Using Analytics to Advise Interstate Data Sharing
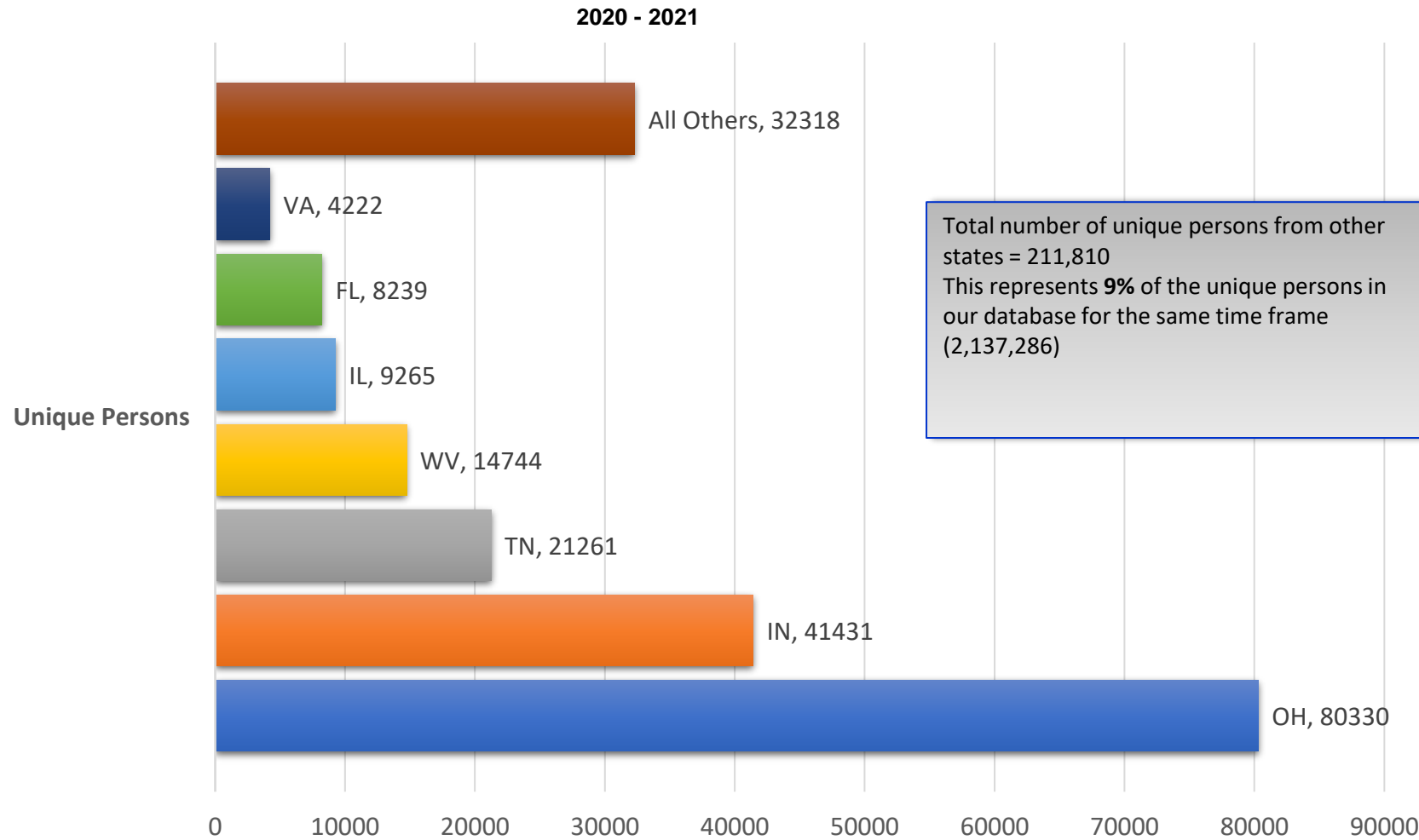
2022 Harold Rogers PDMP Meeting

Background

- Kentucky All Schedule Prescription Electronic Reporting System (KASPER) is an house developed and supported Prescription Drug Monitoring Program (PDMP)

- Began interstate data sharing in 2011

- Since 2015, Kentucky has shared data with six of our seven border states

- Since 2020, also share with the St. Louis County, MO Prescription Drug Monitoring Program (PDMP)

