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# A Phenomenological Investigation of Factors Leading to Success in Diverting Non-Urgent Emergency Department Use at a Rural Critical Access Hospital Using the Patient Centered Medical Home Model

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**Abstract**

Emergency Department (ED) overuse for non-urgent medical concerns is a factor contributing to ED overcrowding, which is in turn related to negative health outcomes. Additionally, low-urgency care provided in the ED is more expensive and less comprehensive than in a primary care clinic. To address this issue, a number of programs have been developed in the United States to redirect non-urgent, high-frequency patients from the ED to their primary care clinic. These programs utilize the patient-centered medical home (PCMH) model to provide holistic, team-based care in a primary care setting in order to address the educational and behavioral needs of patients in such a way that patients stop or reduce their ED usage for low-urgency issues.

This research paper uses a phenomenological approach to identify, investigate, and prioritize the key factors related to the success of a rural ED diversion program located in Prineville, Oregon. For this study eight team-members of the Prineville ED diversion program were interviewed. From the interviews, seven key factors related to the success of the program were identified. The factors, in order of priority, are communication, mental and behavioral health integration, developing trusting and caring relationships with patients, patient education, team-based care, patient access, and community resource support.

*Keywords:* patient-centered medical home, care coordination, emergency department diversion, primary care, rural healthcare

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# Chapter 1 – Introduction

Emergency departments (EDs) in hospitals all over the world are struggling with overcrowding, due to a variety of factors including an increased patient load, an increase in the complexity of patients, and systemic organizational issues (Boyle, Beniuk, Higginson, & Atkinson, 2012; Derlet & Richards, 2000). ED overcrowding is related to negative health outcomes, including increased mortality, increased length of hospital stay, and higher patient costs (Carter, Pouch, & Larson, 2014; George & Evridiki, 2015; Sun et al., 2013) and a major contributor to ED physician dissatisfaction (Rondeau & Francescutti, 2005). These problems in the ED have a broad effect on healthcare, as EDs play an integral role in the network of community health services. "EDs serve as a hub for prehospital emergency medical systems, an acute diagnostic and treatment center, a primary safety net, and a 24/7 portal for rapid inpatient admission" (Schuur & Venkatesh, 2012, p. 391). Additionally, when EDs close, the most vulnerable populations are put at risk, and other nearby EDs are increasingly stressed (Silverstein, 2013).

Rural hospitals and EDs are at particular risk to closing because of high rates of uncompensated care at rural EDs (Bennett, Moore, & Probst, 2007) and low rates of Medicare reimbursement (Fannin & Nedelea, 2013). In the rural United States, the need for ED services is covered by federally designated rural critical access hospitals (CAH), a program that provides additional reimbursement for hospitals identified as critical to

healthcare access for rural populations. These hospitals cover broad geographic areas, are less likely to have access to specialists and medical equipment, and struggle to recruit and retain medical staff (Fordyce, Doescher, Chen, & Hart, 2012; Joynt, Harris, Orav, & Jha, 2011).

In 2014 the American College of Emergency Physicians released a national report card on the quality of emergency services. The nation's grade for emergency services was based on five key areas: access to emergency care, quality and patient safety environment, medical liability environment, public health and injury prevention, and disaster preparedness. In 2014, the overall grade was a D+, a decrease from the grade of C- given in 2009; this grade reduction was greatly influenced by decreased access to timely emergency care.

| NATIONAL GRADE BY CATEGORY | |
|---|---|
| ACCESS TO EMERGENCY CARE | D- |
| QUALITY & PATIENT SAFETY ENVIRONMENT | C |
| MEDICAL LIABILITY ENVIRONMENT | C- |
| PUBLIC HEALTH & INJURY PREVENTION | C |
| DISASTER PREPAREDNESS | C- |
| OVERALL | D+ |

*Figure 1*. National Grade for Emergency Care (American College of Emergency Physicians, 2014, p. v)

In the United States, the number of EDs decreased nearly 11% from 1995 to 2010 while the national ED visit rate increased at twice the rate of growth of the population of the nation. (American College of Emergency Physicians, 2014). Between 2003 and 2009

mean wait time to see a provider at an ED increased from 46.5 minutes to 58.1 minutes – as ED volume has increased, so have mean wait times (Hing & Bhuiya, 2012). Also, "from 2001 to 2007, 69 million people in the US (24% of the population) had to travel farther to the nearest trauma center, with almost 16 million having to travel an additional 30 minutes or more" (Hsia & Shen, 2011, p. 6).

Access to high quality emergency care in the United States continues to decrease due to fewer available ED services (such as: staff shortages, limited hospital capacity, and financial barriers to expansion) and an increase in ED usage. As the American College of Emergency Physicians (2014) reports, most states are failing when it comes to providing ED access.

> While the national grade in *Access to Emergency Care* has not changed, an overall shift in state-level grades tells a different story. Only 5 states in 2014 earn a B grade or better, compared with 11 states in 2009. The number of states receiving a C has also decreased, while the number earning a D did not change. The difference in grades from 2009 to 2014 is accounted for solely by the increase in the number of states receiving an F, which grew from 12 to 21 states, indicating that two-thirds of the states received a failing grade of a D or an F. (p. 11)

Despite long-standing concerted efforts by policy makers and healthcare leaders, scholars and practitioners are asking, "Is there a solution to the collapse of emergency services or is it an incurable disease?" (Estella, 2011).

One area related to ED access that receives regular attention in the literature is ED "throughput" – referring to the ability of the ED to efficiently triage and address emergency situations in a way that allows for increased capacity. Factors related to

throughput in the ED are identified as dealing with minor care non-urgent patients, insufficient exam rooms, insufficient staffing, poor inpatient bed turnover, issues related to electronic medical record implementation, and administrative issues (Waldrop, 2009).

Non-urgent use of the ED has been estimated between 20 and 40 percent based on a systematic analysis of recent studies (Carret, Fassa, & Domingues, 2009). A reduction of the number of non-urgent patients would improve ED throughput and diminish the negative effects related to ED overcrowding. In order to reduce non-urgent ED admissions a number of ED diversion models have been put forward as a way to redirect non-urgent patients to a primary care clinic rather than the ED (Ruger, Richter, Spitznagel, & Lewis, 2004). One such ED diversion program that has been recently successful is located in Central Oregon. The Central Oregon ED diversion program was implemented in 2010 through the partnership of 15 different regional organizations, including clinics and hospitals, insurance companies, community health services, and healthcare advocacy organizations. In particular, the collaborative effort at the St. Charles Health System Pioneer Memorial Hospital (PMH) was a noted success. PMH is located in Prineville, OR, which serves the population of Crook County (roughly 20,000 people) (St. Charles Health System, 2013).

Initial quantitative data collected in 2010 and 2011 at PMH indicated that the Prineville ED diversion program was successful in diverting chronic overuse of the emergency room as well as improving health outcomes for patients. High utilizers were identified as individuals who had ten or more ED visits in a twelve-month period. In a study of 144 ED high utilizers the program achieved a 49% reduction in visits within two quarters, with a significant overall decrease in the cost per patient. Additionally, the

program made gains toward the "triple aim" of better health, better quality and lower costs – reporting improvements in patient-provider communication, care for patients with chronic pain, and lower costs for care. Though this program conducted quantitative analysis, the report recognized that an in-depth qualitative analysis had not yet been conducted on determining the factors that led to the success of program.

## Statement of the Research Problem

A qualitative study of the St. Charles ED diversion program at PMH would contribute to the body of research by investigating the critical factors that lead to the successful outcomes of the ED diversion program.

## Research Question

The purpose of this research study is to identify, investigate, and prioritize the key factors of success related to the emergency department diversion program at the St. Charles rural critical access hospital in Prineville, Oregon.

## Definition of Terms

*Emergency Department (ED)*

For the purposes of this study the ED is a hospital-based medical facility that is open 24 hours, 7 days per week which is designed to provide a full range of medical services to acutely ill or injured patients.

