BACKGROUND
Comparative effectiveness research (CER) seeks to identify treatments that work best for which patients under what circumstances.

The National Academy of Medicine (NAM) recommended a list of 100 CER national priorities, which identified areas of research with potential for the highest impact on patient care and informing the priorities for the Patient-Centered Outcomes Research Institute (PCORI). PCORI was established by the Affordable Care Act (ACA) to address the effectiveness of existing drugs and treatments. The impact of PCORI has not yet been fully realized and funding for PCORI authorized through 2019, conducting CER to address national priorities is crucial.

The OHDSI multi-stakeholder, interdisciplinary collaborative is well positioned to address CER priorities as it employs a common data model (CDM), standard population estimation and patient level prediction tools, and represents 236 million patient lives across the four data sources utilized in this project (600 million patients lives in total).

OBJECTIVES
Estimate the number of patients available for study within four US databases currently available in the ATLAS web based cohort building tool.

METHODS
The list of 100 national priorities for CER was obtained from the website of the health and medicine division of the National Academy of Sciences, Engineering, and Medicine.

Each research priority topic was evaluated by three experts in database research based on availability of critical exposure and endpoint data. 1 year of continuous enrollment was required prior to and after the index date.

Definitions of the target (T) and comparator exposure(s)(C), and the outcome(s)(O) were created for each addressable research topic using the cohort definition tool in ATLAS (Figure 1).

RESULTS
Among the top 100 NAM CER research priority topics, 35 were determined addressable using the OHDSI platform data and tools.

The T, C, O assignments were possible for 8 of the 25 CER top quartile topics (Table 2).

Summary of topics of interest (N=10) were available for study in one or more of the databases evaluated for the 8 of the 25 CER top quartile topics (Table 2).

LIMITATIONS
All T, C, O definitions used in this analysis should be considered preliminary and require clinical input and review.

Lab results are only available within certain datasets and a subset of individuals, therefore studies requiring lab data may not be generalizable to broader populations.

STRENGTHS
Use of the common data model allows for feasibility assessment of CER topics in US and ex-US databases, such as CPRD and JMDIC.

This analysis highlights opportunities and illustrates that there are sufficient number of subjects to study CER questions using real world data and the OHDSI platform.

CONCLUSIONS
The OHDSI platform can be used to address approximately 1/3 of the NAM CER priority topics.

Future CER should capitalize on the OHDSI platform to address these and other studies definable using the T, C, O framework.

 POTENTIAL NEXT STEPS
Assess the likelihood that observational data could generate strong, actionable signals for CER/PCORI.

Characterize treatment patterns for each of these research areas.

REFERENCES

DISCLOSURES
The statements made here are those of the authors and not necessarily those of the companies or institutions who employ them. 38并非, Frank Delafio, Martin Schuemer, and Patrick Ryan are full time employees of Janssen Research and Development, a unit of Johnson and Johnson. The work on this study was part of their employment. They also hold pension rights from the company and own stock and stock options.