Rhode Island Health Care System Planning

2024 Foundational Report

Chapter 9: Data

EXECUTIVE OFFICE OF
HEALTH & HUMAN
SERVICES
STATE OF RHODE ISLAND

Recommendations for Strengthening Data to Support Health Care System Planning in Rhode Island

Background

Rhode Island Executive Order 24-04 (McKee, 2024) stipulates that the Cabinet focus on *"integrating oversight and accountability of the health care system using quality data and make recommendations for establishing a framework for regulating and overseeing the entire System of Care."* As such, this chapter offers recommendations to improve the quality and availability of data for health care system planning, monitoring and oversight, and evaluation.

The Health Care System Planning initiative draws on existing data to inform the assessments and recommendations offered throughout this report. Each of the contributing workgroups generated analytical questions to inform their understanding of the challenges and opportunities within and across Rhode Island's health care system.

EOHHS contracted with Freedman Health Care (FHC) to serve as the data analytic team for the report. FHC is a consulting firm that partners with state health agencies to analyze and improve health data for understanding state-specific health care needs and driving policy decisions. FHC contributes solutions to states' unique needs while aligning and advancing national trends in health data analytics. FHC also serves as the project management and technical support vendor for the Rhode Island EOHHS Medicaid IT Enterprise environment. This work includes providing project management, subject matter expertise, database architecture, and analytics in support of the Rhode Island Data Ecosystem, the State's All-Payer Claims Database (known as HealthFacts RI), and the Office of the Health Insurance Commissioner's Cost Trends Data Hub and reports.

FHC assisted the workgroups by sorting their questions into near-term and longer-term analytic projects. Near-term requests were answered by gathering and analyzing data and generating numerous data visualizations and analyses to inform and describe the findings and recommendations surfaced in this phase of the Health Care System Planning initiative. These visualizations and data are being prepared for posting on the Rhode Island Health Care System Planning website, where visitors can explore and interact with the information. Some examples of the data that will be available include:

- An interactive dashboard to display health care workers that are entering and leaving the workforce, by license type, from 2011through 2024. This analysis was completed to support better understanding of the current workforce supply and workforce trends.

- Interactive maps that display variation in the level of care that persons with a diagnosed condition receive. The Health Related Social Needs Workgroup was interested in understanding how care received for chronic conditions varies across regions.

- An interactive dashboard for exploring the top ten diagnoses for Rhode Islanders for each year from 2016 to 2023, by age band. The dashboard was developed for the Long-term Care and Healthy Aging Workgroup, and shows how different age cohorts vary in diagnoses, how and where care was provided, and how diagnoses changes over time.

- Additional dashboards and static visualizations developed for the sectors will be included on the website, aligning with the questions each sector aimed to explore. This website will continue to be

populated as the Rhode Island Health Care Planning System team moves into the Implementation phase, including visualizations yet to be developed described in the recommendations section below.

The broader recommendations encompassed in this chapter enable the longer-term workgroup-specific data recommendations collected by FHC and presented throughout the report, as well as in the data recommendations compendium below.

This data analytic process underscored for the Cabinet and the State staff the importance of an increasingly formalized data infrastructure for the Health Care Planning structure. This understanding led to the set of recommendations offered here on how data can be more easily and quickly brought to bear to inform planning, monitoring, and oversight, and to evaluate the system reforms set in motion by this work overall.

Key Themes from Work-to-Date

This phase of system assessment and recommendations development surfaced several key themes about how data can best support Health Care System Planning:

1. Health Care System Planning relies on available data but also requires new data types to be collected.

    a. Existing and new data types can be used together to accomplish fiscal transparency and performance monitoring for health care entities such as hospitals, behavioral health providers, skilled nursing facilities, and federally qualified health centers.

2. When data are combined, they provide clearer insights into the health system's interdependencies.

    a. Health Related Social Needs (HRSNs) information, such as spatial distribution of socioeconomic characteristics, environmental impacts and assets, transportation access and safety can be combined with other data to better understand health outcomes.

3. Regular system monitoring through established and accessible modalities (i.e. performance monitoring dashboards) streamlines information to more rapidly inform and improve decision-making.

    a. Data from the Healthcare Workforce Data Hub are readily available to support workforce recommendations and these data can be enhanced by gathering additional information about the workforce through licensure.

    b. Fiscal transparency and performance monitoring of health care providers can be similarly accessible through regularly updated dashboards.

