

Health Products and Food Branch

Your Health and Safety - Our Priority

Marketed Health Products Directorate



Adverse Drug Reaction Reporting and Signal Detection in Canada

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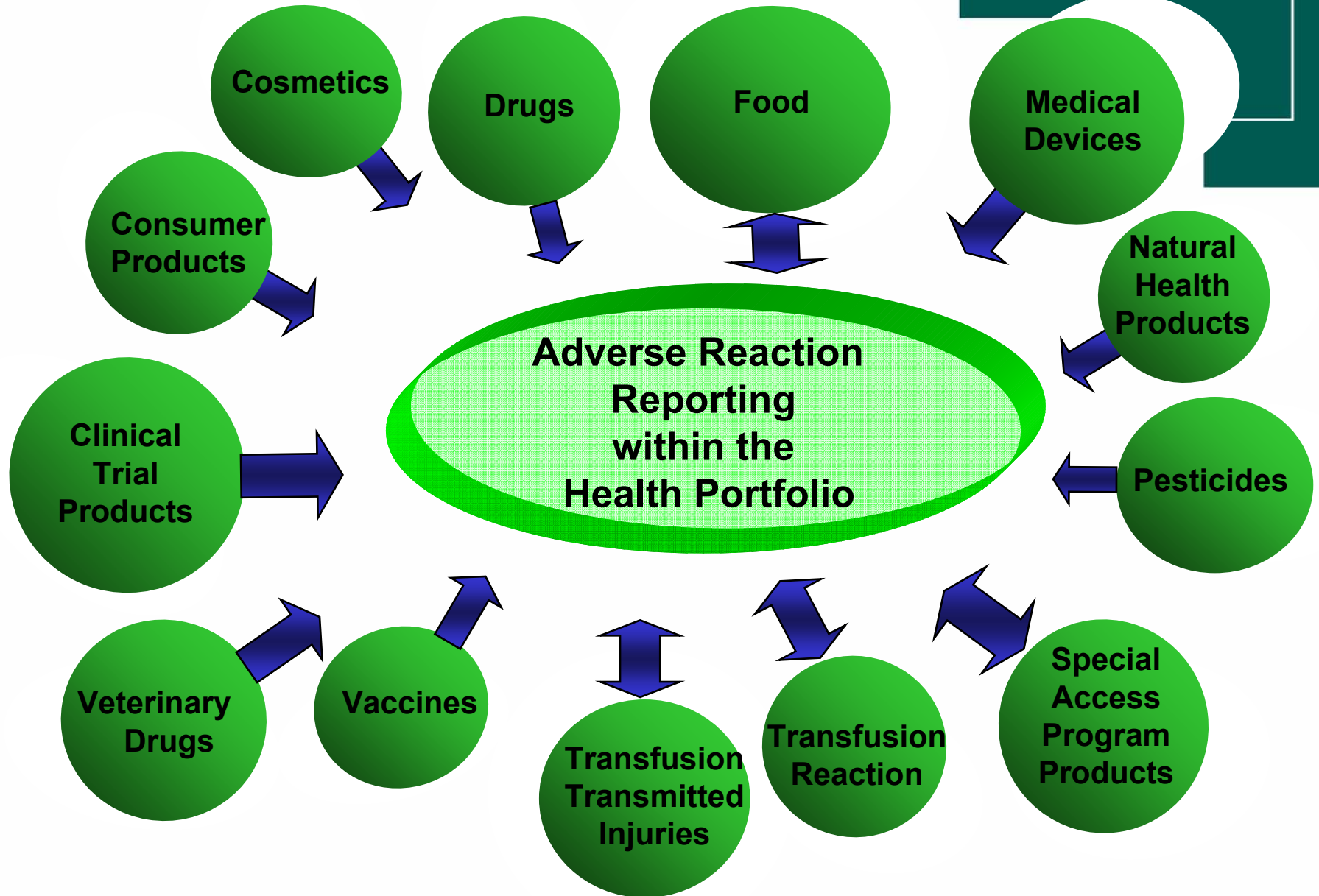
Health
Canada

Santé
Canada

Canada

Adverse Reaction (AR) Reporting Health Products and Food Branch

- Adverse Drug Reaction Reporting
- Clinical Trial AR Reporting
- Food AR Reporting
- Medical Devices Problem Reporting
- Natural Health Products AR Reporting
- Special Access Program AR Reporting
- Veterinary Drugs Pharmacovigilance Program



Canadian Adverse Drug Reaction Monitoring Program (CADRMP)

- Existed since 1965
- Spontaneous Adverse Reaction Reporting Program
- Voluntary reporting for Health Professionals and Consumers
- Mandatory reporting for Market Authorization Holders (i.e. manufacturers)
- Legislative Framework (e.g. *Food and Drugs Act and Regulations* (C.01.016), Access to Information and Privacy Act etc.)

