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SHARE Research Summary Report

Project Title: *Achieving the Triple Aim in Medicaid: Evaluating the Access, Quality, Health and Cost Impacts of Coordinated Care Organizations in Oregon*

National Project: State Health Access Reform Evaluation (SHARE) Program

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Project Goals: **Aim 1** - Evaluate the impact of Coordinated Care Organizations (CCOs) on health care access and quality, as well as patient engagement, health behaviors, and health outcomes over time. **Aim 2** - Evaluate the effects of CCOs on health care utilization patterns, per-member costs, and per-user costs over time. **Aim 3** - Document the mechanisms of transformation, and assess CCO's defining characteristics, similarities and differences.

SUMMARY

In 2011 the state of Oregon faced a challenge that will sound familiar to many states. The state's budget was insufficient to cover rising Medicaid costs. Oregonians were getting sicker, and the budget to care for them was getting smaller. In response to shrinking reimbursement rates, providers were limiting the number of Medicaid patients that they would accept, creating access problems that might exacerbate health problems. On top of it all, Oregon expected to expand Medicaid in 2014 to an additional 260,000 members. As a solution, Oregon initiated a series of changes designed to transform the system. At the heart of Oregon's health system transformation are Coordinated Care Organizations (CCOs): community-based networks of providers, community programs, and insurers who bear financial risk for their local Medicaid population.

To evaluate Oregon's CCO transformation initiative, The Robert Wood Johnson Foundation's State Health Access Reform Evaluation (SHARE) Program provided a two-year grant to a team of researchers at the Oregon Health Authority, Portland State University, and Providence Center for Outcomes Research and Evaluation; this funding was supplemented by federal matching dollars. The SHARE CCO Evaluation Project took advantage of Oregon's natural experiment in health care financing and systems reform; it employed a multi-disciplinary, mixed-methods research plan designed to assess what CCOs in Oregon actually do, how they impact healthcare access, use, quality, costs, and health outcomes, and how each CCO's outcomes are associated with its unique design.

Study Aim 1: Member Reported Outcomes for CCOs. We wanted to know whether CCO implementation had a short-term impact on how patients used care, the quality of the care they received, and their own health and behaviors. Using existing survey data from the Oregon Health Insurance Experiment as a pre-CCO baseline data point, we fielded a follow-up survey 12 months after CCO implementation. We followed our panel through CCO implementation and compared changes in self-reported outcomes over time for Medicaid CCO members, fee-for-service (FFS) Medicaid enrollees, and those who remained uninsured, using *Generalized Estimating Equations* (GEE) to model the impact of CCO membership on the odds of having a given outcome relative to the FFS and uninsured groups. Key findings include:

- **Health Care Access:** CCOs were associated with better improvements in access to medical care compared to both FFS Medicaid and the uninsured. All types of Medicaid (CCO and FFS) were associated with substantial improvements in mental health access.
- **Utilization of Care:** CCOs were associated with more frequent primary care use, a marker of primary care connection, compared to both FFS Medicaid and the uninsured. ED visits went down for CCO members, but they also went down for everyone else.
- **Quality of Care:** CCOs were associated with better improvements in ratings of care quality compared to both FFS Medicaid and the uninsured. CCOs were also associated with better connections to personal care providers compared to both FFS Medicaid.
- **Preventive Screenings:** Medicaid members were about twice as likely to have had a preventive screening (cholesterol test, diabetes test, or Pap test) than the uninsured, but CCOs did not see any bigger improvements than general FFS Medicaid.
- **Care Coordination** - CCOs provided better "social determinants of health" assistance than non-CCOs, and did much better on care coordination than the uninsured.
- **Health Outcomes** - CCOs were associated with better improvements in self-reported health compared to the uninsured, which was not the case among FFS Medicaid.

We found evidence of an early, positive impact of CCOs on member-reported access to care, quality of care, connection to primary care, and certain elements of care coordination. We did not see evidence of a CCO-specific impact on preventive care (which went up for everyone on Medicaid, regardless of CCO status) or ED utilization (which went down for everyone).

Study Aim 2: Cost and Utilization Outcomes for CCOs. We wanted to measure the impact of CCOs on health care utilization patterns, per-member costs, and per-user costs over time. We mapped claims data from the Medicaid components of Oregon’s *All Payer All Claims* (APAC) database to our survey panel, calculated utilization and costs for panel members before and after CCO implementation, and assessed changes in expenditure totals and patterns. Key findings from this initial analysis include:

- **Important Changes in Where Patients Receive Care.** Claims data analysis confirmed the survey finding that use of primary care increased, with increases in the probability of use and cost per person for primary care services. In addition, specialty care use and cost per person decreased.
- **Shifts in Pharmacy Use and Costs.** The claims analysis found a reduction in the probability of filling any prescription but increases in the cost per user and costs per person.
- **No Changes Found for MH, ED and IP.** Changes in use and costs for mental health services, emergency department and inpatient care were not found in the claims analysis. Similar to the survey findings, ED costs went down for both the CCO and control groups.
- **No Changes found in Overall Use or Costs.** No changes were found in overall or total service use and costs.

Overall these findings suggest that, in their first year, CCOs had an impact on service patterns in directions that are consistent with their intent. The shifts in primary and specialty care are similar to general findings for Oregon’s Patient Centered Primary Care Home (PCPCH) program and thus may reflect expected assignment of CCO members to PCPCHs. Findings were largely consistent across our study arms: both the self-report and claims data are suggestive of an increase in primary care connectedness and both see evidence of declining ED visits among CCO members – but also in respective control groups.

Study Aim 3: Defining Characteristics of CCOs. CCOs vary in design; we wanted to understand what *key* CCO design elements lead to the *best* outcomes and therefore might be identified as mechanisms of transformation. We used document review and qualitative interviews to assess each CCO along four key structural domains – governance, organization, finance and operations. We then evaluated survey and administrative performance data in light of CCO characteristics to identify the drivers of better CCO outcomes. Key findings include:

- CCO organizational configurations and corporate types vary extensively, reflecting the diverse range of predecessor organizations and complex partnership arrangements.
- Substantial differences exist in the composition and functions of CCO Boards of Directors and Community Advisory Councils, reflecting varying levels of local community engagement and involvement in decision-making. In addition to CCO Boards and Advisory Councils, various other proprietary and organizational interests exerted a substantial degree of influence over the governance decisions of many CCOs.
- During the first twelve months of implementation, financial strategies, including risk-sharing arrangements, were the least developed aspect of CCO implementation. (More recently,

CCOs' efforts to establish alternative payment and other financing strategies have increased considerably.)

