



# Clinical Trials in Indiana

## Findings Report

Project Team:

Julia Donato  
Sanjana Jairam  
Kashmira Jitendra Golatkar  
Jainish Shingala  
Peter Stewart



# Project Overview

- Goal & Impact
  - Objective: To collect, analyze, and visualize data on clinical trials and other relevant data.
  - Impact: Aiding in statewide conversations on equitable access to clinical trials.
- Project Objectives
  - Comparative Analysis: Assess the number of clinical trials in Indiana vs. national data.
  - Regional Distribution: Categorize trials by county to understand regional variances.
  - Data Visualization: Develop effective visual tools to present the data.
  - Insights & Recommendations: Provide expert analysis and suggestions based on findings.

# Indiana vs. National Clinical Trials

Indiana National rank per capita: 38

Top 5 States in Per capita trials:

#1 Rhode Island

#2 Kansas

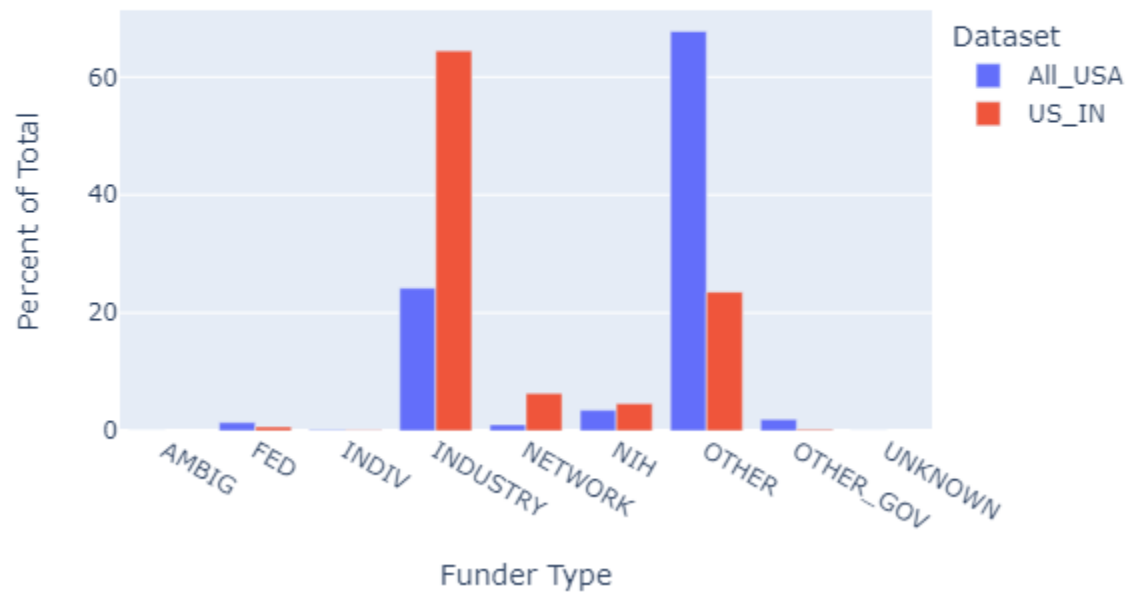
#3 Maryland

#4 Nebraska

#5 Vermont



Side-by-Side Bar Chart of Funder type for Indiana and rest of US

