WHO Programme for International Drug Monitoring, Pharmacovigilance Centres & Patient Safety

Birth of WHO Drug Monitoring Programme

Thalidomide – Phocomelia

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16th World Health Assembly 1963

- Assembly Resolution **16.36 - Clinical and Pharmacological Evaluation of Drugs**

  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.

Pilot project of ten countries

- Australia, Canada, Denmark, Germany, Ireland, Netherlands, New Zealand, Sweden, United Kingdom, USA

23rd World Health Assembly 1970

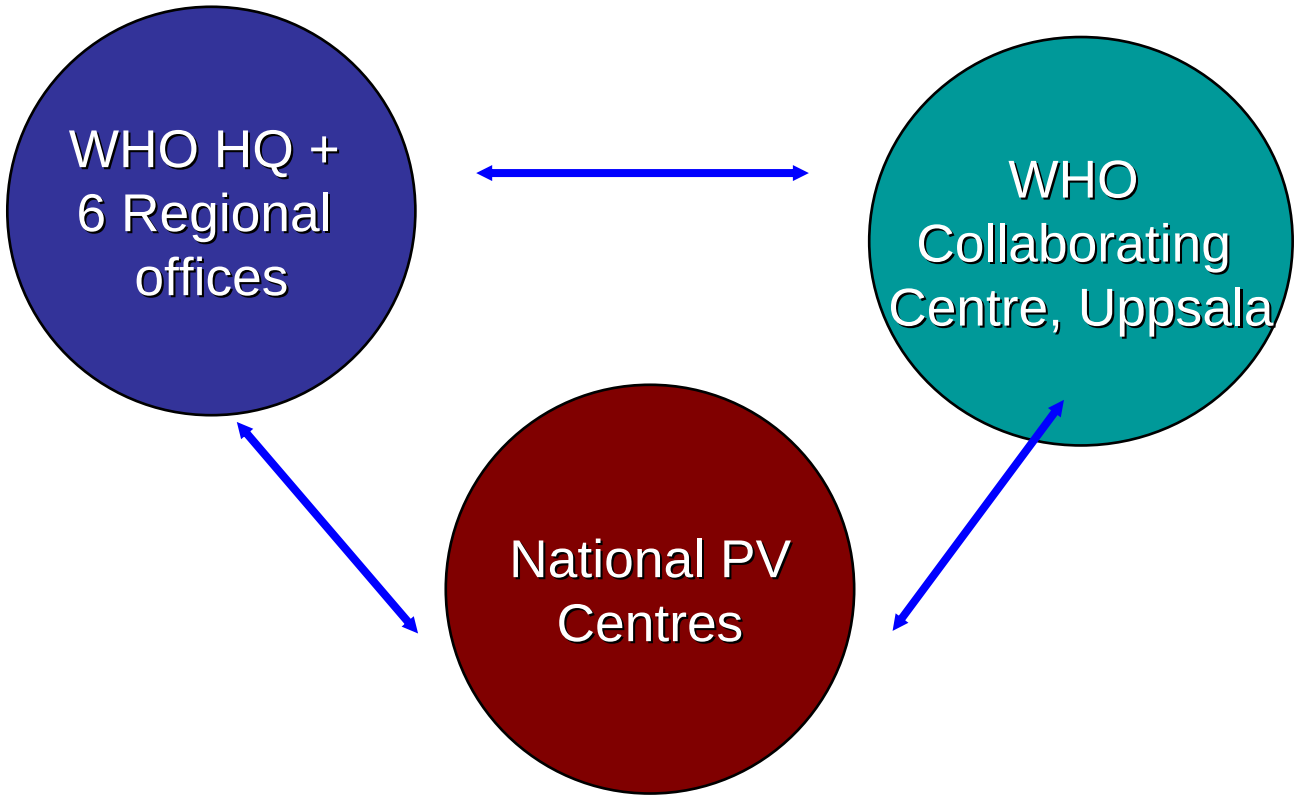
- **WHA23.13 International Monitoring of Adverse Reactions to Drugs**
  - REQUESTS the Director-General to develop the activities of the project into a primary operational phase aimed at the establishment of an international system for monitoring adverse reactions with provision for alerting Member States in cases of urgency, in accordance with resolution WHA16.36, and to report to the World Health Assembly

WHO - Swedish Agreement

- **1978**

Agreement signed that the operational activities of the WHO Programme for International Drug Monitoring should be based in Sweden.

WHO Programme for International Drug Monitoring



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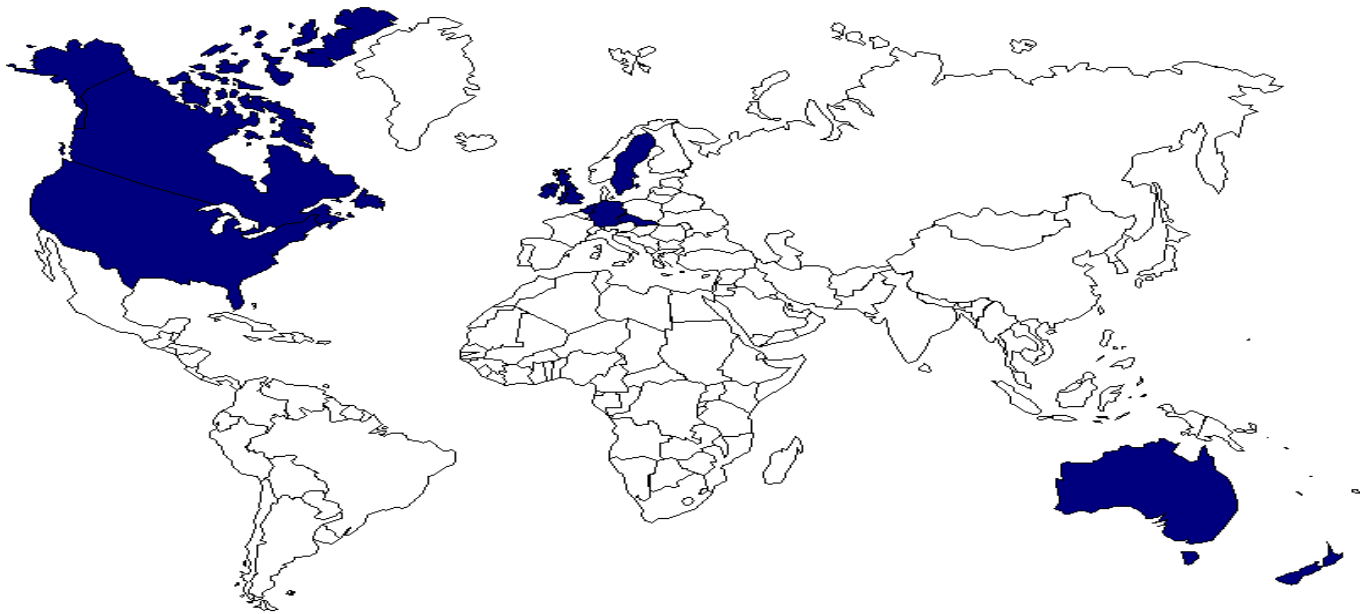
WHO Drug Monitoring Programme

