Clinical trial registries as research data sources: tips and learnings

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René Magritte (1933)

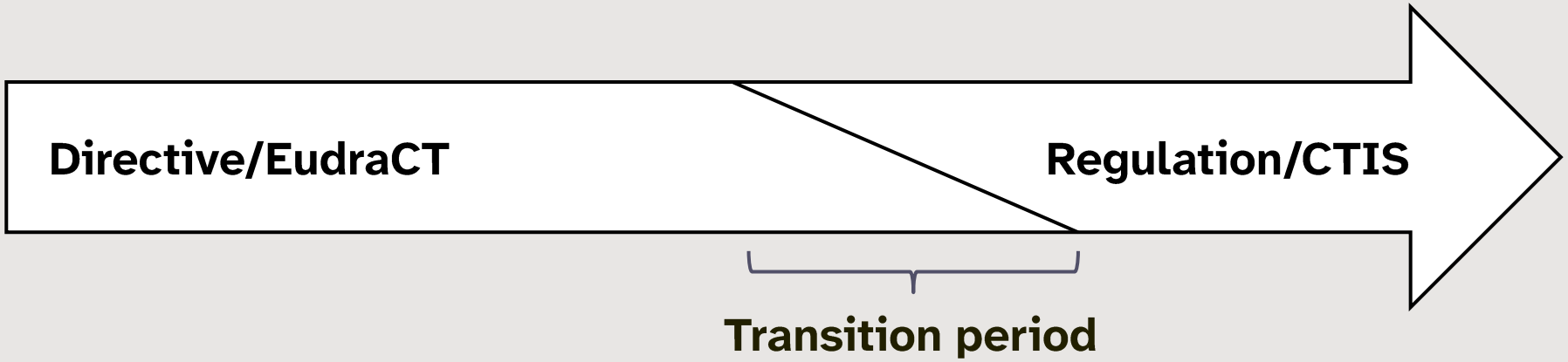
A case study: working with EudraCT and CTIS

Research question

To describe the evolution of clinical trials on medicinal products in the EU/EEA from 2013 to 2025, combining public data from EudraCT and CTIS.

Core challenge

Two different sources, two different regulatory frameworks, one harmonised dataset



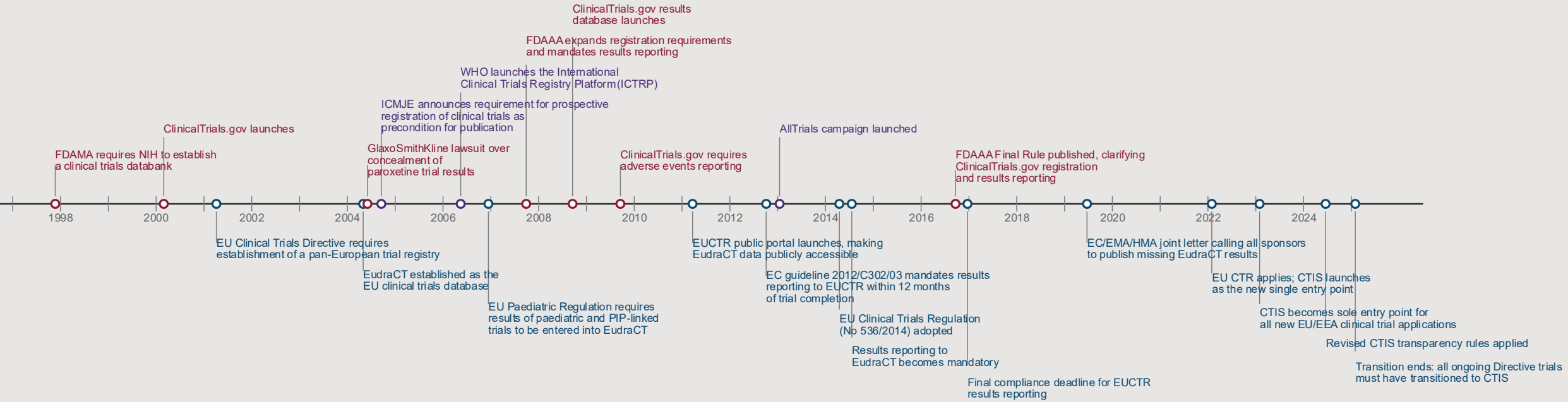
A case study: working with EudraCT and CTIS