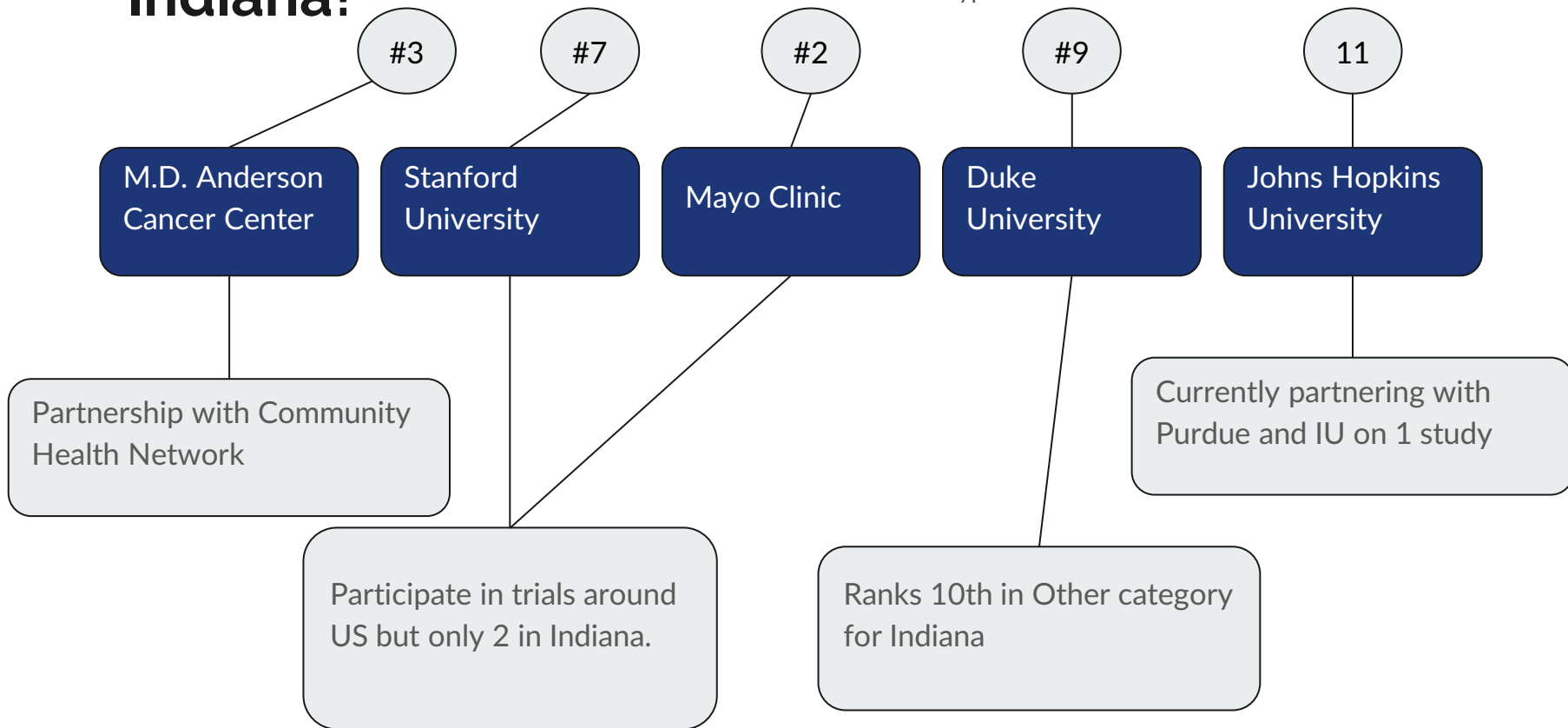


Trials in Indiana are 64% from Industry

The rest of the US trials are 68% in the Other category

# Who are the “Other” Funders with ties to Indiana?

National Rank in ‘Other’ Funders type:





## Example of 'Other' Funder Trials

### **Molecular Transducers of Physical Activity Consortium (MoTrPAC)**

- Currently recruiting in Muncie along with many other locations in the US.
- Study has 14 sponsors from around the United States.
- Study has an extensive list of requirements for participants.
- This is the only trial connected to Stanford and Mayo Clinic (2 of the most prolific sponsors nationally) that has a location in Indiana.

**Improving the Available Data for Indiana Locations can help Indiana participate in more of these types of trials with complex participant requirements.**

More info on this trial:

<https://www.clinicaltrials.gov/study/NCT03960827?locStr=Indiana&country=United%20States&state=Indiana&distance=50&spons=Stanford%20University&aggFilters=funderType:fed&rank=2>



