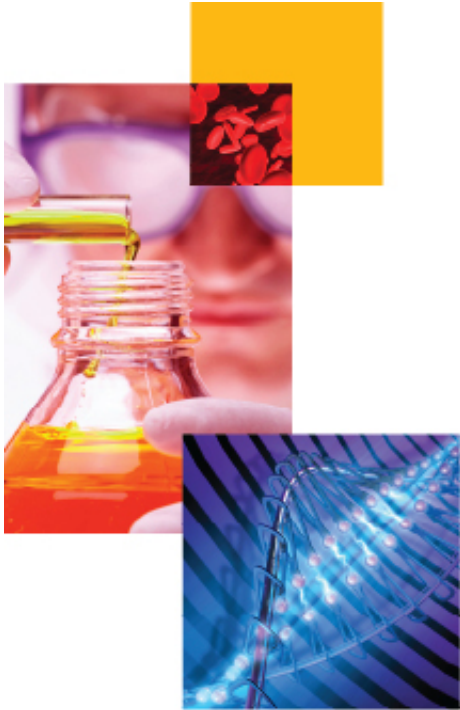

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Observational Medical Outcomes Partnership

OMOP 2009 Symposium
Defining the Health Outcome of Interest
November 12, 2009

PARTNERS FOR INNOVATION, DISCOVERY, LIFE



Health Outcomes of Interest Definitions

- Ten HOIs
 - Acute liver injury
 - Angioedema
 - Aplastic anemia
 - GI ulcer hospitalization
 - Mortality after Myocardial Infarction
 - Myocardial infarction
 - Hemorrhage
 - Hip fracture
 - Hospitalization
 - Renal failure
- UBC and RTI deliverables are posted on the OMOP website (<http://omop.fnih.org/HOI>)
- OMOP research team completed synthesis of results:
 - Literature Search Strategy
 - Recommended definitions for each HOI to be used for OMOP research



“Surveillance”

- Case surveillance: AERS
 - *“I just grab everyone and keep throwing them out until I find the guy with the ball.”*
 - Ed “Too Tall” Jones, all-pro defensive lineman for the Dallas Cowboys
- ‘Association’ surveillance: denominator-based
 - Does the relationship between the exposure and the HOI change with accumulation of data



The definition of an HOI can make a great difference in a study outcome

The Prevalence of Dementia Across Different Diagnostic Criteria in the Same Canadian Cohort

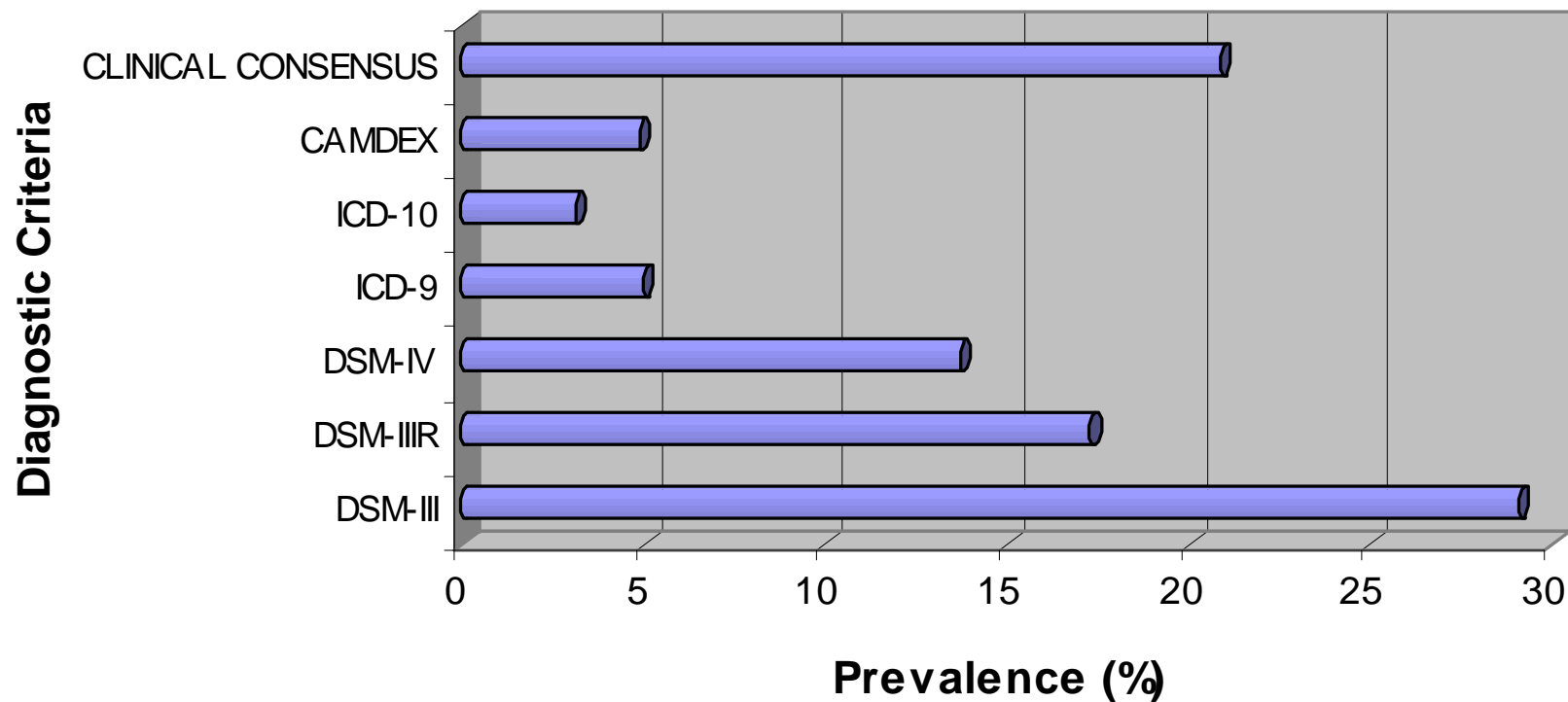


Figure derived from data in Erkinjuntti T, Østbye T, Steenhuis R, Hachinski V: The effect of different diagnostic criteria on the prevalence of dementia. *N Engl J Med* 1997;337:1667-74



Insights from Work to Date

- Most published studies are epidemiology evaluations not surveillance
- One definition is chosen and ‘validated’
- Inconsistent reporting of actual codes used
- Identifying publications systematically is difficult



Lets think about the HOI Hip Fracture

- Lets start with diagnosis codes
 - What are the diagnoses that may fit with this HOI?

- Do we want to include broader codes that reflect
 - Fractures of the pelvis
 - Fractures of the femur

- There are some codes that suggest pathologic fractures (mostly due to cancer or osteoporosis)
 - Should we exclude cases with evidence of these disorders?



Things other than diagnosis?

- Are there any other data items that we would find in claims or EHR that would be helpful in developing case criteria?
 - Procedures?
 - Treatments?
 - Medications?
 - Durable medical equipment?
 - Site of care---is that important?
 - Hospital
 - Nursing home
 - Outpatient
 - ER
 - Temporal sequence of these relative to diagnosis codes?



Will You Change the Definition Based On?

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- Data source
 - Claims
 - Inpatient data only
 - EHR
 - Primary Care only
- Hypothesis generation vs. screening vs. confirmation



What is the Best Definition for Hip Fracture?

- Your decision