Is EHRs Data Extraction for Select Long-Term Care Settings Possible?

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FCSM 2023 Research and Policy Conference
October 24, 2023

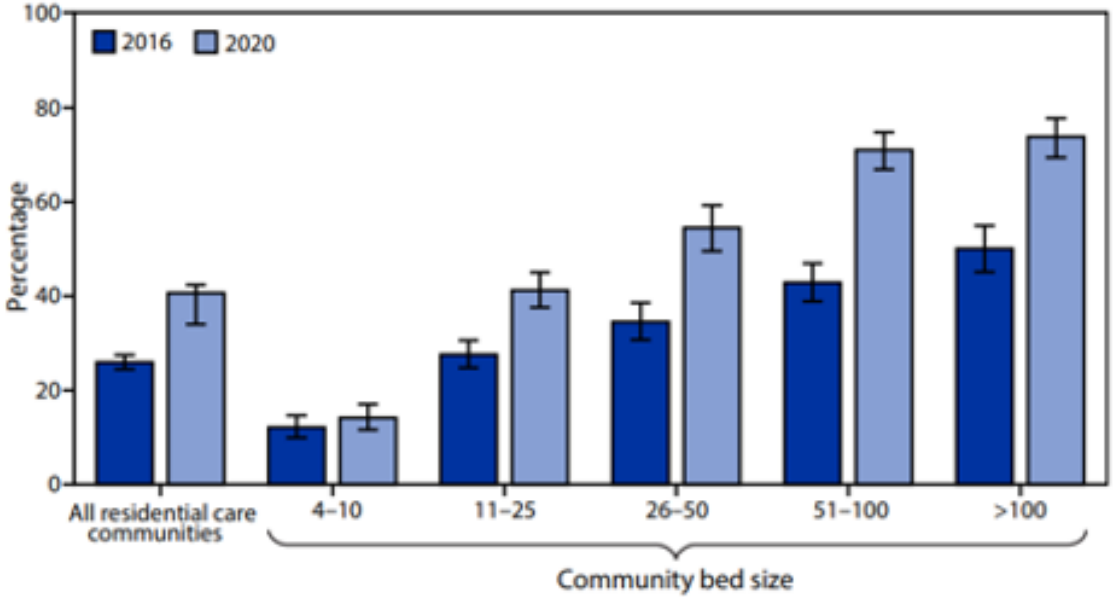
NPALS™ National Post-Acute and Long-term Care Survey

Disclosure

- None of the authors have any conflicts of interest to disclose.

- The findings and conclusions in this presentation are those of the authors and do not necessarily represent the official position of the National Center for Health Statistics, Centers for Disease Control and Prevention, Department of Health and Human Services, or RTI International.

Percentage of Residential Care Communities* that Use Electronic Health Records,† by Community Bed Size — United States, 2016 and 2020§