*Patient Centered Medical Home (PCMH)*

A medical home is a centralized location for a patient's care, as well as a place to store and maintain their medical record. The PCMH is designed to provide continuous, comprehensive, holistic care to patients. The PCMH is intended to act as a hub, tying together the associated specialists and health services in a community.

*Federally Qualified Health Center (FQHC)*

An FQHC is a community health center that receives enhanced reimbursement from Medicaid and Medicare by the federal government for the provision of healthcare to vulnerable populations. FQHCs provide primary care for all persons, regardless of ability to pay, acting as a critical element of the health care safety net.

*Emergency Medical Treatment and Active Labor Act (EMTALA)*

EMTALA is a federal act, passed in 1986, that requires all hospitals who receive federal funds to provide a screening examination to any person who presents in the ED, regardless of ability to pay.

## Study Limitations

This study is based on the experiences of administrators and healthcare providers in a unique, small town setting in Central Oregon and intended to follow up on a

quantitative study on the same subject – the Central Oregon Health Council Emergency Department Navigation Program Report (2011). While much can be learned from their perceptions of the phenomenon in question, the findings of this research should not be generalized as a rule or directly extrapolated to other settings without proper verification.

Also, though the Central Oregon ED program was successful in the past, it is beyond the scope of this study to quantitatively verify that the program is still successful, five years later. This limitation will be addressed by asking the administrators of the program about their internally collected metrics, as well as their opinions about the ongoing success of the program.

Furthermore, in such a study there is always the chance that information was not clearly communicated or interpreted – qualitative research heavily relies on the skill of the researcher and the rigor of their method. For the purpose of validity, participants will be asked to review interview transcripts, improving the likelihood that the interviewee's original intent was accurately recorded and interpreted. Additionally, the questions used to guide the interview used in this study will be listed in the Appendix and may be used to repeat this study in order to demonstrate reliability.

This study focuses on the experience of administrators and team members of the program oversight committee, but does not directly involve patients. The experiences and opinions of patients may differ from those of the program staff, and could be the topic of a follow-up study. However, for the purposes of identifying overall factors of success for the program it is believed that those with the broadest view of the program (administrators and oversight committee) would provide the most comprehensive viewpoints.

## Study Delimitations

ED diversion is a topic of interest in many settings worldwide. Research in this area could focus on a broad array of characteristics. It could look at urban settings or settings with unique social situations (such as border areas or areas with a distinct socio-economic makeup), and could be conducted in nations other than the United States. Also, there are many ways of implementing an ED diversion program besides using the Patient Centered Medical Home (PCMH) model. These models could be assessed and compared, providing insight into the available methods of ED diversion.

Although these topics are important and interesting, they are beyond the scope of this paper and project. Rural healthcare faces unique challenges and it is the intent of this paper to provide insight into a successful ED diversion program that uses the PCMH in a rural setting. Therefore, this study is not intended to provide information on urban ED diversion programs, ED programs outside of the United States, or ED diversion programs that do not employ the PCMH model of healthcare.

## Researcher's Perspective

The author is married to a physician who is the acting medical director of the Prineville Mosaic clinic and a member of the ED diversion team. Also, the author is socially acquainted with a number of members of the ED diversion team. Despite these

familiarities, there are a number of factors that reduce the prospect of bias being introduced into the research:

1. Participation on the ED diversion team is largely voluntary and not tied to the performance rating or bonus of the team members.
2. The ED diversion team is not in a high-profile position or under pressure to meet performance goals.
3. The author's spouse is a voluntary participant, not the leader of the team, and has little personally at stake in the program's outcomes.

## Need or Significance

This study is relevant due to the limited research on the use of the PCMH as a method of ED diversion in a rural, critical access hospital setting in the United States. Additionally, the literature in the area of ED diversion does not include many qualitative studies on factors contributing to the success of ED diversion programs. The intent of this study is to provide deeper insight into the factors that have contributed to the success of the Central Oregon ED diversion program at PMH, a rural critical access hospital. By providing such insight, this research adds to, and compliments, other contemporary studies in the literature on this subject.

# Chapter 2 – Review of Literature

Emergency department (ED) overcrowding and overuse has become a prevalent topic in the literature over the past 30 years, with the number of related articles increasing in the late 1980s and early 1990s. This increased interest is largely due to the enactment of the Emergency Medical Treatment and Active Labor Act (EMTALA) of 1986. EMTALA requires hospitals in the United States to provide an examination to anyone who presents themselves in the ED, no matter their ability to pay or social status. One of the main intentions of EMTALA was to reduce patient dumping – the transfer of uninsured patients from private to public hospitals (Barber, 1992). In effect, the passage of EMTALA required the ED to act as the safety net for the uninsured. This new role caused a steep uptick in ED usage, but also an increase in lost revenue as EMTALA did not provide a method of reimbursement to EDs for their required service to non-paying patients (Beck & Paul, 1998; Bennett, Moore, & Probst, 2007). This has resulted in cost shifting – the increase of charges for insured patients in order to pay for those who cannot provide full remuneration (Zibulewsky, 2001).

Throughout the early 1990s, a number of methods were attempted in order to divert non-urgent ED users; including the use of co-payments and the use of algorithm-directed triage (Richardson, & Hwang, 2001). Unfortunately, a barrier to developing reliable methods of diverting non-urgent patients was the lack of a clear definition of

"non-urgent." By the mid-1990s the use of nurse triage information, explicit medical criteria, and physician judgment based on medical record information (or combinations thereof) were identified as three commonly used methods of assessing the appropriateness of an ED visit. However, the results from these methodologies only moderately agreed with each other when assessing ED visit appropriateness, showing a high level of subjectivity in the assessment process (O'Brien, Shapiro, Woolard, O'Sullivan & Stein, 1996). As Abbuhl and Lowe (1996) pointed out, gatekeeping at the front desk of the ED without full assessment inherently introduces error; "Measures of appropriateness based on retrospective reviews of diagnoses fail to take into account that physicians, nurses, and patients cannot determine the urgency or cause of symptoms until after their evaluation" (p. 189).

As a result of increased enforcement of EMTALA in the late 1990s (Lee, 2004), many of the experiments in direct ED diversion evaporated. Hospitals found attempting to directly divert or reject so-called non-urgent ED users could be fined up to $50,000 per incident, as well as face the potential loss of Medicare reimbursement, the results of which could be financially devastating (Wanerman, 2002). Still, throughout the 1990s and into the 2000s, the scholarly discussion of EMTALA, ED reimbursement, and non-urgent patient diversion from the ED increased, with hot debates in the literature in relation to ethical, financial, political, and legal issues (Derlet & Richards, 2000; LaCalle & Rabin, 2010; Richardson & Hwang, 2001).

## The Medical Home Model

More recently, a new tactic has been employed in reducing non-urgent use of the ED that includes focusing on strengthening the community presence of primary care clinics – thereby indirectly decreasing non-urgent ED care by increasing access to health clinics. In addition to reducing unnecessary ED visits, access to primary care and continuity of care under the same provider, can allow for better care at lower costs (Kim, Mortensen, & Eldridge, 2015). Patients that have a "medical home," consisting of a primary care provider (PCP) that provides comprehensive and continuous care, tend to have a decrease in non-urgent ED visits (Choudhry, et al., 2007). This line of research has continued to grow the last few years, with expanded access to primary care at a medical home being listed as a factor of success in multiple studies (Diedhiou, Probst, Hardin, Martin, & Xirasagar, 2010; Flores-Mateo, Violan-Fors, Carrillo-Santisteve, Peiró, & Argimon, 2012).

> Having a health care home – a health care practice where a patient receives the majority of his or her health care in a regular, continuous, and patient-centered manner – improves health outcomes and controls the cost of care. Patients with a health care home are less likely to have a costlier illness at a later date and go to the emergency room for health care. Having a health care home is also associated with improved access to and use of primary care, better management of chronic diseases, more cancer screenings for women, and even fewer lawsuits against emergency rooms. (Choudhry, et al., 2007, p. 3)

Because of the success of the medical home, the concept has been formalized into a new organizational model known as the patient centered medical home (PCMH). Being patient centered means a patient's provider "*honors* and responds to individual patient preferences, needs, values, and *goals*" (Greene, Tuzzio, & Cherkin, 2016, p. 49).