4. Standard units of analysis will help planning participants understand and address health equity. Wherever possible, analyses should array information by race, gender, sexual orientation and gender identity, disability status, age, socio-economic status, primary language spoken, and geography. Note: Best practices for the collection and reporting of sexual orientation and gender identity (SOGI) information are evolving and yet-to-be standardized. New information and analyses produced from these data should be for the purpose of advancing equity and health for LGBTQ+ individuals and populations. A risk assessment specific to the LGBTQI+ population should be considered when reporting this information.

a. Data products designed to isolate and sort the variables that impact health will improve health outcomes. The variables identified through health planning can be isolated with a consistent methodology across analyses (such as standard geographic regions).

Recommendations for Ongoing Data System Improvements

Summary of Recommendations

With consideration for the themes above, as well as the overarching goal of supporting a high-quality, affordable, equitable, accessible, culturally, and linguistically appropriate health care system, here are a set of high-level recommendations to address data gaps and limitations identified by the health care system planning initiative:

1. Centralize more health care data in the Rhode Island EOHHS Data Ecosystem; use the Ecosystem as the health data hub for health care system capacity planning, oversight and monitoring, and evaluation.

2. Develop fiscal transparency and performance-monitoring dashboards utilizing Rhode Island EOHHS Data Ecosystem infrastructure.

3. Analyze transitions-of-care system-wide to identify bottlenecks in patient flow between settings of care.

The Rhode Island EOHHS Data Ecosystem is central to the recommendations above. Rhode Island has been at the forefront of integrated health data systems and continues to invest in and improve this work. The Ecosystem was established in 2017 and is an exemplar across the country in data governance, safety, and system integrity. Through carefully governed, permissioned access to de-identified data, the Ecosystem is used by both state and non-state partners to conduct research to better understand the state health and human services system and its impact on individuals, cohorts, and populations. The Ecosystem integrates data from many different sources to provide a more complete, interconnected picture of the well-being of individuals, families, and communities in Rhode Island. Some key partners contributing data to the Ecosystem include Medicaid, DCYF, DHS, DLT, RIDOH's Center for Health Data and Analytics, and the Rhode Island Coalition to End Homelessness. Since being established, the Ecosystem has continued to grow and develop its capabilities as a health data source for Rhode Island. The following recommendations, described below in more detail, align with the Ecosystem's planned upgrades and capacity expansion already underway.

1. Centralize more health data in the Rhode Island EOHHS Data Ecosystem; use the Ecosystem as the health data hub for health care system capacity planning, oversight and monitoring, and evaluation
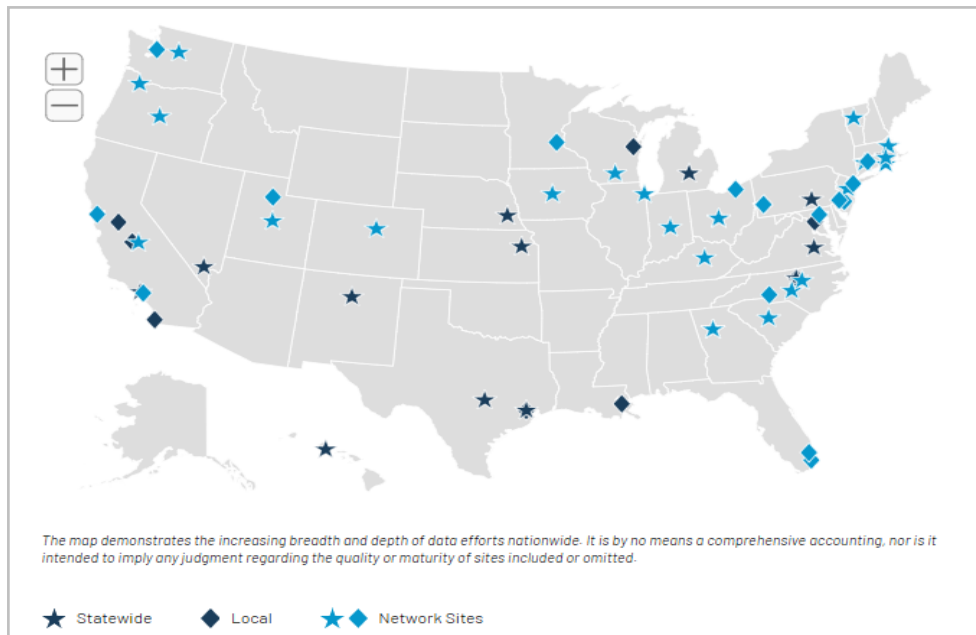
Health and human services data in the United States are often as fragmented as the systems they describe, scattered across silos with limited coordination or integration. Recognizing this challenge, states are increasingly centralizing and coordinating health data to gain a more comprehensive understanding of health outcomes, disparities, access, and costs. Centralized data systems enhance insights for policymaking

and regulation by consolidating diverse data sources, streamlining analyses, and enabling the creation of unified, actionable narratives.

