



Update from the Office of Surveillance and Epidemiology

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No conflicts of interest to disclose

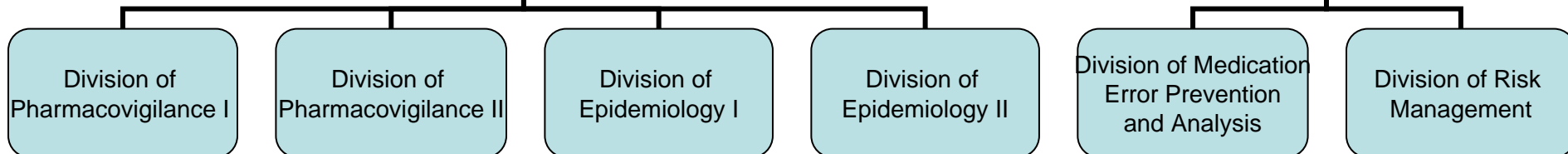
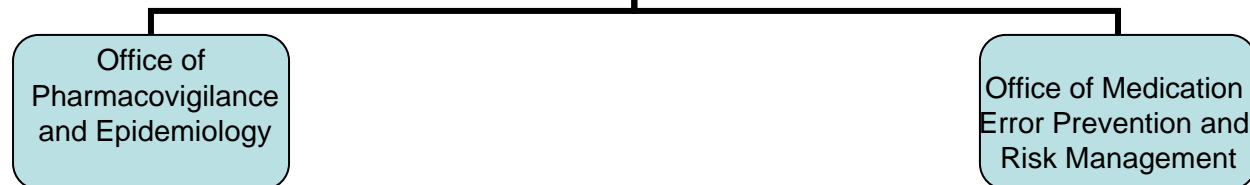
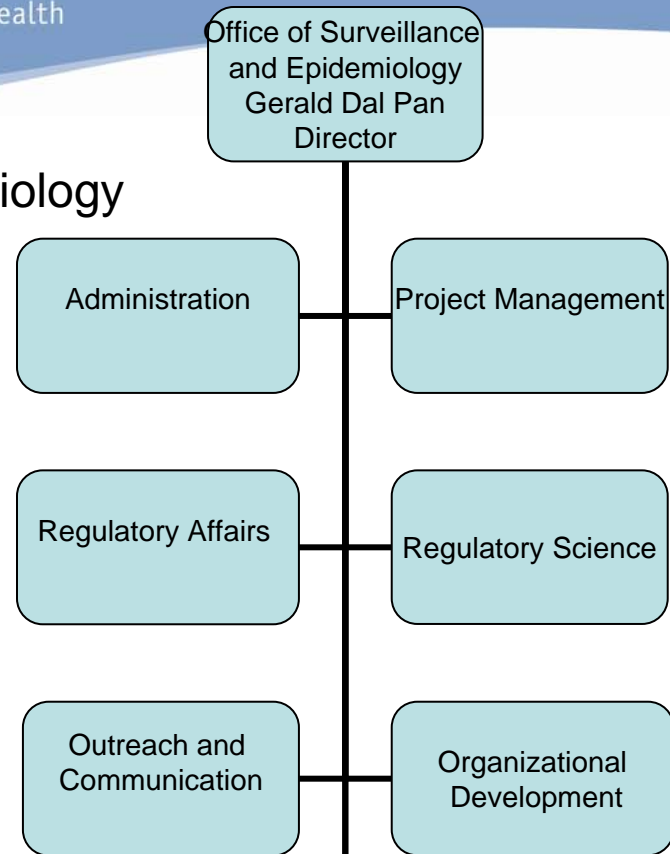
Overview

- OSE organization and growth
- Adverse event reporting
- Epidemiology
- Risk management
- Risk communication