The PCMH acts as a connecting point for medical services in a community, providing comprehensive and preventative care, thereby reducing ED usage (Ferrante, Balasubramanian, Hudson, & Crabtree, 2010). In essence, the PCMH strives to seat the traditional values and competencies of primary care in an organizational model that accounts for the needs of the current-day healthcare system. In this model, the PCP coordinates care (when necessary) between specialists, ensuring that transitions between the medical home and medical "neighbors" occurs without a hitch (Starfield, 2010).

The PCMH is based on seven principles that aim to make primary clinics the "hub" of health care. The seven principles are as follows:

- Holistic patient care
- Emphasis on quality and safety
- Enhanced care coordination and management
- Team-based care
- Enhanced access to care
- Greater patient engagement in care
- Enhanced payment (Hoff, 2013)

Holistic Patient Care

Providing holistic patient care means recognizing and caring for the patient's integrated needs, including their physical, mental, behavioral, social, and spiritual needs. Holistic care:

> …embraces the mind, body and spirit of the patient, in a culture that supports a therapeutic nurse/patient relationship, resulting in wholeness, harmony and healing. Holistic care is patient led and patient focused in order to provide individualized care, thereby, caring for the patient as a whole person rather than in fragmented parts. (McEvoy & Duffy, 2008)

As defined above, holistic care is to be *patient led* and *patient focused*. This requires a shift in thinking for many medical providers who, because of their training, have grown to see themselves as experts in disease control rather than patient caretakers (Papathanasiou, Sklavou, & Kourkouta, 2013). The PCMH model calls for the medical team to focus on the person, rather than their condition.

A key part of the PCMH model's implementation of holistic care is the introduction of behavioral health consultants (BHCs) and community health workers (CHWs). These roles focus on behavioral and social support for patients, augmenting the efforts of the PCP in providing holistic care. BHCs are able to help patients with mental and behavioral issues related to self-management, including addressing motivation for behavior change, dealing with stress and anxiety, and depression (Mann, et al., 2016). "CHWs commonly are used to augment medical personnel's ability to empower individuals and communities to

adopt healthy behaviors, secure resource access, obtain social support, and enable timely access to care" (Kaur, 2016, p. 59). BHCs and CHWs work closely with the entire care team to coordinate holistic patient care.

Allowing patients to lead their own healthcare requires the development of trust between the patient and the primary care team. Building trust is a key component in holistic care, as trust has been shown to be an instrumental factor related to patients taking an active role in caring for their health (Becker & Roblin, 2008). If providers do not first build strong relationships with patients, or try to hurry the process of building trust, their attempts at providing holistic care may be rebuffed as being intrusive or pushy (McEvoy & Duffy, 2008). Holistic care cannot be routinized or optimized – it is patient-driven customized care.

### Emphasis on Quality and Safety

In 1999, the Institute of Medicine (IOM) report *To Err Is Human* brought focus to many of the systemic issues that can cause reduced quality and safety in modern healthcare (Wachter, 2004). Many of the issues highlighted in the IOM report were related to poor integration of specialists, communication problems, a misaligned reimbursement system, and collective inattention.

The PCMH addresses much of what was identified in *To Err is Human* through defining an integrated system for delivering quality healthcare. The organizational changes promoted by the PCMH model are intended to improve patient outcomes, reduce mistakes, decrease duplication of services, and provide cost savings. These are measured through The National Committee for Quality Assurance's Physician Practice Connections

– Patient-Centered Medical Home tool, which has identified 166 items of measurement. These items assess nine standards: access and communication, patient tracking and registries, care management, patient self-management support, electronic prescribing, test tracking, referral tracking, performance reporting and improvement, and advanced electronic communications (Stange, et al., 2010).

With the PCMH model, enhancing quality includes incorporating identified best practices. As innovations within the PCMH model are validated through evidence-based methods they are publicized as best practices and incorporated into the model (Grumbach & Grundy, 2010). This method of incorporating best practices highlights the application of Senge's concept of the learning organization as related to enhancing quality and safety through the PCMH model (Daaleman, 2008).

## Enhanced Care Coordination and Management

Enhanced care coordination and management supports the integration of multiple providers and provider teams in their care for patients. This allows patients and their medical data to smoothly transition between care groups across the healthcare system. Visit to visit and time after time, patient experience should be congruous and based on up-to-date clinical information. "Measures of coordination within a patient care team assess the degree to which the care delivered by each team member is consistent with and informed by the care delivered by other team members" (Singer, et al., 2011, p. 119).

Care coordination requires providers and staff to communicate effectively and in such a way that respects the dignity of each patient. "Patient-centered communication seeks to increase health care providers' understanding of patients' individual needs,

perspectives, and values; to give patients the information they need to participate in their care; and to build trust and understanding between physicians and patients" (Levinson, Lesser, & Epstein, 2010, p. 1311). It also means patient care information is accurately shared across the medical system, including between the ED and primary care clinics (Wagner, Sandhu, Coleman, Phillips, & Sugarman, 2014). This level of care coordination and management requires the use of new organizational processes and communication tools outlined by the PCMH model.

Electronic communication tools, including electronic medical records and health information exchanges, play an important role in supporting patient management in the PCMH model. Electronic medical records allow medical notes to be shared in real-time between team members, providing a comprehensive and up-to-date log of a patient's medical history, as well as allowing for consistent patient care tracking and analysis (Vartak, Crandall, Brokel, Wakefield, & Ward, 2009). Even though in many cases the implementation of electronic communication tools have not yet fully lived up to their promise regarding the enhanced care coordination and management (Kellermann & Jones, 2013), their use is still seen as necessary and important to improving coordination of care (Rudin & Bates, 2014).

### Team-Based Care

Team-based care is defined as "a group of diverse clinicians who participate in and communicate with each other regularly about the care of a defined group or panel of patients" (Goldberg, Beeson, Kuzel, Love, & Carver, 2013, p. 150). In primary care, the team frequently includes physicians, mid-level providers such as physician assistants and

nurse practitioners, pharmacists, nurses, mental health providers, and community health workers. Because team-based care is a relatively new concept in healthcare, a working group from the IOM has outlined five principles to guide the development of team based care: clear roles, mutual trust, effective communication, shared goals, measurable processes and outcomes (Wynia, Von Kohorn, & Mitchell, 2012). In accordance with the PCMH, patients are also considered part of the team, as well as the purpose for the team.

The concept of team-based care is central to integrating health care within the PCMH. In the PCMH model patients are cared for by more than just their PCP; care is coordinated by an in-house team that is able to address medical and non-medical issues. Typically, PCPs have limited time to fully address patients' needs; during PCP visits physical care often supersedes mental and social care (Croghan & Brown, 2010). Integrating physician assistants, nurses, BHCs and CHWs, allows the PCMH team to holistically address patients' needs. Also, team-based care improves patient access, because patients can see any of their team members for care. This prevents the PCP from becoming the bottleneck for access to care.

Research suggests team-based care improves "access to after-hours care, quality of care, continuity of care, confidence in the system, utilization of physician and nurse services, patient centeredness, comprehensiveness of care, and disease prevention and promotional initiatives" (Jesmin, Thind, & Sarma, 2012, p. 78) as well as improved heath outcomes (Hunt, et al., 2008). Also, team-based care has been shown to be associated with reduced provider burnout (Helfrich, et al., 2014).

Enhanced Access to Care

Patient access is fundamental to successful implementation of the PCMH; without access to primary care patients are left out of the healthcare system. Enhancing access to care means eliminating barriers to patients receiving appropriate care in a timely manner. The health care access barriers (HCAB) model identifies three categories of barriers to patient access: structural, financial, and cognitive (Carrillo, et al., 2011).

Structural barriers represent the mismatch between patients' needs and clinics' availability. Structural barriers associated with increased ED use include inability to contact the clinic by phone, inability to schedule an appointment soon enough, waiting too long in the clinic's office, limited clinic hours, and lack of transportation (Rust, et al., 2008).