Unified health data systems are known in numerous ways: data hubs, ecosystems, data collaboratives, data intermediaries, and state health data organizations (McAvey, 2024). Many of these efforts share the goal of centralizing data and combining information across various sources to provide a unified, more complete understanding of individuals and populations experiencing the multiple dimensions of the health and human services system. Dimensions often include health care coverage types, services, programs, and information about environmental factors that influence health. Figure 1 below maps the health data integration efforts currently underway in the United States (Actionable Intelligence for Social Policy, 2024)

Figure 9.1: Integrated Data Systems

The map demonstrates the increasing breadth and depth of data efforts nationwide. It is by no means a comprehensive accounting, nor is it intended to imply any judgment regarding the quality or maturity of sites included or omitted.

★ Statewide   ◆ Local   ★ ◆ Network Sites

As a trusted convener and data steward, the Rhode Island EOHHS Data Ecosystem is positioned to serve as the central hub for health care data in Rhode Island, supporting comprehensive health care system planning. With established structures already in place including statutory authority, governance, data stewardship, funding sources, and an existing bank of data, the Ecosystem can serve as the comprehensive health care data hub and analytical resource for health care system planning.

Action Steps

Figure 9.2

Key Short-Term Action Steps	Rationale
1. Designate the Rhode Island EOHHS Data Ecosystem as Health Data Hub.	A clear designation of the Ecosystem as a health data hub provides support for incorporating new data to meet health planning data needs while allowing for stream-lined decision-making.
2. Prioritize and stage identified data types for Ecosystem integration. Example of potential first phase priorities may include the following types of anonymized, secure data: • Hospital Discharge Data • Health Related Social Needs Data • Longitudinal Data System (LDS) and educational outcomes data	Centralizing more health data in the Ecosystem will improve access to comprehensive information and reduce effort and costs associated with gathering data from multiple sources to support holistic health system planning, monitoring, and evaluation. Adhering to the Ecosystem's nationally recognized data governance model ensures safety, security, and de-identification of data.
3. Complete data inventory to inform prioritization of additional health data to be housed within the Ecosystem.	Conduct inventory to include review of existing data and new data collection priorities and identify key partnerships for identifying priority data for integration.
4. Establish process and criteria for proposing additional existing data types to be included in the Ecosystem.	Criteria should reflect the potential health system impact of integrating new data types within the Ecosystem.
5. Prioritize and stage new data types for Ecosystem integration, in alignment with dashboard Recommendation 2: • Hospital financial data • Skilled nursing facility financial data • Federally qualified health center data • Behavioral health facility financial data • Health related social needs data (i.e. closed loop referrals)	Collection and use of new data types can happen simultaneously with integration of existing data types.

2. Publish fiscal transparency and performance-monitoring dashboards using the Rhode Island EOHHS Data Ecosystem infrastructure to incorporate additional and new data types

Fiscal Transparency Dashboards Consistent with national trends, there is growing concern and interest in health care provider entity fiscal transparency, solvency, and performance. Across workgroups involved in this phase of the health care system planning initiative, there was strong support for utilizing existing data as well as collecting new data to populate performance-monitoring dashboards for a variety of health and human services system provider types. An example framework for a hospital fiscal transparency and monitoring dashboard is featured in the hospital-focused chapter of this report (see Figure 6.22). While certain metrics are specific to the hospital industry, many sample metrics in the framework are applicable across care settings and facilities within the health care system and contribute to a starting template for additional dashboards.

A suite of dashboards focused on fiscal transparency, solvency, and performance will not only provide critical information relative to a specific provider type, but this information can also help to explain and address the pressures created by system interdependencies. For example, understanding skilled nursing facility (SNF) bed availability can help to streamline patient care transitions as they move from the hospital to the SNF setting, which will have a direct impact on hospitals' patient census and bed availability. Similarly, if Rhode Islanders are unable to access appropriate primary care services, such as in a federally qualified health center, they may seek costly, non-emergent care in a hospital emergency department setting or suffer a health emergency because of a lack of preventive and more comprehensive primary care services.