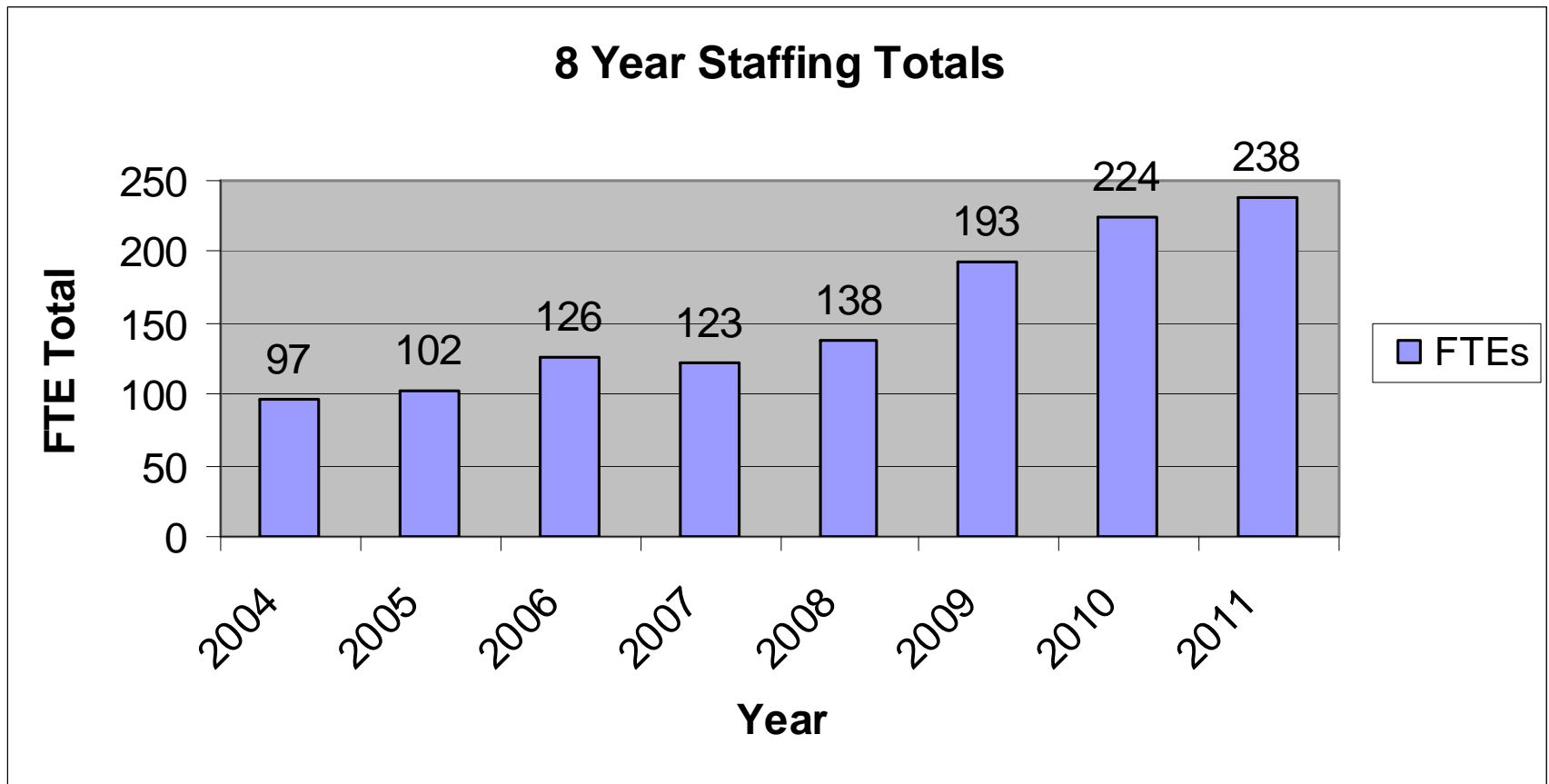


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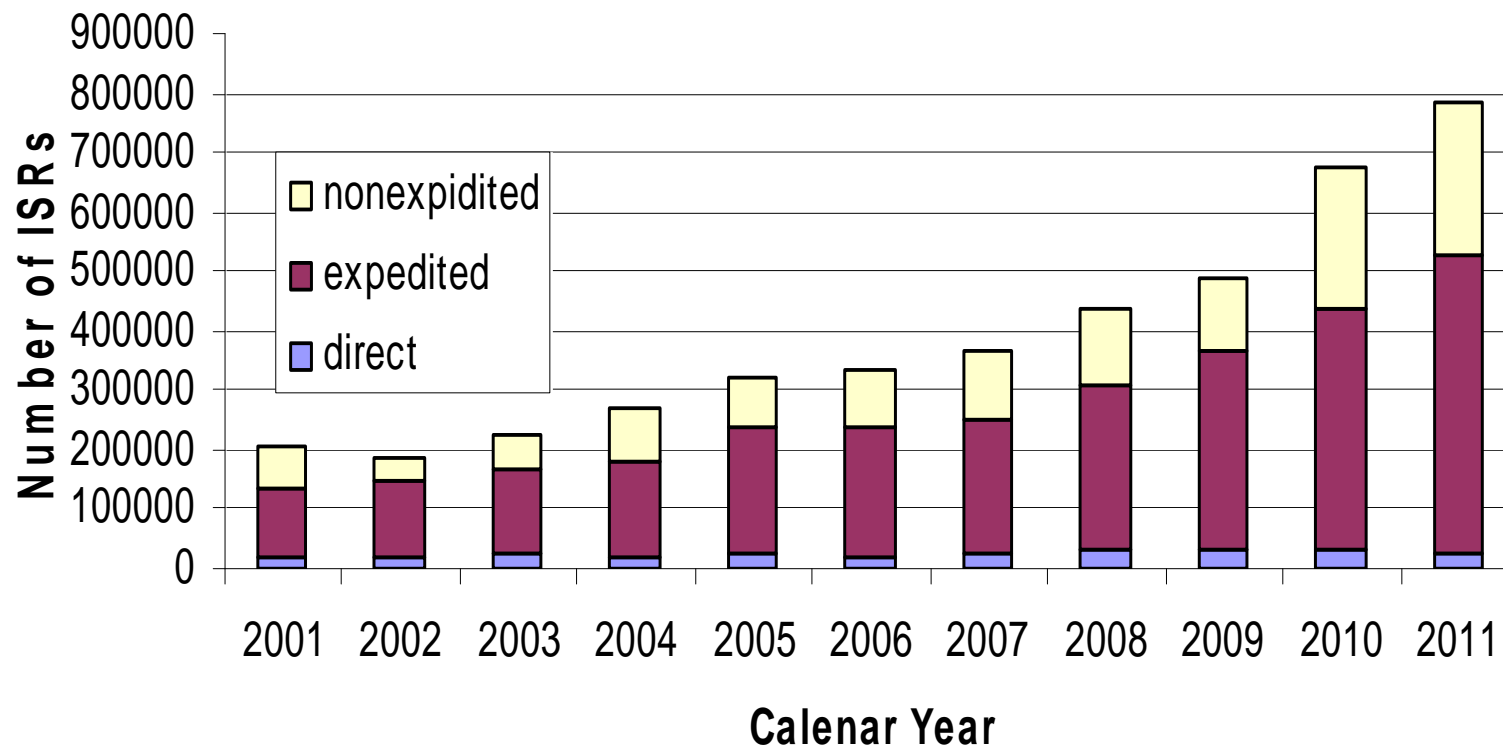
- All OSE disciplines are involved throughout the product lifecycle
- OSE's work is integrated with that of OND and other offices