Founding Members 1968



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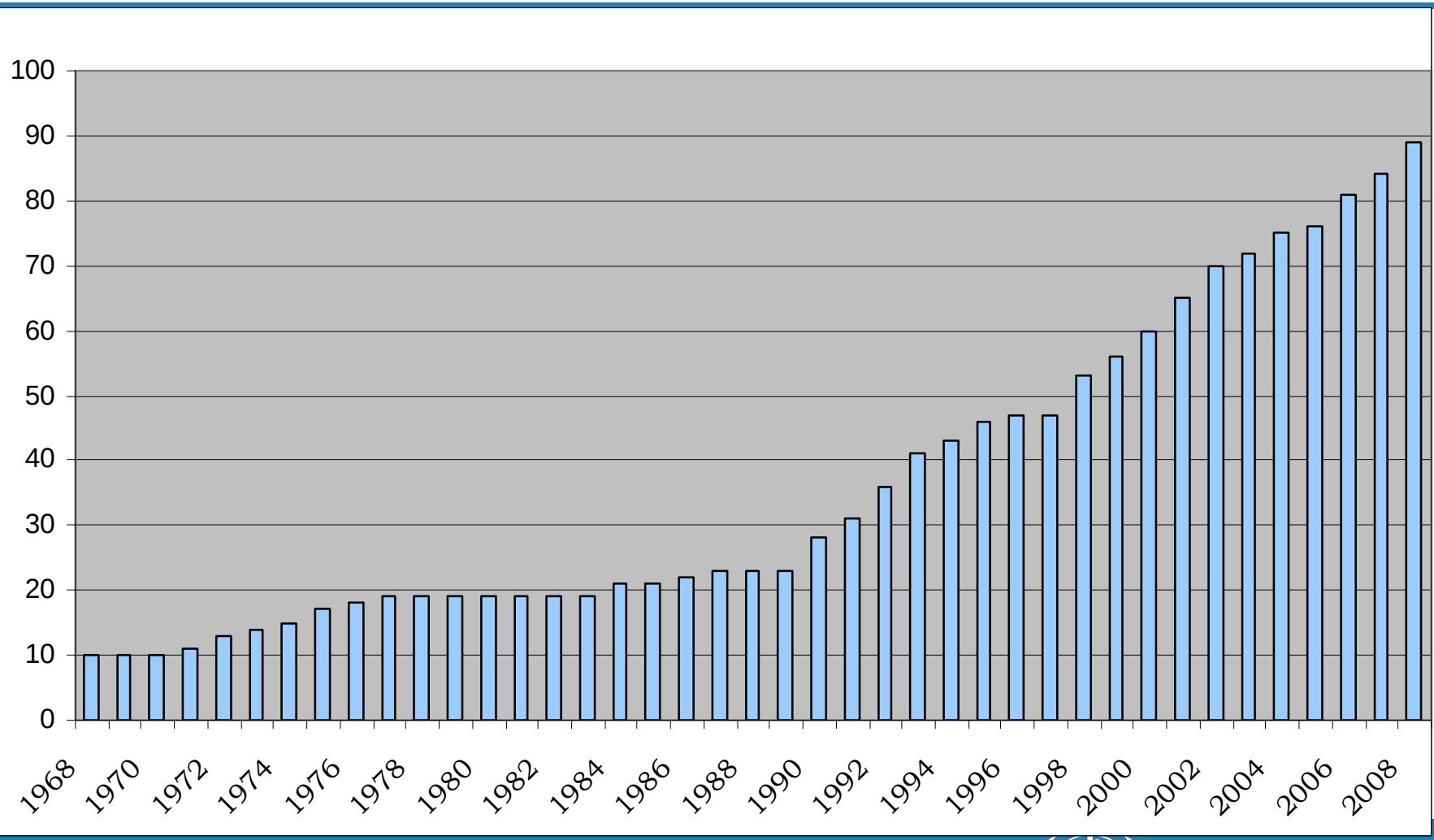
Member countries 1968-2008



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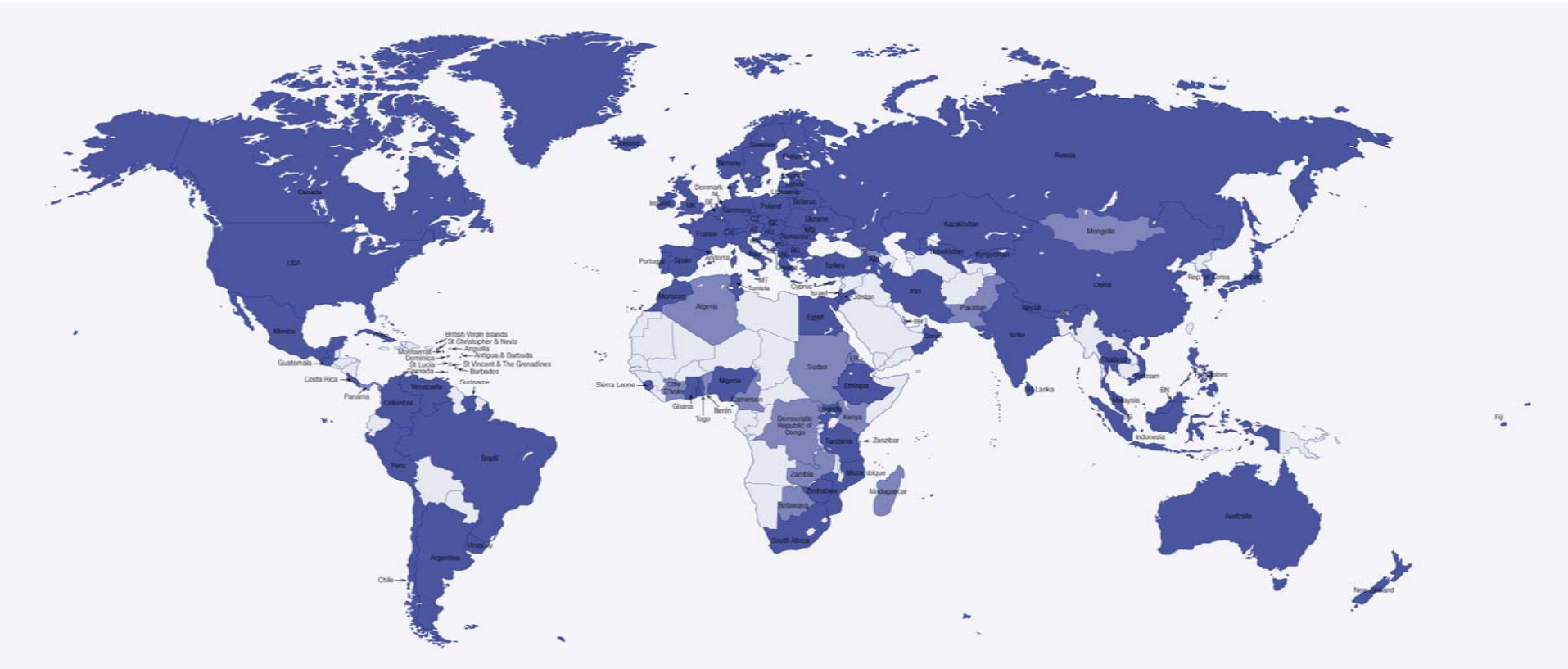
WHO Programme
October 2008



