



***Using Data to Improve Chronic Care:
Building Capacity and Connectivity in Oregon
Evaluation report for the Asthma Tracking Grants¹***

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Why asthma tracking grants?

In 2000, healthcare leaders representing plans, systems, purchasers, and providers agreed that improving data connectivity among data holders and the healthcare providers would result in better quality of care, particularly for patients living with chronic disease. To test this concept, two different pilot projects were recommended by a working group of leaders. The first, a statewide approach coordinating claims data from multiple sources, merging patient information, and reporting back to the physician through paper or electronic reports. The second was to build capacity through localized initiatives (clinic or small health plans) to develop a disease registry for disease management.

The Health Care Quality Corporation (Quality Corp) in partnership with the Department of Human Services' Diabetes and Asthma Programs, the Diabetes Coalition, and the Oregon Asthma Network, coordinated efforts among partners to pilot both recommended data connectivity concepts. The Diabetes Coalition began with the Diabetes Collaborative and assisted three clinics in the development of a diabetes tracking system. In the Asthma Program's third year of funding, money was available for three additional organizations to develop asthma tracking systems. During this time, support for the Chronic Disease Data Clearinghouse was growing. With localized success in the development of tracking systems, and improved disease management because of these systems, clinics and physicians gradually have become more interested in a unified method for sharing data on all of their patients, regardless of a patient's plan membership.

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“Real World” Pilot Projects

Through a competitive selection process the Oregon Asthma Program sponsored three grants for the development and implementation of an asthma disease registry. Funding was provided to different organizations ranging from a children and adolescents clinic to a small community health plan, to a physician-hospital community organization. Legacy Emanuel Children and Adolescents Clinic is part of Legacy Health Systems, a large not-for-profit healthcare system. The clinic has more than 400 patients with asthma. Marion Polk Community Health Plan, organized under Mid-Valley Independent Physician Association, has approximately 29,000 Oregon Health Plan members. Tuality Health Alliance is a physician-hospital community organization that contracts on behalf of physicians with health plans and provides medical management and quality improvement services to health plans. Of the three sites, the Legacy Clinic has the most sophisticated Information Technology (IT) system for integrating with a registry. Marion Polk Community Health Plan and Tuality Health Alliance are more recently emerging. Regardless of size and technical ability, each organization provides some level of medical management for patients or members living with chronic disease.

Each grantee was required to develop or enhance a tracking system for patients or members with asthma and to assure a linkage to one or more existing electronic data sources such as pharmacy data, emergency department data, or claims data. Furthermore, grantees were required to implement the use of the tracking system by producing information and tools that would help clinicians deliver improved asthma care in the primary care setting.

Legacy Emanuel Children and Adolescents Clinic built upon Legacy Health System’s current electronic medical record (EMR) by creating a two-screen flow sheet within their EMR that can collect, display, and track clinical data for their asthma population. They specifically were interested in tracking the frequency of preventive visits, emergency department visits, and asthma exacerbations. Additionally, they tracked information on school days missed, percentage of asthma patients receiving the flu vaccine, percentage of asthma patients with an updated asthma action plan, compliance with pharmacy refills, and asthma education during clinic visits.

Marion Polk Community Health Plan identified their members with asthma through the use of the Oregon Asthma Program’s, *Technical Specifications for Quantifying Measures in the Guide to Improving Asthma Care in Oregon: Measuring Quality of Care in Health Systems*. In doing so, they were able to establish the beginning of an asthma registry designed to create clinical reports using pharmacy and claims data, specifically focusing on emergency department visits and hospitalizations. The reports were designed to support health care providers in improving the quality of asthma care.

Tuality Health Alliance embarked on the development of an asthma tracking system designed to track patient follow-up, medication compliance, and Asthma Action Plans.

Patients identified in the registry were derived from various data sources including medical claims data, emergency department lists from the contracting hospital, and pharmacy reports. Data from the asthma registry was compiled in a report for primary care providers and distributed on a quarterly basis to inform providers of the asthma medication use and emergency department utilization of their patients with asthma.

Celebrating Success

With small amounts of money, ranging from \$38,000 to \$47,000 for each grantee, the organizations successfully leveraged their resources and experience to create (or enhance) an asthma registry. Grantees also created resources that support improved quality health care for patients or members with asthma. Funding from the Department of Human Services, Oregon Asthma Program added credibility to the project for the health system leaders at each organization and the participating physicians. Each organization continues to enhance its asthma registry and find new and creative models to encourage the use of disease management tools derived from the registry. A little bit of money went a long way, and successfully inspired innovation and entrepreneurial spirit. Clinic champions, quality improvement coordinators, and health plans value information, and are willing to encourage the use of shared data to improve asthma care.

Grantees were developing or developed an asthma registry, or enhanced an electronic medical record. The tenacity and hard work from each grantee's team was essential for the success of its asthma registry. Following patients and members electronically, while maintaining a medical chart, resulted in duplication of effort, and additional human resource hours. Despite the extra work to develop and verify data in an asthma registry, each grantee indicated that the human resource commitment continues to be provided, which is evidence for its value.

