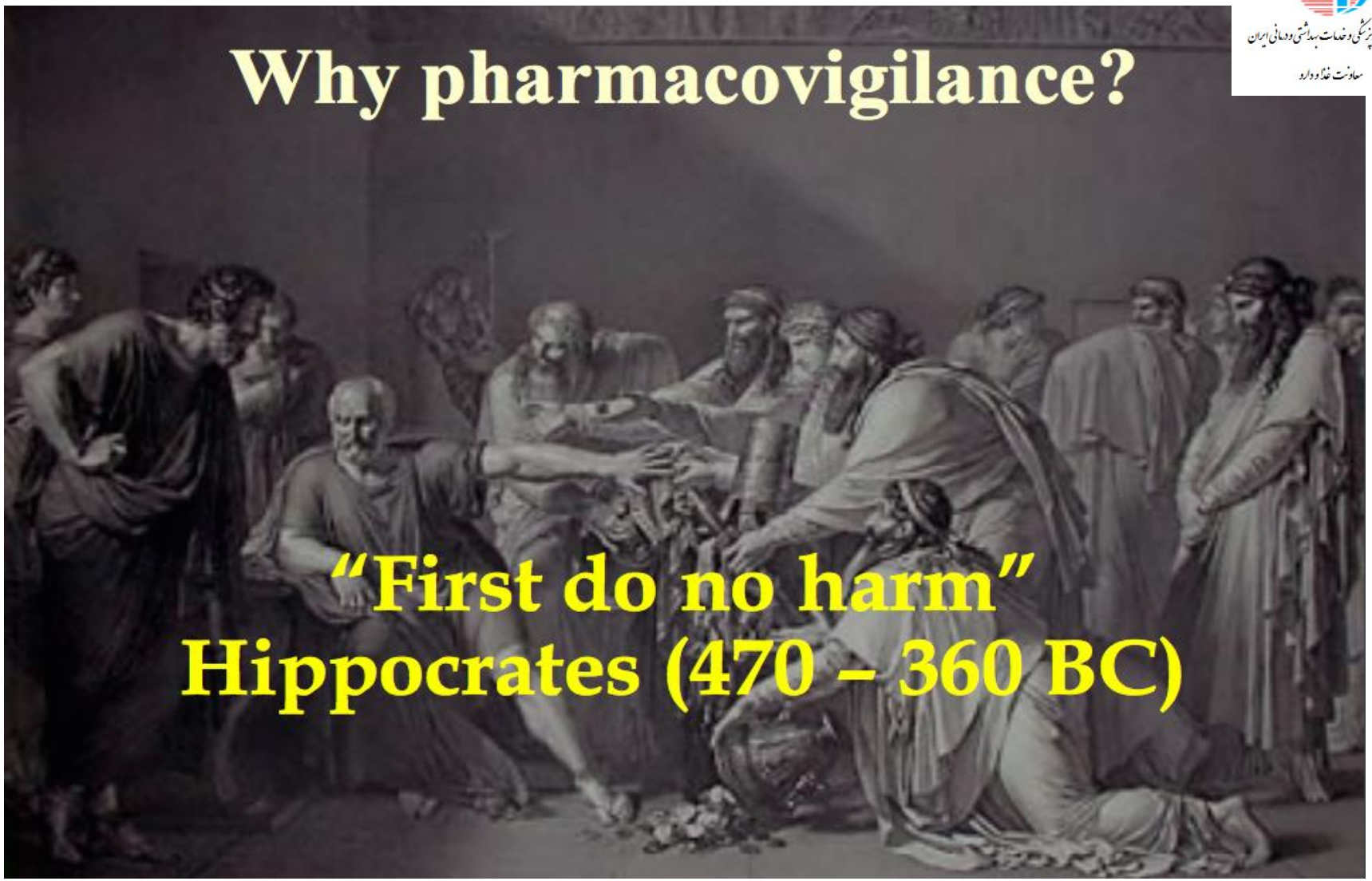
How it started



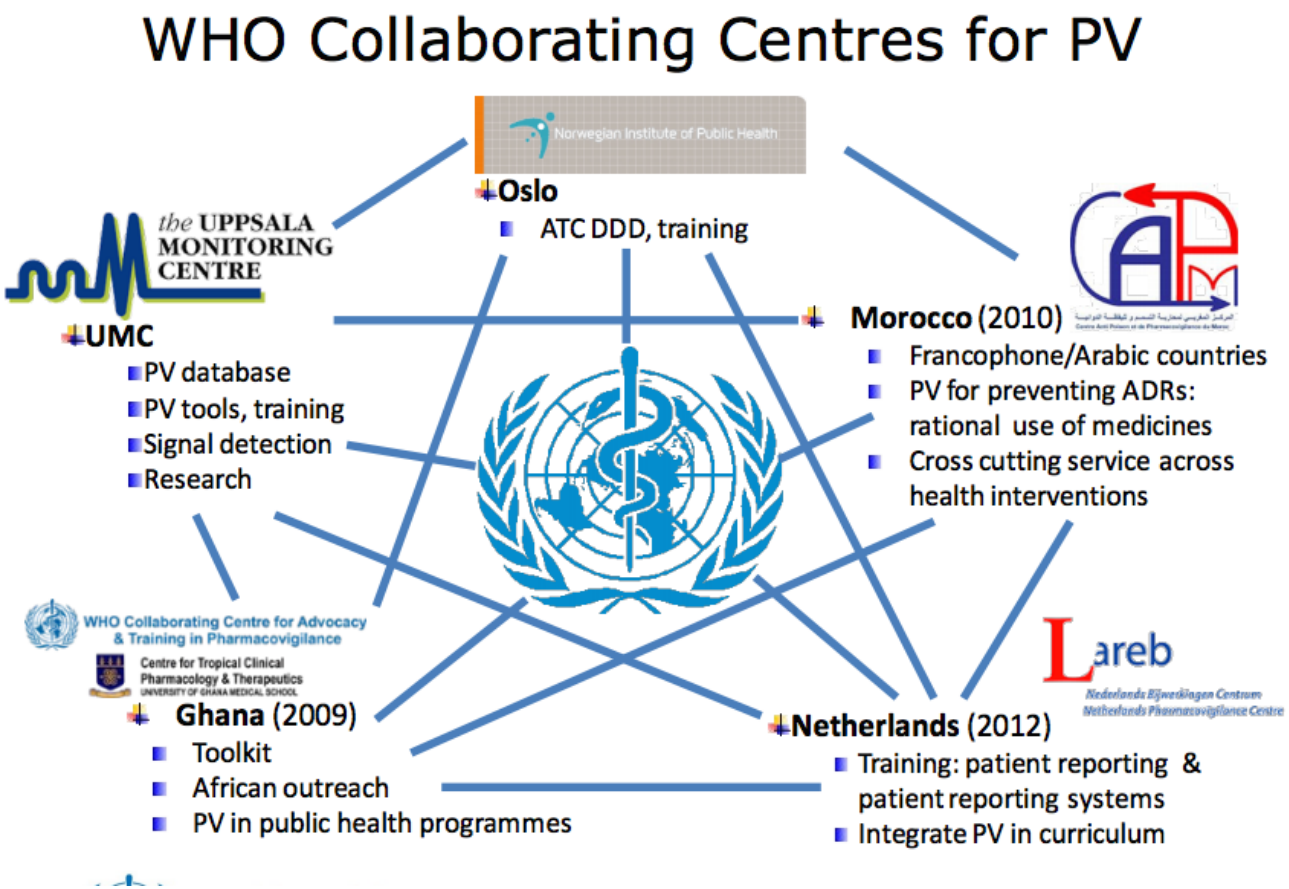
- Thalidomide 1961

- WHO Prgm. for Int. Drug Monitoring 1968

- World Health Assembly Resolution 16.36
- INVITES Member States to arrange for a systematic collection of information on serious adverse drug reactions observed during the development of a drug and, in particular, after its release for general use.


Why pharmacovigilance?
"First do no harm"
Hippocrates (470 – 360 BC)

Pharmacovigilance Collaborating Centers



Pharmacovigilance

The science and activities relating to the detection, assessment, understanding and prevention of adverse effects or any other drug-related problem.