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Pharmacovigilance in WHO HQ

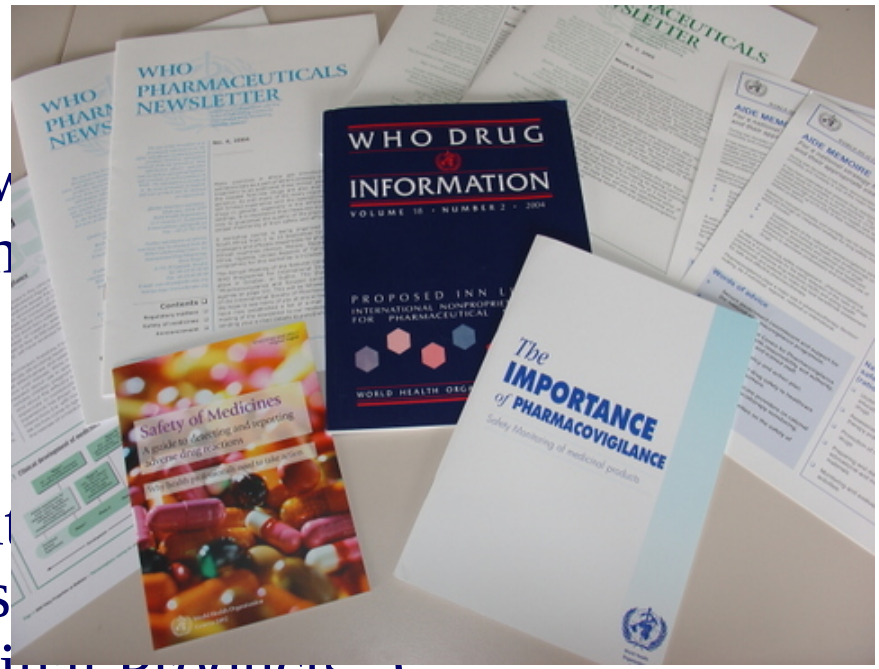
1. Exchange of Information
2. Policies, guidelines, normative activities
3. Country support
4. Collaborations
5. Resource mobilisation

1. Exchange of Information

- National Information Officers, Regional Offices, Regulators network, Electronic exchange groups (PVSF, Vigimed etc), Annual PV centres meeting

- Publications (WHO Pharm Nev
  Drug Alerts, WHO Drug Inforn

- Conferences and expert commit
  of Drug Regulatory Authorities
  Committee on Safety of Medicinal Products..)



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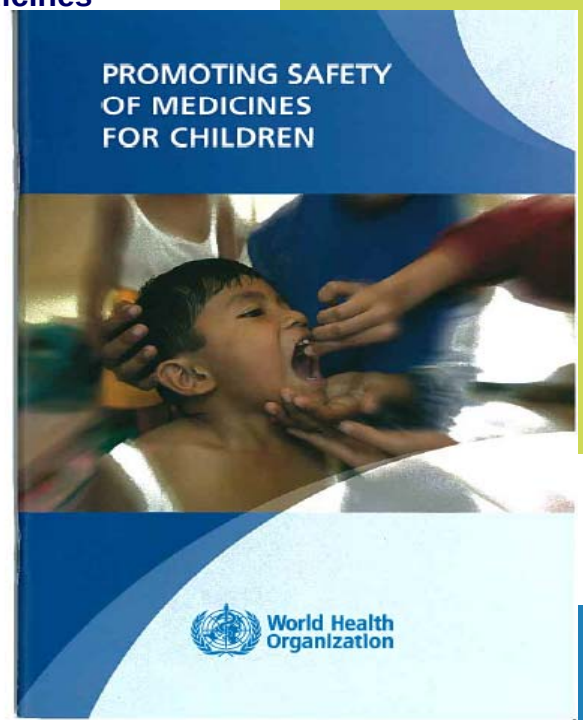
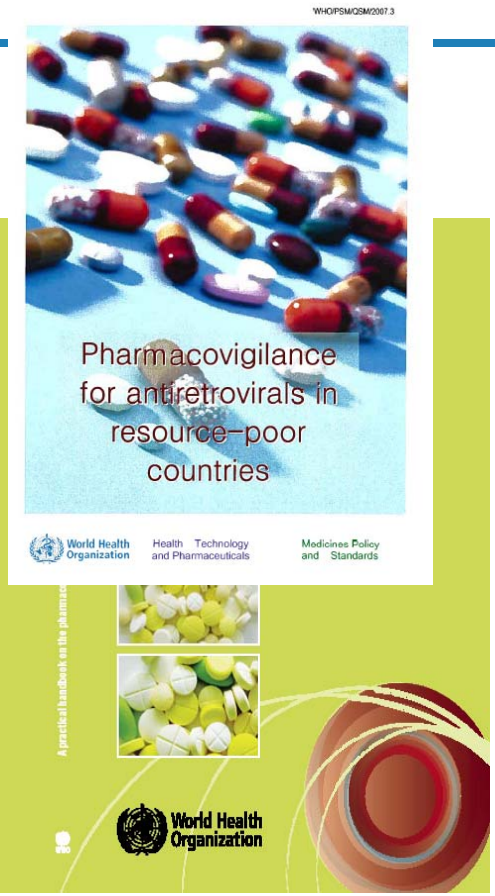
2. Policies, Guidelines and Normative Activities