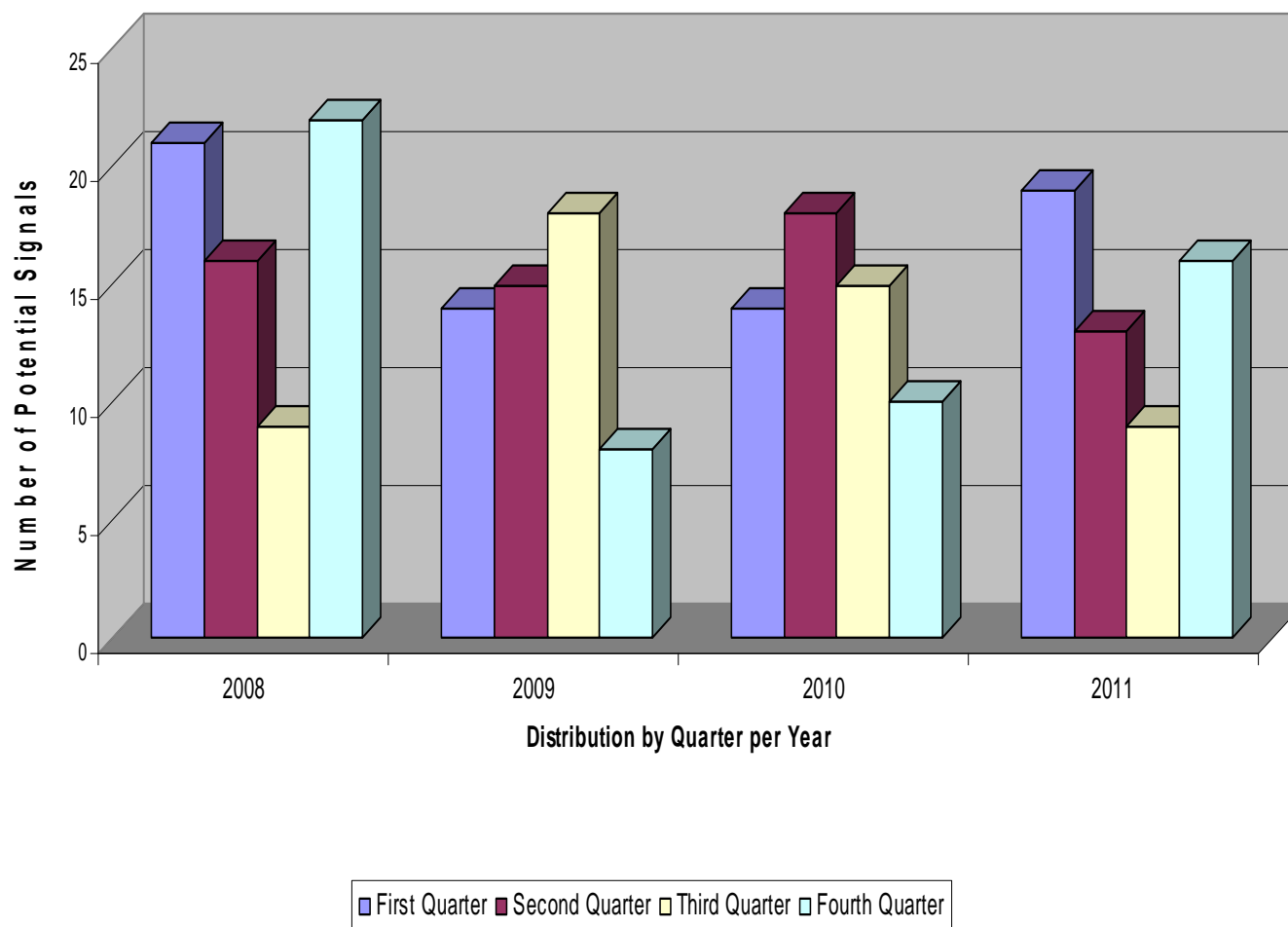
OSE Staff Growth



Growing Number of Adverse Event Reports - US



Potential Signals of Serious Risks / New Safety Information Identified from AERS
January 2008 - December 2011
237 Potential Product - Safety Issues Posted





Results From Quarterly Reports From January 2008 to December 2010

Table. Results From Quarterly Reports From January 2008 to December 2010

Result	Quarterly Reports, Year, No. (%)			Total
	2008	2009	2010	
Potential safety signals, No.	60	45	48	153
Label changes	30 (50)	28 (62)	16 (33)	74 (48)^b
Subgroups ^a				
Warnings and Precautions	16 (53)	19 (68)	11 (69)	46 (62)
Adverse Reactions	11 (37)	5 (18)	7 (44)	23 (31)
Drug Interactions	2 (7)	1 (4)	0	3 (4)
Dosage and Administration	1 (3)	1 (4)	0	2 (3)
Boxed Warning	6 (20)	2 (7)	1 (6)	9 (12)
Contraindications	0	1 (4)	1 (6)	2 (2)
Use in Specific Populations	0	0	1 (6)	1 (1)
REMS	2 (7)	2 (7)	0	4 (5)
Withdrawn from market	0	0	1 (6)	1 (1)