# Who are the Industry Funders

## Top 5 Industry Sponsors in US



## Top 5 Industry Sponsors in Indiana





## Clinical Trials - The Urban Rural Gap

Indiana Population is 28.8% rural

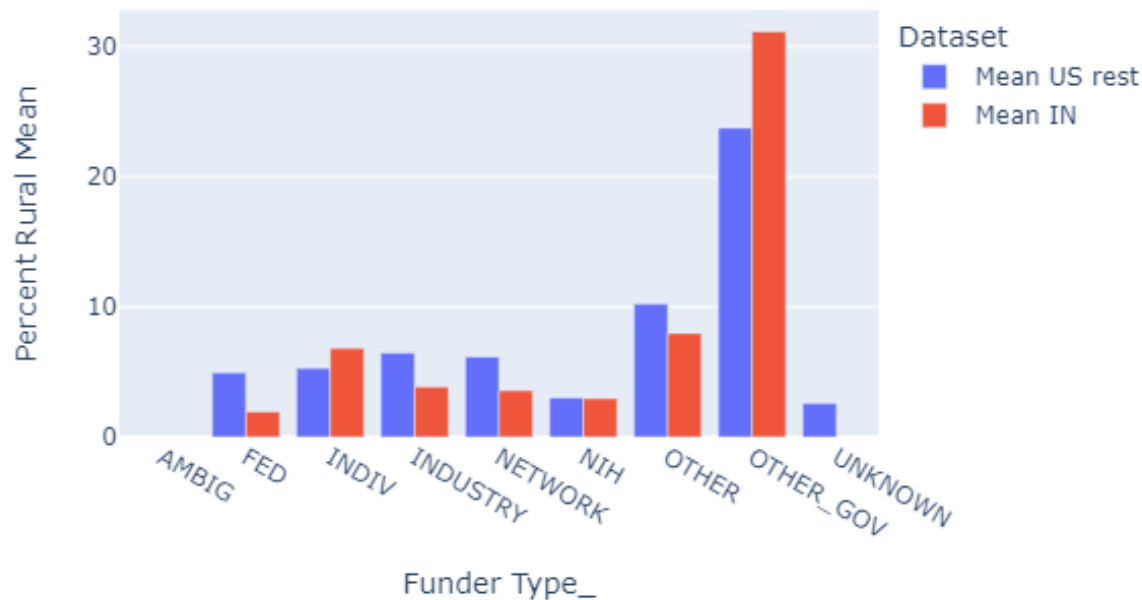
US Population is 20% rural

The mean rural population percentage of **Indiana's** trials locations is **4.82%** by county.

The mean rural population percentage of the **rest of US** trials locations is **9.16%** by county.



## Trial Location Ave Rural Pop Percentage



For the Rest of the US 'Other' funded trial locations are about 10% rural versus 'Industry' funded at 6%. Indiana lags behind in rural population representation by location in both categories. 'Other\_gov' has the highest rural representation but this category is a very small proportion of trials overall.



## Why Indiana Lags Behind in Rural Locations

- 'Other' Funders are more likely to have more rural locations.
- Indiana could get higher rural population locations by increasing participation in 'Other' funded trials
- Improving the ability for large institutions to conduct trials in Indiana can lead not only to more trials, but also to trials spreading into more rural areas across the state.