Despite the differences among the grantees, each organization succeeded in both developing an asthma registry, and in implementing clinical resources for improving quality of care. Clinicians were impressed with the data, and used the reports or flow sheets to provide case management for their patients with asthma. Each registry referenced the National Asthma Education and Prevention Program's *Guidelines for the Diagnosis and Management of Asthma*, and *The Guide to Improving Asthma Care in Oregon*. Health care providers were reminded of the "Gold Standard" level of asthma care, and had patient data available when making clinical decisions.

Overcoming Challenges and Unanticipated Barriers

Developing and implementing an asthma registry is challenging, but clearly not impossible. Legacy's Children and Adolescents Health Clinic confronted unanticipated barriers with the emerging EMR that is currently being developed by Legacy Health Systems. The duplication of work was tiring and required additional work by both office and clinical staff. The development and implementation of the asthma tracking system and two-screen disease management flow chart provided a valuable decision support

resource for the clinical staff between the full implementation of Legacy's EMR and the paper-based system that existed in the clinic at the beginning of the pilot project.

Creating an asthma registry at the health plan level (Marion Polk Community Health Plan, and Tuality Health Alliance) was challenging for different reasons than at the clinic. These two organizations created registries based on claims data, not clinical activity. At times physicians did not agree with the designated diagnosis of asthma, and did not want their patients to be part of the asthma tracking system. However, positive professional relationships, and open lines of communication between physicians and their respective plans (THA and MPCHP), contributed to a collaborative approach improving the accuracy of the patient lists. Additionally, both of these organizations administer health care primarily for the Medicaid population. The variable enrollment of Medicaid members made providing continuous health care services a challenge. Patients who are on and off the plan become difficult to track for both the provider and the health plan.

Unanticipated barriers and challenges for each of the funded sites were overcome with dedication and hard work. Employed or partnering physicians expressed value in the disease management resources and pharmacology data that supported their efforts to provide improved quality of care. The early involvement of physicians was helpful in establishing a line of communication that resulted in quick turn-around to fix errors and in supporting resources for physicians to improve their asthma management at the patient level. Working with a case manager or a physician champion at the clinic level helped all three sites. Having a champion of asthma, chronic disease management, or electronic medical records cannot be underestimated in the success of overcoming challenges when implementing a disease tracking system.

The Role of Public Health

To address the burden of asthma in Oregon, health systems, providers, public health, community-based organizations, people with asthma and their caregivers must work together to ensure that Oregonians with asthma receive high quality care from a responsible and accountable health care system. Funding three different sites to develop and implement an asthma registry, the Oregon Asthma Program was able to work with partners in a "real world" environment to learn and recognize successful strategies, barriers, and solutions to implementing an asthma tracking system.

With limited funding, the Oregon Asthma Program's central coordination of resources (monetary, in-kind, and provider tools) was able to deflect the duplication of work that was essential in the development and implementation of asthma tracking systems on small budgets. Additionally, the Oregon Asthma Program was able to provide technical assistance on *The Guide to Improving Asthma Care in Oregon* and the *Technical Specifications for Measuring the Guide to Improving Asthma Care in Oregon*. Both were developed to steer efforts to improve asthma management and to define appropriate indicators for monitoring the quality of medical care provided to Oregonians with asthma. All three sites were able to develop their asthma tracking system based on the clinical indicators defined in the Guide, and were further able to identify patients by

using the algorithms outlined in the Technical Specifications. Other provider resources available for each site included Asthma Action Plans, an asthma pocket guide, and asthma education materials.

Initiatives are planned to connect community asthma education resources and health systems to spread information on using asthma tracking systems for the improvement of asthma care and disease management.

Conclusion

Collaborations between health plans and health care practitioners on data connectivity processes will make a positive difference in the improvement of quality care for individuals living with chronic diseases. Each asthma tracking grant recipient, regardless of size or organizational structure, experienced broad benefits in linking an existing data source to clinical care outcomes. Whether the source of data was insurance claims information, or an electronic medical record, both case managers and clinicians were able to use the information to better manage patients with asthma. This was accomplished by tracking medication use, frequency of asthma education, flu shots, emergency department visits, and hospitalizations. Data connectivity can support high levels of care collaboration throughout multiple layers of the health care delivery system.

For continued success and growth in the use of data connectivity techniques, such as disease tracking systems, the following recommendations are essential. Community partnerships with health care organizations and worksites will play an integral role in spread by influencing health plans and health care systems to adopt data connectivity activities for the improvement of disease management. Maintaining neutral coordination at a statewide level will help in preventing duplication of activities, encouraging the use of population-based care guidelines, providing a cohesive unified message, and diffusing any political concerns. Continued work is required to better understand the level at which the data should be housed and delivered. It is clear that information derived from an asthma tracking system is valuable at both the provider and health plan level, and that the preliminary work involved is well worth the up-front resources required to establish such a system.