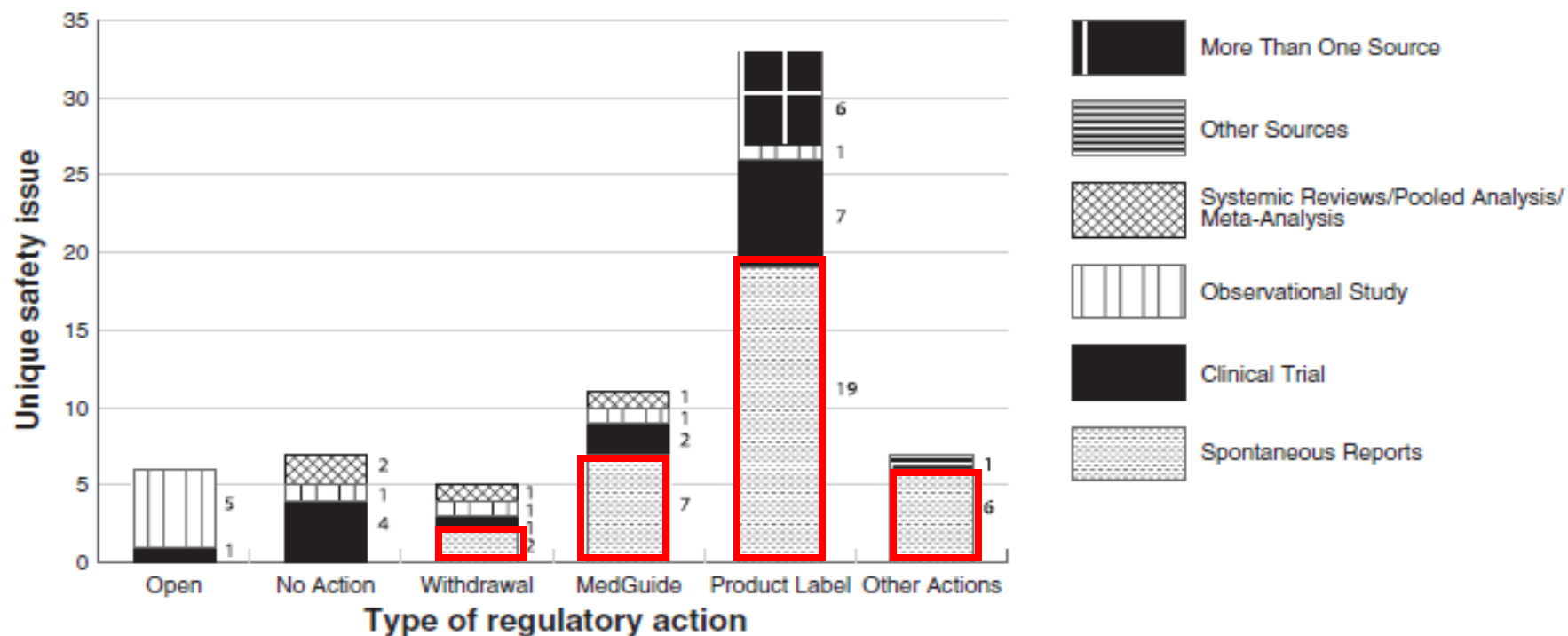
Abbreviation: REMS, Risk Evaluation Mitigation Strategy.

^aCalculated from the number of actual label changes.

^bThe calculated 48% total label changes includes the 1 drug withdrawn from the market and those drugs with newly implemented REMS.

Powers, A. et al. Arch Intern Med 2012;172:72-73.