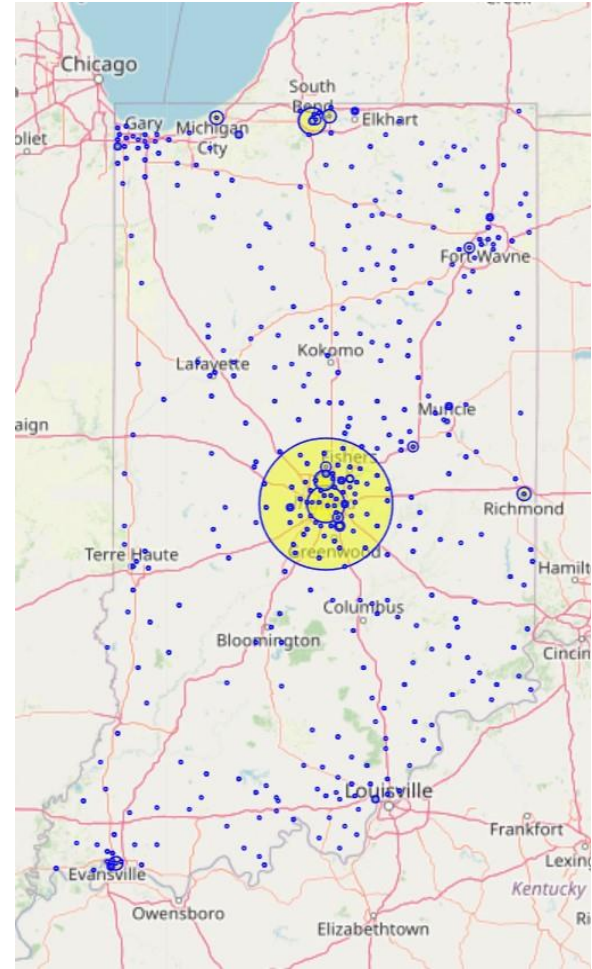
# Geographic Visualization of Trials

In the following slides we'll visualize how the trials are distributed in Indiana and across the US by trial locations.

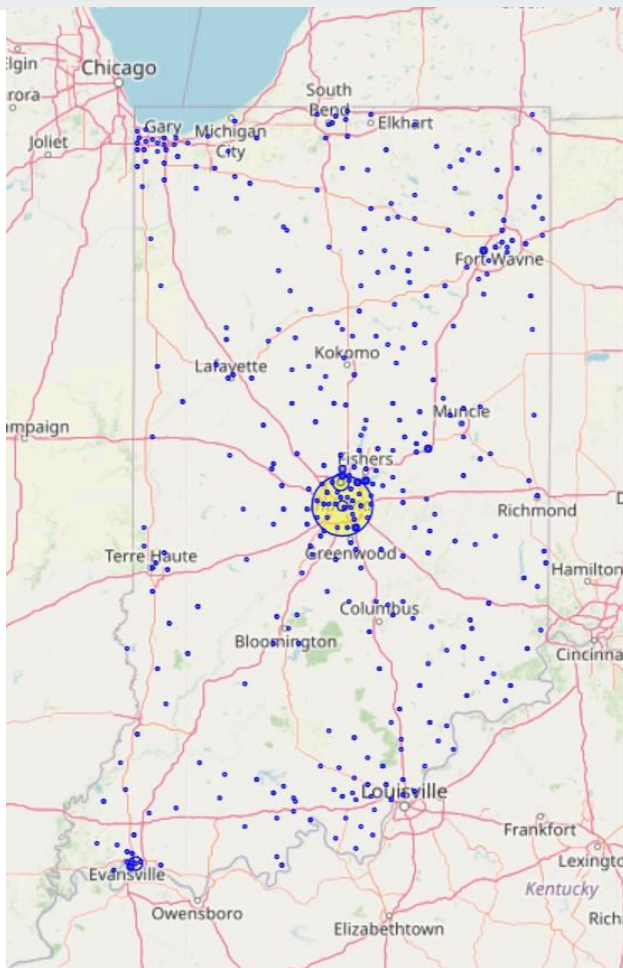
- Each blue circle represents a zip code where trials are located.
- The size of the circle is calculated by the number of trials at that location and the large circles are filled in with yellow so the other dots can still be seen.
- Some trials may not be included due to missing or unknown zip codes.
- The Indiana maps include all trials from all dates including but not limited to active ongoing trials.
- The National maps include only 2018 to present.