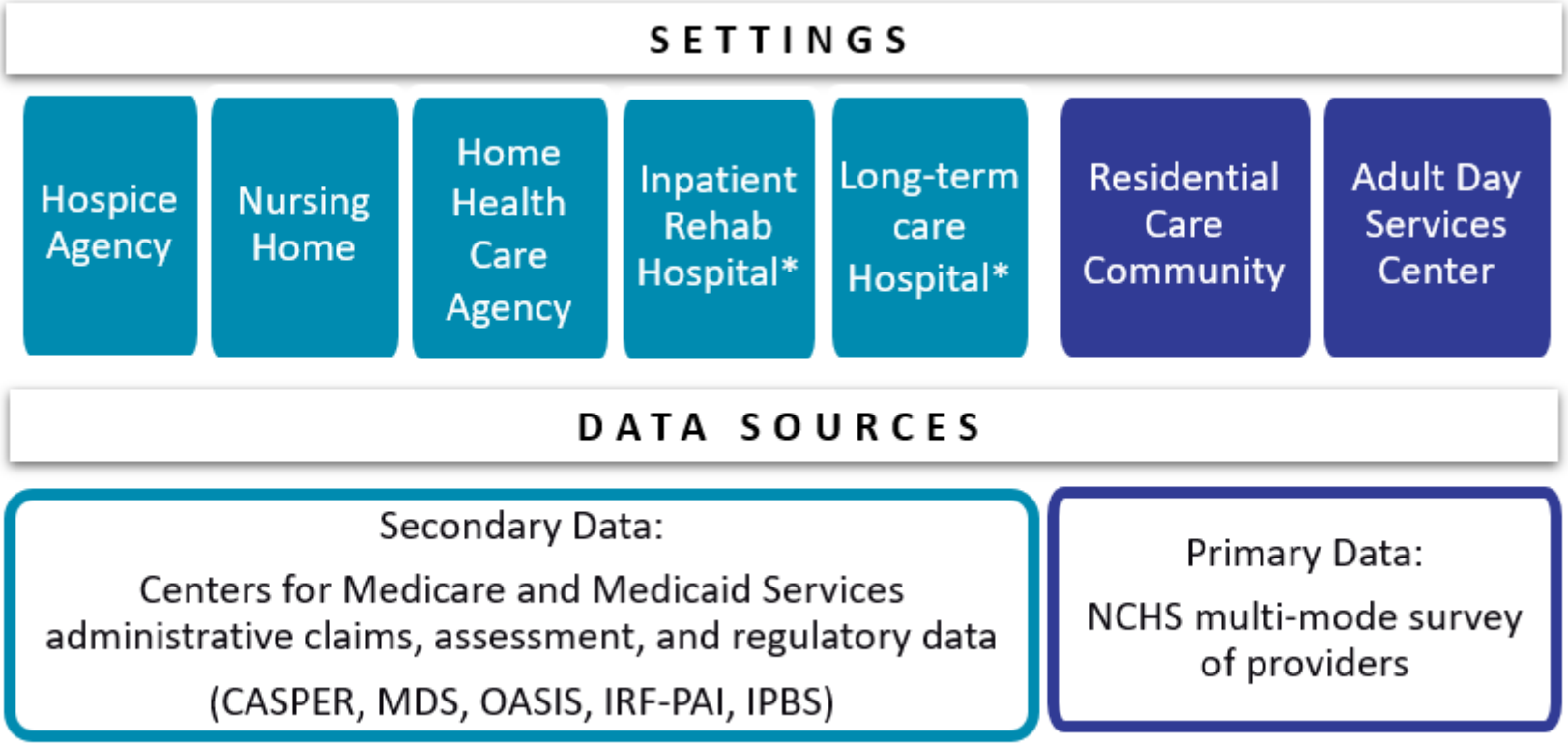
* Residential care communities are state-regulated, have four or more beds, provide room and board with at least two meals a day, and are staffed around the clock to provide supervision and assistance with personal care and health-related services to adults. Residential care communities licensed to exclusively serve persons who are mentally ill, intellectually disabled, or developmentally disabled were excluded.

† Respondents were asked, "An Electronic Health Record is a computerized version of the resident's health and personal information used in the management of the resident's health care. Other than for accounting or billing purposes, does this residential care community use Electronic Health Records?"

§ Residential care communities with missing data were excluded.

National Post-acute and Long-term Care Study

(formerly National Study of Long-Term Care Providers)



* Setting added in 2018

EHR Environmental Scan – 2022 NPALS

Overall Goal

- To assess whether NPALS data elements can be extracted from commercial EHR platforms or systems for residential care communities (RCCs) and adult day service centers (ADSCs).

EHR Environmental Scan – 2022 NPALS

Specific Goals

1. **Understanding EHRs characteristics and usage**
   - Identify existing EHR platforms/systems that may serve as alternative sources of data
   - Determine what information may be available on these EHR platforms.
2. **Assessing state regulations and data collection/reporting requirements**
   - Whether EHRs data are available on a consistent basis across geographic areas and provider types.
3. **Determining if EHRs data available**
   - Whether the data are aggregated, or do they have identifiable information that can be used to link these data to the NPALS respondents.
   - Whether the data are collected on a regular basis and how often the data are collected/updated (including lag time).

EHR Environmental Scan – 2022 NPALS

Study Design

1. **Literature scan**

2. **Subject matter expert interviews**
   - Provider associations
   - EHR vendors

3. **High-level analysis of EHR data suitable for extraction or reporting**

Results of Literature Scan

17 vendors serving the broad long-term and post acute care sectors

Challenges:

- Finding information on EHR market share proved quite difficult.
- Vendors are often hesitant to share proprietary information regarding their market share.
- Vendors do not adhere to the specific categorization of RCCs and ADSCs
- One vendor was able to quantify their market share for Continuing Care Retirement Communities (CCRCs) since this sector is distinctly defined