Sources of Data for Drug Safety Communications

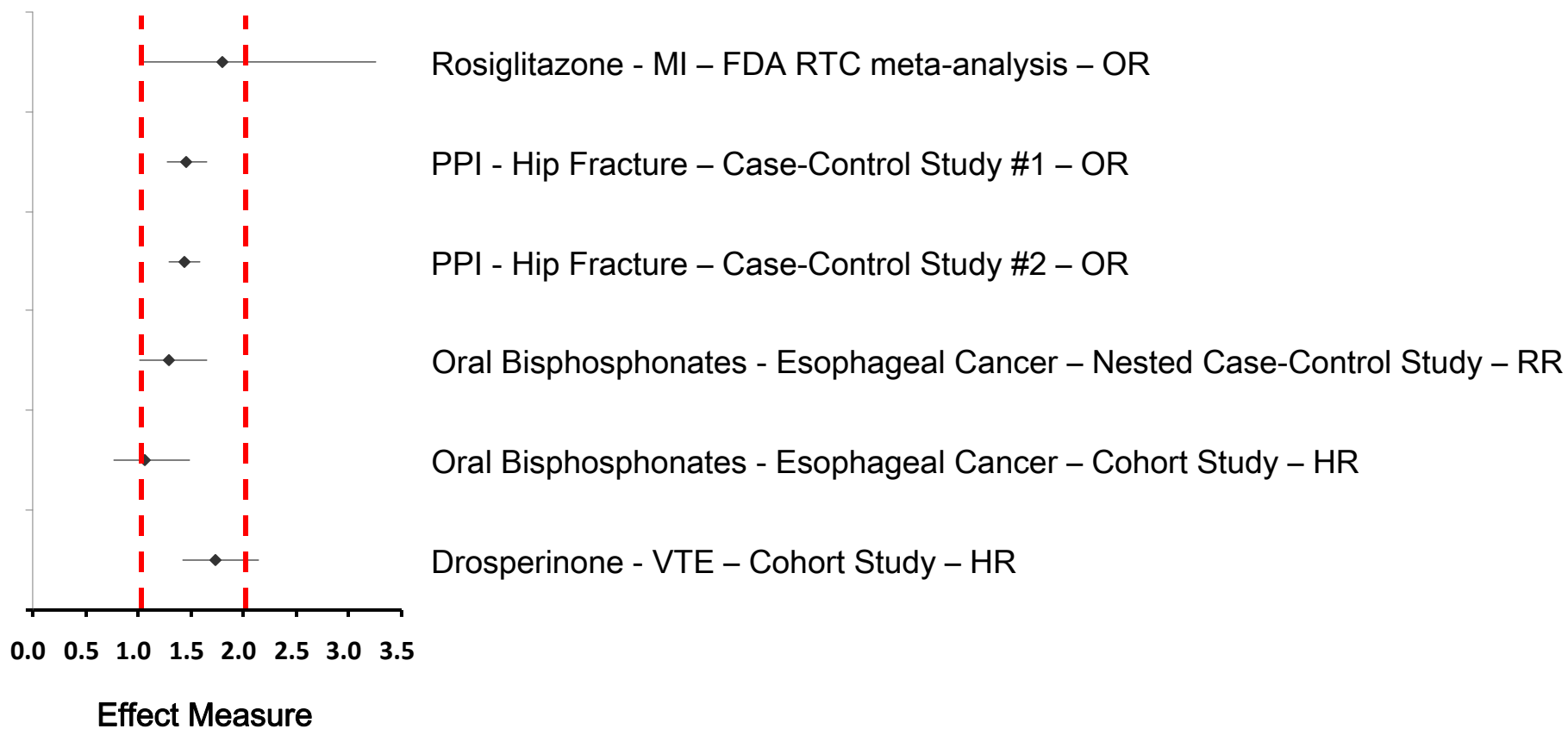


Using Large Databases

- Potential source of data for large observational studies
 - Case-control studies
 - Cohort studies
- Need to understand the output of such systems
- Not a replacement for careful clinical evaluation



Effect Measures -- A Not-so-random Sample of Some Recent Drug Safety Issues



Sources:

Rosiglitazone - <http://www.fda.gov/downloads/AdvisoryCommittees/CommitteesMeetingMaterials/Drugs/EndocrinologicandMetabolicDrugsAdvisoryCommittee/UCM218493.pdf>

PPI #1 – Vestergaard et al. Calcif Tissue Int. 2006;79:76-83. PPI #2 – Yang et al. JAMA 2006;296:2947-53 Oral bisphosphonates #1 – Cardwell et al JAMA 2010;304:657-63

Oral bisphosphonates #2 – Green et al. BMJ 2010;341 Drosperinone - <http://www.fda.gov/Drugs/DrugSafety/ucm273021.htm>

Sentinel Initiative

- FDA initiative
- Use large databases from multiple sources
- Cover a large number of lives
 - 25 million in 2010
 - 100 million in 2012
- Two components:
 - Mini-Sentinel
 - Federal Partners Collaboration

FDAAA REMS Numbers

March 25, 2008 – Sept. 30, 2012

- Current number of **individual** drugs with an approved REMS (individual drugs are defined by different dosage forms or combination products)
 - 14 Medication Guide only
 - 27 communication plan
 - 27 ETASU
 - Total of 68 individual drugs with REMS*
- 4 single **shared** system (SSS) ETASU REMS
 - SSS REMS generally include at least one NDA product and its generic(s), but class-wide SSS REMS include multiple innovators and generics.
- Historically, about 200 REMS approved
 - This number is approximate because in the past, REMS were not counted consistently (for example, some REMS contained multiple individual drugs but were counted as one; drugs in a SSS REMS may have been counted individually).
- 130 released REMS

* The drugs in a SSS REMS are not counted in the number of drugs with individual REMS.

REMS Integration Initiative: Overview

- In 2011, FDA began an initiative designed
 - to evaluate how we have been implementing our REMS authority.
 - to determine how to design REMS that can be better integrated into the existing and evolving healthcare system.
- FDA gathered preliminary input from stakeholders, including public meetings held in
 - 2010 to obtain input on issues and challenges associated with the development and implementation of REMS.
 - 2012 to assess how REMS Assessment surveys are working.