# Indiana Trials Mapped

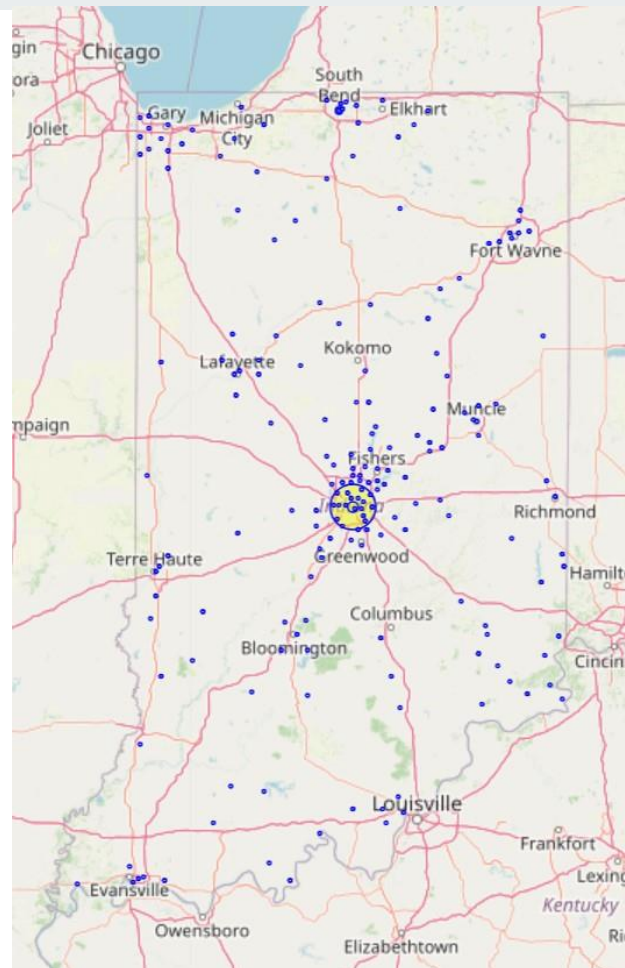
- The large circle at center is zip code 46202 where 3,897 trials are included in the data, this is the zip code where Methodist and University Hospitals are located.
- We can also see several large circles inside Indianapolis in addition to 46202 which are zip codes for other large hospitals.
- The vast majority of the small blue dots represent 1 trial location all time.



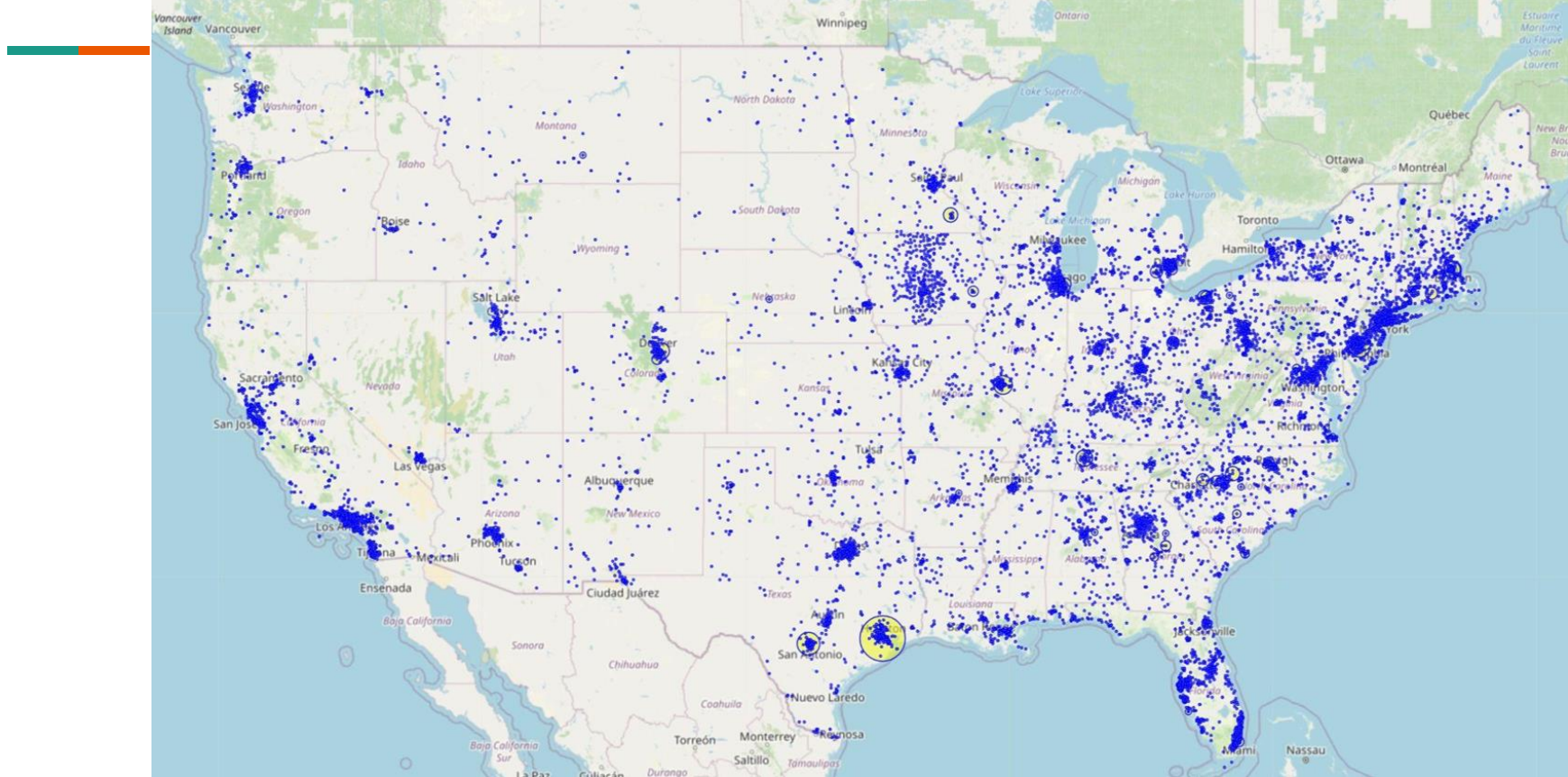
All Trials  
with  
Industry  
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Type