- Initial efforts to integrate operations resulted in multiple, overlapping levels and loci of care coordination among physician offices, clinics, hospitals, health plans, and CCOs.
- A strong initial focus on high ED and inpatient utilization is gradually giving way to overall care management and coordination, as well as “upstream” primary care and prevention efforts.

Integrating the 3 Aims: We integrated the three arms of the study to determine whether the organizational structures we measured in Aim 3 were predictive of the outcomes assessed in our first two study aims. Composite scores representing CCO governance (BEC and CAC) domains, and operational integration (OCC) were created, as well as an overall “CCO-ness” Index computed from the three domain-specific indexes. Regression models that included the indexes and key outcome variables were developed to explore the relationships among organizational structure and CCO cost, utilization, access, and other outcomes. Key findings from this aspect of the study include:

Member Reported Outcomes:

- **Better Access to Care:** Stronger CCO structure and functioning (“more CCO-ness”) was associated with better access to care. We found evidence of a relationship between the overall CCO INDEX score and access to mental health care (OR 1.2, $p=.02$) and prescription medications (OR 1.2, $p=.01$). When all three domain index scores were regressed against these outcomes, the BEC (governance) domain was the strongest driver of this relationship.
- **Reduced Inpatient Events:** We did not see evidence of a relationship between our CCOness Index and ED visits, but did find a modest association between CCO-ness and reduced inpatient events (OR 0.9, $p=.04$). This relationship appears mostly driven by the OCC component of the Index -- the breadth of entities in the CCO partnership, which could indicate engagement with the sectors needed to reduce acute utilization.
- We did not see evidence of a relationship between our CCO-ness Index and preventive screenings or health outcomes in the patient-reported outcomes data.

Cost and Utilization Outcomes:

- **Mixed Effects of “CCOness”:** The overall measure of CCO structure and functioning showed mixed effects in the cost and utilization analyses. Increased pharmacy costs were the only consistent effect across CCO types. Some results may suggest strategic targeting of service areas within CCO types.
- **BEC Index Most Reflective of Overall Results:** The index of CCO governance (BEC) had results most consistent with overall results in regard to increased primary care and decreased specialty care. CCOs with the highest BEC score were most likely to show these changes in treatment patterns.
- **Impact of more “CCO-ness”:** Stronger CCO structure and functioning (“more CCO-ness”) was associated with higher MH expenditures and lower inpatient expenditures. These results are consistent with the survey findings. However, increased ED costs were also found.
- **Impact of less “CCO-ness”:** Amongst these CCOs, the increase in primary care and decrease in specialty care was strongest. ED expenditures also decreased, however, overall use also went down in this group.

IMPLICATIONS

The pace of change in Oregon has been rapid, and many health system leaders have expressed concern that time for strategy and planning has not been sufficient. Despite the strain on the system, early results from Oregon's CCO movement are promising. Although we have not seen substantial cost savings or transformations in quality and access, to the degree that outcomes did shift, they shifted in the intended direction. CCO members have reported better access to care, better connections to primary care, and better quality care. Costs didn't go down overall, but have shifted toward primary care and away from specialty and ED care. If one were moving toward larger cost, quality, and health outcomes down the road, these would certainly be important steps along that path.

In the context of wider health care reform, these findings may serve as a catalyst for communities that find themselves paralyzed in the face of the task at hand. Massive reforms are necessary to transform US health care from a costly and inefficient system that neglects the most vulnerable to a high-functioning, pragmatic and outcomes-oriented system that advances health equity. Although few states are following Oregon's exact path, the essential elements of the Coordinated Care Model – integrated, whole-person care, better information sharing, alignment of payment and incentives with value, stronger community engagement, and improving population health – are universal and fundamental challenges for health reform everywhere. Any state -- whether its reform strategy hinges on CCOs or something else entirely – stands to learn something from these early results out of Oregon.

The bottom line is that Oregon's CCOs are still learning how to do transformation, and yet low-income Oregonians are already reaping benefits. The message may be: just start.

PURPOSE AND SCOPE

In 2008, the state of Oregon embarked on a multi-year process designed to transform the financing and delivery of Medicaid services with the aim of providing a holistic, coordinated system of care to individuals who are covered through the state's public insurance programs: primarily, but not exclusively Medicaid enrollees. This monumental undertaking was catalyzed by a projected \$2 billion dollar deficit in the state's Medicaid budget, and reforms were explicitly based on the Triple Aim. At the heart of Oregon's health care transformation is the financing and organization of Medicaid service delivery through Coordinated Care Organizations, or CCOs.

Established in 2012, CCOs are a version of accountable care for Medicaid. They are regionally based: CCOs are community-based networks of providers, community programs, and insurers who bear financial risk for their local Medicaid population. They are also integrated: CCOs receive a single global budget to pay for the physical, mental, and dental care of their assigned members.

The SHARE CCO Evaluation Project took advantage of this natural experiment through a multi-disciplinary, mixed-methods research plan designed to assess what CCOs in Oregon actually do, how they ultimately impact healthcare access, use, quality, costs, and health outcomes, and how each CCO's outcomes are associated with its unique design. To accomplish this, we leveraged previous research and existing data integrating survey, claims analysis, and qualitative research methods. The study included three primary aims, and concluded with their integration into a series of regression models designed to assess the variation in outcomes across CCOs and to understand the relationship between what CCOs are actually doing differently and how those differences affect cost, access, utilization, satisfaction with care, and overall health status outcomes.

- **Aim 1** of the study was to evaluate the impact of CCOs on health care access and quality, as well as patient engagement, health behaviors, and health outcomes over time. Using existing survey data from the Oregon Health Insurance Experiment (OHIE), we compared the results for individuals who enrolled in a CCO against those who did not.
- **Aim 2** was to evaluate the effects of CCOs on health care utilization patterns, per-member costs, and per-user costs over time. We mapped claims data from the Medicaid components of Oregon's new *All Payer All Claims* (APAC) database to our survey panel, calculated utilization and costs for panel members before and after CCO implementation, and assessed changes in expenditure totals and patterns.
- **Aim 3** was to document the mechanisms of transformation, and assess CCO's defining characteristics, similarities and differences. We used document review and qualitative interviews to assess each CCO along four key structural domains – governance, organization, finance, and operations. Our goal was to tie CCO characteristics to survey and administrative performance data in order to understand the *key* CCO design elements that lead to the *best* outcomes.

Findings from this study of Oregon's CCO initiative will help to inform critical decisions as other states struggle to implement federal health reform. In addition to the description of how Oregon's CCOs have been structured and are functioning, and the outcomes they are producing, we provide insights about the mechanisms through which results were achieved and suggestions and recommendations about how Oregon's CCO model might be modified and adapted to other regions.

METHODS

Working in collaboration with researchers from Portland State University and the Providence Center for Outcomes Research and Education, we developed and implemented a three-pronged approach to evaluate early outcomes for Oregon's Coordinated Care Organizations.