WHO

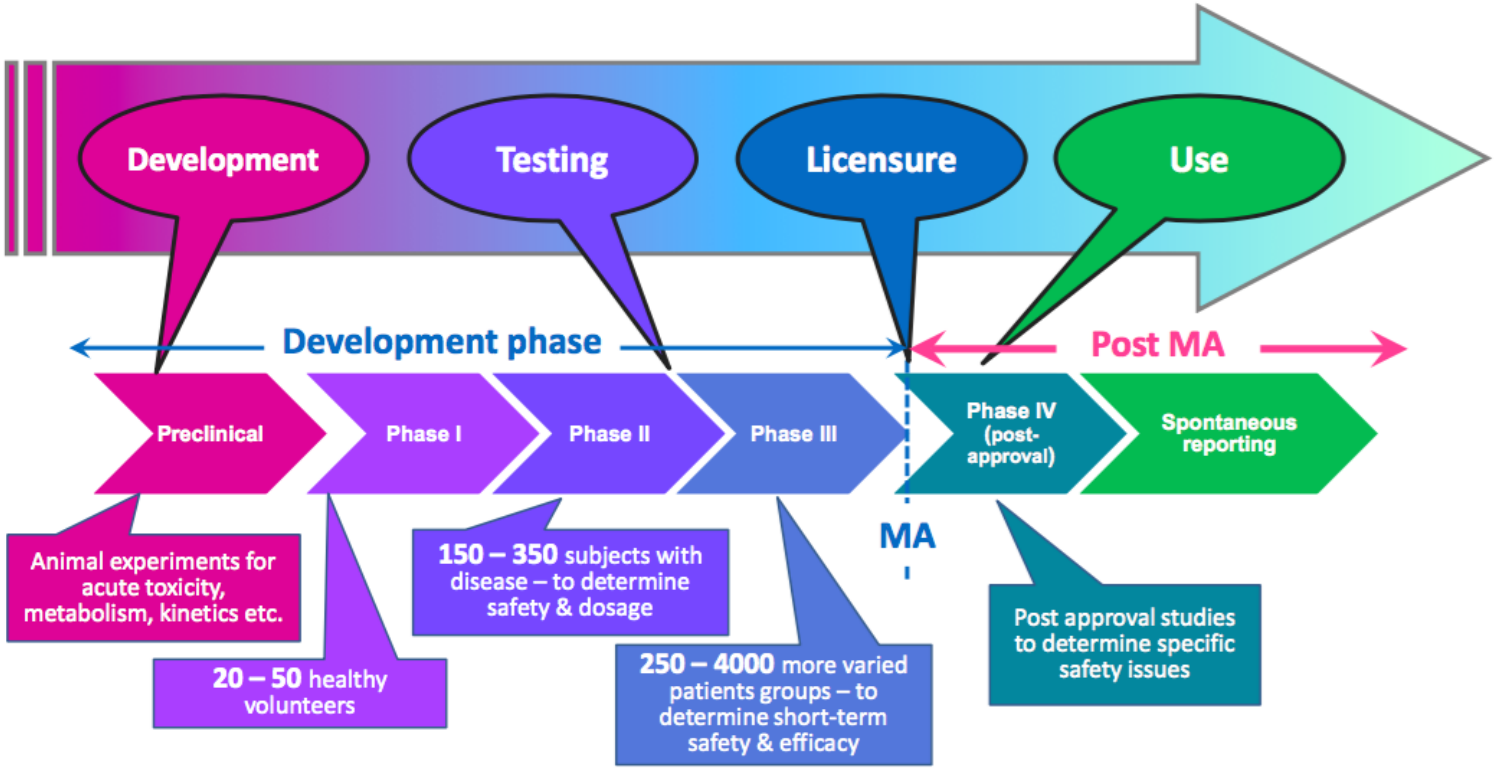
Pharmacovigilance

- ✓ collects, records, codes ADEs / ADRs
- ✓ analyses and assesses the reports
- ✓ promotes the safe use of drugs
- ✓ creates appropriate structures and means of communication needed to perform its tasks

Aims of Pharmacovigilance

- ✓ to improve patient care and safety
- ✓ to improve public health and safety
- ✓ to contribute to the assessment of benefit, harm, effectiveness and risk of medicines
- ✓ to promote education and clinical training
- ✓ to promote effective communication to the public
- ✓ to promote rational and safe use of medicines

The process of drug development



Terminology & Definitions

- Adverse Drug Event (ADE)
- Adverse Drug Reaction (ADR)
- Side Effect (SE)

Adverse Event (AE)

Any untoward medical occurrence that may present during treatment with a pharmaceutical product but which does not necessarily have a causal relationship with this treatment.

e.g. A hospitalized patient experiences syncope when getting out of bed.