All Trials  
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Other  
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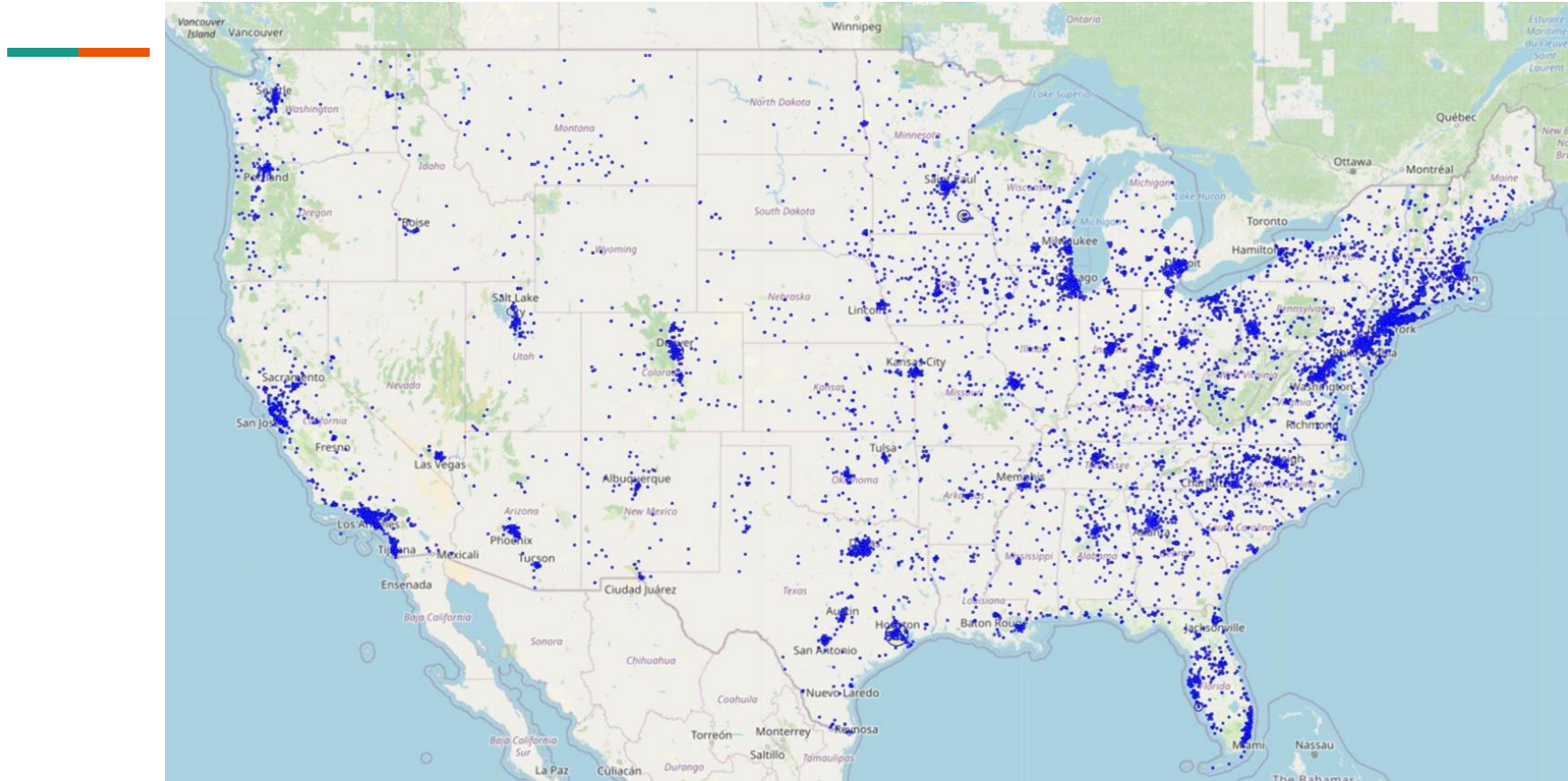


