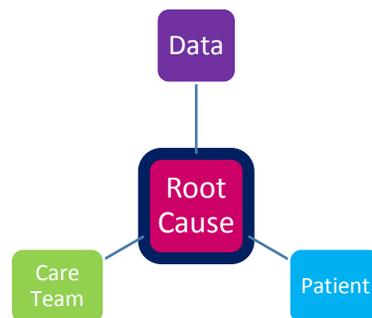


A team at [CareOregon](#) took a very systematic approach to gain deep insight into the root causes of high utilization and where designing an enhanced care model could make an impact. They looked at their data, interviewed clinicians, and interviewed patients.



Data:

As a health plan, they were able to look at total billed charges by service and see that 43% of the charges were for hospitalizations and emergency room visits, together the largest bucket of spending.

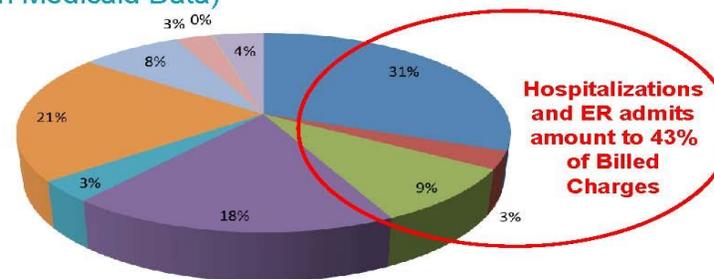
Where is the \$\$\$ going?

% of Total Billed Charges by Service



(State of Oregon Medicaid Data)

**2009 Total Billed
Charges =
\$1,630,851,673**



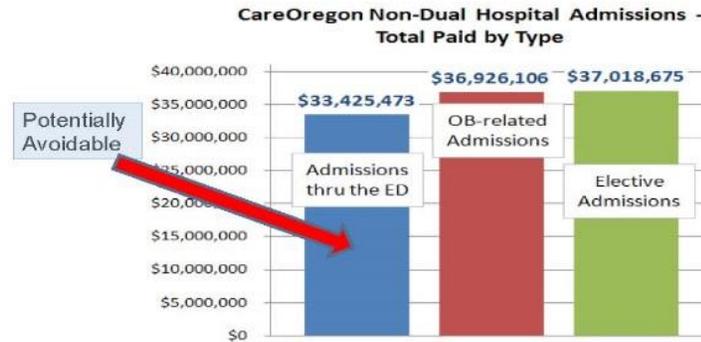
- Inpatient Hospital
- Inpatient Mental Health
- ER
- Outpatient Hospital
- Lab & X-ray
- Outpatient Physician
- Prescription Drugs
- Mental Health Prescription Drugs
- Dental Services (not ER)
- Outpatient Behavioral

* Outpatient Behavioral includes mental health services and ER and non-ER chemical dependency services



Drilling down into the hospital and emergency department visits they identified that admissions through the emergency department were potentially avoidable. They did not want to change elective admissions or OB-related admissions.

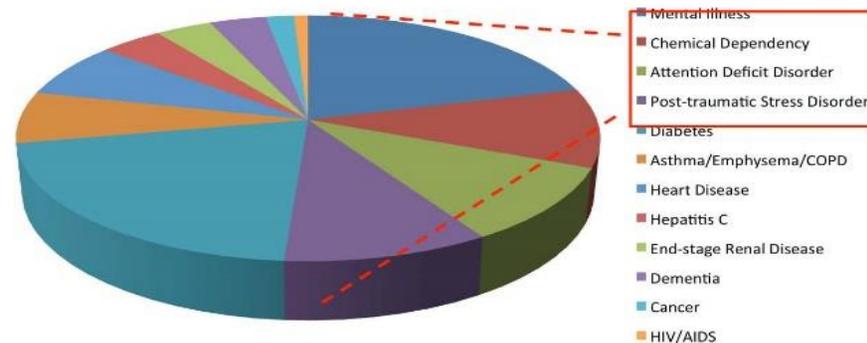
Understanding Hospital Admissions



Looking through the lens of claims data and diagnosis codes, they identified a high prevalence of mental health and addictions diagnoses and a high prevalence of individuals with 1 or more chronic conditions with a substance abuse or schizophrenia and/or bi-polar disorder.

Very High Prevalence of Mental Health and Addictions

(State of Oregon DMAP Data)11_6_13



CareOregon Tri County Claims Data: 21% Adults have 1+ chronic condition PLUS substance abuse or schizophrenia ± bipolar disorder; 3%, both.
Based on HSO 160,000 members (40% Adult). 21% Adults = 13,440; 3% Adults = 1920 (no FFS)

Next, they did analysis on the effect of substance abuse and mental illness on costs and utilization, looking at individuals with diabetes and individuals with congestive heart failure. The impact was substantial.