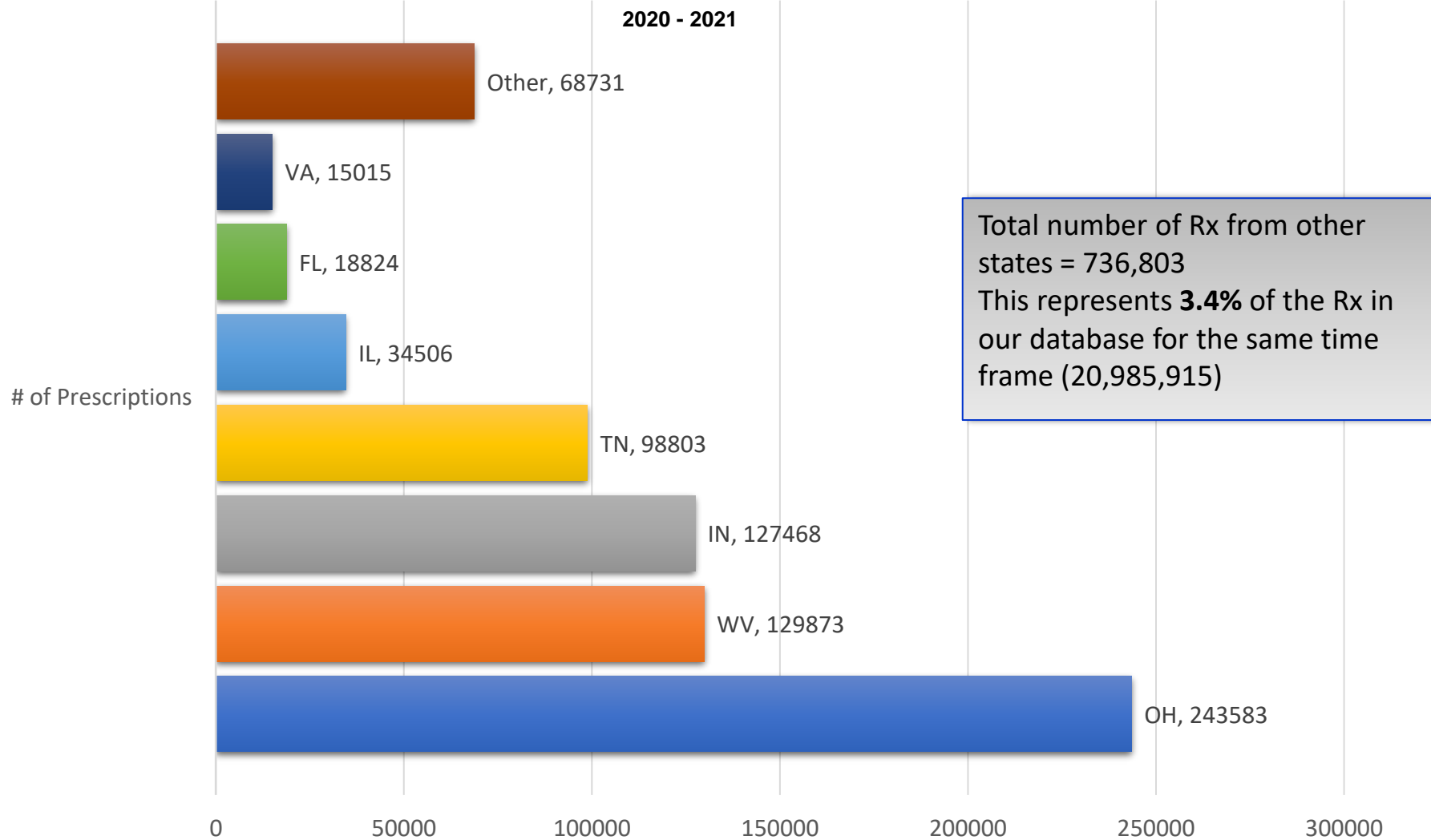- Currently sharing with 18 other states

The Challenges of Interstate Data Sharing

- Patient Matching

  - High probability match

  - Difference in patient matching criteria

    - All states: first name, last name and date of birth

    - Some states: zip code or telephone number

    - Kentucky: first name, last name, SSN (instate only), date of birth, street, city and zip code

