CHCS Center for Health Care Strategies, Inc.

Complex Care Innovation Lab
Dashboard Profiles

Introduction

The information provided in this memo provides background and details on healthcare data dashboards. In this context, a dashboard is the end-user interface of an organization's electronic health record (EHR)or care coordination software, which provides quick, accessible information to both providers and administrators. Organizations are increasingly recognizing the opportunities for these dashboards to support care coordination and track health outcomes of their patient population. Dashboards are a powerful tool that can be customized to provide a single consistent and reliable source of information, so that all staff can speak the same language, adopt a system-wide standard of care, and work together to implement improvement initiatives.

The *Complex Care Innovation Lab (Innovation Lab),* supported by Kaiser Permanente Community benefit and led by CHCS, brings together national leaders in improving care for low-income individuals with complex medical and social needs. The *Innovation Lab* is a collaborative of 15 health care organizations including nine that have provided us with dashboards: the Camden Coalition of Health Care Providers, Commonwealth Care Alliance, CareOregon, Hennepin Health, Johns Hopkins Medicine, Montefiore Medical Center, Project ECHO, Southcentral Foundation, and Stanford Coordinated Care. This memo provides a summary of the ways *Innovation Lab* members have customized their EHR or care coordination dashboards to suit their programmatic needs.

Innovation Lab members' dashboards primarily present three types of information:

1) ***Information that tracks the provider's care coordination activities and engagement with a patient.*** A number of the dashboards provide information on the ways in which patients interact with the care coordination program, including number of encounters with the patient and whether those encounters were in-person or by phone;

2) ***Clinical measures for the participating providers.*** Dashboards often include more traditional clinical process and outcomes measures, , allowing members of the provider's care team to analyze to what extent their care is improving the health of their patients; and

3) ***Information that tracks the use of the provider's resources.*** Dashboards also track workflow and workload for the care teams, ensuring that the provider's resources are used correctly; some dashboards also present information on the financial cost of interventions.

Care Coordination Activities

The Camden Coalition of Healthcare Providers (CCHP) tracks enrollment of patients by week and care team hours spent on patients. As part of their evaluation of their operations (and in line with Camden's city-wide "7-Day Pledge" campaign), the Camden Coalition also tracks patient follow-up measures including "days to home visit" and "days to PCP or specialty visit" for patients, to show patients' utilization trends.

The Patient Navigator used by Montefiore Medical Center lists on one page all the interventions received by the patient, including referrals to specialists and non-medical interventions including the coordination of transportation and discussion of care plan goals. This comprehensive data set shows the patient's current utilization habits, and potentially their engagement with different providers and services.

The Commonwealth Care Alliance is an integrated payer/provider system that collects information for all patients in its Behavioral Health Home program. Data include: enrollment date and all inpatient admissions since enrollment; length of stay; and whether those stays involved skilled nursing care. This information allows CCA to track service utilization and expenditures.

Johns Hopkins Community Health Partnership (J-CHiP) displays metrics including: the number of patients encountered by staff; the number of face-to-face encounters; and the number of patient intakes completed on the phone or through the mail. Johns Hopkins' dashboard presents information on the percentage of patients with individual care plans within 30 days of enrollment, and the percentage of patients who have had contact with the organization within the last six months.

Stanford Coordinated Care's dashboard, in addition to presenting standard clinical outcomes measures for each care team and organization, presents a "patient health portrait" with charts of the patient's outcomes (e.g., A1c, blood pressure readings, LDL levels) and test and assessment results plotted over time, to illustrate the patient's current health status and help anticipate any future health issues.

Clinical Measures

Dashboards can also illustrate a number of clinical metrics ranging from patient utilization, organizational quality measures, and overall outcomes. Since many programs aim to reduce patients' use of emergency departments (EDs) and inpatient services, their dashboards in addition to specific measures detailed below provide information on inpatient admissions since enrollment in the program, admissions in the last three months, 30-day readmission rate, or ED visits.