Research Question 1: What is the impact of Oregon's CCO model on health care access, health care quality, health care utilization, preventive care, care coordination, and health outcomes?

Overview of Approach: We employed a longitudinal survey of Medicaid-eligible or expansion-eligible individuals in Oregon. Several surveys of this population had been conducted prior to this study; for the follow-up survey, we selected a random sample of baseline survey respondents and oversampled to ensure adequate representation of smaller CCOs; the total follow-up sample included 18,000 persons. Twelve months after CCO implementation, we sent a follow-up survey to these 18,000 individuals and received 8,864 responses, a 48% response rate.

The survey collected demographic information for each respondent and included measures of health care access, health care quality, health care utilization, preventive care, care coordination, and health outcomes. We then used state CCO membership files to attribute individuals to one of three groups depending on their coverage at the time of the follow-up survey: those with Medicaid enrollment were attributed into the "Medicaid CCO" or "Medicaid non-CCO" group as appropriate; those without Medicaid enrollment records were classified according to their self-report data as either "uninsured" or having "other insurance." For this study, we included only the subset of respondents with two valid data points (just prior to CCOs launching and 12 months after), and who were either on Medicaid or uninsured at the time of our follow-up survey (n=7,014).

Analytic Method: We used generalized estimating equations (GEE) to compare outcomes over time for Medicaid CCO members (n = 3,415), Medicaid non-CCO members (n = 294), and uninsured participants (n = 3,305) for whom we had valid pre and post data points. GEE is a form of regression that is appropriate for linear or binary outcomes and accounts for multiple measurements within subjects. We employed three primary independent variables in our analysis:

1. *Group:* Whether the respondent was in the Medicaid CCO, Medicaid Non-CCO, or Uninsured group at the time of our follow-up survey. This term captures the impact of group membership independent of time (for instance, potential selection effects associated with CCO membership).
2. *Time:* Whether the observation occurred at baseline (t1, just prior to CCO launch) or follow-up (t2, 12 months post-CCO launch). This term captures the impact of time independent of group membership (for instance, if people generally tend to do better over time regardless of which group they are in).
3. *Group*Time:* The interaction between group membership and time, which we define as our primary term designating the "effect" of CCOs over time.

We employed logistic regression models to assess the impact of CCOs on the odds of a given outcome occurring over time. In addition to our primary independent variables, our models controlled for age, gender, education, race/ethnicity, rural/urban residency, baseline insurance status, and baseline chronic illness status. Results were reported as Odds Ratios, designating the relative odds of an outcome occurring in the CCO group compared to the referent group (separately designated as either uninsured or non-CCO Medicaid members).

Research Question 2: What are the impacts of Oregon’s CCO model on health care utilization and costs?

To answer this question, we matched the survey panel with individuals within the *All Payer All Claims* (APAC) data set to examine the impact of CCOs on utilization and costs. Matched cohorts were developed based on insurance type, age, gender, geographic location, and presence of seven chronic conditions (asthma, COPD, diabetes, CHF, schizophrenia/bipolar disorder, hypertension, hyperlipidemia). These matched cohorts were analyzed using difference-in-difference (DiD) methods to calculate changes in utilization and costs overall and for specific service types for panel members one year pre- and post-CCO implementation (July 2011 - June 2012 and October 2012 - September 2013). The analysis applied a two-part model to assess changes, probability of use, expenditures per user, and expenditure per person associated with the implementation of the CCO model.

Research Question 3: What are the structural and functional characteristics of CCOs; how do they differ from previous arrangements; and, how do they vary among CCOs?

To assess the structural and functional characteristics of Oregon’s CCOs, we developed a framework that included four primary domains: 1) Governance; 2) Organizational structure; 3) Finance and Risk Sharing; and, 4) Operational Integration. A data dictionary and preliminary coding scheme reflecting key constructs in each domain were developed based on theoretical principles of implementation science (Consolidated Framework for Implementation Research; CFIR) and published literature.

Data analysis proceeded in two phases. The first phase included document reviews of Oregon statutes, Oregon Health Authority Administrative Rules, and CCO applications and Transformation Plans (strategic plans for progression towards the CCO Model). Semi-structured interviews with key informants from seven of the 13 CCOs were conducted by two-person teams. Audio recordings were transcribed and, along with the documents, were independently coded by two research assistants and reconciled by a third member of the research team, all using Atlas.ti software.

In the second phase of the qualitative analysis, key constructs identified in the first phase were used to develop domain composite scores and an overall CCO index score that could be used in a regression analysis of CCO outcomes. Composite scores were created for two of the four domains: Governance and Organizational Structure. (Data for the Finance/Risk-Sharing and the Operational Integration domains was determined to be too limited to produce valid and reliable index scores.) Finally, the domain composite scores were summed, averaged, and categorized to create an overall index score of “CCO-ness” defined as “basic, moderate, and high” with “high” representing the CCOs that were most consistent with legislative intent regarding community engagement, local control, breadth of provider representation on governing Boards, and organizational/operational integration.

- Community control and provider representation are included in the Governance domain through a “Board Engagement Composite (BEC) Score” that reflects statutory intent. This score incorporates breadth and depth of representation and board composition, as well as appointment and selection processes. A BEC score of “0” indicates narrow membership and more tightly controlled appointment process; “1” reflected broader representation and a level of openness in the appointment process; and, “2” reflected a broadly inclusive governing board with respect to both composition and process. Similarly, the “Community Advisory Council (CAC) Composite Score” includes statutorily-defined representation; “0” equating to standard composition as required by legislation; “1” reflecting composition beyond minimum

requirements; and, “2” indicating a CCO that exhibits a high level of community engagement and local control.

- The “Organizational Structure (OCC) Composite” score reflects the degree of operational integration, primarily through the breadth of representation of partner organizations that also functioned as service providers during the first 12 months of CCO operations.

Research Question 4: What does integration of qualitative and survey data tell us about health system transformation?

For the integrated analysis, we included the 3,296 survey respondents for whom we had both pre- and post-survey data points and who were in one of the 13 CCOs that had been indexed (three additional CCOs had been added since the indexing; they are excluded from this analysis). Our intent was to determine if the CCO Index scores created in Aim 3 were predictive of outcomes among CCOs on our dimensions of interest.