"Cognitive barriers are rooted in the patient's beliefs and knowledge of disease, prevention, and treatment, as well as in the communication that occurs in the patient-provider encounter" (Carrillo, et al., 2011, p. 566). Though a clinic may believe they are providing structural access, a patient's cognitive barriers may prevent them from receiving care.

Financial barriers particularly affect the uninsured and underinsured. Without the ability to pay for care, patients tend to put off visits to their PCP as long as possible, which leads to ED visits when health issues reach emergency status.

To overcome structural barriers, PCMH clinics employ strategies such as: providing extended clinic hours, after-hour phone support, same-day appointments, group visits, and email and telephone access (Enhanced Access, Safety Net Medical Home

Initiative, n.d.). Using these strategies has been shown to improve patient access and quality while reducing costs (Christensen, et al., 2013).

Financial barriers have been addressed at the national level through the passage of the Patient Protection and Affordable Care Act (ACA) as well as through sliding scale payment available at Federally Qualified Health Centers (FQHCs) (Morgan, 2011). Also, because one of the PCMH's triple aim goals is to reduce costs, the PCMH was designed for greater cost efficiency than traditional models, thereby reducing financial barriers. In Michigan, full implementation of the PCMH model resulted in "$26.37 lower per member per month medical costs for adults" (Paustian, et al., 2014, p. 52).

Cognitive barriers are addressed by the principles of the PCMH in multiple ways. The PCMH value of patient-centered care helps facilitate stronger provider-patient communication by involving patients in their own care. Practicing holistic care means providers are aware of the patient's multifaceted needs, including their cognitive and educational needs. Also, the team-based model provides greater opportunity for patient-provider interaction around patient education and patient engagement.

### Greater Patient Engagement in Care

Patient engagement encourages patient self-care and behavior change, which are related to positive health outcomes (Gill, 2013). Common engagement methods include motivational interviewing, brief action planning, patient education, shared decision-making, and social support through groups (Barry & Edgman-Levitan, 2012; Gutnick, et al., 2014; Hoving, Visser, Mullen, & van den Borne, 2010). Such techniques can be used

individually, or as an integrated system for greater effectiveness (Jordan, Briggs, Brand, & Osborne, 2008).

At its core, patient engagement requires a shifting of responsibility for health from the provider to the patient, from extrinsic motivation to intrinsic motivation, from compliance to freedom and autonomy (Anderson & Funnell, 2010). "An empowerment based education program is patient-centered rather than content-driven and provides patients with the knowledge and skills they need to make informed choices" (Funnell & Anderson, 2008, p. 460). This means patient education is more than lecturing, or providing literature. Patient-centered education includes inquiry, listening, and the incorporation of the patient's perspectives in their care (Weinberger, Johnson, & Ness, 2014). An effective model for patient-centered education is called "teach back," where a patient is asked to teach the provider or educator what they know about caring for themselves (Peter, et al., 2015). Teach back engages the patient in dialogue in a way that puts the burden of communication on the provider and allows for validation of the patient's understanding.

The intent of patient engagement techniques is to motivate patients to change behaviors for improved health. When patients respond to engagement efforts, taking independent actions to manage their own care, it is called patient activation (Hibbard & Greene, 2013). "Activated patients are knowledgeable about their health conditions, confident in their ability to manage these conditions, and maintain their health by seeking information and performing health promoting behaviors" (Altshuler, et al., 2016).

Enhanced Payment

The PCMH model compliments the newly developed concept of the Accountable Care Organization (ACO) (Edwards, et al., 2014). ACOs are organizations that receive payment based on quality metrics related to care provided for a group of patients. With the passage of the ACA, ACOs have received much attention, as they represent a new model of payment through Medicare rather than the more traditional fee-for-service model.

> In the ACA's formulation, an organization of health care providers that agrees to be accountable for the total care of a defined group of Medicare beneficiaries and meets specified quality metrics may share in any savings that accrue to the Medicare system. (Sanford, 2012, p. 1524)

Clinics that follow the PCMH model are poised to take advantage of this new payment model available to ACOs, due to the PCMH model's focus on high quality and safety standards.

While the passage of the ACA has provided new payment methods that may prove advantageous for primary care clinics, it has also created new challenges. The ACA has expanded insurance coverage to an additional 34 million people and based on current projections the United States will require an additional 52,000 primary care physicians by the year 2025 in order to handle the estimated growth in the number of patients (Petterson, et al., 2012). This finding underscores the gap between the need for primary care physicians and the lack of primary care capacity of the healthcare system in the United States.

## Recent Issues and Innovations in ED Diversion

Because timely access to a primary clinic is inversely related to ED utilization, a shortage of primary care physicians exacerbates stress on the entire healthcare system. Though access to a medical home can reduce ED visits, many non-urgent ED users who have a PCP and insurance (Northington, Brice, & Zou, 2005) still visit the ED for non-urgent issues. Common factors as to why patients still choose the ED for non-urgent care are related to their knowledge of alternatives as well as a lack of access to care at their primary care clinic. "…patients' knowledge of the health care system (and more specifically, primary care options) is a critical factor in deciding where to go for medical care" (Shaw et al., 2013, p. 1300). Though the waiting time can be long for non-urgent ED patients, the perceived and actual barriers to visiting a primary care clinic are often greater (Wilkin, Cohen, & Tannebaum, 2012). Even when other options exist, the ED is seen as a convenient place for finding timely care (Tsai, Liang, & Pearson, 2010). Accordingly, improving awareness of, and access to, primary care through a PCMH are critical to reducing stress on EDs.

The importance of access to primary care in reducing ED over-utilization has been reported in a number of successful ED diversion programs located around the United States. Recently, Washington State has implemented a successful new program called "ER is for Emergencies." During 2013 the program reported:

- The rate of emergency department visits declined by 9.9 percent.
- The rate of "frequent visitors" (five or more visits annually) dropped by 10.7 percent.

- The rate of visits resulting in a scheduled drug prescription fell by 24 percent.
- The rate of visits with a low-acuity (less serious) diagnosis decreased by 14.2 percent. (Washington State Hospital Association, 2015, para. 1).

These achievements were accomplished using seven best practices. The best practices include using electronic health information, improving patient education of resources, identifying frequent users, developing patient plans for frequent users, implementing narcotic guidelines, prescription monitoring, and using feedback information to ensure interventions are working (Washington State Hospital Association, 2015). Of these best practices, the second (improving patient education) and fourth (developing patient plans for frequent users) are directly related to increasing patient access to primary care.

Similar to the Washington program, a PCMH model was used in Orange County, CA, at a county hospital to reduce ED utilization. Roby et al. (2010) found that increased access to primary care, coupled with improved care coordination, improved case management, and education for patient self-management, resulted in a reduction of ED visits.

Another study, performed in West Haven, Connecticut, at the Veteran's Affairs (VA) clinic analyzed the clinic's transition to a PCMH model in 2007 to investigate the effect on emergency department utilization. This study focused on the continuity of care between a patient and their PCP, finding that patients with continuity of care were 9% less likely to visit the ED after the implementation of the PCMH model (Chaiyachati, et al., 2014).

The insights gathered from the most recent research on ED diversion point in a similar direction: timely access to primary care is a key factor to reducing non-urgent ED utilization. However, as previously discussed, improving access to primary care is its own issue – largely due to a shortfall in available physicians and the complexity of navigating the healthcare system. Though the deficit of available primary care physicians will not be a quick or easy problem to solve, primary care clinics can take action by helping patients take better advantage of their current capacity. To this end, using CHWs has been shown to help patients navigate the healthcare system, thereby improving access (Enard & Ganelin, 2013). As patient navigators, CHWs can act as a liaison between the patient and the clinic, helping patients find the care they need in timely manner while also serving as an educator around appropriate access of care.