The Camden Coalition, a New Jersey Medicaid ACO demonstration pilot, also utilizes its data dashboard to display a variety of quality measures that are part of the ACO program, including metrics related to: preventive care; acute care; management of chronic conditions; CAHPS/ satisfaction; follow-up; utilization; social supports; and identification of drug and other services. The dashboard also compares them to a baseline rate.

Hennepin Health, Johns Hopkins, and Southcentral Foundation's dashboards all present information on organizational and clinical outcomes measures, generally focusing on common metrics that illustrate chronic disease management (e.g., asthma, diabetes, hypertension). Preventive care measures include depression screening, tobacco use assessments and BMI assessments.

Stanford Coordinated Care collects HEDIS data on its patients and presents the information in a table that automatically color-codes which interventions are part of the screening tools. Stanford also presents its' patient population's clinical measures in a table to assess the risks that its population is facing.

Utilization of Resources

Many dashboards present information on the care teams' utilization of resources, mainly to ensure that they are capable of meeting their clients' needs. For example, CareOregon tracks clients added each quarter to make sure that their Health Resilience Program does not exceed capacity and overload staff with high caseloads. The Camden Coalition's dashboard provides a wealth of information on workload measurements for all the outreach workers on its care teams, including individualized accounting of hours worked by week. Project ECHO monitors hospitalization encounter data for the patients in its program, and presents what portion of patients have received a transition plan developed by their care teams.

Montefiore Medical Center's dashboard presents both utilization and cost information on its patients. It breaks down health care utilization information in detail, including a presentation of patients' utilization across a list of 36 medical specialties and 18 other categories (e.g., "dentist," "hospice") at the hospital. Montefiore also collects and presents extensive cost data for its patients, including charts and graphs that show percent of total costs for patients stratified by risk level. The charts further break down costs by spending category: inpatient; outpatient; and professional, and the proportion of costs attributed to "potentially preventable services" incurred by the patients in each risk category.

The Southcentral Foundation's dashboard displays information on patient participation in interventions to generate predictive risk reports, using automatic searches segmented by group of patients, department, and location of intervention (e.g., ambulatory care, ED, clinic). The dashboard also tracks rates of specific medications on a population level to identify over-prescribing. Finally, the dashboard includes clinical outcomes measures for each of its locations and providers, in addition to dashboards for each care team with results and percentile benchmarks from HEDIS results.

Depicting Data

Dashboards are not a data collection or management tool – rather, they present data to the care team so staff can quickly glean important patient- and organization-level information. The Camden Coalition uses an array of graphs and charts to clearly depict care team activities. The dashboard landing page tracks individual care team members' hours spent with patients, using rows and columns of color-coded raw data in a streamlined but intuitive layout. Stanford Coordinated Care's "patient health portrait" is another example of innovative presentation of health care data. The portrait contains the patients' scores on key clinical indicators, any care gaps identified by the care coordinators, and presents a series of line graphs depicting the patient's interactions with the team. On a single page, it delivers the "at-a-glance" information for a patient to the member of the care team accessing the portrait.

The Next Frontier

The dashboards profiled in this brief collect and present data in order to track quality and clinical measures, utilization of resources, staffing caseloads, and the workflows of the care teams they employ. Provider organizations have decided which information to include in the dashboard – a choice that reflects and informs institutional priorities – and how best to structure the presentation of that information for the members of their care teams to facilitate the coordination of care for the highest need patients. The process of translating patient experiences into data, then to actionable information, and finally to actual *care* is ongoing and is the focus of innovation at providers around the country, including many of the *Innovation Lab* sites profiled.

The following table summarizes the information *Innovation Lab* members have in their EMR/care coordination dashboards:

Innovation Lab Member	Resource Utilization	Care Coordination Activity	Clinical Measures
Camden Coalition of Health Care Providers	Y	Y	Y
Commonwealth Care Alliance	Y	Y	
Hennepin Health	Y	Y	Y
Johns Hopkins Community Health Partnership	Y	Y	Y
Montefiore Medical Center	Y	Y	
Project ECHO	Y		
Southcentral Foundation	Y	Y	Y
Stanford Coordinated Care	Y	Y	Y