Approach: We constructed GEE models to compare outcomes over time for individuals at different types of CCOs. As with our first models, independent variables include group, time, and group*time interaction, with the latter acting as primary indicator of any treatment effect. However, the “group” term was designated as follows:

- MODEL ONE: “Group” refers to the total CCO index score, which is computed from the three composites and represents total overall “CCO-ness.” Values range from 0 (least CCO-like) to 2 (most CCO-like). This term allowed us to test whether the overall CCO-ness score was predictive of outcomes within the universe of CCO members.
- MODEL TWO: “Group” is defined by three distinct variables representing the three composite index scores, with all three entered into the model to determine which, if any, were significant predictors of CCO outcomes. The composites included:
 - BEC Composite: Measures breadth/integration and engagement of board.
 - CAC Composite: Measures composition/engagement of community advisory council
 - OCC Composite: Measures broadness of representation of organizations in the CCO

Models were also adjusted for age, gender, race, education, and baseline insurance coverage.

Integrating Qualitative and Claims Data. We replaced our overall CCO indicator and its interaction with time (pre/post) with either: the CCO total index score”; the BEC Composite; the CAC composite; or the OCC composite. Re-running our regression analyses with these difference indices provided difference-in-difference results for each CCO group within an index. We assessed the impact of the different indices by evaluating the difference-in-difference effects at each level.

Methodological Limitations. Our results are subject to several important limitations.

SURVEY DATA (AIM 1): There are several important limitations to our survey data. First, self-reported data are subject to recall bias, which could mean that some individuals over or under report some measures. Second, our 48% response rate is good for a Medicaid survey, but it is still possible that non-responders differ systematically from responders. Third, while our original design called for comparing CCO enrollees to non-enrollees within Medicaid, Oregon did a very thorough job enrolling its Medicaid members into CCOs early on, leaving only a handful of members outside of CCOs. This resulted in a smaller-than-expected “comparison group” in our non-CCO Medicaid arm, limiting study

power. And finally, it is important to note that Oregon is somewhat different than the rest of the nation in many ways; notably, it includes fewer members of racial and ethnic minority groups. Therefore, some caution should be used in generalizing results to other states launching accountable care in Medicaid.

ADMINISTRATIVE DATA (Aim 2): There are several important limitations to our administrative claims data and analyses. This analysis uses matched privately insured individuals as a comparison group which may not accurately reflect what would have occurred among Medicaid recipients not enrolled in CCOs due to differences in covered services or access to care. It is also possible that care transformation efforts developed under CCOs have “spilled over” to privately insured individuals. The modest sample size creates challenges in developing efficient estimates of effects and may not fully reflect the population of CCO members. Several important individual characteristics available for Medicaid recipients are not available within the APAC data for privately insured such as ethnicity, primary language and disability status. APAC data also does not have any claims related to substance abuse care and some specific health conditions (e.g. HIV/AIDs).

QUALITATIVE DATA (Aim 3): Limitations to our qualitative data and analyses include substantial differences in the quantity and quality of information in both the CCO applications and Transformation Plans. The Request for Applications (to become recognized as a CCO) and the guidelines for preparing Transformation Plans (CCO’s detailed roadmaps for implementation that were required 12 months after initial application and recognition) provided a standardized format and highly detailed instructions. Although some CCOs provided a clearly articulated strategy and roadmap of planned activities, others provided only very minimal responses. The utility of the information available in the applications and Transformation Plans was also limited by their high-level focus on future goals, with limited information about past and current activities to implement specific structural, functional, and operational strategies.

SIGNIFICANT FINDINGS

STUDY AIM 1: HEALTH AND HEALTH CARE OUTCOMES FOR CCOS (Survey Data)

We wanted to know whether CCO implementation had a short-term impact on how patients used care, the quality of the care they received, and their own health and behaviors. Using existing survey data from the Oregon Health Insurance Experiment as a pre-CCO baseline data point, we fielded a follow-up survey 12 months after CCO implementation. We followed our panel through CCO implementation and compared changes in self-reported outcomes over time for those who ended up in Medicaid CCOs, fee-for-service (FFS) Medicaid enrollees, and those who remained uninsured across these data points, using *Generalized Estimating Equations* (GEE) to model the impact of CCO membership on the odds of having a given outcome over time relative to both the FFS and uninsured groups. Key findings include:

- **Health Care Access:** CCOs were associated with better improvements in access to medical care compared to both FFS Medicaid (OR=1.89, p=0.013) and the uninsured (OR=7.51, p<0.001). All types of Medicaid (CCO and FFS) were associated with huge improvements in mental health access (CCO OR=4.93, p<0.001; FFS OR=3.36, p=0.001).
- **Utilization of Care:** CCOs were associated with more frequent primary care use, a marker of primary care connection, compared to both FFS Medicaid (OR=1.67, p=0.029) and the uninsured (OR=3.68, p<0.001). ED visits went down for CCOs, but they also went down for everyone else.

- **Quality of Care:** CCOs were associated with better improvements in ratings of care quality compared to both FFS Medicaid (OR=1.52, p=0.081) and the uninsured (OR=2.69, p<0.001). CCOs were also associated with better connections to personal care providers compared to both FFS Medicaid (OR=2.36, p<0.001) and the uninsured (OR=5.06, p<0.001).
- **Preventive Screenings:** Medicaid members were about twice as likely to have had a preventive screening (cholesterol test, diabetes test, or Pap test) than the uninsured, but CCOs did not see any bigger improvements than general FFS Medicaid.
- **Care Coordination** - CCOs provided better “social determinants of health” assistance than non-CCOs (OR=2.28, p=0.04), and did much better on care coordination than the uninsured (OR=2.01, p<0.001).
- **Health Outcomes** - CCOs were associated with better improvements in self-reported health compared to the uninsured (OR=1.04, p=0.589), which was not the case among FFS Medicaid.

Bottom Line for Aim 1: We found evidence of an early, positive impact of CCOs on member-reported access to care, quality of care, connection to primary care, and certain elements of care coordination. We did not see evidence of a CCO-specific impact on preventive care (which went up for everyone on Medicaid, regardless of CCO status) or ED utilization (which went down for everyone).

STUDY AIM 2: COST AND UTILIZATION OUTCOMES FOR CCOS (Claims Data)

We wanted to measure the impact of CCOs on health care utilization patterns, per-member costs, and per-user costs over time. We mapped claims data from the Medicaid components of Oregon’s new *All Payer All Claims* (APAC) database to our survey panel, calculated utilization and costs for panel members before and after CCO implementation, and assessed changes in expenditure totals and patterns. Key findings from this initial analysis include:

- **Important Changes in Where Patients Receive Care.** Claims data analysis confirmed the survey finding that use of primary care increased, with increases in the probability of use and cost per person for primary care services. In addition, specialty care use and cost per person decreased.
- **Shifts in Pharmacy Use and Costs.** The claims analysis found a reduction in the probability of filling any prescription but increases in the cost per user and costs per person.
- **No Changes Found for MH, ED and IP.** Changes in use and costs for mental health services, emergency department and inpatient care were not found in the claims analysis. Similar to the survey findings, ED costs went down for both the CCO and control groups.
- **No Changes found in Overall Use or Costs.** No changes were found in overall or total service use and costs.