Another innovation in providing access has been the use of paramedics to conduct home visits. This integration of primary care and emergency care, known as community paramedicine, allows paramedics to work under a physician and provide care within the scope of their training at a patient's home. This allows for regular home visits from a paramedic, as well as mobile triage, reducing ED visits for non-urgent medical issues (Kizer, Shore, & Moulin, 2013).

> …services commonly provided by community paramedics include physical assessment; medication compliance and reconciliation; post-discharge follow-up (within 24- 72 hours as directed by the hospital, PCP, or medical director); chronic disease management (usually for congestive heart failure, AMI, or diabetes); patient education; home safety assessment/fall risk prevention;

immunization/flu shots; and referrals to either medical or social services. (Pearson, Gale, & Shaler, 2014).

Community paramedicine has been piloted in multiple rural locations in the United States with demonstrated success. However, a challenge that remains in implementing paramedicine broadly is funding and reimbursement, as only one state, Minnesota, has passed legislation for Medicaid reimbursement for community paramedicine services (Pearson et al., 2014).

## ED Navigation in the Rural United States

Reducing unnecessary ED visits is of particular concern in the rural United States, where hospitals manage emergency care for broad geographic areas, face greater financial challenges, and struggle to recruit and retain doctors (Ricketts, 2000; Van Vonderen, 2008). The reduction of ED visits in rural areas is important because rural critical access hospitals (CAHs) "have less access to capital and fewer health care providers in their communities, including fewer specialists. Therefore, these hospitals may face equal or greater challenges in delivering high quality care" (Joynt, Harris, Orav, & Jha, 2011, p. 2). Uncompensated ED visits at rural hospitals has been estimated at a cost of $4 Billion dollars nationwide (using 1999-2000 data) further stressing the healthcare system. (Bennett, Moore, & Probst, 2007). Due to such challenges, from 2010 through 2014, 47 rural hospitals stopped providing inpatient care, with 26 of the hospitals closing entirely (Thomas et al., 2015).

To address these issues the federal government has developed multiple programs intended to support rural healthcare. Hospitals achieving the critical access hospital (CAH) designation receive special compensation rates rather than the usual fixed-fee Medicare rates – the CAH program is credited with saving many small, rural hospitals from closing (Fannin & Nedelea, 2013). Also, the FQHC program supports community health centers with federal funds in order to reach the medically underserved. While the CAH program helps to keep rural hospitals open, FQHCs provide safety-net primary care access.

The access FQHCs provide in rural areas is a key factor in reducing non-urgent ED utilization. Rust et al. (2009) found that the absence of a community health center was associated with an excess of uninsured ED visits in rural areas. The aforementioned studies suggest that access to primary care is essential to solving ED overcrowding in rural areas.

In alignment with the literature, a PCMH-based model for patient navigation has recently been used to successfully achieve the triple aim of better health, better quality, and lower costs through the reduction of ED visits among high-utilizing patients in rural Central Oregon (Central Oregon Health Council, 2011). This program was a joint effort between the St. Charles Health System, Mosaic Medical FQHC, Pacific Source Health Plans, the Oregon Health Authority, and a network of other regional healthcare agencies (15 organizations in total).

The Central Oregon program began by identifying a number of high utilizers at St. Charles EDs. These patients were then provided community-wide treatment plans, guided by CHWs to receive care at the proper facility, and were also given access to

behavioral health consultants. Additionally, patient information was reviewed and managed by a health engagement team (HET) that collaboratively managed community-wide treatment plans with the patient's PCP. The Central Oregon Health Council studied the program's first six months, reporting positive results.

> The Central Oregon Health Council has determined that the ED diversion project has been successful in achieving the goals of the Triple Aim: better health, better care, and lower cost, and as such has become an important intervention in the Central Oregon community. (Central Oregon Health Council, 2011, p. 16)

In the initial cohort of 144 identified non-urgent, ED high utilizers, a reduction in use of 49% was observed in the first two quarters of the diversion program (see Figure 2). In addition, patients received more comprehensive and consistent care through their PCMH and reported improved health outcomes. Of note, patients reported decreased physical and emotional problems after joining a PCMH, improved communication with their health care providers, and perceived fewer barriers to receiving care (Central Oregon Health Council, 2011). In particular, the Central Oregon program's results were found to be outstanding at the rural critical access hospital in Prineville, OR.

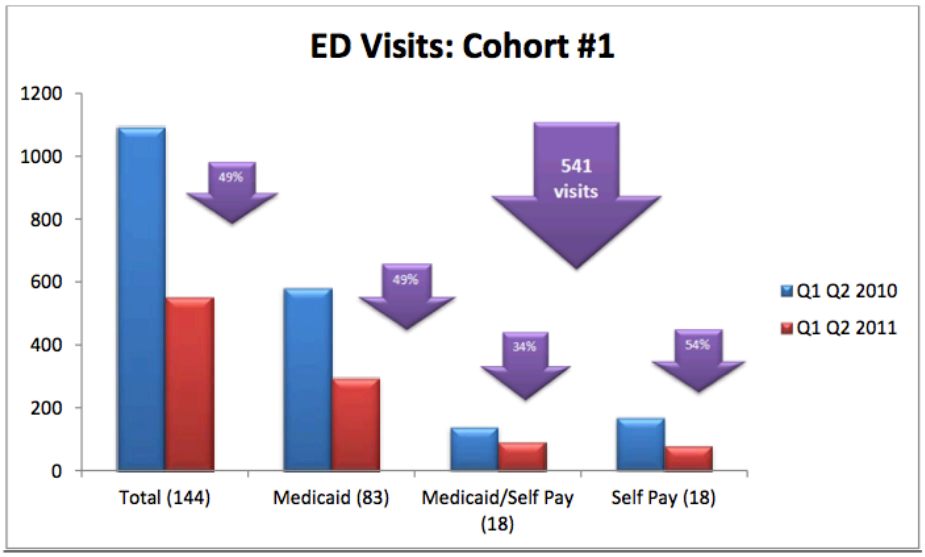


*Figure 2*. ED Visits of Cohort #1 of the Central Oregon ED Diversion Program (Central Oregon Health Council, 2011, p. 10)

The 2011 Central Oregon Health Council report was the result of quantitative analysis and noted that a full and thorough qualitative analysis had not yet been conducted to determine factors that contributed to the success of the program. Therefore, the qualitative study proposed in this paper builds on the quantitative findings of the initial report in order to investigate factors that have led to the program's success.

# Chapter 3 – Method

## Research Purpose

The purpose of this research is to identify the factors perceived to positively impact the Central Oregon ED diversion program at the hospital in Prineville, Oregon. The research proposed in this paper would contribute to the body of research by identifying the critical factors that led to the successful outcomes of the ED diversion program, as identified by the ED diversion oversight team located in Prineville, Oregon.

## Research Question

The purpose of this research study is to identify, investigate, and prioritize the key factors of success related to the emergency department diversion program at the St. Charles rural critical access hospital in Prineville, Oregon.

## Setting

Prineville, OR is a town of roughly 9,000 persons and is the county seat of Crook County (20,000 people in total) which is located in Central Oregon. Prineville is traditionally known as a lumber, ranching and rodeo town; however, the reduction of

timber cutting due to environmental protections enacted in the 1990s has caused the town's primary employers, lumber mills, to either drastically reduce their number of employees, or altogether close (Read, 2011). Due to this economic downturn, Prineville reports high levels of unemployment (near 18%) and high levels of uninsured patients (near 16%) (U.S. Census Bureau, 2014).

## Participants

The participants in this research are the current members of the Prineville-based ED diversion oversight team. This team includes administrators and health care providers from the St. Charles hospital (who operate the local ED), Mosaic Medical (the regional FQHC and PCMH), Lutheran Community Services, and Pacific Source Community Solutions/Oregon Health Plan (OHP). The team consists of 8 members.

## Research Design and Rationale

The question addressed by this research project is best investigated through qualitative research, due to its subjective nature. As such, phenomenology was selected as the most appropriate qualitative method because phenomenology is used to examine the common experience of several individuals as related to an occurrence or phenomenon. For this research, the committee responsible for administering the Prineville ED diversion plan will be interviewed in order to uncover what factors they believe contribute most to the impact of the diversion program.