REMS Integration Initiative: Goals

- Require a REMS when necessary to ensure that the benefits of a drug outweigh its risks.
- Approve REMS that can be efficiently implemented.
- “Measure the effectiveness of REMS and standardize and better integrate REMS into the healthcare system” (PDUFA V, Goal XI (A))

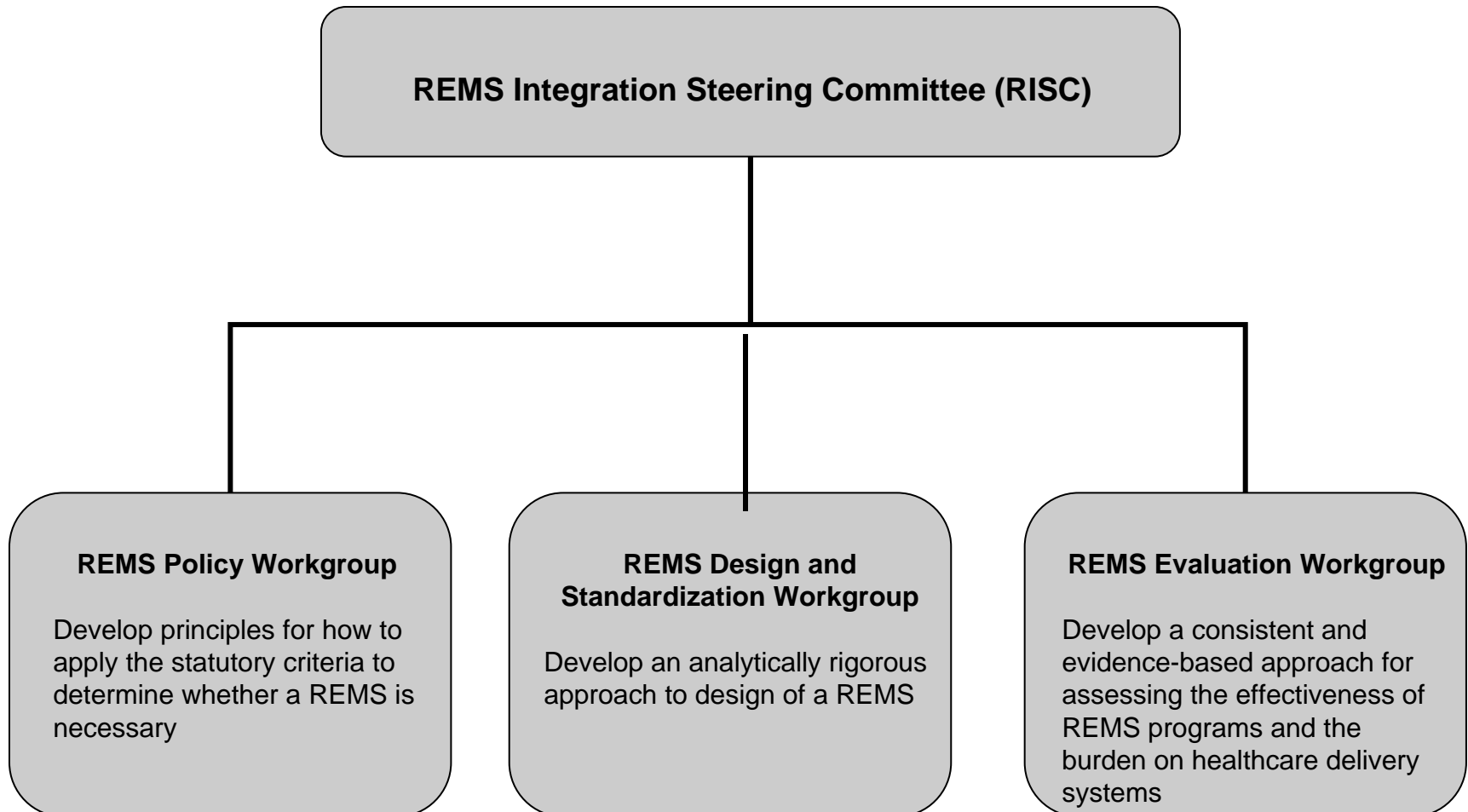
REMS Integration Initiative: Objectives

- Develop
 - Criteria for determining when a REMS is required.
 - Strategies for designing REMS, including standardization, so they can be efficiently integrated into the existing and evolving healthcare system.
 - An evidence-based approach to measuring the effectiveness of REMS.
- Provide opportunities for stakeholders to contribute to the development of standardization and integration initiatives.