Insights from SME Interviews

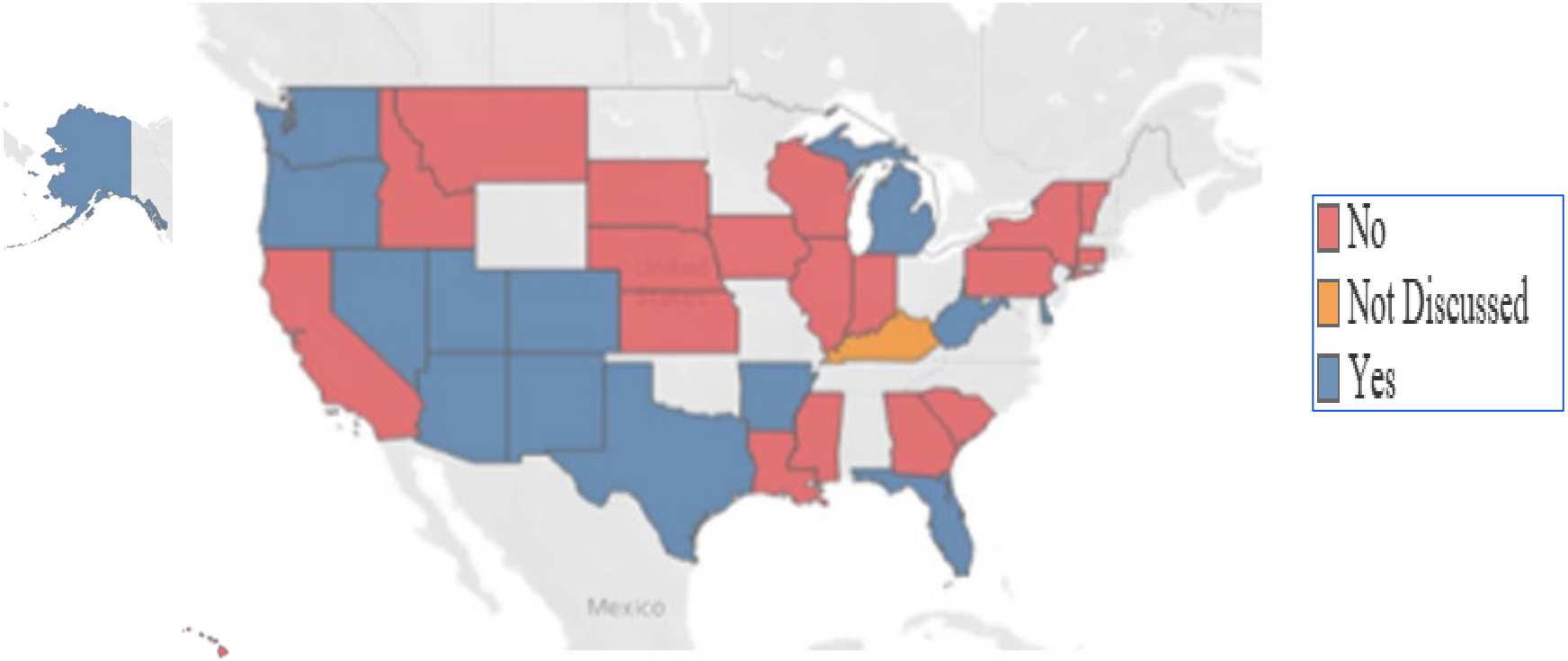
- Significant difference in adoption by facility size; Smaller providers often do not see the return on investment for implementing EHRs that larger providers do.
- Rural RCCs also have lower adoption due to greater barriers for internet access.
- More sophisticated providers use EHRs to manage staffing and workflow, regulatory compliance around documentation and record retention, invoicing, and data collection for quality measures.
- Medication management is most common for EHR usage amongst RCCs. Other services that are often utilized are incident reporting and customizable assessments depending on state.