This phenomenological study will follow the five steps outlined by Shi (2013). First, phenomenology has been selected as the method that best suits the research problem. Second, a phenomenon pertinent to the research question has been identified. Third, data will be collected through interviews with participants who have experienced the phenomenon. Fourth, clusters of meaning will be developed in order to highlight themes that emerge from the interviews. In the fifth and final research stage, the phenomenological experience will be described in a way that vividly shares the common experience of those involved with the phenomena.

## Participant Selection

The Prineville ED diversion oversight team members have been selected as the "key informants" (Suri, 2011, p. 66) because they are closest to the controlling side of the phenomenon. To recruit participants, the aims of this study will be introduced at an ED diversion meeting, with members solicited for participation. Participation in this research project will be entirely voluntary, with participants receiving no reward or punishment regardless of decision to participate.

Selecting experts for interviews is an example of purposeful sampling (Bruce, 2008), the method to be used for this study. Because the ED team administers the program and some of the current team members helped design and implement the original program, it is reasonable to consider them experts. "The logic and power of purposeful sampling lies in selecting *information-rich* cases for study in depth. Information-rich cases are those from which one can learn a great deal about issues of

central importance to the purpose of the inquiry, thus the term *purposeful* sampling" (Patton, 2002, p. 273). It is expected that the information collected from the ED diversion oversight team will exhibit such richness, providing the unique insight and expertise required of this study.

## Data Collection

Data will be primarily collected through the recording of in-person interviews with ED diversion oversight team members and project administrators. Audio will be recorded with a digital audio recorder. Interview audio will be transcribed and provided to the interviewee for review. Additionally, if ED oversight team members provide written documentation pertinent to the research, it will be reviewed and considered along with the audio interview. Research interviews will be performed at private meeting spaces, offices at participant's workplaces, or if preferred, at a meeting room at the county library.

Data will be collected until a point of sufficiency has been reached, allowing the author to adequately answer the research question. "The logic of data sufficiency is guided by the synthesist's perception of what constitutes sufficient evidence for achieving the synthesis purpose" (Suri, 2011, p. 73). It is assumed that sufficiency will be achievable with the scope described, given the interest and support shown by the St. Charles PMH administration in this project thus far.

## Data Analysis

Data will be analyzed through the following hermeneutical process. First, the researcher will read the interview transcripts as well as listen to the interview audio recordings, noting the meanings that emerge. Next, after reading and listening for specifics, the transcripts will be reviewed again, this time focusing on the whole phenomenon, rather than the reduction of themes. The literature on phenomenological analysis stresses that at this stage the researcher must operate with a certain naivety, "bracketing" their presuppositions as to understand the interviewees plainly, without projecting prejudice (Flood, 2010).

The next stage is to begin delineating "meaning units." This means crystallizing and condensing what interviewees said, retaining as much of the original language as possible and distilling the spirit and essence of the subject (Hycner, 1985). Once the meaning units have been distilled they are applied to the research question. Redundant units of meaning are reduced at this point.

Next, primary themes are generated – these are the "clusters of meaning" referred to by Shi (2013). Associations are systematically formed between related concepts. Major themes begin to emerge as meaning units are combined under common headings.

Finally, the major themes are considered in light of the research question. From these themes a vivid description should be developed – the intention is to give the reader the feeling of "being there," experiencing the phenomenon themselves. (Shi, 2013)

Throughout the data analysis phase, a journal will be kept. This journal is an important part of the process, allowing the researcher to ruminate on the data and track themes and ideas as they emerge throughout the course of the project. In a way, the journal is a meta-phenomenological element, allowing the researcher to remain aware of their own experience throughout the sense-making process.

## Human Subjects Safety and Review

This research proposal has been reviewed by the George Fox University institutional review board in order to ensure all research was ethically conducted. All interview participants will be asked to complete a release form that describes the research intention and procedures. No data will be collected until participants complete the release form, indicating their willing participation in the study. Furthermore, all participants will retain anonymity; their comments will be referenced using non-identifying pseudonyms. Participants will also be provided copies of their interview transcripts for purposes of validity, providing them the opportunity to clarify or edit their statements prior to analysis and final report.

# Chapter 4 – Findings

This chapter presents qualitative data through in-depth interviews with eight team members of the Central Oregon ED diversion program. First, an overview of the participants and their relationship to the program is presented. Second, the interviews and interview process are discussed as a whole. Third, the "clusters of meaning" derived from the totality of the interviews are drawn out. Fourth, the major themes are discussed in light of the research question. Finally, the shared experience of the ED diversion program team members is vividly described as related to the major themes.

## Participant Profile

In regard to role and training, participants included three community health workers (CHWs), two nurse care coordinators (RNCCs), one ED nurse, one behavioral health consultant (BHC), and one manager with a clinical social work background. All participants are either currently part of the ED diversion program in Prineville, or were instrumental in the program's initial development.

| Participant | Gender | Role | Organization |
|---|---|---|---|
| R1 | Female | BHC | Mosaic Medical Prineville |
| R2 | Male | RNCC | Mosaic Medical Prineville |
| R3 | Female | Manager for Health Integration | St. Charles System |
| R4 | Female | System CHW | St. Charles System |
| R5 | Female | System CHW | St. Charles System |
| R6 | Female | RNCC | St. Charles Family Care Prineville |
| R7 | Female | Clinic CHW | St. Charles Family Care Prineville |
| R8 | Female | ED Nurse | St. Charles ED Prineville |

*Table 1*. Research Participant's Gender, Role, and Organization

In this study a total of eight people were interviewed. Participants in this study were primarily female, educated, and experienced in the field of healthcare. Regarding gender, the participants selected were representative of the healthcare workforce in Prineville. Two of the participants work at the Prineville St. Charles Family Care clinic; one works in the St. Charles Prineville ED; three work for St. Charles in systematic or administrative roles, and two work for the Mosaic Medical clinic in Prineville. Participants were selected using a purposeful sampling method.

Initially, the St. Charles Prineville hospital CEO referred key experts in the ED diversion program; these experts were the first to be interviewed. At the end of each interview, interviewees were asked to identify other key members of the ED diversion program. New interviewees were selected by the frequency and intensity of references from other interviewees, as well as for their involvement (current or past) in the

Prineville ED diversion program. By the final interview, it was evident that the key actors in the Prineville ED diversion program had been identified. Data sufficiency was determined as the number of newly referred interviewees approached zero and the information collected provided a vivid and holistic description of the various facets of the Prineville ED diversion process.

## Interview Analysis

All interviews were held between November 9th, 2015 and December 18th, 2015. It should be noted that these interviews took place within a few months after the St. Charles Prineville hospital moving locations across town, which was a major event for the local healthcare community.

The shortest interview lasted 20 minutes and the longest just over one hour; the total recorded interview time was 347 minutes, with the average interview time being roughly 43 minutes. Half of the interviews were held in the interviewee's office, two interviews were conducted by phone, one in a hospital lobby, and one at a private residence. One interview included two interviewees at once, the rest were solo interviews.

In all cases the interviewees appeared to speak freely, not under direct supervision or under apparent duress. Most spoke with candor and emotion, expressing hopes as well as frustrations with the ED diversion program, and the status of the healthcare system in general. When given the opportunity to review and revise the transcript of their interview, two interviewees responded with amendments to their transcripts. In both cases the

changes did not alter the substance of their interview; changes of the text were stylistic, related to language use, clarity of meaning, and tone of voice.

Each of the interviews relied on the research questions in Appendix A to guide the semi-structured interview process. Every interview began with the question "What is your interest and role in the ED diversion program?" and loosely followed the order given in Appendix A. In many cases during the interview process the interviewee answered a question before it was asked, or answered multiple questions through a single response. Also, some questions naturally arose in dialogue, with the interviewer prompting the interviewee to clarify a comment, or to expand their response.

The final question asked of all interviewees was, "Who else should I interview related to this project?" This question guided participant selection and indicated when saturation was reached. By the final few interviews it was apparent that the key team members related to ED diversion in Prineville had been identified and included in this research.