Overall these findings suggest that, in their first year, CCOs had an impact on service patterns in directions that are consistent with their intent. The shifts in primary and specialty care are similar to general findings for Oregon’s Patient Centered Primary Care Home (PCPCH) program and thus may reflect expected assignment of CCO members to PCPCHs. Findings were largely consistent across our study arms: both the self-report and claims data are suggestive of an increase in primary care connectedness and both see evidence of declining ED visits among CCO members – but also in respective control groups.

STUDY AIM 3: DEFINING CHARACTERISTICS OF CCOS

CCOs vary in design; we wanted to understand what *key* CCO design elements lead to the *best* outcomes and therefore might be identified as mechanisms of transformation. We used document

review and qualitative interviews to assess each CCO along four key structural domains – governance, organization, finance and operations. We then evaluated survey and administrative performance data in light of CCO characteristics to identify the drivers of better CCO outcomes.

What makes a CCO? State Requirements. Oregon’s legislation made certain that all CCOs had certain key characteristics. CCOs are required to integrate and coordinate care across physical, behavioral, and oral health care services. They are required to work within a global (capitated) payment structure that modifies existing risk-reward dynamics. They are incentivized to employ a strong focus on primary and preventive care, to conform to evidence-based standards, and to construct more effective care management systems. All CCOs are also incentivized for quality and access through public reporting of accountability metrics and quality measures.

CCO governance departs from more traditional structures. CCOs are required to have a governing board with a majority interest consisting of representation by entities that share financial risk, as well as representation from the major components of the health care delivery system. Each CCO must establish and convene a Community Advisory Council (CAC) to provide a community perspective. The CCO governing board must include a member of the Council, along with at least one primary care provider, one mental health services provider, and two additional community members. Finally, each CCO must conduct a Community Health Needs Assessment and create a Community Health Improvement Plan.

What makes a CCO? Patterns. Apart from these key requirements, CCOs are encouraged to develop their own local governance, organization, financial, and operational solutions. Our qualitative analysis of documents and interviews revealed key patterns among the 13 CCOs under study. Key findings include:

- **Governance Varies.** Substantial differences exist in the composition and functions of CCO Boards of Directors and Community Advisory Councils, reflecting varying levels of local community engagement and involvement in decision-making.
- **Governance is Complex.** In addition to decisions reached by CCO Boards and Advisory Councils, various other proprietary and organizational interests also exert a substantial degree of influence over the governance decisions of many CCOs.
- **Organizational Structure Varies.** CCO organizational configurations and corporate types vary extensively, reflecting the diverse range of predecessor organizations and complex partnership arrangements.
- **Financial Strategies were Generally Underdeveloped.** During the first twelve months of implementation, financial strategies, including risk-sharing arrangements, were the least developed aspect of CCO implementation. (More recently, CCOs’ efforts to establish alternative payment and other financing strategies have increased considerably.)
- **Care Coordination Efforts Overlap.** Operationally, care coordination efforts among clinics, hospitals, health plans, and CCOs frequently overlap.
- **High Utilizers First, Then Upstream.** A strong initial focus on persons with high ED and inpatient utilization has been followed by more gradual attention to managing the care of other patient groups through “upstream” efforts such as primary care access and prevention.

What makes a CCO? Index Score. Since CCOs did adopt very different structures, we wanted to measure whether those differences had a measurable impact on health, health care and utilization outcomes. To do this, we needed to be able to categorize CCO according to the types of structures

employed. We focused our attention on three of the components of CCO structure that were explicitly shaped by state legislation: CCO governance (BEC), community engagement (CAC), and operational integration (OCC). All CCOs were required to adhere to certain state-mandated guidelines in each of these areas, and yet they did so in different ways.

We developed a CCO Composite Scores to indicate the degree to which CCOs had implemented governance, community engagement, and/or integration structures as intended by the legislation. The 13 CCOs scored as follows:

Corporate Form	Total Partners (Organization Core; OCC)	Board Engagement Composite (BEC)	Community Engagement (CAC)
Private IPA/MCO	1	Basic	High
Private/LLC	3	High	Moderate
Nonprofit/MCO	1	Basic	Basic
Nonprofit/MCO	10	Moderate	Moderate
Nonprofit/LLC	2	High	High
Nonprofit/LLC	2	High	Moderate
Nonprofit/LLC	2	High	Basic
Nonprofit/LLC	4	Moderate	Basic
Nonprofit/LLC	9	Moderate	High
Nonprofit/LLC	18	Moderate	Basic
Nonprofit/LLC	13	Moderate	Basic
Nonprofit/PBC	11	High	Moderate
Nonprofit/PBC	13	High	Basic

RESULTS FROM INTEGRATED ANALYSIS ACROSS THE THREE AIMS

We integrated the three arms of the study to determine whether the organizational structures we measured in Aim 3 were predictive of the outcomes assessed in our first two study aims. Index scores representing CCO governance (BEC), community engagement (CAC), and operational integration (OCC) were created, as well as an overall “CCO INDEX” score computed from all three domain-specific indices and intended to represent overall “CCO-ness.” Regression models that included the indexes and key outcome variables were developed to explore the relationships among organizational structure and CCO cost, utilization, access, and other outcomes. Key findings include:

Member Reported Outcomes:

- **Better Access to Care:** Stronger CCO structure and functioning (“more CCO-ness”) was associated with better access to care. We found evidence of a relationship between the overall CCO INDEX score and access to mental health care (OR 1.2, $p=.02$) and prescription medications (OR 1.2, $p=.01$). When all three domain index scores were regressed against these outcomes, we found that the BEC component was the strongest driver of this relationship.
- **Reduced Inpatient Events:** We did not see evidence of a relationship between our CCOness Index and ED visits, but did find a modest association between CCO-ness and reduced inpatient events (OR 0.9, $p=.04$). This relationship appears mostly driven by the OCC component of the Index -- the breadth of entities in the CCO partnership, which could indicate engagement with the sectors needed to reduce acute utilization.

- **Limited or No Effect on Prevention:** We did not see evidence of a relationship between our CCO-ness Index and preventive screenings or health outcomes in the patient-reported outcomes data.

