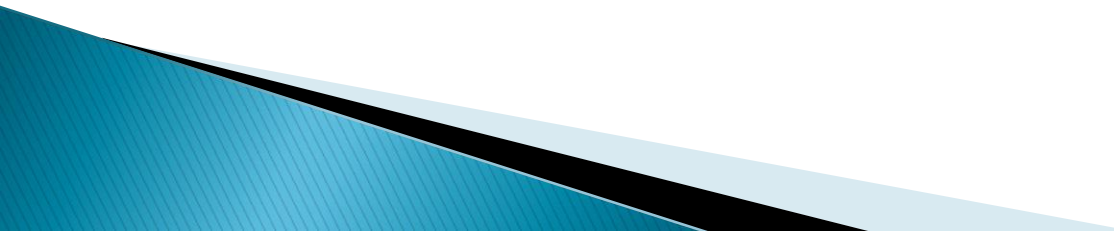


LESSONS IN EPIDEMIOLOGY
BY
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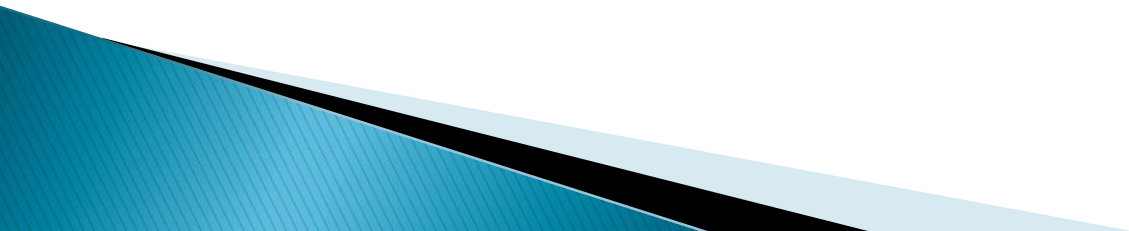


Lessons learnt

Three key areas:

1. Power of interdisciplinary research
2. Understanding the clinical significance of research findings
3. Routinely collected data (RCD): Promises and limitations

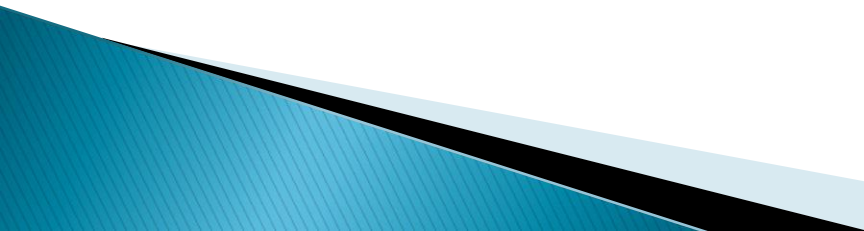
Routinely collected data (RCD): promises and limitations



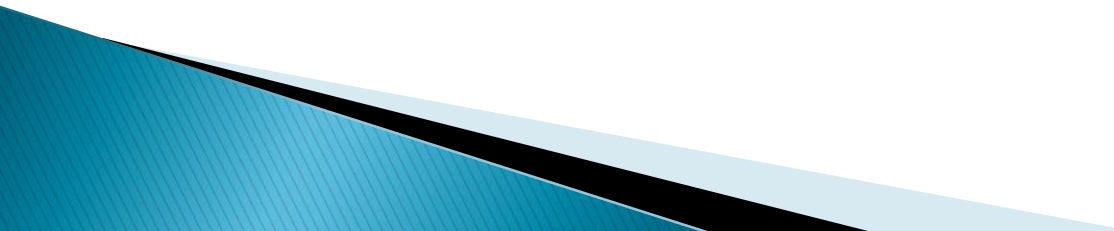
What is RCD?

- ▶ Data collected for purposes other than research or without specific apriori research questions developed before collection

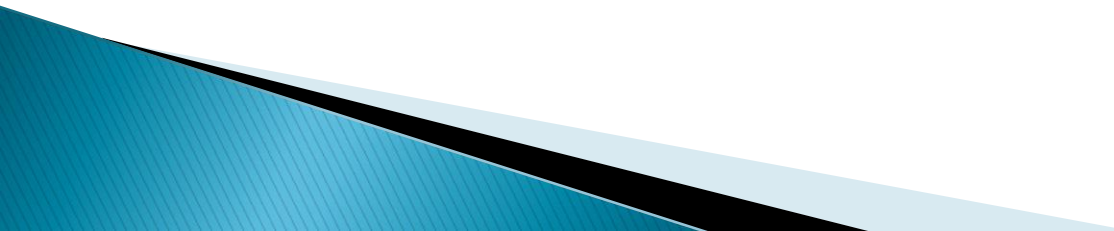
Uses of RCD

- ▶ Disease surveillance
 - ▶ Monitoring population health and health system performance
 - ▶ Set up of disease registries e.g National Hip Fracture registry
 - ▶ Set up of clinical databases at national, regional or international level
 - ▶ Identification of health problems
 - ▶ Hypothesis generating
- 