- **Guidelines**
  - The Importance of Pharmacovigilance (2002)
  - Safety Reporting - A guide to detecting and reporting adverse drug reactions (2002)
  - Policy perspectives on medicines (Pharmacovigilance) 200
  - Safety monitoring of herl (2004)
  - Pharmacovigilance in Pu
  - Advisory Committee for t Medicinal Products (ACS





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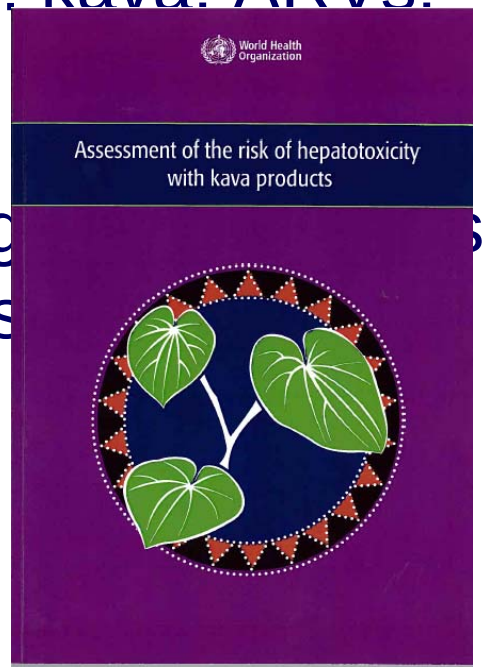
3. Country suppo

10 courses offered in 2008

- Training courses on pharmacovigilanc (Regional Training Courses, biennial course b UMC and HQ)
- Address specific / stated needs: kava, ARVs, antimlalarials….
- Annual Meeting of Pharmacovig s (working groups, break out sess



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4. C… WHO

Almost 110 million people targeted for either diethylcarbamazine citrate (DEC) plus albendazole or ivermectin plus albendazole.

- Malaria
- HIV/AIDS
- Leprosy
- Lymphatic Filariasis
- Patient Safety
- Poisons and Chemicals Safety
- Traditional Medicines
- Vaccines

5. Fundraising

- Gates foundation
- European commission
- Others

WHO Collaborating Centre *the* Uppsala Monitoring Centre

- established as a foundation 1978
- based on agreement Sweden – WHO (1978 and revised 2002)
- international administrative board
- WHO Headquarters responsible for policy
- Staff of about 50

Some facts about the UMC

- It is a *WHO Collaborating Centre* for the WHO PV programme
- Self financing
- 'Products' arm gener
- No profits: foundatior
- Where does the mon

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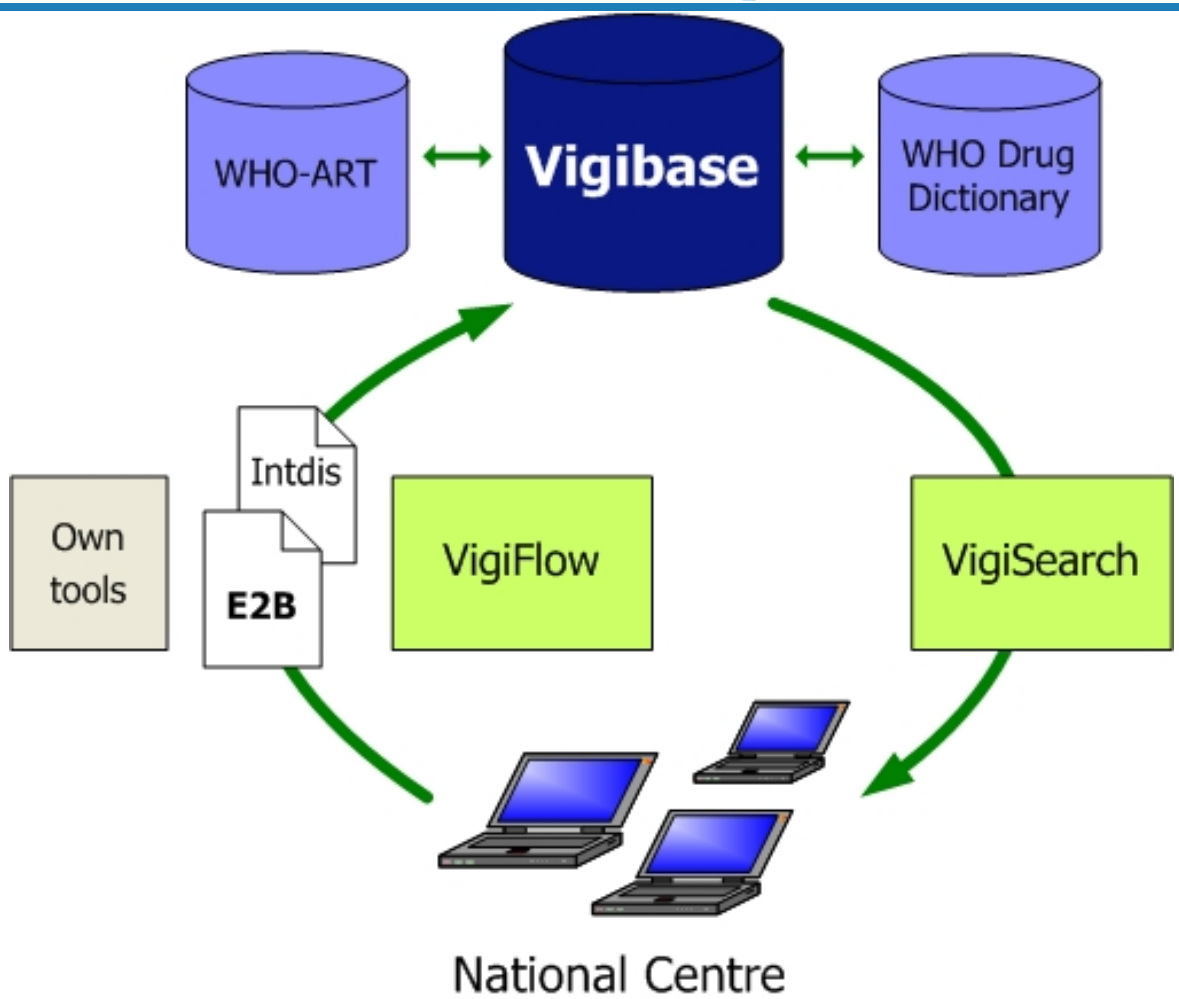
Functions