Cost and Utilization Outcomes:

- **Mixed Effects of “CCOness”:** The overall measure of CCO structure and functioning showed mixed effects in the cost and utilization analyses. Increased pharmacy costs were the only consistent effect across CCO types. Some results may suggest strategic targeting of service areas within CCO types.
- **BEC Index Most Reflective of Overall Results:** The index of CCO governance (BEC) had results most consistent with overall results in regard to increased primary care and decreased specialty care. CCOs with the highest BEC score were most likely to show these changes in treatment patterns.
- **Impact of more “CCO-ness”:** Stronger CCO structure and functioning (“more CCO-ness”) was associated with higher MH expenditures and lower inpatient expenditures. These results are consistent with the survey findings. However, increased ED costs were also found.
- **Impact of less “CCO-ness”:** Amongst these CCOs, the increase in primary care and decrease in specialty care was strongest. ED expenditures also decreased, however, overall use also went down in this group.

Overall, we found some evidence that our CCO INDEX score was predictive of success in some domains. Survey and claims analyses both found some evidence of increased MH access and reduced inpatient care among CCO with higher index scores. The CCO index did not predict success among CCOs in the areas of quality, reduction of ED use, preventive care, or health outcomes. It may be that such effects are not yet evident for any CCO, that these outcomes are driven by features not captured in our typology of CCO characteristics, or that our typology is not sensitive enough to detect the real differences in how CCOs are approaching these challenges.

TRANSLATION OF FINDINGS

These data represent some of the first available evidence on the impact of the Coordinated Care movement in Medicaid. Preliminary findings have been presented at *Academy Health*, at the convening of the *American Public Health Association*, and at *CCO Oregon*, a local conference bringing together CCO leadership from across the state. We have also prepared several manuscripts for peer review, the first of which will be submitted within a month of this report.

What We Have Learned: With outcomes data collected just one year after implementation, our findings are probably best seen as “early indicators” of CCOs’ impacts rather than a definitive assessment of Oregon’s delivery system transformation. Still, our results do contain some promising early signs for CCOs: *after just one year*, Medicaid beneficiaries enrolled in CCOs report better access to care, better quality care, and better connections to primary care than uninsured persons or Medicaid beneficiaries in non-CCOs. Likewise, when comparing the claims data of CCO members to a matched control group of commercially insured persons, we see early evidence of a shift toward primary care and away from more expensive specialist care. And finally, our analysis suggests that the CCOs that had progressed furthest in transformation according to the legislation’s priorities—those that had broad membership with functioning Community Advisory Councils and representative governance—were also the CCOs that tended to perform best in terms of outcomes.

Despite strong findings around access to care, quality of care, and primary care utilization, the jury is still out on several other key outcomes. We did not find early evidence of improvements in preventive care and screenings. We did not see reductions in ED expenditures in our claims data (which compared CCOs to the commercially insured) or in our survey data (which compared CCO members to the uninsured, and found that ED use went down for both groups). And we did not see evidence of significant cost savings for the CCOs compared to our commercially insured comparison group; however, the changes in *where costs accrued* may yet lead to broader cost savings in the long term.

When we ask, “what are the outcomes of Oregon’s CCO Experiment?” it is important to think carefully about what the “CCO Experiment” actually looked like on the ground. Our qualitative interviews with CCO leadership reveal that change was a heavy lift, and health care transformation is a process. During the first year, most CCOs focused on the following strategic priorities:

- Bringing partners to the table and cementing collaborative structures
- Determining decision-making and governance structures at the CCO
- Contracting and compliance
- Administering a behavioral health benefit in conjunction with the physical health benefit
- Building a Community Advisory Council
- Determining the metrics to which CCOs would be held accountable
- Developing Community Health Needs Assessments, Community Health Improvement Plans, and Transformation Plans (strategic plans for progression towards the Coordinated Care Model)
- Developing programs to provide intensive assistance for high-utilizers

This focus on building the infrastructure of transformation in the first year meant that, necessarily, the following goals were *less* of an immediate priority for many CCOs:

- Transforming payment models at the provider level (most providers are still being paid FFS)
- Using the global budget to pay for non-traditional health care expenses (housing, transportation, job training, etc.)
- Integrating behavioral health and physical health services (the *payment* is integrated at the CCO level, but at most CCOs the *services* were not integrated much further after one year)
- Developing strategies to meet the metrics for which CCOs would be held accountable (much of this work began in Year Two)
- Developing strategies to prevent patients from *becoming* high-utilizers

Oregon’s Coordinated Care Model promised community governance; what it delivered after one year was community representation. Oregon’s Coordinated Care Model promised integrated service delivery; what it delivered after one year was integrated risk. Oregon’s Coordinated Care Model promised a focus on upstream prevention; what it delivered after one year was a focus on high-utilizers. Oregon’s Coordinated Care Model promised payment reform; what it delivered after one year was a handful of limited alternative payment pilots. Oregon’s Coordinated Care Model promised accountability to quality metrics; what it delivered after one year was the capacity to report quality metrics. In other words, after one year, Oregon’s CCOs are in their infancy.

And yet, already, CCOs are producing some significant results, even from the perspective of members who do not necessarily see the organizational and foundational “behind the scenes” work. What does this mean? If Oregon’s CCOs aren’t yet CCOs in the ideal, what is the reform that is producing these improved outcomes? There are a number of possibilities. First, it may be that some pilots and related transformation efforts are already impacting “on the ground” care in some communities, and these may be helping drive scores in favor of CCOs across the state. Oregon has a robust primary care home program that began before CCOs, that CCOs are expected to use for their members, and may be driving increases in primary care access and use. Second, the pervasiveness of dialogue around CCO reform in Oregon may have created culture change in some health care organizations, with systems and providers beginning to modify behavior in anticipation of reforms they know are coming sooner or later. Third, perhaps the work on CCO transformation in communities has accelerated other systems changes, such as Oregon’s broader *patient centered medical home* initiative, that are interrelated but not directly tied to the nature of CCO reform. And finally, there may be something powerful in **the act of organizing and building CCOs** – the work of engaging in the extensive conversations necessary to convince a range of partners to collaborate, even without much hope of profit, in the service of a vulnerable population—that in itself has a powerful impact on service delivery and health outcomes.

Whether any of these explanations is the true driver behind the early CCO outcomes we see in this study remains to be seen. However, one year after launch, it is clear that Oregon’s delivery system transformation is having some impact on cost and care outcomes. These early impacts do not necessarily herald a sea change in the Triple Aim; indeed, it is far too early for such a definitive judgment. But the levers one would pull to achieve such a change -- better access to care, better primary connections, better quality – are showing promising signs of improvement. As Oregon’s transformation journey continues, additional research will reveal whether these early trends result in the sort of dramatic and widespread and systems change the CCO model was designed to trigger.

Implications for Ongoing Implementation of the CCO Model in Oregon: State officials are extremely interested in the SHARE results as a complement to their own CCO performance monitoring and evaluation efforts. The Oregon Health Authority tracks a large number of metrics on quality, access, utilization, and spending; some of these metrics are tied to financial incentives for the CCOs. (The latest report can be found here: <http://www.oregon.gov/oha/metrics/Pages/index.aspx>.) Although the data sources differ, the findings of this project broadly track with the results the state has reported to date, which lends credence to the state’s monitoring.