Findings from the High-Level Analysis

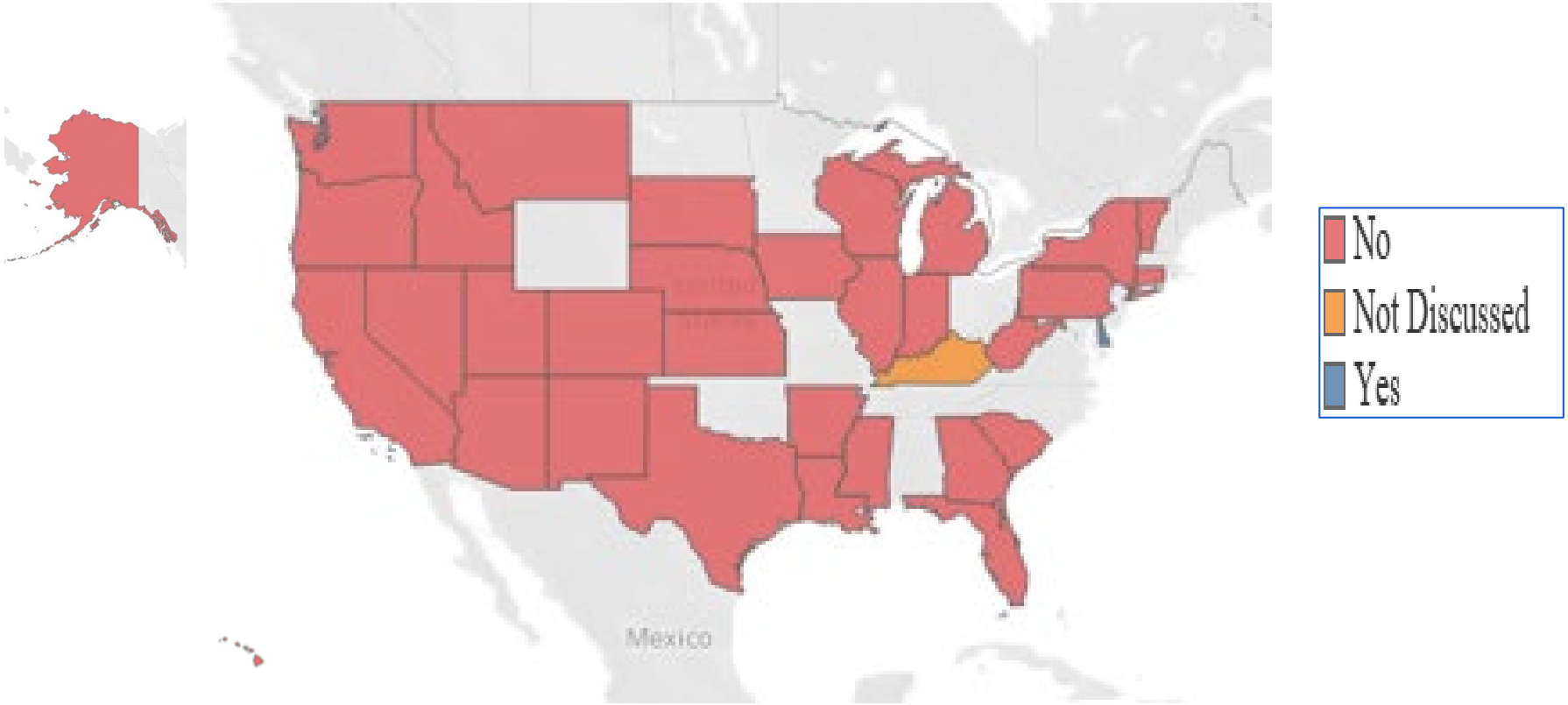
State Regulations and Reporting for EHRs

	State regulations require electronic reporting of infection control and/or public health data for licensed residential care facilities	Does the state licensure agency require reporting via the EHR?	Beyond infection control data, do any of your state regulations require your state's licensed residential categories to: 1) collect health record content; 2) adopt an electronic health record
State Totals: *Totals will not sum to 50 because multiple licensing agencies were interviewed for some states	Yes: 14 No: 20 Not Discussed: 2 Not Interviewed: 19	Yes: 1 No: 32 Not Discussed: 3 Not Interviewed: 19	Yes: 2 No: 28 Not Discussed: 5 Not Interviewed: 20