Canadian Adverse Drug Reaction Monitoring Program

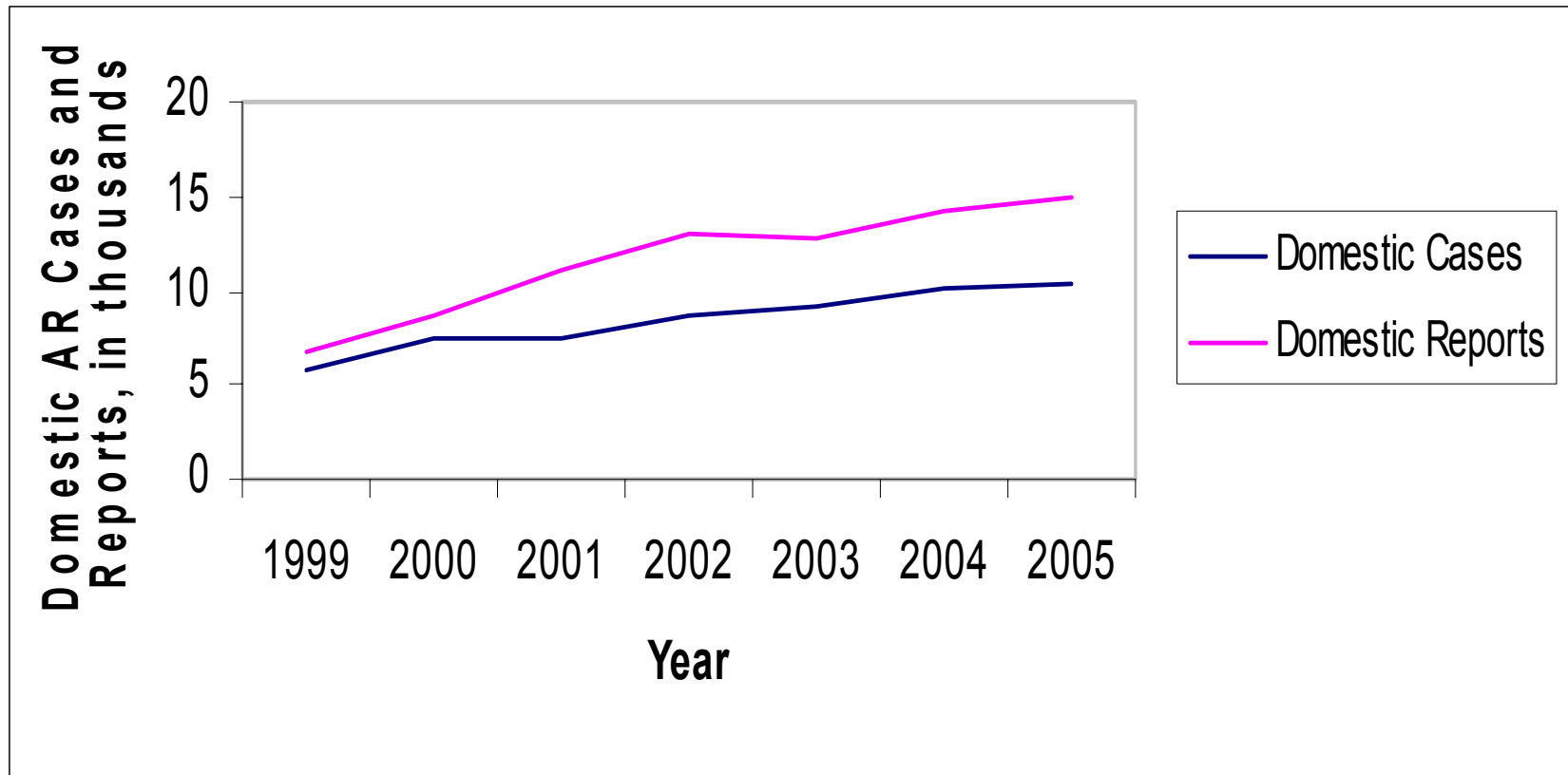
- For the assessment that the benefits of health products distributed in Canada continue to outweigh the risks
- Detection or new adverse reaction (51% of approved drugs have serious side effects not detected before marketing approval)