- Receive and manage ADR data
- Develop tools; innovate
- Analyse:
  - Signal detection :Identification of previously unknown drug reactions
- Communicate
- Support countries: train; search; technical assistance

Flow of ADR reports



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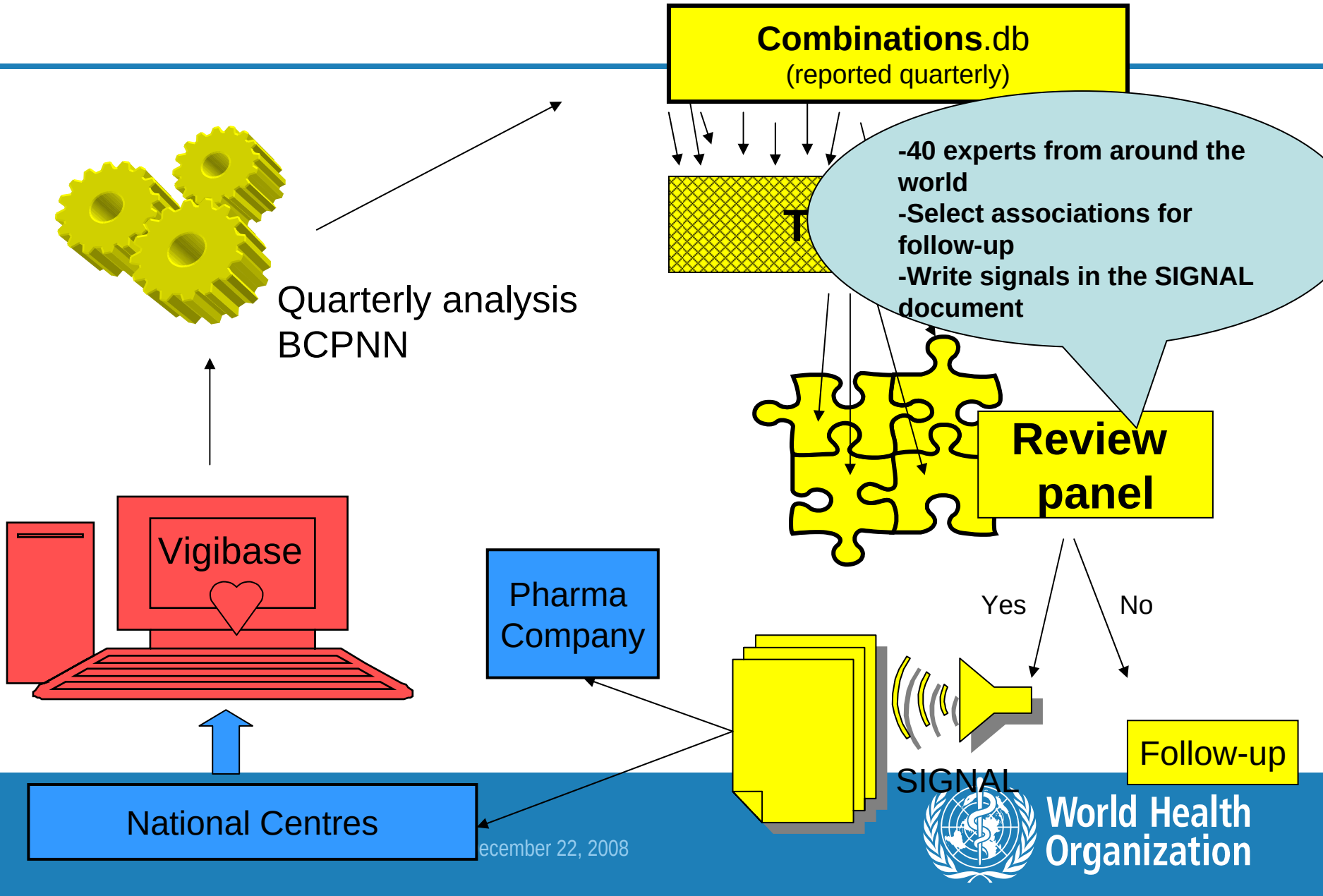
Signal Detection & Follow-up



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UMC Functions
- a communication centre

- Internet home page

  http://www.who-umc.org

- Vigimed e-mail discussion group

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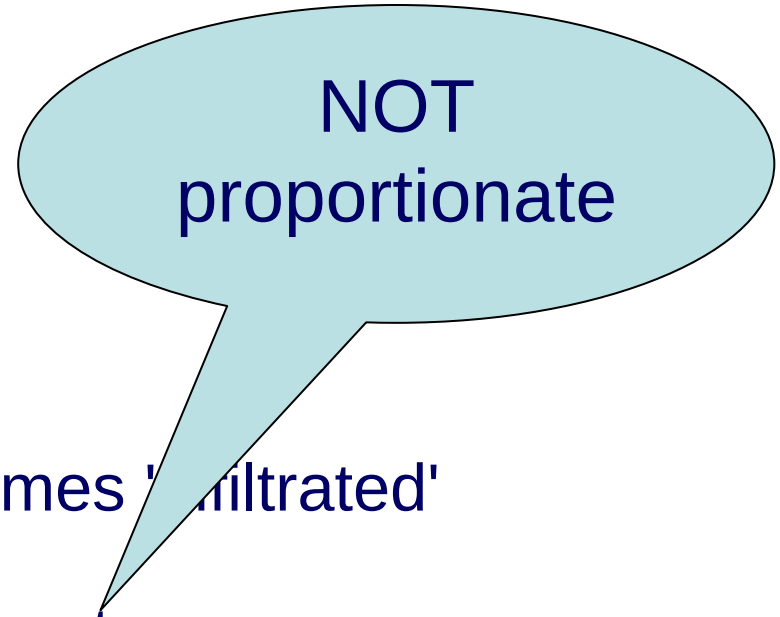
Achievements

- 89 Member countries
- 4 million+ case reports
- Disease driven approach
- Some Public Health programmes 'infiltrated'
- Growing recognition and support



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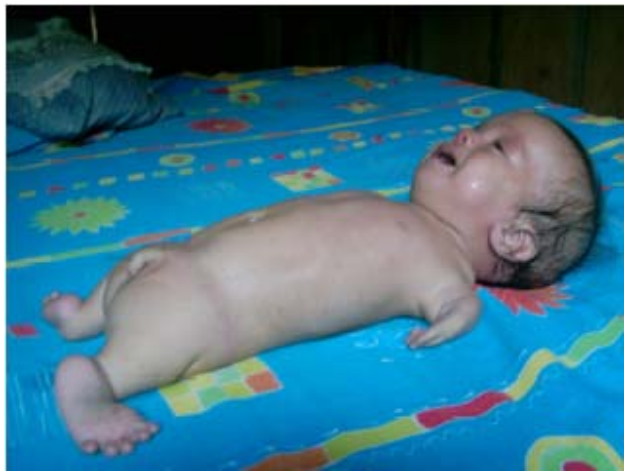
At least 2 reasons why we need to re-think our strategy