Side Effect (SE)

Any unintended effect of a pharmaceutical product occurring at normal dosage which is related to the pharmacological properties of the drug.

e.g. Antihistamines (taken for allergies) →

Drowsiness (can be beneficial!)

Adverse Drug Reaction (ADR)

A response which is noxious and unintended, and which occurs at doses normally used in humans for the prophylaxis, diagnosis, or therapy of disease, or for the modification of physiological function (WHO, 1972).

e.g. Heparin → Bleeding

Frequency of ADRs

Frequency of adverse drug reactions (CIOMS)

• Very common	• >= 1/10
• Common (frequent)	• > = 1/100 and < 1/10
• Uncommon (infrequent)	• >= 1/1000 and < 1/100
• Rare	• >= 1/10000 and < 1/1000
• Very rare	• < 1/10000

Causality Assessment

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Table 1

Naranjo ADR probability scale—items and score

Question	Yes	No	Don't know
Are there previous conclusion reports on this reaction?	+1	0	0
Did the adverse event appear after the suspect drug was administered?	+2	–1	0
Did the AR improve when the drug was discontinued or a specific antagonist was administered?	+1	0	0
Did the AR reappear when drug was re-administered?	+2	–1	0
Are there alternate causes [other than the drug] that could solely have caused the reaction?	–1	+2	0
Did the reaction reappear when a placebo was given?	–1	+1	0
Was the drug detected in the blood [or other fluids] in a concentration known to be toxic?	+1	0	0
Was the reaction more severe when the dose was increased or less severe when the dose was decreased?	+1	0	0
Did the patient have a similar reaction to the same or similar drugs in any previous exposure?	+1	0	0
Was the adverse event confirmed by objective evidence?	+1	0	0

Scoring for Naranjo algorithm: >9 = definite ADR; 5–8 = probable ADR; 1–4 = possible ADR; 0 = doubtful ADR.

Causality Assessment

Table 2

WHO–UMC causality categories

Causality term	Assessment criteria (all points should be reasonably complied)
Certain	• Event or laboratory test abnormality, with plausible time relationship to drug intake • Cannot be explained by disease or other drugs • Response to withdrawal plausible (pharmacologically, pathologically) • Event definitive pharmacologically or phenomenologically (ie, an objective and specific medical disorder or a recognized pharmacologic phenomenon) • Rechallenge satisfactory, if necessary
Probable/likely	• Event or laboratory test abnormality, with reasonable time relationship to drug intake • Unlikely to be attributed to disease or other drugs • Response to withdrawal clinically reasonable • Rechallenge not required
Possible	• Event or laboratory test abnormality, with reasonable time relationship to drug intake • Could also be explained by disease or other drugs • Information on drug withdrawal may be lacking or unclear
Unlikely	• Event or laboratory test abnormality, with a time to drug intake that makes a relationship improbable (but not impossible) • Disease or other drugs provide plausible explanation
Conditional/unclassified	• Event or laboratory test abnormality • More data for proper assessment needed, or • Additional data under examination
Unassessable/unclassifiable	• Report suggesting an adverse reaction • Cannot be judged because information is insufficient or contradictory • Data cannot be supplemented or verified

Serious Adverse Event or Reaction is any untoward medical occurrence that:

- Results in death
- Is life-threatening
- Requires inpatient hospitalization or prolongation of existing hospitalization
- Results in persistent or significant disability/incapacity
- Teratogenic

Extent of problem

Is under-reporting really a concern?

- > 90% of all **serious** ADRs are <u>not</u> reported
- What about non-serious ADRs?