Practical problems

- Two registries with different structures, fields, and definitions
- A subset of CTIS trials not publicly visible
- Transitioned trials at risk of double-counting
- Data quality varying across systems and countries
- No official export tools for either portal

Tip #1: Know the landscape

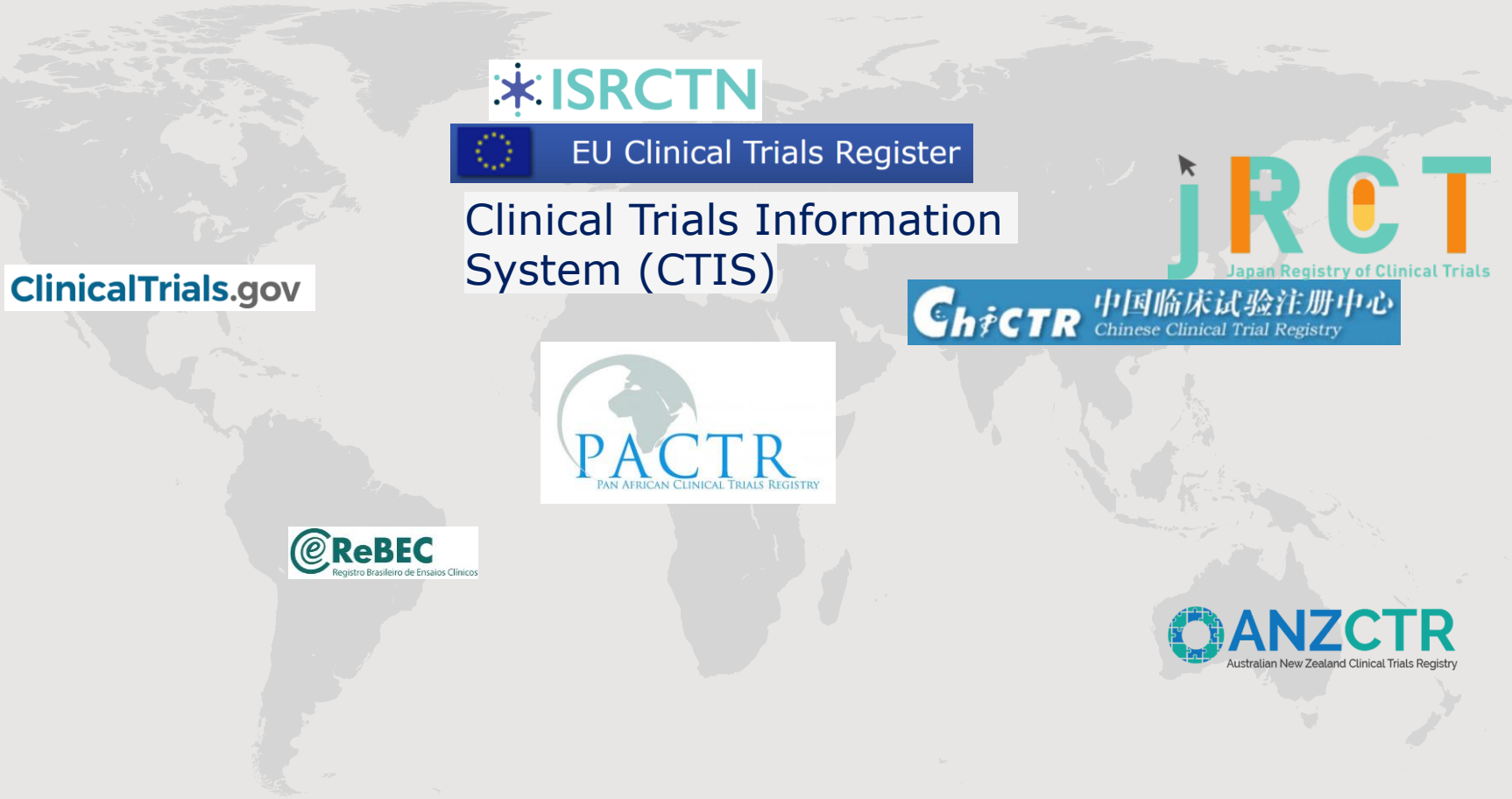
History shapes the data



Adapted from Dickersin K., D. Rennie: The Evolution of Trial Registries and Their Use to Assess the Clinical Trial Enterprise.: JAMA 307. 1861–1864 (2012)