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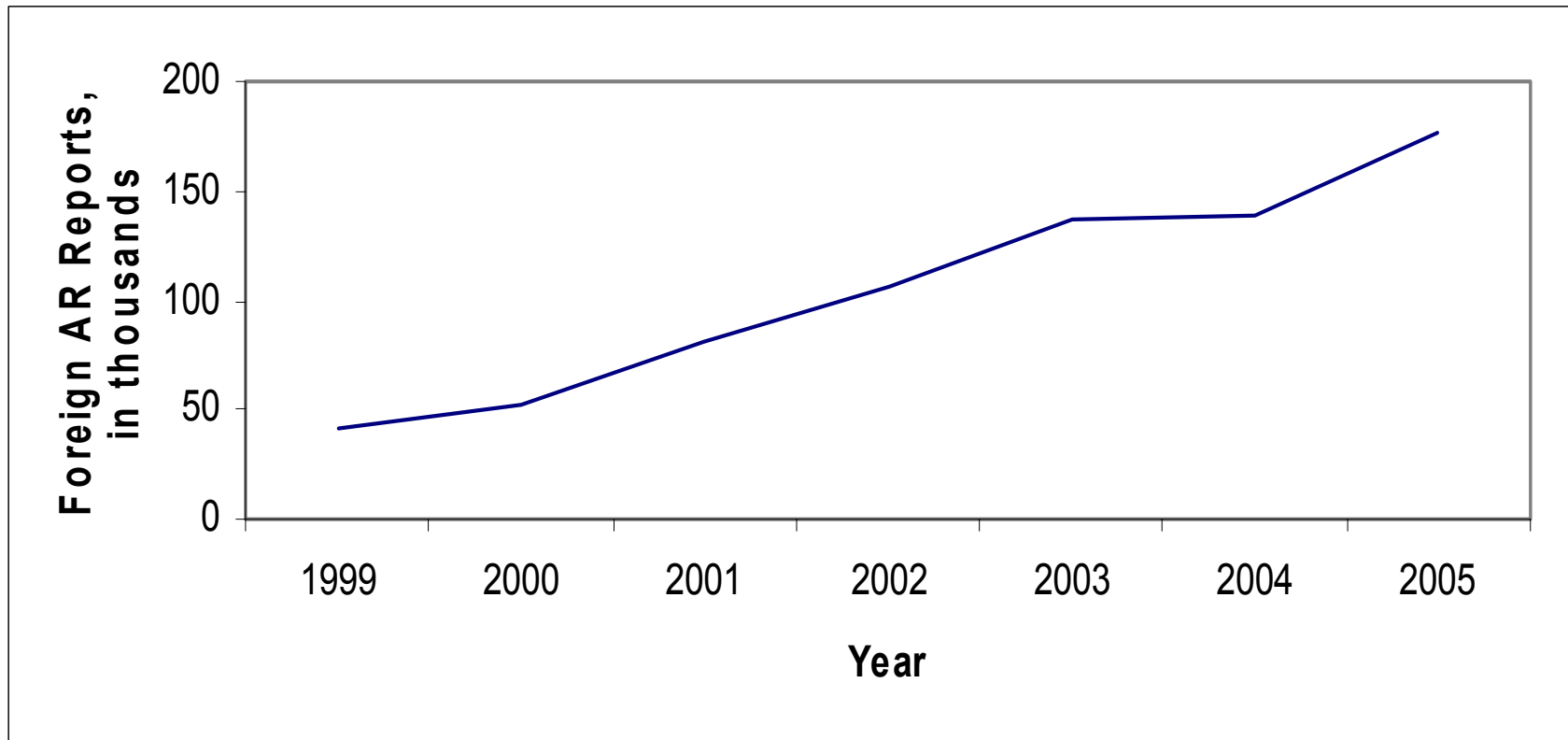
Collects adverse reaction reports for the following marketed health products approved for use in humans:

- pharmaceutical drugs (prescription and non-prescription)
- biologics (Schedule D, biotechnology products, therapeutic and diagnostic vaccines and fractionated blood products)
- radiopharmaceuticals drugs
- natural health products

Marketed Health Products Directorate Domestic Reports/Cases



Marketed Health Products Directorate Foreign Reports



Mandatory Reporting Market Authorization Holders (MAH)

- MAHs are responsible as per the *Food and Drug Regulations* for the reporting of ARs to Health Canada
- AR reports submitted by MAHs are collected by the MHPD located in Ottawa
- AR reports submitted voluntarily by health professionals and consumers are collected by 7 Regional AR Offices
- Domestic AR report information is entered into the Canadian Adverse Drug Reaction Information System (CADRIS)

Domestic Adverse Reaction Reports

- Reports concerning reactions occurring in Canada to a product that is marketed in Canada
- Market Authorization Holder reporting within 15 calendar days of receiving the information (expedited reporting)
- Serious Adverse Reactions
- Unusual failure in efficacy reports for new drugs

Foreign Adverse Reaction Reports

- Reports concerning reactions occurring outside Canada to a product in which at least one active ingredient is marketed in Canada
- Market Authorization Holder reporting within 15 calendar days of receiving the information (expedited reporting)
- Serious Unexpected Adverse Reactions

Annual Summary Report

- Conducted on an annual basis
- Maintained on site and available when requested

Number of Adverse Reaction Cases Received by Type of Reporter

<u>Reporter</u>	<u>2004</u>	<u>2005</u>
Pharmacist	3011 (29.4%)	2592 (24.9%)
Physician	2667 (26.2%)	2970 (28.5%)
Health Professional	1499 (14.6%)	1267 (12.2%)
Consumer/patient	1928 (18.8%)	2304 (22.1%)
Nurse	873 (8.5%)	926 (8.9%)
Other	260 (2.5%)	351 (3.4%)
<u>Total:</u>	10238	10410

Regional Adverse Reaction Monitoring Offices

- Collection of reports, review for completeness, follow-up with reporters
- Provide acknowledgement letters to the reporters
- Increase health professional and consumer awareness of CADRMP
- Provide guidance, in order to maximize the quality of reports
- Direct Canadians to Health Canada sources of new safety information

How to report?

- Adverse reaction reporting form
- Available Regional/National Offices, MedEffect website, CPS
- Submit by fax or mail
- On-Line submission
- Toll Free Telephone and Fax
- Verbal reports accepted