Effect of Substance Use and Mental Illness on Cost/Utilization

Average 12 mos TOTAL cost, ED and Hosp utilization by group



Adults with Diabetes



Adults with CHF



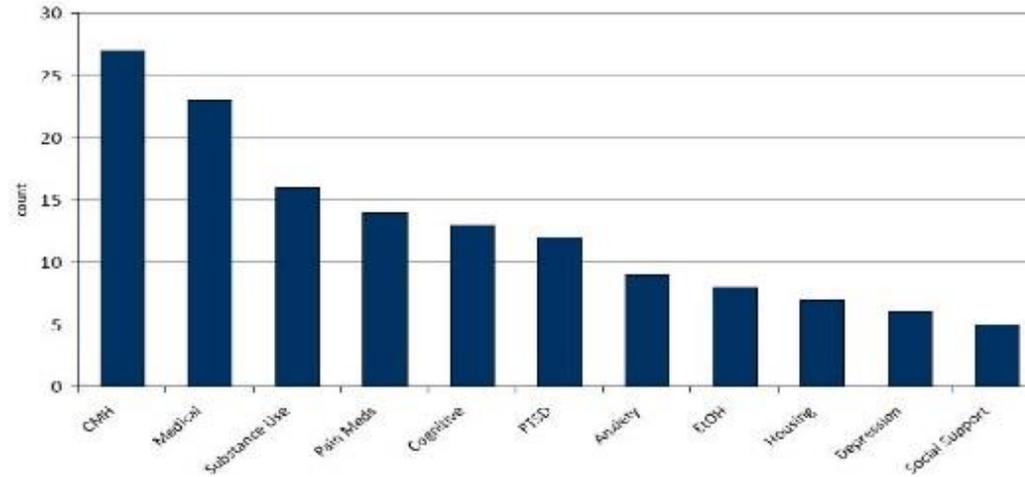
Clinician Interviews and Record Reviews

The team at CareOregon significantly engaged primary care providers in their network across the state to learn what they knew about the potential population segments, to hear their challenges in providing primary care to these individuals, and to get ideas and buy-in on an eventual enhanced care model.

In addition, they did chart reviews looking for qualitative themes in the primary care provider's notes. The bar chart to the right displays the themes found-and the themes of mental health, substance abuse, and social issues were more prevalent than clinical issues.

Understanding the Root Causes: Ask the Care Team

Count of Qualitative Themes from PCP Notes
PCP's were asked: *What is driving this patients non-Primary Care utilization?*



Patient Interviews

Using a tool they developed, called the [HARMS-8](#), the team interviewed between 15 and 30 individuals who seemed to fit the emerging population segment in which care redesign could make an impact.

A summary of their learnings from these interviews is to the right.

What Did CareOregon Learn About Root Causes?

- High prevalence of childhood and life trauma (relevance of the ACE study); often translates into distrust of health care providers
- Most clients have had an overwhelmingly negative experience with the healthcare system; most clients primarily identify as ill and as a patient
- Prevalence of SUD and mental health conditions; mild cognitive deficits common
- Lack of timely access to psychiatric assessment and mental health respite services
- Care coordination needs extensive (particularly between sites of care)
- Many cant afford or do not have access to non-medical items or services critical to optimal health and self management (ie transportation, stable housing, healthy food, medications, place to exercise, etc)



What are the implications of the data review, clinician interviews, and patient interviews for the enhanced care model CareOregon then developed?

The interventions would need to address:

- The challenges these individuals face in their life circumstances, such as trauma, mental health issues, poverty, housing, and food insecurity.
- Individuals who do not have a lot of trust or good experiences with the healthcare system.
- Individuals with chronic conditions and substance abuse or mental health issues.
- Health care system challenges, such as lack of access to mental health services, needs not addressed in the healthcare system, and primary care practices needing help better caring for the complexity of needs.

It is important to tease out the root causes as CareOregon did to assure the interventions in the enhanced care model will have an impact. As the slide to the right shows, the intervention for a cognitive deficit (higher level of care and self-management support) is different than if the underlying issue is a chaotic lifestyle (support in developing problem-solving skills).

Using root cause analysis to design effective interventions

<u>Root Cause</u>	<u>Interventions</u>
1. Cognitive deficit vs. Chaotic lifestyle	1. Higher level of care vs. self management tools and problem solving skills
2. Not picking up medications vs. taking meds inconsistently or inaccurately	2. Address pharmacy barriers vs. offering coordinated fills, bubble packing, and self-management support
3. Daily substance use vs. low health literacy	3. Engage in CD treatment vs. health education at appropriate literacy level