The project’s findings around emergency department utilization have particular significance in Oregon and nationally, given the well-publicized results from the Oregon Health Study. When Oregon added new adults to its Medicaid program via a lottery in 2008, researchers found that Medicaid coverage significantly increased ED use. (*Cite Bill and Kate’s 2014 Science paper*) This project suggests that Oregon’s more recent Medicaid delivery system changes may be counteracting the possibility of increased ED use. The state has also reported declines in ED utilization and spending among CCOs, and recently published data showing that the 2014 Medicaid expansion population is using emergency services at a lesser rate than the traditionally eligible group.

Implications for Health Reform: Those hard at work on CCO implementation have sometimes protested that transformation is happening too quickly. The pace of change in Oregon has indeed been rapid, and many CCO leaders in our interviews expressed a concern that there was not enough time given to strategy and planning. The strain of reform on health care organizations is widely evident.

Despite this strain, however, early results from Oregon’s CCO movement are promising. One year did not result in massive cost savings, nor did it result in unequivocal transformation in terms of quality

and access. Nevertheless, to the degree that outcomes did shift, they shifted in the intended direction. CCO members did report better access to care, better connections to primary care, and better quality care. Costs didn't go down overall, but did begin to shift toward primary care and away from specialty and ED care. If one were moving toward larger cost, quality, and health outcomes down the road, these would certainly be important steps along that path. There are at least some signs that the hard work and strain of reform may be paying dividends.

In the context of wider health care reform, these findings may serve as a catalyst for communities that find themselves paralyzed in the face of the task at hand. Massive reforms are necessary to transform US health care from a costly and inefficient system that neglects the most vulnerable to a high-functioning, pragmatic and outcomes-oriented system that advances health equity. Although few states are following Oregon's exact path, the essential elements of the Coordinated Care Model – integrated, whole-person care, better information sharing, alignment of payment and incentives with value, stronger community engagement, and improving population health – are universal and fundamental challenges for health reform everywhere. Any state -- whether its reform strategy hinges on CCOs or something else entirely – stands to learn something from these early results out of Oregon.

The bottom line is that Oregon's CCOs are still learning how to do transformation, and yet low-income Oregonians are already reaping benefits. The message may be: just start.

CHALLENGES AND BARRIERS

Reform Exhaustion. While this evaluation was timely, its very timeliness presented a barrier. Since Oregon was heavily mired in health reform during the study period, it was occasionally hard to get in contact with organizational informants for our qualitative interviews. Conducting research in a time of intensive reform can place the research in conflict with the needs of transformation. Specifically, the subcontractors' requests for time and data competed for attention with the needs of state teams and CCO leaders who are working on implementation. Although key stakeholders value this research, the more immediate demands of implementation often took precedence. In addition, during the second year of the project other research studies and a CMS review of OHA's progress were conducted. As a result, some CCOs were asked to respond to multiple requests for data, and were also asked for time to meet with researchers and participate in interviews. The multiple demands on OHA likely contributed to delayed receipt of the APAC data, while the demands on CCOs had a more pronounced effect on requests for information for the qualitative arm of the study. We were fortunate to have built strong relationships between the research team, the state, and health care stakeholders that helped us weather this challenge, but future research in environments of large reform should take other competing research efforts into account and perhaps work to align data collection efforts.

CCOs Spread Wider than Expected. Widespread CCO adoption within short period was great for state policy objectives but left a smaller non-CCO comparison group than would have been ideal. Other external challenges to the study included Medicaid expansion under the ACA and the strong, positive response to CCO implementation. Although both were positive for Oregon, the extraordinary increase in Medicaid enrollment concurrent with implementation of the CCOs exacerbated another identified challenge, namely the rapid implementation and ongoing modification of multiple health system transformation initiatives.

Mapping Administrative Data. Our analyses for Aims 1 and 2 relied upon administrative datasets (Medicaid enrollment data and the All Payer, All Claims (APAC) database – that were themselves undergoing significant flux during our study period. The state's system for tracking attribution of Medicaid members to CCOs was a particular challenge early in the study, when it was not fully

developed, making our sampling strategy particularly difficult. Similarly, this was the first major study to use APAC data in the manner we employed it; acquiring the APAC data files for this use proved challenging despite the full partnership of the state. We worked through these challenges by working closely with state partners to address concerns and identify workarounds, but these efforts put significant strain on state resources that were already stretched thin due to transformation.

Point-in-Time Research Protocols. Research in the context of an extremely dynamic healthcare environment can be particularly challenging. Specifically, ongoing modifications to the CCO transformation initiative, even as the evaluation was underway, required the research team to modify protocols and collect additional data. These changes affected all three arms of the study, such that data analysis was delayed and key findings were subject to modification as implementation progressed. This suggests the need for a longer-term evaluation protocol to document the iterative nature of the implementation process and CCO outcomes. To address the delays, we requested and received from RWJF a no-cost extension of six months duration.

Timing: The follow-up survey was fielded quite early in CCO implementation, so some of the envisioned transformation has not yet fully happened. We knew that transformation would take time, but it was hard to predict exactly what would and would not have happened by the time we fielded the survey. We are happy to report initial findings and eager to conduct a follow-up study in the future.

REFLECTIONS ON WORKING WITH STATES

The project has provided early evidence of the potential benefits of a fundamental re-orientation of the health care delivery system to achieve the Triple Aim goals of better health, better care and lower cost. While the project did not create a new model for delivering service, it does document how, exactly, a statewide health system may be re-designed to provide greater integration and coordination of services, and how such changes can positively affect access, quality and costs of care. For example, the Oregon Governor has described the CCOs as “16 experiments,” so having data on their different characteristics and early outcomes is very valuable – they want to learn from each other as much as we want to learn about them.

The project also highlights the ability of state government to facilitate health system transformation through legislation, administrative rules, and departmental policies, and to engage the health care and broader communities in those efforts. In particular, the project has informed OHA’s ongoing efforts to fine-tune the program based on research findings, and has served as a source of external validation for the CCO performance monitoring and evaluation work that the state itself is doing. In this way, the project has helped the state and others identify areas in which delivery system transformation is progressing rapidly, as well as those areas in which it is moving more slowly.

Lessons learned in terms of working with states include:

- **Ensure that research is a priority for state leaders.** Oregon policymakers were eager to obtain early results associated with CCO reform, and therefore it was easier to obtain their assistance in study design and implementation. If they weren’t concerned about the results, it might have been more difficult to get their help. This research team included both policymakers and research subcontractors, which allowed us to work together to jointly prioritize research question and coordinate data sharing and dissemination.
- **Offer the state the benefit of an outside evaluation.** OHA is conducting evaluations of CCO reform at many levels—both internal and external. In this case, it was useful to OHA to

triangulate this study's results with results from other data collection efforts in order to produce a multi-dimensional picture of outcomes associated with reform.