International Harmonization

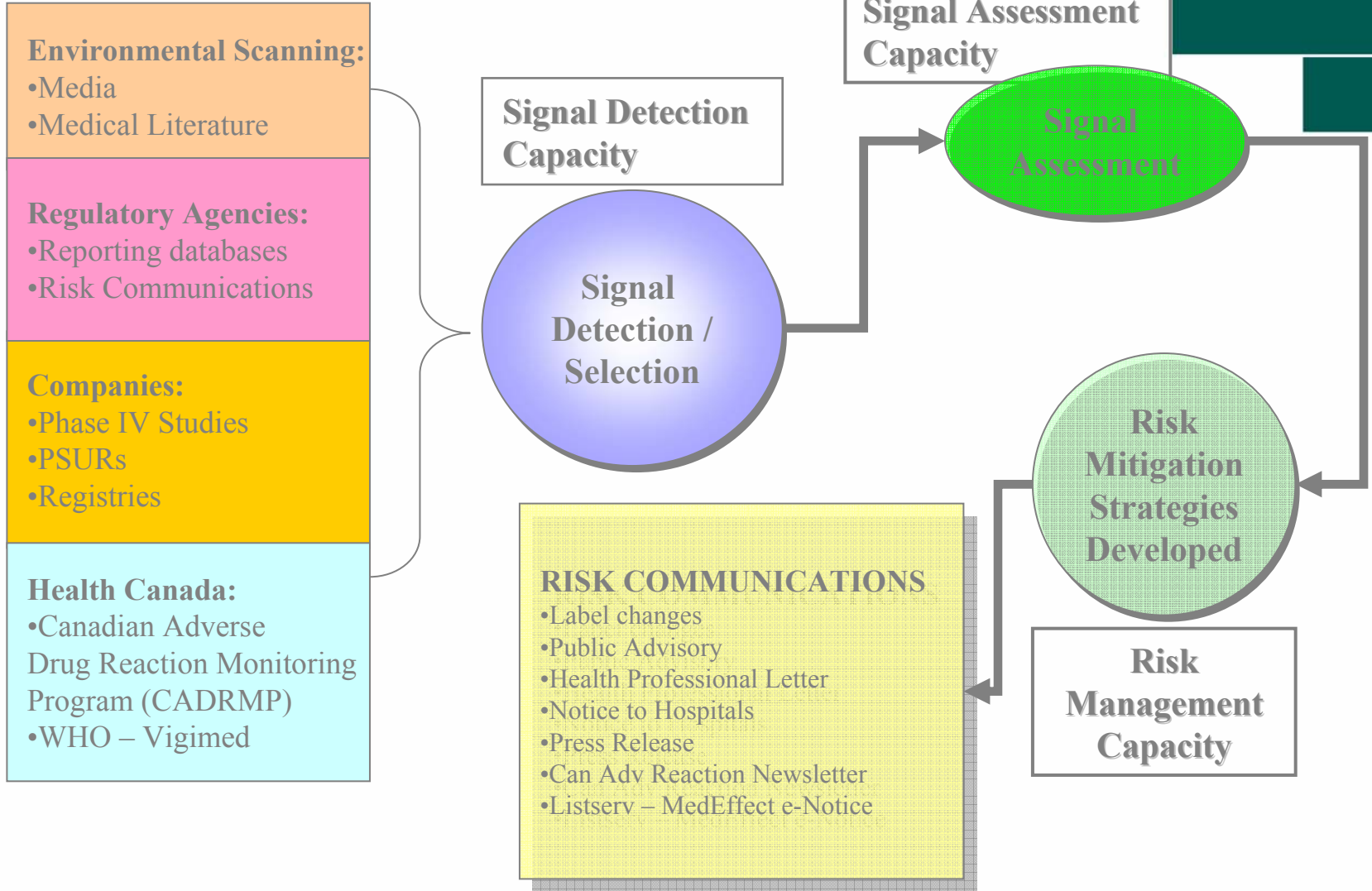
- WHO International Drug Monitoring Program
- ICH (International Conference on Harmonization)
- CIOMS (Council for International Organizations of Medical Sciences)
- ICH Standards (e.g. MedDRA, E2B data fields etc.)
- International Sharing of data between Regulatory Agencies requires consistency of data coding and assessment

Purpose of Adverse Reaction Reporting Program

- Detection, prioritization, confirmation and risk management of safety signals.
- SIGNAL – reported information on a possible causal relationship between an adverse event and a health product the relationship being unknown or incompletely documented previously

Integrating Multiple Sources

Monitoring Inputs



How Difficult is it to Identify Signals?

- Reports vary widely in quality, accuracy, and completeness
- AR's are observations and suspicions
- Population exposure data often unavailable
- AR may resemble progression of disease
- Unlikely that true background rates are known
- AR may be result of non-compliance of patient, or medication error, or other system factors
- Other factors may influence AR Reporting (e.g. marketing, media, litigation etc.)

Adverse Reaction Data

- Each report represents the suspicion, opinion or observation of the individual reporter
- Cause and effect relationships have not been established in the vast majority of reports submitted
- Only a small proportion of suspected adverse reactions are reported to the program, consequently this information must not be used to estimate the incidence of adverse reactions

Causality

- AR Reports are only suspected associations
- Causality is implied with a post-market system of reporting ARs, the reporting practitioner/consumer suspects the event is related to the administration of the product
- WHO Algorithm (certain, probable/likely, possible, unlikely, unassessible)
- Other Sources of Evidence – international, registries, post-market studies etc.