Reason 1

Preventable harms still occurring



2007

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Half of all ADRs are avoidable

Journal of Clinical Pharmacy and Therapeutics (2006) **31**, 335–341

ORIGINAL ARTICLE

Adverse drug reactions in hospital in-patients: a pilot study

E. C. Davies*‡ MPharm MRPharmS, C. F. Green† BSc Hons PgDipClinPharm PhD MRPharmS, D. R. Mottram‡ BPharm PhD, FRPharmS and M. Pirmohamed*§ MBChB PhD FRCP

- 125 Patients
- 24 Patients experienced ADRs (19%)

59% of ADRs were avoidable

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Reason 2

- WHO Programme for International Drug Monitoring started late 60s – early 70s
- About 40 years later: less than 100 'full' members
- 4 million reports
- Most reports from developed countries. Why is that?

Why is Pharmacovigilance not getting the attention it deserves

Traditional trends

- Adverse ***drug*** reaction
- Adverse ***drug*** event
- ***Medicine*** safety
- ***Medicine*** toxicity
- Benefit /harm profile of a medicine
- Product emphatic

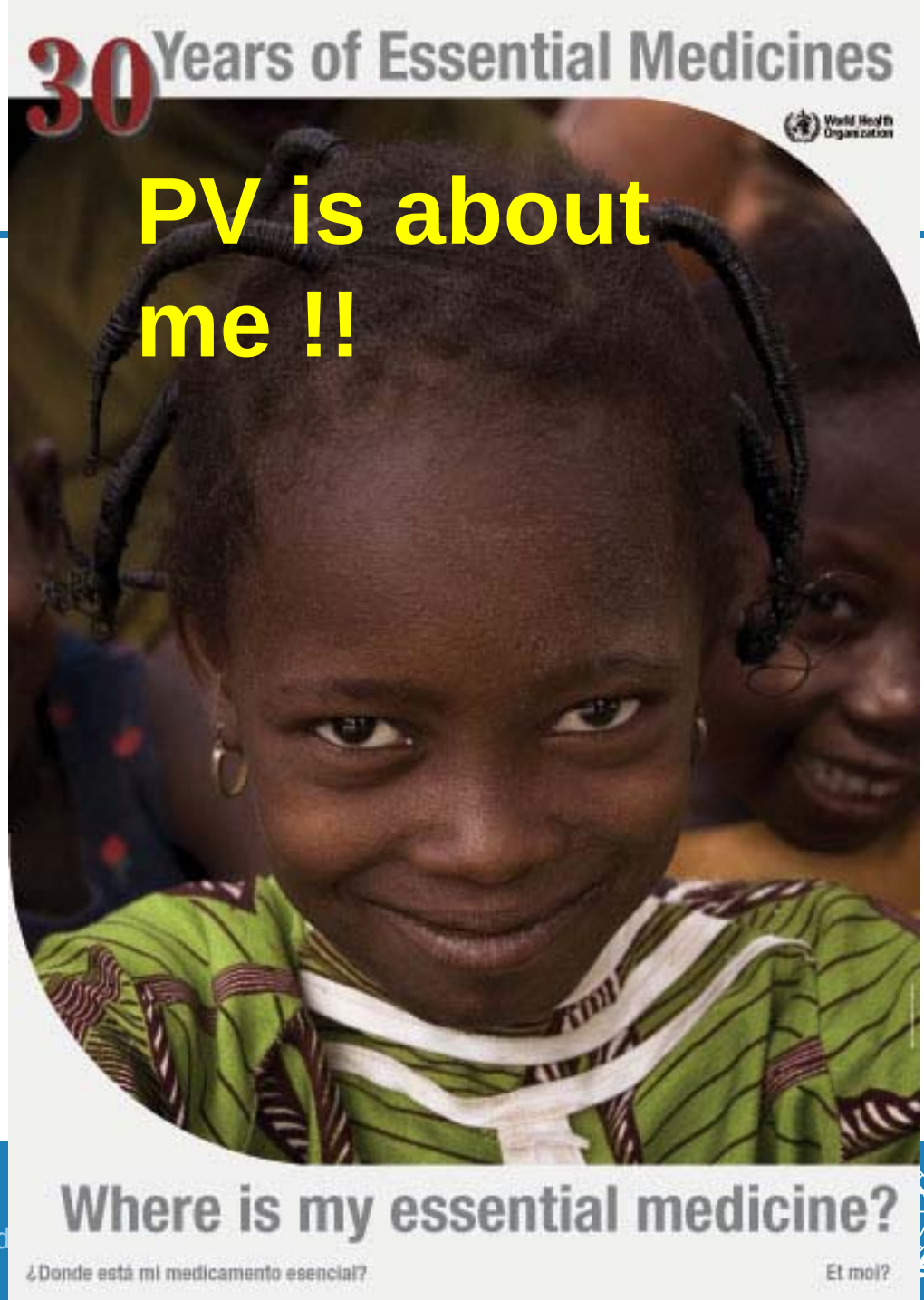
Where is the patient?

Need to humanize what we do

- Let's give pharmacovigilance a 'face'
- Let's talk about patient safety, not *just* medicine safety
- Ask the right question
- Instead of asking 'Is the medicine safe'
- Need to ask:

Is the patient safe taking this medicine?

Am I SAFE with this medicine?