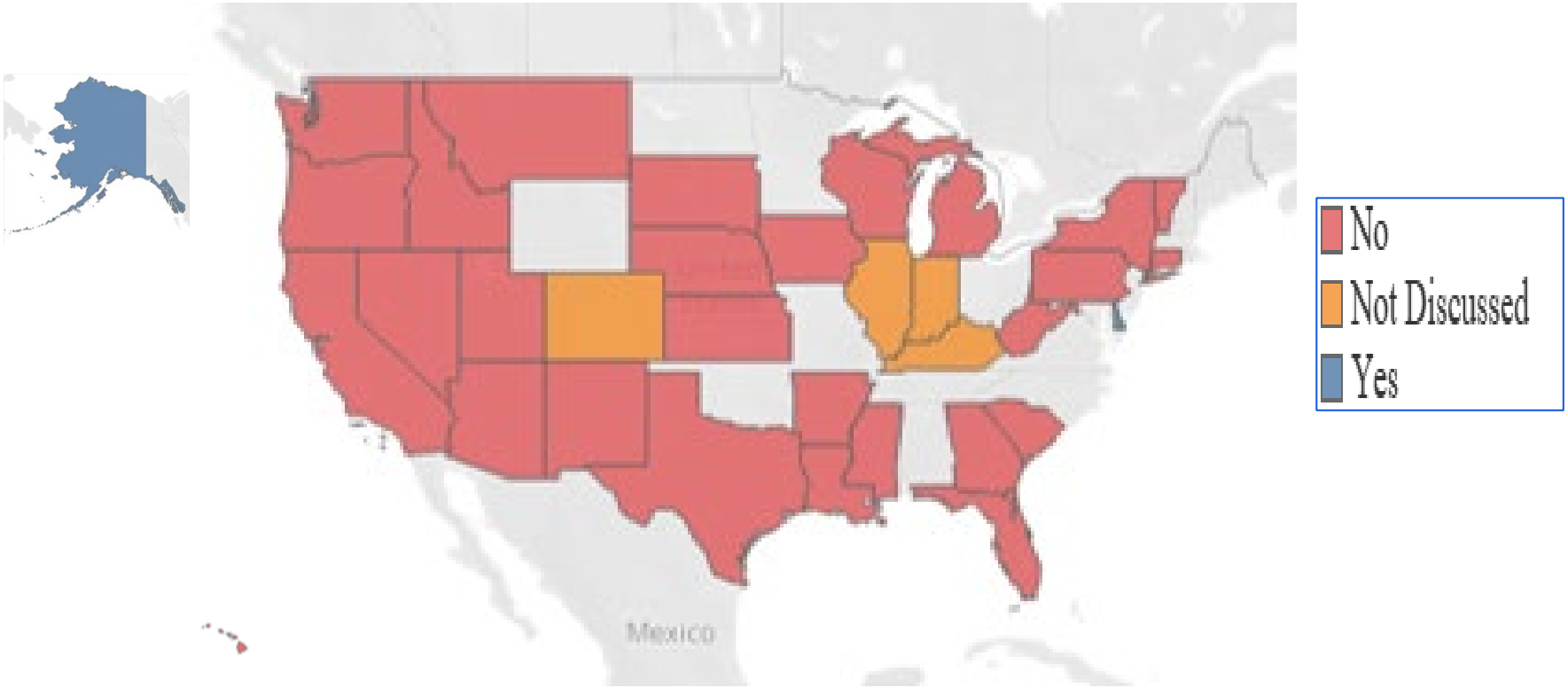
Does the state require electronic reporting of infection control and/or public health data?



Does the state licensure agency require reporting via an EHR?



Beyond infection control data, does the state require collection of health content or adoption of an EHR?



Findings from the High-Level Analysis

EHR Reporting Requirements	
State	Type of Reporting
AK, AZ, AR, CO, NV, TX, WA, WV	Electronic Portal option required; non-electronic reporting also allowed
DE	Required reporting of health record contents via EHR
FL, MI, NM, OR, UT	Required electronic portal reporting for positive COVID-19 cases

Findings from the High-Level Analysis

Crosswalk of NPALS Items to EHR Vendor Data

There are measures in both

- Demographics, diagnoses, medications, functional status, health outcomes, select organizational characteristics

Variable level of effort to align the two

- Demographics and diagnoses lower level of effort
- Organizational-level characteristics higher level of effort—would need to infer

Some limitations….

- Not required, so not all providers included
- No standardization (customization common)
- Little data integration and harmonization (e.g. diagnoses)
- Available software varies (small vs large providers)

Conclusions

There is potential for using EHR data to support the survey process, but...

- Not much regulation and data from states
- Commercial EHRs data may require a high level of effort and will not be nationally representative
- Programming and automating capture would be required as well as the creation of a database for storage

Recommendations

- Work to align survey content with data elements and standards for EHRs found in the US Core Data for Interoperability (USCDI).
- Build on Data Already Collected and Reported
- Evolve Survey Questions on EHR and Health IT Use
- Test Different Approaches for Data Extraction and Reporting
    - Data extraction by vendors for survey respondents to complete the survey
    - Respondents generate their own EHRs reports to complete the survey
    - Vendor-supported queries of EHR data to obtain reports to complete survey
    - Development of standardized approaches to report survey data
    - Explore testing with HIE organizations that includes NPALS settings data

Thank you!

More information about NPALS…

Visit: https://www.cdc.gov/nchs/npals/index.htm

Email: ltcsfeedback@cdc.gov