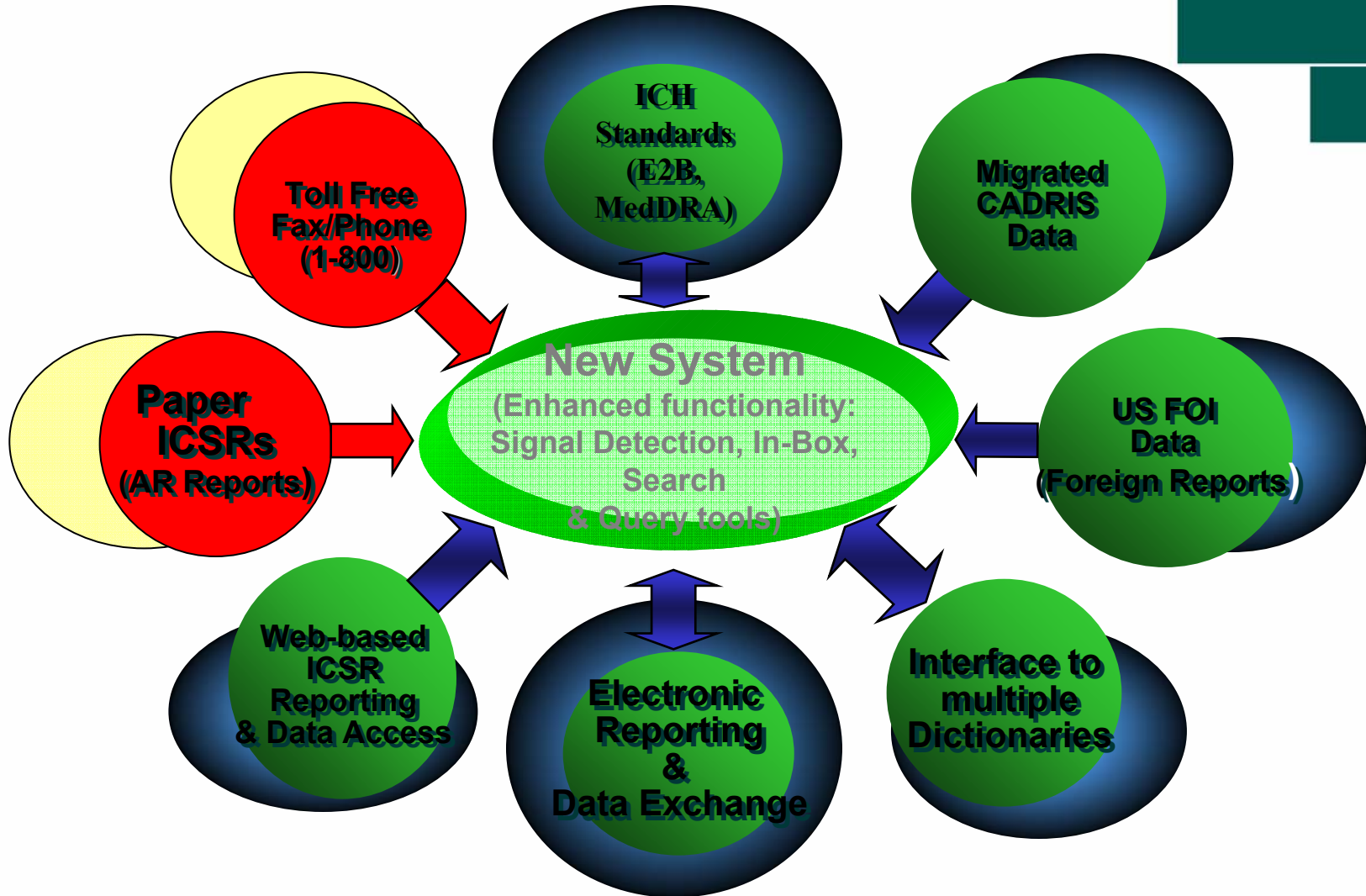
Current Activities

- CADRMP On-line Query and Data Extracts
 - AR information may be searched online
 - AR information is also provided in standard test files for importation into existing databases or information systems
 - Updated quarterly
- Canadian Adverse Reaction Newsletter
 - Quarterly publication

Current Activities (cont'd)

- MedEffect
 - Website portal providing information to latest advisories, warnings and recalls, as well as links to advertise adverse reaction reporting forms, guidance documents, and fact sheets
 - URL: <http://www.medeffect.com>
- Request for Proposal for AR Reporting System
 - Posted February 2006
 - Contract signed Oct 2006

Adverse Reaction Information System



Thank you!