# US Trials Mapped- Start Dates 2018 to now: Industry

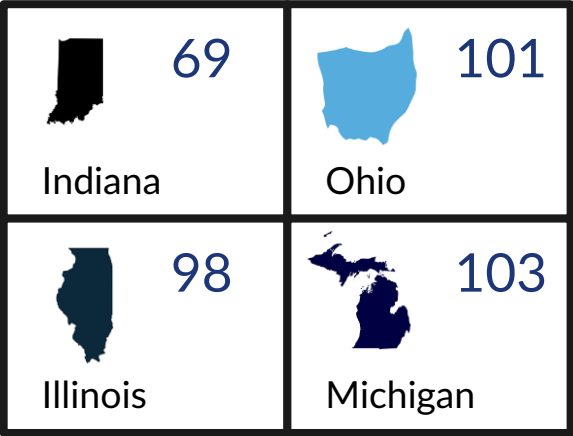




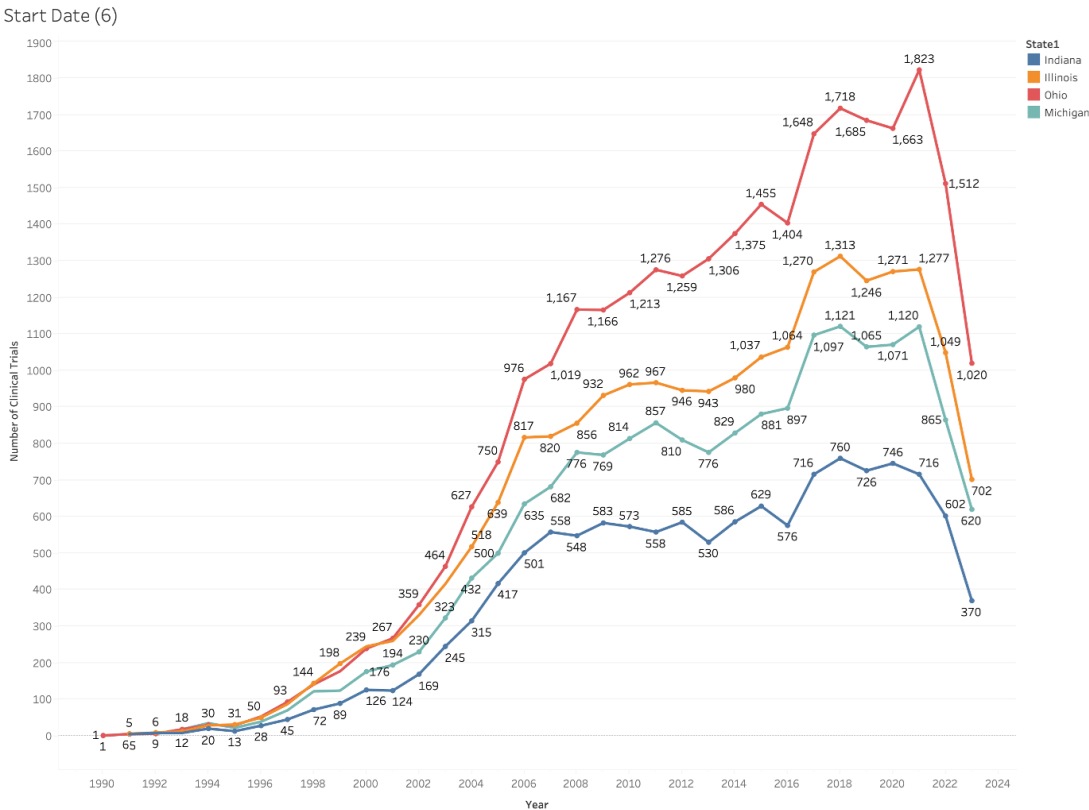
# US Trials Mapped- Start Dates 2018 to now: Other