Tip #1: Know the landscape

Geography shapes the data



Tip #1: Know the landscape

Geography shapes the data

Namiot E.D. et al.: The international clinical trials registry platform (ICTRP): data integrity and the trends in clinical trials, diseases, and drugs.: Front. Pharmacol. 14 (2023)

Tip #1: Know the landscape

Policy shapes the data

- What even counts as a "clinical trial" varies across jurisdictions
- What gets published depends on the regulatory framework
- "Public" does not mean complete
- Very low compliance on prospective registration of trials of nonregulated interventions

Azar M. et al.: Evaluation of Journal Registration Policies and Prospective Registration of Randomized Clinical Trials of Nonregulated Health Care Interventions.: JAMA Intern Med 179. 624–632 (2019)

Tip #2: Know the data

Same concept can mean different things

- Field definitions differ across registries
- Your operationalisation choices matter
- Data quality varies across registers and over time

DeVito N.J., B. Goldacre: Trends and variation in data quality and availability on the European Union Clinical Trials Register: A cross-sectional study.: Clinical Trials 19. 172–183 (2022)

Tip #3: Know the tools

Tools shape what's possible

- Some registries have export tools (e.g. ClinicalTrials.gov has an API and bulk download), other do not (e.g. EudraCT and CTIS)
- ctrdata is an R package that queries, downloads, stores, deduplicates, and harmonises trial data across four major registries (EudraCT, CTIS, ClinicalTrials.gov, and ISRCTN)

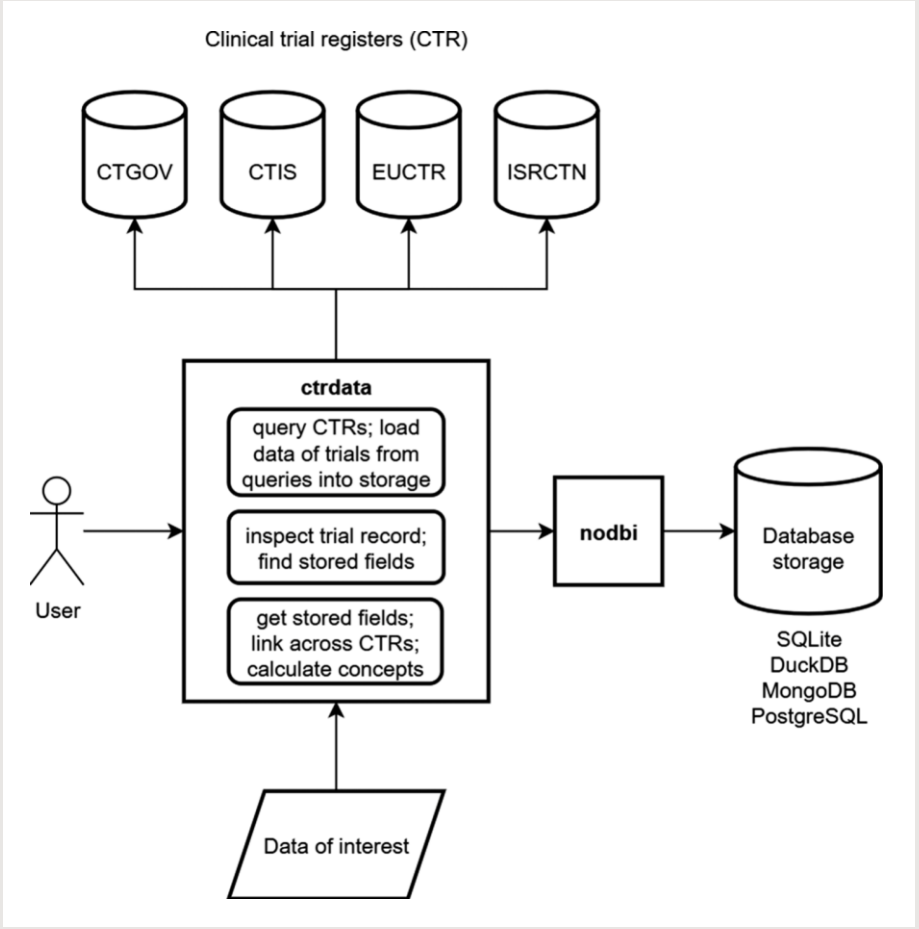


Figure reproduced from Herold R.: Aggregating and analysing clinical trials data from multiple public registers using R package ctrdata.: Research Synthesis Methods 17. 624–656 (2026)

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