Benefits of RCD

- ▶ Population reach
 - ▶ Longitudinal
 - ▶ Cost effective
 - ▶ Evaluation of outcomes of care where RCTs are unavailable
 - ▶ Evaluation of impact of policies
- 

Limitations of RCD

- ▶ Errors in coding (Measurement bias)
 - ▶ Incomplete data
 - ▶ Confounding
 - ▶ Poor quality data
- 

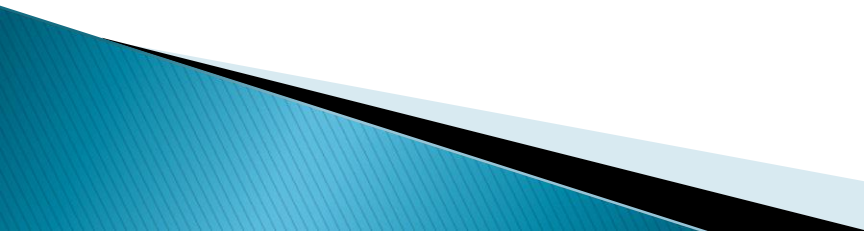
Garbage In, Garbage Out



**YOUR ANALYSIS IS ONLY
AS GOOD AS YOUR DATA**

$f(\text{garbage}) = \text{garbage}$

Examples of RCD in use

- ▶ WHO National Tuberculosis Control Programmes:
 - Diagnoses
 - Treatment outcomes
 - Who is accessing treatment
 - Adverse outcomes
 - National and district drug forecast and procurement
 - 1. Global burden of disease
 - 2. Gross Domestic Product
 - 3. Years lost to disability
- 



East and Southern Africa (2017)

19.6m people living with HIV

6.8% adult HIV prevalence (ages 15-49)

800,000 new HIV infections

380,000 AIDS-related deaths

66% adults on antiretroviral treatment*

59% children on antiretroviral treatment*

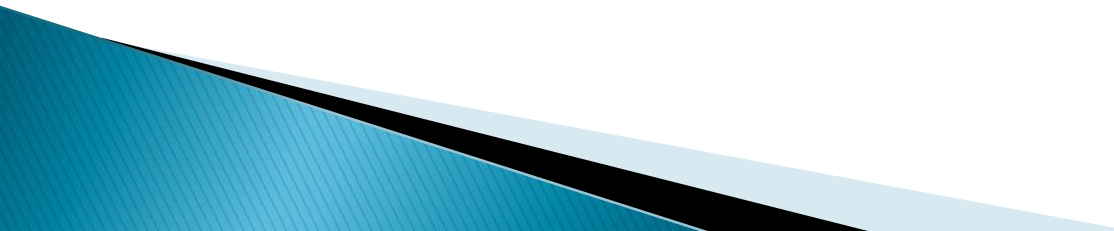
*All adults/children living with HIV

Source: UNAIDS Data 2018

Data rich but information poor!!



Maximising the benefits of RCD

- ▶ What potentially useful databases are available?
 - ▶ Which data items are available in the database?
 - ▶ Are there alternative and/or innovative ways of using the database
- 

Publishing the data

- ▶ RECORD statement:

REporting of studies Conducted using
Observational Routinely collected Data

The RECORD statement – checklist of items, extended from the STROBE statement, that should be reported in observational studies using routinely collected health data.

	Item No.	STROBE items	Location in manuscript where items are reported	RECORD items	Location in manuscript where items are reported
Title and abstract					
	1	(a) Indicate the study's design with a commonly used term in the title or the abstract (b) Provide in the abstract an informative and balanced summary of what was done and what was found		RECORD 1.1: The type of data used should be specified in the title or abstract. When possible, the name of the databases used should be included. RECORD 1.2: If applicable, the geographic region and timeframe within which the study took place should be reported in the title or abstract. RECORD 1.3: If linkage between databases was conducted for the study, this should be clearly stated in the title or abstract.	
Introduction					
Background rationale	2	Explain the scientific background and rationale for the investigation being reported			
Objectives	3	State specific objectives, including any prespecified hypotheses			
Methods					
Study Design	4	Present key elements of study design early in the paper			
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection			
Participants	6	(a) <i>Cohort study</i> - Give the eligibility criteria, and the		RECORD 6.1: The methods of study population selection (such as codes or	

▶ LET'S GET RECORDING!!