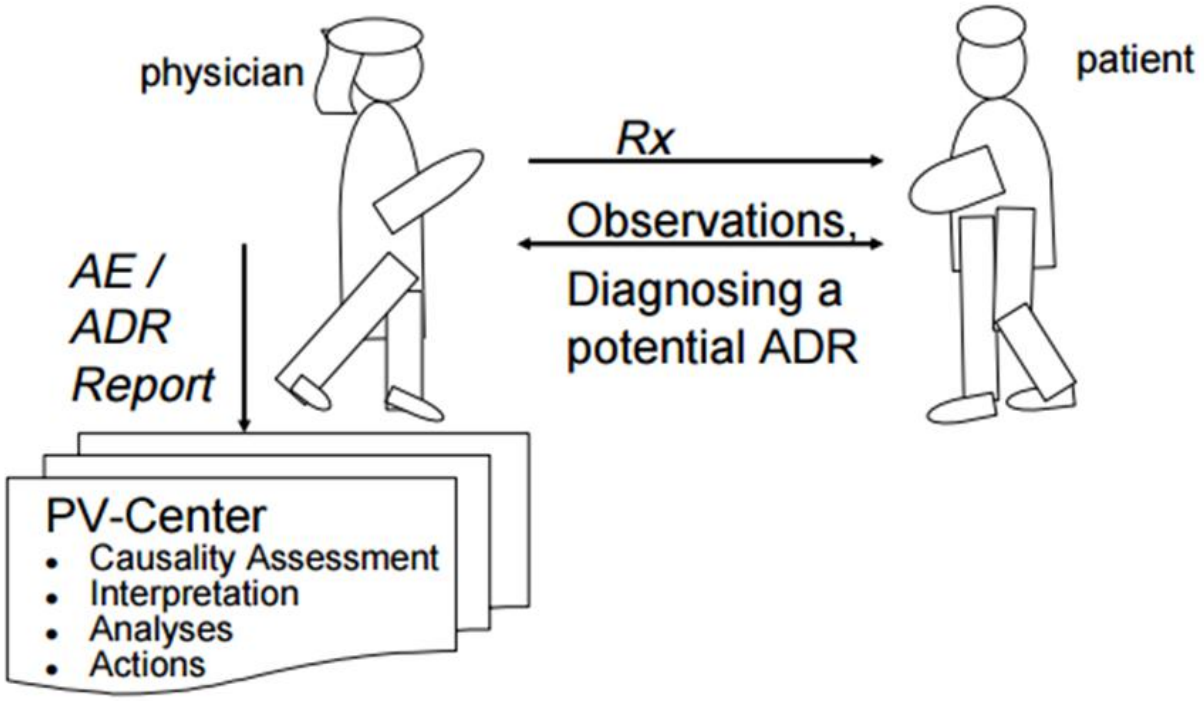
Uppsala Monitoring Centre

- Building a global safety culture

Minimum Information to report an ADR

- Patient information
- Suspected product
- Suspected reaction
- Identifiable reporting source