- **Bring the rigor of academic research to the moment of decision.** Results from academic research are often of high quality, but come too late to be of use in shaping the policy they are studying. By focusing on rapid turnaround projects, the SHARE mechanism helped ensure that our findings are available to policymakers *now*, while CCOs are still trying to drive transformation in their communities. We can help shape that which we have studied.
- **Communicate about findings early and often.** Many of our state partners and CCO leadership partners were eager to learn about findings much earlier than we were ready to share them. They wanted to act immediately upon results. Early discussions among small groups, as well as early presentations at formal and informal seminars, gave stakeholders the opportunity to weigh in and reflect on the study as we went; it also increased interest in the research.
- **Align data collection efforts whenever possible.** Since research groups often compete for grant funding, they often neglect to recognize when their research overlaps. Stakeholders in Oregon were subjected to multiple requests for data and for interviews. This study team collaborated to align data collection efforts along multiple grant-funded research projects in order to minimize the response burden for stakeholders.

From the state's perspective, there is great value in working with sophisticated local researchers who understand the health policy context well and are committed to sharing results with policy makers and health system. As community-based researchers, the investigators in this project were able to capitalize on their strong relationships with stakeholders across to state to collect and help interpret data. Along with other independent studies of Oregon's health reform efforts, this project is an important triangulation point for the state's own monitoring and evaluation efforts.

AREAS FOR FUTURE RESEARCH

This work has been the launching point for several additional projects related to CCO implementation.

THE SIM PROJECT: The qualitative work included in this project informed the development of a structured tool we are using to assess the "spread" of key CCO elements throughout the Oregon health care marketplace. Using this work as a starting point, we have developed an organizational survey through the State Innovation Models (SIM) initiative that will be used to track key elements of transformation – such as community engagement, payment reform, and integrated care – across hundreds of Oregon health care organizations, including CCOs and non-CCOs. Over the next several years, this work will provide a tangible snapshot of health care transformation in Oregon, "scoring" various CCOs, payers, delivery systems, and other key health care entities on the key elements of transformation over time. When this data is available, we hope to collect additional survey and claims data in order to analyze the impact of these transformation domains on key outcomes across communities in Oregon.

THE CCO CASE STUDY PROJECT: Additionally, we are conducting an ACO case study analysis of two CCOs in Oregon to better understand how CCOs in Oregon work to achieve the triple aim. This study dives deeper into policy & market conditions, governance & structure, strategies & model of care, organizational culture, financial structures, consumer engagement, measurement & improvement,

and goals & outcomes at two of Oregon's most promising CCOs. When combined with the SHARE/CCO Evaluation Project, the ACO Case Study project provides a careful and nuanced consideration of the specific transformation activities that might best explain promising early findings.

CCO DATA SYSTEMS PROJECT: Our work combining survey, claims, and other administrative data systems in this project has led to a series of projects developing “transformational data systems” for Oregon's CCOs. These data systems combine data from various sources to help CCOs make informed, data-driven decisions about how to best care for their populations. We use a data system to track CCO broadly outcomes across the entire state; several organizations have also contracted with us independently to further develop the potential of these data systems as engines of smart health care transformation.

WHAT'S NEXT: The findings from the first year of CCO implementation make us eager to continue to follow the outcomes associated with Medicaid reform in Oregon. As CCOs become more “CCO-like,” it will be even more important to track which aspects of the CCO model are associated with the greatest impact on health and health care outcomes. We look forward to the opportunity to better refine our CCO Index tool, to continue to track our survey population, and to look at sub-groups to see whether there are disparities in patient experience or outcomes under this new model (vulnerable populations) or whether certain groups (e.g. high utilizers) seem to be deriving more benefit from the model than others.

We are also working to integrate *social determinants of health* data into our understanding of CCOs and their impacts. The data we used for this project focused on health care claims data and patient surveys; we are working to connect these data to information about non-health care challenges Medicaid populations face (psychosocial barriers to health, including access to food, housing, and transportation) and the physical and social environments populations live in. We hope to use this data to tell a more nuanced story about the impact of the CCO model not just a driver of health care outcomes, but as a potential driver of longer-term community health transformation.

Finally, we are interested in exploring the longer-term effects of community engagement and broadly inclusive governance on financial performance and individual and population health outcomes. Coupled with a sensitivity to social determinants of health and a focus on preventive and primary care, efforts to engage local communities in defining, developing, delivering, and evaluating their health system may help to transform not only health care services, but our understanding of health as both an individual and a societal goal.

DISSEMINATION ACTIVITIES

PRESENTATIONS:

June 7, 2014. Presentation: “Achieving the Triple Aim in Oregon: the Effects of CCO Implementation on Access, Quality, and Cost.” AcademyHealth – State Health Research and Policy Interest Group.

September 23, 2014. Poster Session: “Achieving the Triple Aim in Medicaid: A Preliminary Evaluation of Coordinated Care Organizations in Oregon.” CCOs and Beyond: Health Care Payment Innovation.

November 17, 2014. Presentation: “Achieving the Triple Aim in Oregon: Effects of Coordinated Care Organization Implementation on Access, Quality, and Cost.” American Public Health Association Annual Meeting and Expo. Recording available at:

<https://apha.confex.com/apha/142am/webprogram/Paper312077.html>.

December 3-4, 2014. Presentation: “Following a Longitudinal Panel of Low-Income Oregonians through CCO Implementation: Are there Any Early Signs of an Impact?” Oregon’s Coordinated Care Model Summit: Inspiring Health System Innovation. Breakout Session: CCO Impacts: Member Reported Outcomes. Slides available at: http://transformationcenter.org/wp-content/uploads/2014/12/Eval_Wright.pdf.

February 19, 2015. “Oregon’s Coordinated Care Organizations: Governance & Impacts.” SHARE Webinar on Oregon’s Coordinated Care Organizations. Slides available at: http://www.shadac.org/files/shadac/publications/SHARE%20Webinar%20Rissi&Wallace_FINAL.pdf.

June 2015. “Achieving the Triple Aim in Oregon: Early Effects of Coordinated Care Organizations.” Submitted to AcademyHealth ARM.

DRAFT PAPERS:

“Oregon’s CCO Experiment: Promising Early Signs of Change at the Member Level.” *Manuscript prepared for submission in March 2015.*

“Defining Accountable Care: Lessons from the Development of Oregon’s Coordinated Care Organizations.” *Manuscript under development for submission in summer 2015.*