# Neighboring States



Number of trials over time:



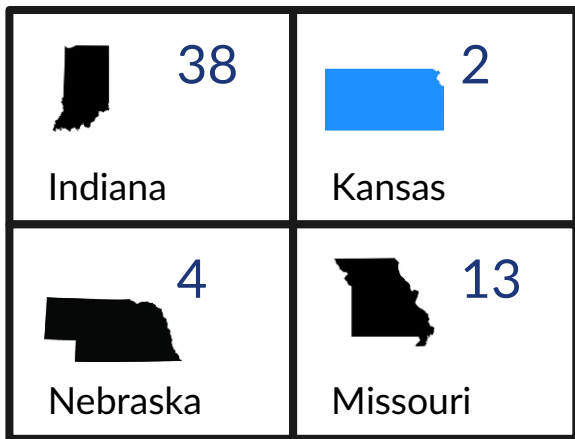
The trend of count of NCT Number (df all.csv) for Unified Start Date Year. Color shows details about State1. The data is filtered on Unified Start Date Year, which has multiple members selected. The view is filtered on State1, which keeps Illinois, Indiana, Michigan and Ohio.



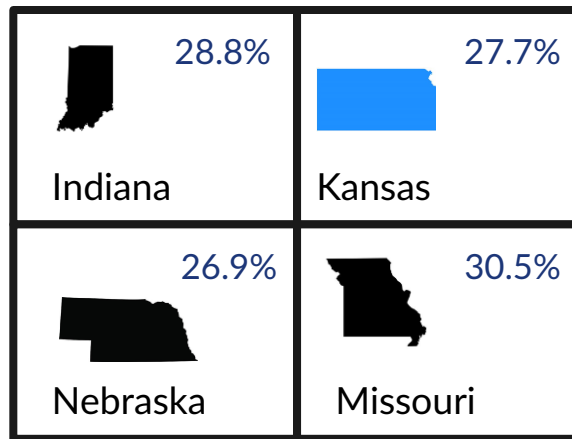


# States with Similar Rural Population

Trials per Capita State Rank



Percent Rural Population:





## Conclusions and Recommendations

In this presentation we offer an explanation for why Indiana lags behind our neighboring states and other similar states in the number of clinical trials we are participating in. After analyzing the data we believe the key to increasing trials in Indiana is to make our state more attractive to large multi-institution trials by offering easier and broader access to Hoosier trial participants. Indiana is already a well known leader with \$12 Billion in Life Sciences exports so the state should be well positioned to be a leader in clinical trial participation going forward.



# Methodology and Data Sources

- *Trial Dataset: All US Trials from Clinicaltrials.gov- NIH National Library of Medicine*
  - *<https://clinicaltrials.gov/about-site/about-ctg>*
- *Urban Rural Population information from the US Census*
  - *<https://www.census.gov/programs-surveys/geography/guidance/geo-areas/urban-rural.html>*
- *Hospital Information from the Centers for Medicare and Medicaid Services*
  - *<https://data.cms.gov/provider-data/dataset/xubh-q36u>*