Basic Model of Pharmacovigilance



Minimum Information to report an ADR

- Patient information
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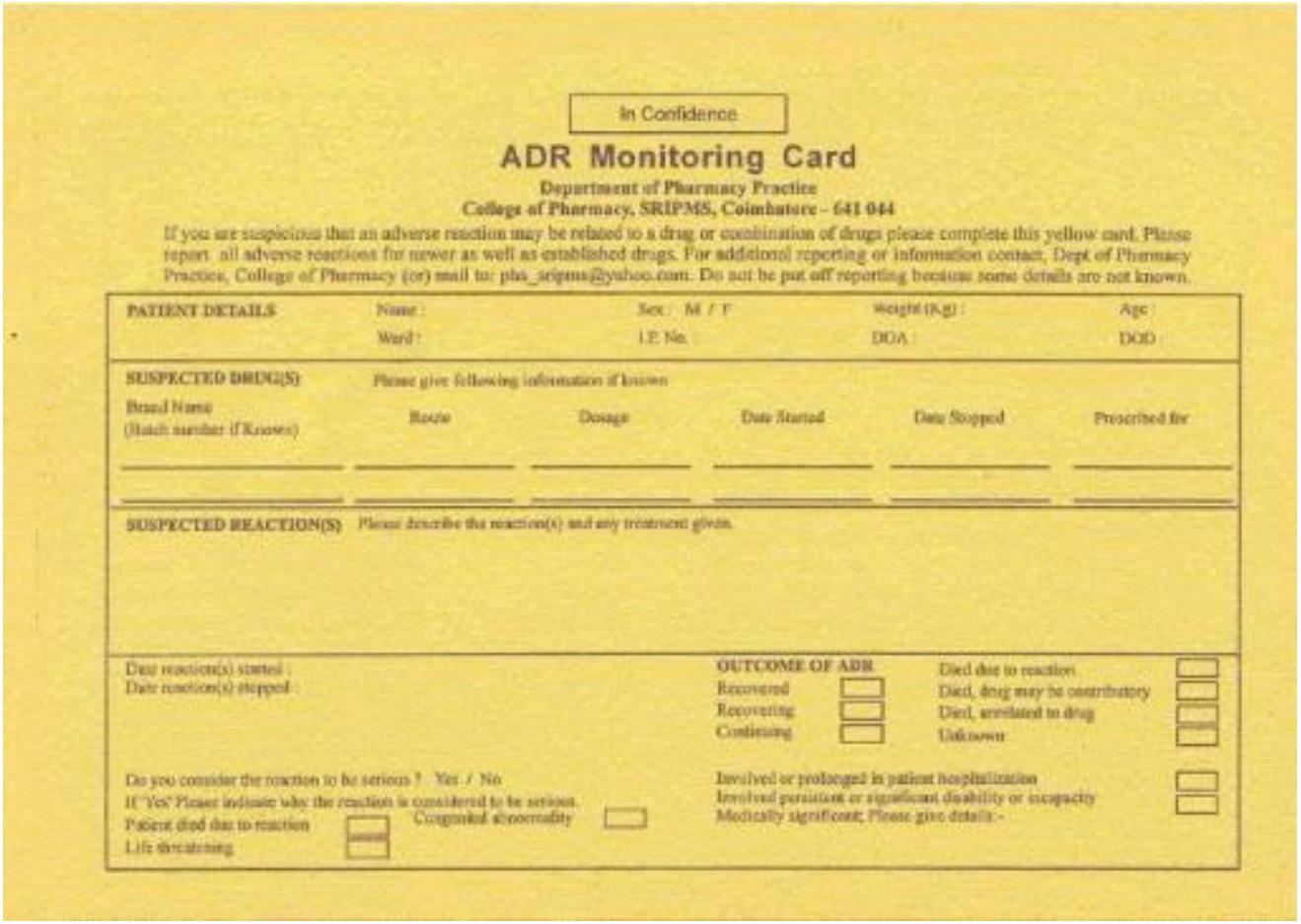
The yellow card



In Confidence

ADR Monitoring Card

Department of Pharmacy Practice
College of Pharmacy, SRIPMS, Coimbatore - 641 044

If you are suspicious that an adverse reaction may be related to a drug or combination of drugs please complete this yellow card. Please report all adverse reactions for newer as well as established drugs. For additional reporting or information contact, Dept of Pharmacy Practice, College of Pharmacy (or) mail to: pha_sripms@yahoo.com. Do not be put off reporting because some details are not known.

PATIENT DETAILS — Name : Sex : M / F Weight (Kg) : Age :
Ward : I.P. No. DOA : DOD :

SUSPECTED DRUG(S) Please give following information if known

Brand Name (Batch number if Known)	Route	Dosage	Date Started	Date Stopped	Prescribed for

SUSPECTED REACTION(S) Please describe the reaction(s) and any treatment given.

Date reaction(s) started :
Date reaction(s) stopped :

OUTCOME OF ADR
Recovered ☐ Died due to reaction ☐
Recovering ☐ Died, drug may be contributory ☐
Continuing ☐ Died, unrelated to drug ☐
Unknown ☐

Do you consider the reaction to be serious ? Yes / No
If 'Yes' Please indicate why the reaction is considered to be serious.
Patient died due to reaction ☐ Congenital abnormality ☐
Life threatening ☐

Involved or prolonged in patient hospitalization ☐
Involved persistent or significant disability or incapacity ☐
Medically significant; Please give details :-

Electronic form for ADR submission:
http://fda.gov.ir/form_show/171

The most important reason for under-reporting of ADRs?

Other reasons?

- Failure to recognize ADR
- ADR already well known
- Uncertain causality
- Patient confidentiality concern
- Fear of legal liability
- Feeling of guilt