Performance-monitoring dashboards can leverage existing information from Rhode Island's health data assets, such as utilization data from the All-Payer Claims Database (APCD). The APCD, known has HealthFacts RI, is a large-scale database that systematically collects health care claims data from a variety of payer sources, including Medicare, Medicaid, and Rhode Island's largest commercial payers. The information is anonymous and cannot be linked to particular people. The APCD provides information about the quality, cost, and efficiency of Rhode Island's health care delivery system. The system includes information about eligibility, medical claims, dental claims, pharmacy claims, provider details, and alternative payment models (APMs). The APCD offers important insights about health care provider entities with respect to spending and utilization, access, and quality but **new data types are also required for fiscal transparency and solvency monitoring, in particular. The workgroups support the creation of the following dashboards for the short-term, to facilitate fiscal transparency, solvency, and performance monitoring:**

- Hospital fiscal transparency and performance monitoring (see exhibit below for example, or we could reference page number with example from other section of report)

- Skilled nursing facility financial transparency and performance monitoring

- Primary care beginning with Federally Qualified Health Center financial transparency and performance monitoring

- Behavioral health facility financial transparency and performance

Workforce Dashboards Alongside interest in dashboards for tracking fiscal transparency and facility solvency, workgroups also focused on dashboards and data hubs particularly relevant to the health care workforce. The following recommendations speak to the need for more refinement in understanding the

capacity of the primary care and behavioral health care workforce. Recommendations for improving understanding of the health care workforce at large are included in the health care workforce section.

- Develop and publish primary care and behavioral health provider dashboards focused on:

  - Current workforce (e.g., number of current primary care providers, level of clinical activity/FTE, size of patient panels mapped by geography)

  - Future workforce (e.g., number of trainees graduating from Rhode Island institution of higher education, number of trainees remaining in practice in Rhode Island)

  - Patient experience (e.g., adults with access to usual source of care)

Action Steps

Figure 9.3

Key Short-Term Action Steps	Rationale
1. Develop project plan for implementing dashboards.	Identifying new data types, authorities to collect the data, and stakeholders across different provider entities requires a detailed project plan to organize and implement the effort. Dashboards from existing data also require project planning.
2. Determine prioritization of dashboard development or simultaneous development across provider types.	A more focused or step-wise approach may deliver a final product faster than a simultaneous development approach and the trade-offs should be weighed.
3. Ensure specific data structure and monitoring and evaluation efforts are developed and applied to inform the State's efforts to promote health equity and address disparities.	Applying standard units of analysis will help understand and address health equity.
4. Create "mock" dashboards modeled from Draft Health Care Provider Financial Health and Efficiency Dashboard featured in report.	Mock dashboards provide a test case for the measures and metrics that stakeholders have identified for inclusion in the dashboard.
5. Incorporate feedback to create Phase I Dashboard for publication.	Dashboards for ongoing fiscal transparency and solvency monitoring should reflect input from the entities supplying the data.

3. Analyze transitions-of-care system-wide to identify bottlenecks in patient flow between settings of care – and based on analysis, consider real-time bed availability tools

The health care system planning initiative prioritizes better understanding and monitoring of health care system capacity. In so doing, the workgroups recommend near-term analysis of patient transitions between settings of care. Such an analysis will provide additional insight into the factors that may be inhibiting or complicating transitions and impacting system or provider-specific capacity. The analysis is a first phase of ongoing work to allow the state and its provider network to simultaneously monitor the demand for a

certain service and the capacity of the service provider network to meet the demand. Longer-term, developing and applying tools, such as real-time bed availability tracking, including associated analytics that systematically monitor the data gathered by the tracking tool, could greatly support health system planning.

Action Steps

Figure 9.4

Key Short-Term Action Step	Rationale
1. Develop analytical plan for a system-wide assessment of transitions of care and identification of bottlenecks and contributing factors.	Understanding where and why there are barriers to care in the most appropriate, least-cost setting is critical for optimizing health system capacity, access to care, and health outcomes.

Conclusion

Governor McKee's Executive Order creates a framework for health care system planning in Rhode Island and anchors this work with an integrated, system-wide approach that is grounded in data. Reflecting this approach, the recommendations in this chapter emphasize continued data integration by centralizing more health and human services data within the Rhode Island EOHHS Data Ecosystem and data-driven fiscal transparency and performance monitoring dashboards and analyses. Taken together, these recommendations promise to continue the optimization of existing data assets and to provide appropriately governed information for ongoing health care system planning, performance monitoring, and evaluation, with the goals of improving health outcomes, access, and the quality, affordability, and equity of care for Rhode Islanders.

References:

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