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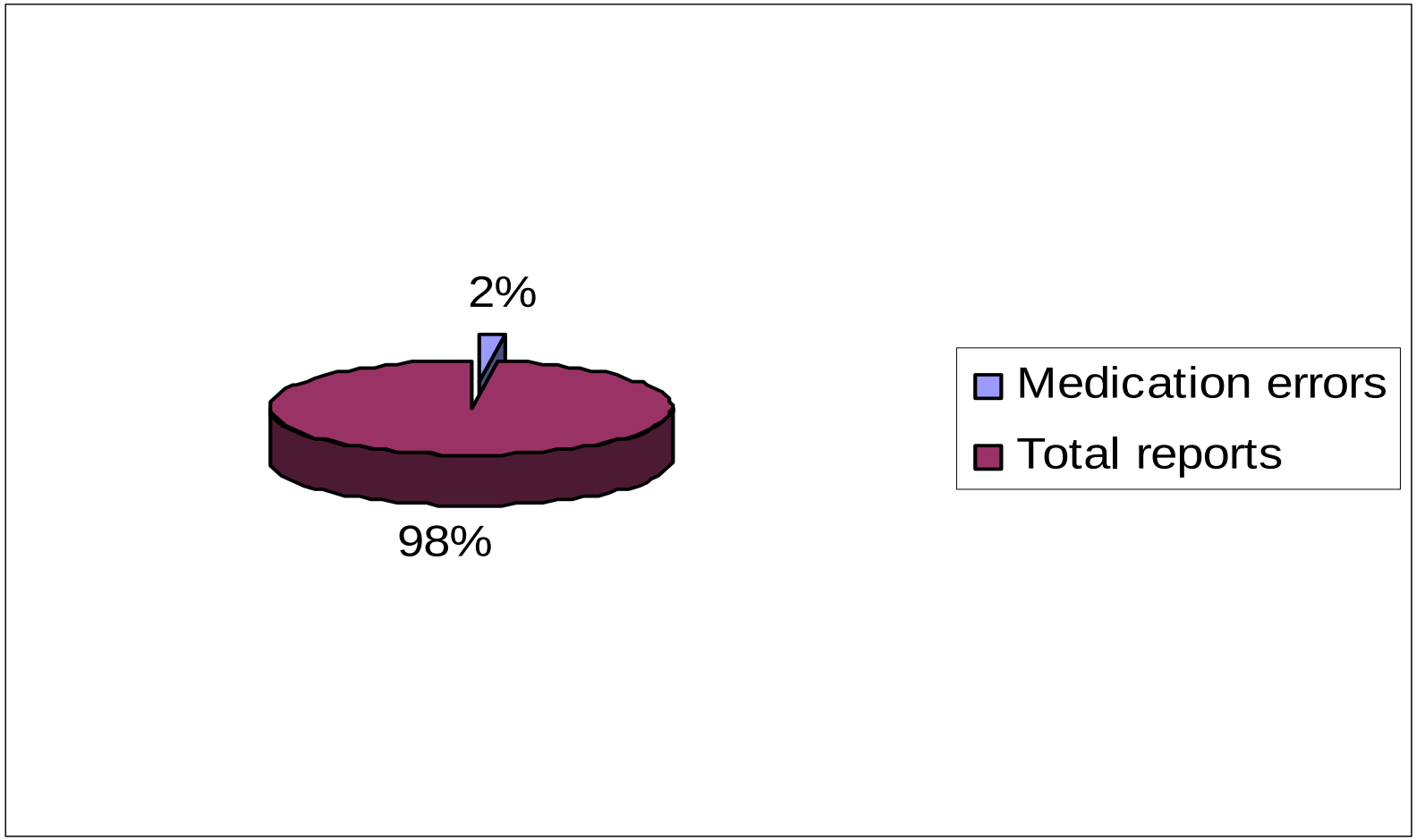
Question

Can Pharmacovigilance centres become more patient centred ?

Reports of medication errors in WHO ICSR database in 2005



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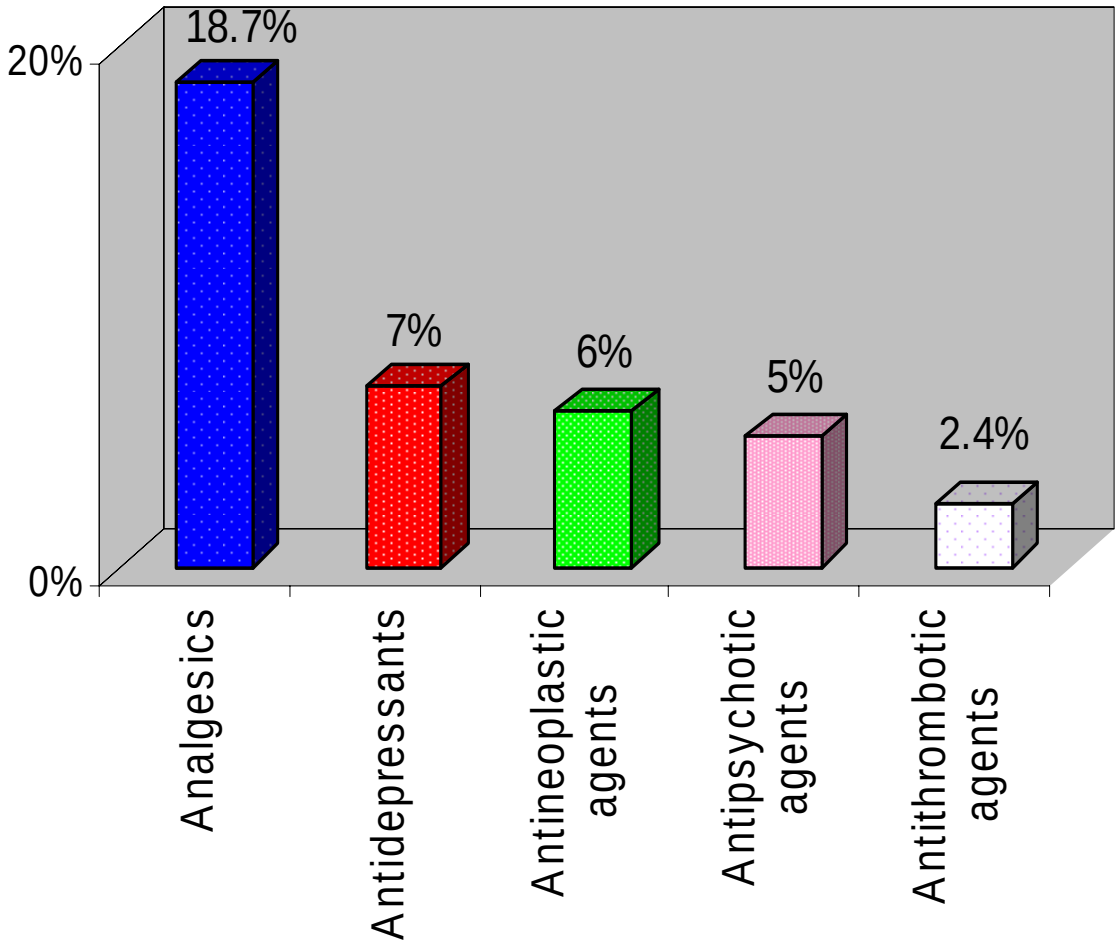
Reports of medication errors by therapeutic groups in WHO database



