### **Definitions**

- Pharmacovigilance
- Adverse event
- Adverse reaction
  - Unexpected adverse reaction
  - Serious adverse reaction
- Side effect
- Signal
- Causality



### **Definitions**

- Organisations involved:
  - WHO World Health Organization
  - CIOMS Council of International Organizations of Medical Sciences
  - ICH International Conference on Harmonisation

## Pharmacovigilance WHO, 2002

 The science and activities relating to the detection, assessment, understanding and prevention of adverse effects or any other drugrelated problem



### Adverse event

 Medical occurrence temporally associated with the use of a medicinal product, but not necessarily causally related



### Adverse reaction

WHO, (1972)

 'A response to a drug which is noxious and unintended, and which occurs at doses normally used in man for the prophylaxis, diagnosis, or therapy of disease, or for the modifications of physiological function'.



### Unexpected adverse reaction

 Not consistent with applicable product information or characteristics of drug.



### Side effect

 Unintended effect occurring at normal dose related to the pharmacological properties

## Signal

- Possible causal relationship adverse event and drug
- Previously unknown or incompletely documented
- More than one report is needed.
  Depending on:
  - Quality of the information
  - Seriousness of the event

# Serious adverse event or reaction

- Any untoward medical occurrence that at any dose;
  - Results in death
  - Life threatening
  - Requires inpatient hospitalization or prolongation of existing hospitalization
  - Results in persistent of significant disability or incapacity

# Frequency of adverse drug reactions (CIOMS)

- Very common
- Common (frequent)
- Uncommon (infrequent)
- Rare
- Very rare

- >= 1/10
- > = 1/100 and < 1/10
- >= 1/1000 and < 1/100
- >= 1/10000 and < 1/1000
- < 1/10000



### 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 (An objective and specific medical disorder or a recognised pharmacological phenomenon)
  - Rechallenge (if necessary)



#### **Probable**

- 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 necessary

### 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 lacking or unclear

## Unlikely

- Event or laboratory test abnormality, with a time to drug that makes a relationship improbable (but not impossible)
- Diseases or other drugs provide plausible explanations

### Conditional / Unclassified

- Event or laboratory test abnormality
- More data for proper assessment needed
- Or additional data under examination



### Unassessable / Unclassifiable

- A report suggesting an adverse reaction
- Cannot be judged because of insufficient or contradictory information
- Report cannot be supplemented or verified