- Impetus for request data from another state
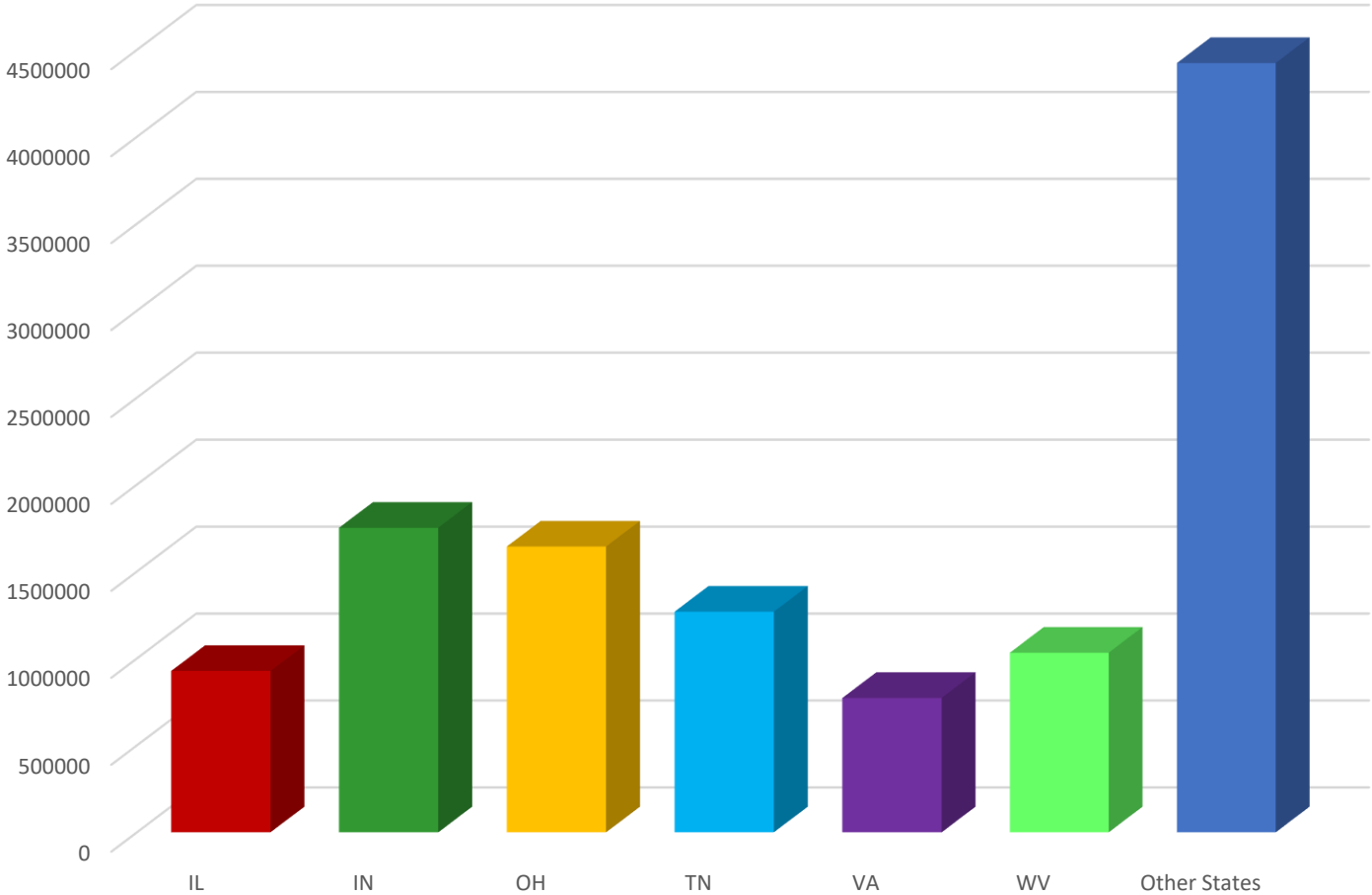
Other State Residents with CS Dispenses

2020 - 2021

Unique Persons

- All Others, 32318
- VA, 4222
- FL, 8239
- IL, 9265
- WV, 14744
- TN, 21261
- IN, 41431
- OH, 80330