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Need a system that

- Records errors
- Analyses
- Learns
- Implements checks
- Prevents errors

Pharmacovigilance system

- Records medication related errors
- Analyses those errors
- Implements interventions
- Promotes patient safety

Actionable learning system

WHO Patient Safety- Pharmacovigilance alliance

- World Alliance for Patient Safety
- To build on medication related expertise of the WHO-PV programme
- Reporting and learning systems
- Collaborative project for the development of pharmacovigilance centres for patient safety
- Partners: WHO-PV, WAPS, UMC, Moroccan centre for poison control and pharmacovigilance

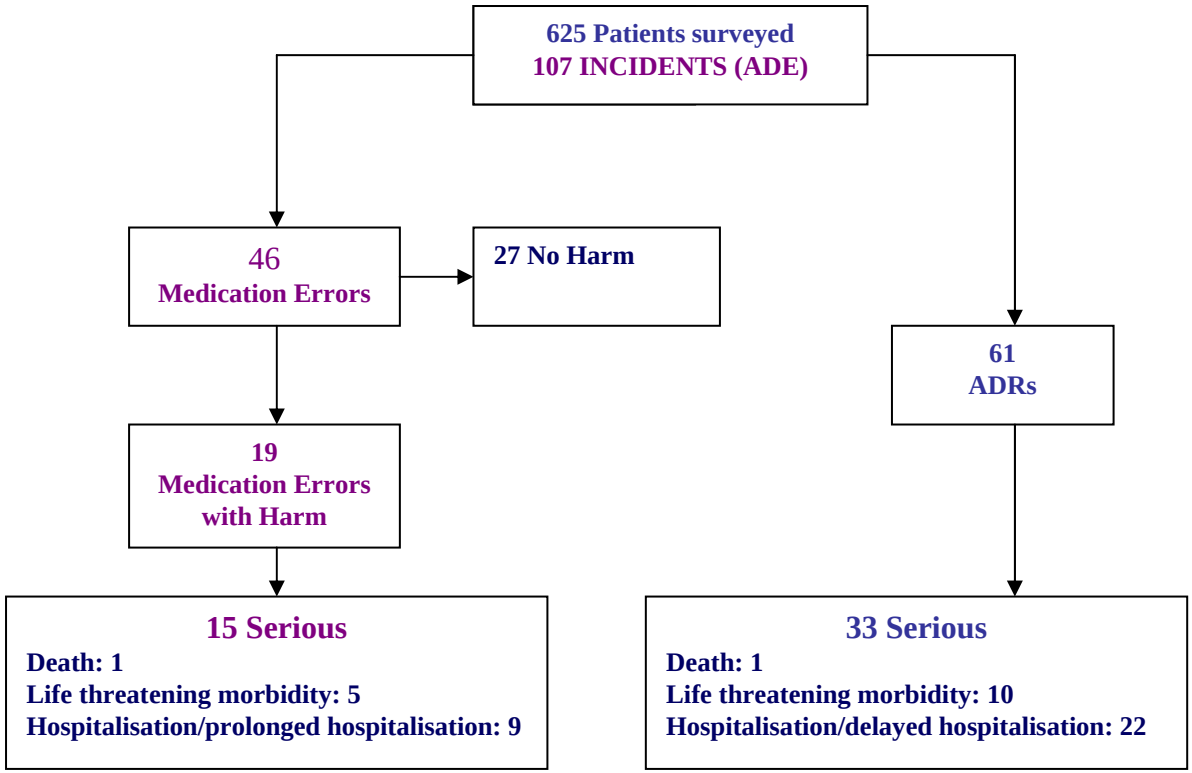
2 Parts: Part 1
At country level

Moroccan centre pilot project:

- A retrospective analysis of spontaneous reports in Moroccan PVC database (2003 – 2006)
- MEs identified (14.4 % of ADEs)
- Some ME characteristics identified
  - stage of ME
  - type of ME
- Medicines involved
- BUT not sufficient information in 'yellow card' for Root Cause Analysis

Part 1 continued

- Moroccan Centre prospective study
- 8 ICU Wards
- 'New' yellow card filled in when ADE identified
- ME form filled-in for each ME detected



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Root cause analysis

Steps	Objective	Resources
Step 1	Description of event (Type, time, consequences….)	Interviewing staff
Step 2	Identification of the proximal cause	Interview, case review
Step 3 Step 4	Contributing factors (communication, training, fatigue, equipment) Implementing an action plan	Interview

Part 1: conclusions

- **Patient safety clearly identified as an existing part of PVC functions**
- **Develop a plan on how to optimize data capture (for MEs and RCA)**
  - **Eg what additional elements in reporting form?**
  - **All reports to have additional info or only those of MEs?**
  - **Only for some medicines?**
- **Test 'plan' in additional PV centres**
- **RCA of optimal information; interventions; measure impact of interventions**

Pilot Project: part 2 (WHO CC as lead investigator)

- Analysed
  - data in WHO ICSR database (Vigibase) for ME
- Pointers for ME
  - Recognition of potential for drug interactions (< 0.5%)
    - are co-reported drugs 'established interactors' ?;
    - nature of ARTs (therapeutic level decreased / increased):
  - Drugs most frequently involved in interactions (anticonvulsants, anticoagulants)
  - Prescription of drugs in patients with known contraindications
    - eg beta-blockers in bronchospasm
- Pointers of impact of information
  - Not respecting 'letters'
    - Eg insulin and rosigliatzone concurent therapy (US FDA warning 2004)
    - 402 reports of the pair in Vigibase, received after warning

Conclusions of Pilot

- Vigibase already contains v. useful information to identify and prevent ME
- Institute an agreed way of identifying more efficiently patient safety reports prospectively
- Improve terminologies.
  - Additional included terms for broader / better search
    - 'Medication error': preferred term
    - Accidental overdose, accidental needle stick: included terms
- Longitudinal data sets (prescription records) may be useful complements to spontaneous reporting systems in identifying MEs
- More effort (education?) needed to communicate patient safety findings

Recommendations from Working Group at National PV centres meeting, 2008 on developing the role of National Monitoring Centres in addressing Medication Errors

PV programs may be well-placed to react to medication errors and highlight high-risk medicines

The current reporting system should be enhanced to capture medication errors

Guidance for follow up: What should the National Centre do when they receive a report?

Definitions: need to reflect consideration of safety of medication use rather than just medicine safety.

Networking: National Monitoring Centres are unlikely to succeed at this work in the absence of a network.

International Collaboration with data sharing and consequential development of guidance for National Monitoring Centres in relation to medication errors

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