## Clusters of Meaning

For each interview, "meaning units" have been discerned during the transcription process and transcript review. These meaning units are the distilled intended meaning of the speaker. The analysis of meaning units takes into consideration the tone, behavior, and language use of the interviewee, capturing the gist of the speaker's intention. Highlighting the meaning units are key sentences. These key sentences are mini-theses that make clear the speaker's intended meaning. Many key sentences are shared as quotes

throughout this section, with the intent of bringing the interviewees direct language to the forefront of the description of the ED diversion process.

Considering all the interviews as a whole, "clusters of meaning" have been identified; these clusters represent the related perspectives and experiences that shape the collective sense of understanding. This section recounts the shared experiences of the interviewees, incorporating clusters of meaning to vividly describe the essence of the Central Oregon ED program. These descriptions have been categorized under topical headings and are presented largely in the interviewee's own words. The clusters of meaning that emerged from the interviews were:

- The Purpose of ED Diversion
- Causes of Non-Urgent ED Overuse
- ED Diversion Roles
- The ED Diversion Process
- Interaction with Patients
- Geographic Factors in ED Diversion

## The Purpose of ED Diversion

The interviewees revealed a number of motivating factors for implementing ED diversion, both personal and corporate. Quality of care, healthcare cost, human concern, and efficiency were expressed as factors driving the ED diversion program. These factors were not expressed as unrelated; rather they were seen as interconnected. When asked about the funding of the ED diversion program through Pacific Source Insurance, one person said, "It's insurance funded right now, but it will always remain care driven,

regardless of the funding. I wanted to make that very clear, that even though they are part of making this coordination possible for St. Charles, that it is not insurance driven care." Another interviewee noted,

> ER costs are so high. Anything you have done in the ER is really expensive. If we can divert those people who aren't really in emergency back to their primary care provider we're cutting a lot of costs that way. The other thing that is driving this is keeping our ER open to actual emergencies and not overflowing them with stuff that is not an emergency.

The desire for efficiency was echoed by the ER nurse, "My interest is decreasing wasted time. Often these visits are wasted time and wasted resources. What I mean is that many times people come into the ER and leave without necessarily leaving with anything." This frustration was voiced by most of those interviewed, though most were quick to note that their frustration was born out of wanting to provide high quality healthcare, and that they felt it was difficult to do so given the mismatch between patient expectations and the limitations of the healthcare system. One respondent said, "We just want people to make their lives better and not have to go to emergency rooms. Incentive wise, I would just say providing better care for people to have a happy, healthy life."

In addition to the organizational purpose for ED diversion, many of those interviewed expressed a personal sense of purpose related to their role. This purpose was reflected in the language used, as well as the passion exhibited when discussing patients. When describing her lifelong interest in social work one CHW said "I guess I can say I am most interested in the part of what my patients need for their care. That's what interests me most in ED diversion." After a passionate response about social pressures

being a factor driving non-urgent ED use, the BHC finished by saying "You gave me the chance to preach my social work!" These responses illustrate the consistently exhibited value of human welfare among ED diversion team members.

## Causes of Non-Urgent ED Overuse

When asked about the factors that cause non-urgent ED overuse the interviewees all agreed that behavioral issues were at the root. "These are folks that frequently have a co-occurring mental health situation, whether it's anxiety disorder, or intense stressors, for example family dynamics issues, or substance abuse disorder." Behavioral health issues were expressed as having internal (mental health) and external (social health) drivers, with interplay between the drivers. As one person said, "It's not necessarily the patients that come to you and you're like, 'Oh my god, you're totally mentally ill.' These aren't your schizophrenic. They're not psychotic. They definitely have times in the dark. Some paranoia based on life experiences." Additionally, the CHWs provided many stories and examples of their experience with the mental-social health link. "…there are so many times that the ER ends up being used for social issues, or social anxiety, or too much of all those types of things." One CHW shared how her regular visits with a patient revealed a mental-social link driving non-urgent ED overuse. "I used to go to a home visit every week with a lady in Redmond and just seeing her once a week, she stopped going to the ER completely. I think she was going to the ER in part because she was lonely."

Related to mental and social health, attitudes of entitlement and lack of education were brought up as factors related to non-urgent ED use. "The biggest thing I have found

is that patients feel this entitlement that being an American, that it's their right to go to the emergency room any time they want." This was discussed as a somewhat unique situation in Prineville, as compared to other locations. "We can't really figure it out, if the patients in Prineville just have a sense of entitlement." The attitude of entitlement was frequently expressed as related to education. As one person said in a passionate outburst,

> We have a lot of white, unemployed, uneducated, entitled people in this community. People who feel very entitled to what they want when they want it, even though they don't appreciate anything you have done, education or anything. They are perfectly happy to tell you that you don't know what you are doing, even though they have an 8th grade education.

Along the lines of entitlement, multiple people used the analogy of a carrot and a stick, related to rewards and punishments. The sentiment expressed was that the ED is all carrots and there are no sticks for those on the Oregon Health Plan (OHP) who do not receive a bill from the ER. This concern was voiced with frustration. "The ER is all carrots, no sticks. There's no sticks. None! You don't get a bill. You don't get anything. Nothing!"

Highlighting the relationship between non-urgent ED usage and education, one system CHW related a story about her first interactions after taking a position in Prineville. She said that the people from Prineville she dealt with frequently mentioned they were attending the walk-in clinic for their care. "I was so confused by them saying they were going to the walk-in clinic up by the hospital. There was a huge education piece…letting people know that it's not a walk-in clinic, it's actually the emergency room."

Another perceived driver of non-urgent ED use was access to care. Two respondents attributed some of the increase to the Affordable Care Act. “There are more people coming into the clinic. That sets us a couple of weeks behind. All clinics across the nation are the same way. In this rural community it’s difficult for patients who feel they need to see somebody right now.” Comments about access referred to both primary care as well as urgent care. “Another thing is that here in Prineville there isn’t an urgent care. That’s huge. A lot of our diversion in Redmond or in other places urgent care is a key.” The ER nurse mentioned “One of the things we found is that often times people come in…’I’m in the ER because it’s going to take me 3 months to get into my primary care.’” The lack of access to other healthcare options was seen as contributing to high-utilizer traffic in the ER.

Drug seeking was another factor mentioned, though it was also noted that the ED diversion program revealed that drug seekers made up a much smaller number of those over-utilizing the ED than initially estimated. “I want to say that a smaller portion of our patients are drug seeking. We always thought that was huge, that everybody is looking for narcotics. It really is a small portion that actually are.”

## ED Diversion Roles

The Central Oregon ED diversion program introduced a number of new clinical roles, as part of the team-based care approach. This included the RNCC, BHC and CHW positions. The addition of these roles changed clinical team dynamics and created new structures, requiring adaptation of both clinical and system-wide communication systems.

As described by the interviewees, the creation and inclusion of these roles have been a challenge, but one that is being overcome through persistent, assertive action.

Upon introduction, the creation of new clinical roles was not universally welcomed, as primary care clinics were not prepared for systemic change. “Primary care has been in place for a really long time. To try to put a new provider into that caused their structure…I don’t want to say fracture…but definitely stretch and be a little uncomfortable.” When stepping into these new roles most of those interviewed related that at the beginning their job was not strongly defined within their organization; rather, they found that they had to define their role as they took it on. As one clinic CHW recounted, the transition into her role required patience and persistence. “When I was first getting hired they didn’t know what to do with me, so I’d just be standing around talking and I’d say ‘Oh, that’s me. Pick me. I can do that. That’s what I’m here for!’ until they just get it.”

The challenge to define these new roles was not described as just a local problem in Prineville, but as a general challenge to the broader healthcare system. As the St. Charles Family Care RNCC shared, “But even with the other clinics, Bend and Redmond, they struggled creating this role. ‘What does an RN care coordinator do?’ They struggled as well because it’s such a new position.” Though it appears these roles are integrating into the St. Charles and Mosaic Medical systems, the Manager for Health Integration noted the ongoing need to clarify role boundaries among medical providers. “That’s a constant on the enhanced care staff, to really drive home what their role is, while also being in the helper role.”