REMS Integration Steering Committee

- The REMS Integration Steering Committee (RISC) was established to oversee the REMS Integration Initiative.
- The RISC will oversee
 - Activities of 3 work groups
 - Stakeholder engagement activities

RISC Work Groups



PDUFA V – Near-term Deliverables

By the end of FY 2013, FDA will:

- develop and issue guidance on criteria for requiring a REMS.
- hold one or more public meetings to obtain stakeholder input on standardizing REMS to reduce the burden on the healthcare system.
- initiate one or more public workshops on methodologies for assessing REMS.

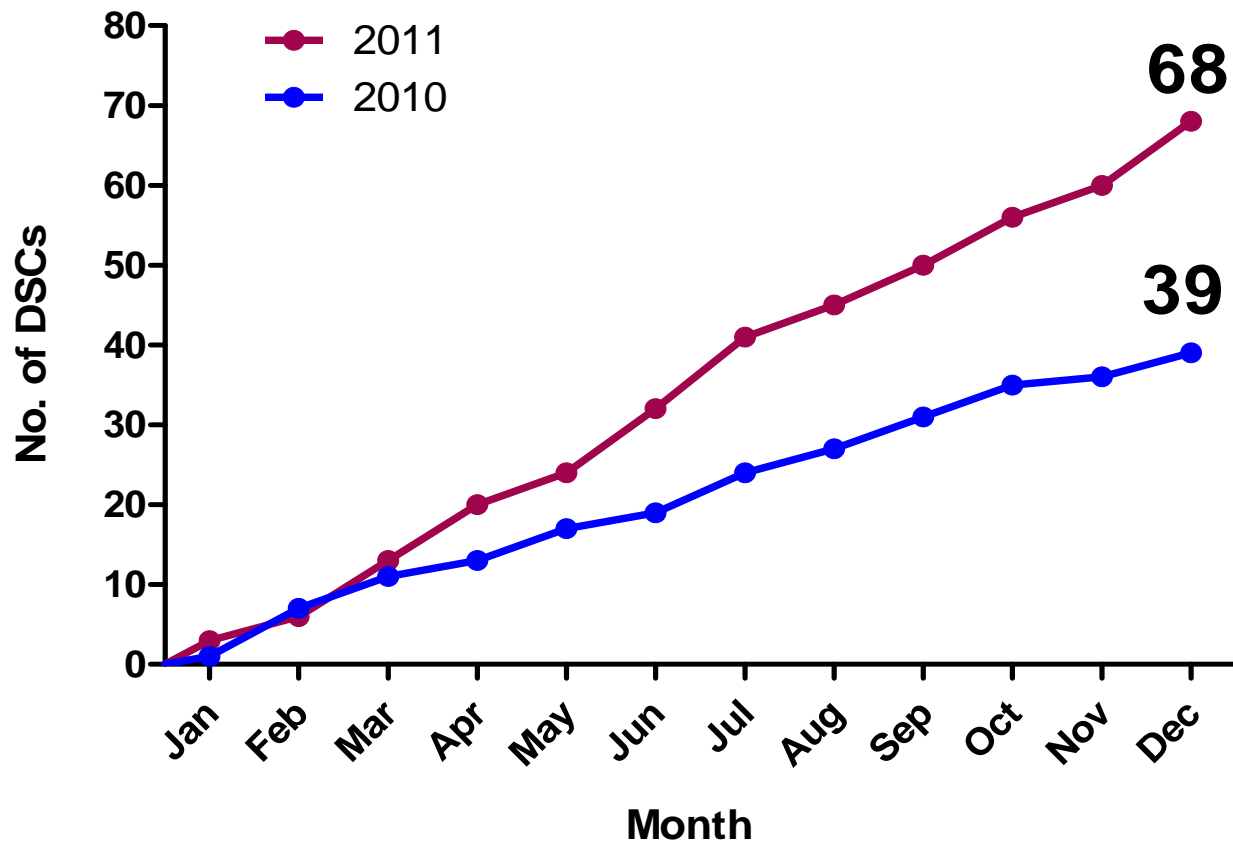
REMS Integration Initiative

PDUFA V Deliverables (cont')

- Use public workshops to gather information and issue draft guidance on methodologies for assessing
 - Whether the REMS is meeting its goals.
 - The impact of REMS on patient access and burden on the healthcare delivery system.
- With stakeholder input, evaluate appropriate ways to better integrate REMS into the existing and evolving healthcare system.

Drug Safety Communications

Cumulative Number of Drug Safety Communications



Thank you

