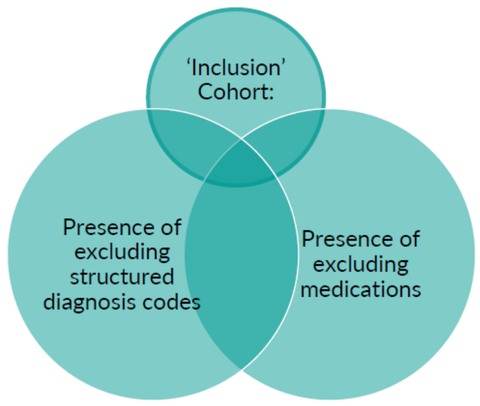
A data-driven approach to clinical trial patient samples

Ana Todorovic, Sophie Gibbons, Philip Craig, Benjamin Fell

BACKGROUND

Clinical trials are time consuming

- Complex inclusion/exclusion criteria
- Lengthy screening process
- Depend on individual psychiatrists noticing and inviting the right patients



Does the patient fit the age range?

Is there evidence of mild cognitive impairment?

Should the patient be excluded based on diagnosis or medication?

METHODS

Find the right patients using electronic health records

- Anonymised electronic health records in Akrivia Health's psychiatric dataset (over 4 million patients)
- Interpret trial inclusion/exclusion criteria based on data and informed by clinical opinion
- Form prioritisation cohorts using SQL or the Akrivia Health Research Platform

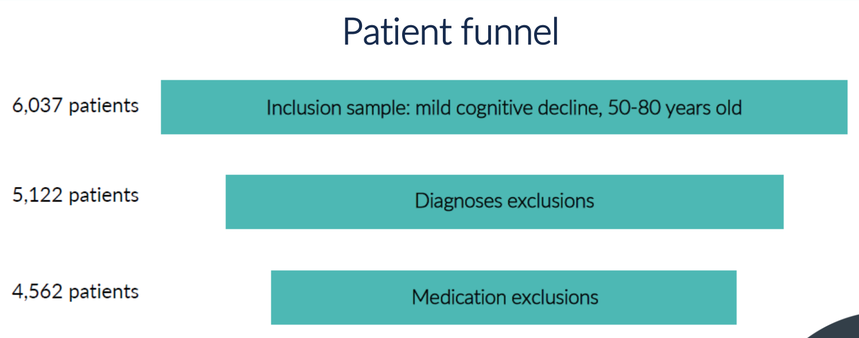
Exclusion criterion: antidepressant prescription.
Exclusion criterion interpretation: mention in clinical notes that patient was on antidepressants at the time of appointment.

CONCLUSION

Electronic health record data can substantially reduce screening time and clinical trial efficiency

RESULTS

Example use case: mild cognitive impairment



- First priority cohort: based on cognitive test scores
- Second priority cohort: recent referrals to memory clinics for assessment.

Exclusion criteria:

- Major depressive disorder, based on information from structured field in patient records
- Took tricyclic antidepressants for longer than 1 year, based on NLP-derived data from clinical notes

Web: akriviahealth.com
Contact: ana.todorovic@akriviahealth.com
@NeuroAnaTody

AKRIVIA HEALTH