Total number of unique persons from other states = 211,810
This represents **9%** of the unique persons in our database for the same time frame (2,137,286)

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CS Rx Dispensed to Other State Residents

2020 - 2021

Total number of Rx from other states = 736,803
This represents **3.4%** of the Rx in our database for the same time frame (20,985,915)

# of Prescriptions

- Other, 68731
- VA, 15015
- FL, 18824
- IL, 34506
- TN, 98803
- IN, 127468
- WV, 129873
- OH, 243583

0   50000   100000   150000   200000   250000   300000

Requests to Other States

The Problem

- Querying other states

  - Requests in our portal are based on the individual user's selection; 22% included a request to another state

  - Integrated requests are based on a corporate decision

- Composition of a patient request is based on what the originating state requires and not what the processing state utilizes

The Problem

- Large volumes of requests with low volume of matches

  - All states: 2.8%

  - Border states: 4.0%

- Regular reports of false positives and false negatives

Grant Project Goals

- Conduct an analysis of the cross border transactions between Kentucky and a couple of border states as well as a couple of non-border states to determine the nature and pattern of the transactions by:

- Examining patients with other state addresses who are dispensed controlled substances in the home state;

- Analyzing the prescriber location of these dispense transaction;

- Developing metrics to identify risk behavior patterns for diversion and substance use disorder in these populations;

- Mapping pharmacy, prescriber and patient zip codes considered to have risky behavior;

Grant Project Goals

- Utilizing systems data proactively, and

- Creating a process to use this data to inform interstate data sharing at the end user level through modifications to the KASPER system

- Future:

- Expanding to include data on KY residents receiving dispenses in other states

- Examine how to apply to interstate sharing

Logic for Suggesting Other States

- Algorithm Threshold Logic
  - Analyze all prescription records by KY zip code weekly for proportion of out of state patients receiving dispenses in KY
  - Create a reference table by zip codes

PAT_ZIP	DR_ZIP	PAT_STATE	DR_STATE	RXs_PAT_OUT_OF_STATE	RXs_GROUP_DR_ZIP	PROPORTION_DR
45638	41101	OH	KY	1257	83115	0.01512362389
25514	41230	WV	KY	1093	13062	0.08367784412
47130	40206	IN	KY	1007	30722	0.03277781394
37752	37752	TN	TN	973	5511	0.17655597895
45638	45638	OH	OH	970	8229	0.11787580507
25514	41222	WV	KY	923	4960	0.18608870967
25514	41230	WV	KY	899	18414	0.04882154882

- Proximity Table: Patient or Prescriber zip code is in a county bordering another state

Informing the Request for Other State Data

Informing the Request for Other State Data

Other States Selection

Suggestions for Other State Selection

Based on your location and patient address, the following states are suggested for interstate requests:

Suggested States:

IN - Indiana, TN - Tennessee

*Analysis is based on the dispensed prescription records within the KASPER system. This analysis should not supersede other information you may have regarding the patient and interstate dispenses.

Other States

Select Suggested States

AK	AL	AR	AZ	CA	CO	CT	DC	DE	FL
GA	GU	HI	IA	ID	IL	IN	KS	LA	MA
MD	ME	MI	MN	MO	MS	MT	NC	ND	NE
NH	NJ	NM	NV	NY	OH	OK	OR	PA	RI
SC	SD	TN	TX	UT	VA	VT			
WY									

Accept   Cancel

*Grayed out states are not currently available.
*The more states selected, the longer it may take to process your report request.

*Analysis is based on the dispensed prescription records within the KASPER system. This analysis should not supersede other information regarding the patient and interstate dispenses.

Implementation and Lessons Learned

- Offered webinars for end users
  - Lesson Learned: Many did not understand interstate data sharing
  - Webinars were well received
- Algorithm validated the need to request other state if in a bordering county
  - Lesson Learned: May not have needed the Proximity table
- Initial functionality to track and analyze was insufficient
  - Lesson Learned: Consider functionality to analyze use of new tools in the requirements building phase of every project.

Current State and Future Goals

- Conducting analysis of first year which is more complex than expected
- Initial analysis of requests with a patient match
  - All States – 6%
  - Border States – 4%
- Additional training offerings
- Solution is scalable to allow incorporation of aggregate data from others state on Kentucky residents

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