Among those with St. Charles system roles there was unanimity in mentioning that Mosaic Medical Prineville seems to be having some of the greatest success among clinics in terms of ED diversion. This was attributed to stable staffing of the RNCC and BHC roles, as well as provider engagement in ED diversion meetings. “I just left the CHW check-in meeting, and we were again talking about how truly Mosaic Madras and Mosaic Prineville are probably the most successful ED navigation programs that we can point at.”

## The ED Diversion Process

From the multiple perspectives of the interviewees the formation and constant evolution of the ED diversion process was described in detail. In 2009 the ED diversion project began as a community wide partnership between healthcare providers and insurance providers. The Manager for Health Integration, who helped begin the program, said, “For me it was an opportunity to look at the integration of behavioral and physical health and do a pilot project to see how the two would work together.” As mentioned in the previous section, the pilot ED diversion project drove the transition to team-based care and a new focus on behavioral health in primary care clinics, changing the relationship and communication between the clinics and the ED.

Since inception, The ED diversion process has focused on identifying and directly addressing high-utilizers of ED services. The definition of a high-utilizer has remained fairly standard since the beginning of the project. “A patient has to have 6 visits in the last 6 months, with one visit over the last 60 days.” Also, to qualify for the ED diversion program the patient must be on OHP insurance.

Once identified, patients are added to the ED diversion list, which is managed by the system CHWs. The lists of qualifying patients are then shared with the patient's assigned primary care clinic. The system CHW periodically meets with the clinic staff (sometimes just the RNCC, at other times behavioral health and medical providers are also included) and discusses a community care plan for the patient. The community care plan is transmitted to the ED and available for reference the next time the patient checks in to the ED. Additionally, the CHW and RNCC contact patients on the ED diversion list to discuss why they are attending the ED so frequently. Through these conversations they try to identify what services may help the patient reduce their ED usage. The CHW and RNCC attempt to actively manage the patient's care until the patient is no longer over-utilizing the ED. Ultimately, the goal is to have the patient become more engaged at their primary care clinic and to recognize the proper role of the ED. This means that when their situation does not call for emergency services they should contact their primary care provider (PCP) for their healthcare needs.

In the first few years of the ED diversion program the communication between clinics and the ED was managed through a paper system, with the system CHW delivering care plans to the ED and storing them in a binder. This process has gone through a dramatic change in the past 3 years, with the introduction of electronic medical records (EMR) and the more recent addition of the Emergency Department Information Exchange Program (EDIE). EDIE is an electronic information system that provides information on all ED visits in the Northwestern United States, and allows for communication of care plans between clinics and EDs. EDIE was mentioned as being

"phenomenal in reducing ED usage. It's exactly because we are able to put these care guidelines into place. They are updated instantly, as soon as I update it, it's there."

Currently, an extension of the ED diversion program is being piloted in order to address patients before they arrive at the ED through the use of paramedics. The paramedicine pilot program, begun in the fall of 2015, regularly sends paramedics to address patient needs at their home. The paramedic is also on call for select patients who are a part of the diversion program, typically patients with chronic conditions that frequent the ED. As the RNCC for the program said, "Paramedics' training is solely focused on 'Is it, or isn't it an emergency situation?' and 'What can we do to prevent an ER transport?'" Rather than immediately transporting these patients to the ED, the paramedic visits the patient's home in a paramedic vehicle and provides appropriate care, or manages the patient's transportation to the ED.

### Interaction with Patients

With changes in the clinical roles due to the adoption of the patient centered medical home model and team-based care, the ED diversion program has reshaped how patients interact with providers. Patients involved with the ED diversion program receive increased attention from the expanding number of team members at their primary care clinic. The team-based model of care puts patients in direct contact with their PCP, the RNCC, BHC, and CHWs, as well as the ED staff. As an RNCC said, "You don't just have a provider, you have a case manager, a care coordinator, mental health, counselors."

Additionally, these medical providers have increased communication with each other through EMR and EDIE, resulting in a greater amount of attention being paid to the

patient and their case, even when they are not present. The Mosaic RNCC made this clear. “In this whole ED diversion it’s not one person. It takes a whole legion of people at the ER, at St. Charles, on the communication. Even for one person it takes all that teamwork.”

The system CHWs are involved with much of this communication. They’re meeting with both the patients and clinics, and helping to manage the community care plans, which are critical to communication between clinics and the ED. As one system CHW described,

> …it’s kind of nice because I’m the liaison between the ER and the clinics. I can talk to the ER doctors, or see the ER visits, and talk to the patient and I’m kind of the middleman for everybody. Then I go to the clinics and we have these meetings…

Beyond medical care, patients are receiving increased behavioral and social support at their primary care clinic. The CHWs, in particular, help to connect patients with resources that may help them improve their life situation, and thereby, their health. “They think ‘My doctor’s office is just for medical stuff.’ But we can help them with other things too, like transportation. Housing is a big issue too.” One CHW told a story of how one of her co-workers drove a box of food and firewood from Bend, Oregon to Gilchrist, Oregon (roughly 46 miles) to a patient in need. “…they aren’t worried about if they can see their doctor, they are worried about making sure they can make it to the food pantry that day. Stuff like that…we try to eliminate those barriers so their focus can be on their health; being well.” This holistic approach to care was described as important to the success of the ED diversion program. “The more we meet their needs and the more

relationship we gain with the patient, the more likely they are going to come back into the clinic to get their needs met, rather than go back to the ER."

Along with the new model of social support, behavioral support is a recent addition to the team-based patient care. "…we put behavioral health consultants in the clinics as well, at this point which are psychologists who are trained in short intervention models for patients." In the team-based model, PCPs can more easily call upon additional resources to care for patients, depending on their specific need. "It has been recognized over about the last 6 years or so, national and internationally, that behavior really drives patient decisions, and those decision impact their health."

### Geographic Factors in ED Diversion

The interviewees all noted distinct challenges regarding the rural geographic location of Prineville. The root problem identified was a lack of resources. "The majority of people who qualify for the diversion program tend to live close by. They don't tend to have a lot of resources. That is one of the things that impacts us too. There is a lack of resources close by." The CHWs seemed to have acute knowledge of the lack of resources, especially since their role is to connect patients with community assistance. As one system CHW compared the different ED diversion sites in Central Oregon she noted the difference at the Prineville ED. "Even though Bend is a busier hospital overall, ED navigation tends to be a little easier for Bend and Redmond because there are just more resources available for people." The St. Charles Family Care RNCC gave a similar comparison between ED diversion sites.

> These people have very limited resources. Even comparatively speaking to Redmond. Redmond has a lot more resources than the people out here do. It's very hard for folks in this rural community. There are a lot of low-income people. We run into a lot of educational obstacles too. On top of that, we don't have an urgent care facility, and that truly impacts the ER use.

The lack of resources referred to patient's resource needs, as well as the resources needed by the clinics and the hospital ED to provide care. Staffing is one issue that was frequently discussed. Referring to the situation in the ED it was said, "I think our staffing situation is worse, for sure. We don't have techs, ward clerks…nothing. If you look at the patient volume and staffing we are not equal in Prineville. Not to Madras. Not to Bend. Not to Redmond." In addition to having fewer support positions, recruitment and retention were listed as problems. "It's really, really hard to recruit providers to work in Prineville and Madras, it just really is. We have had a BHC position open at St. Charles Family Care Prineville open since Ryan Dix left in 2013." Gaps in important staff positions were seen as creating greater inefficiencies in the local healthcare system. One of the system CHWs shared one such scenario related to the shortage of behavioral health workers and its impact on care.

> If we have someone coming in suicidal to Prineville we have to call Lutheran Community Services and see if someone is available to come up and do an assessment. If not, we have to call MCAT, which is Deschutes County, and somebody from Bend has to drive out to Prineville and assess

somebody, and that could take hours. If they're not there on a hold, they can leave.

## Major Themes of the Research

This section draws on the clusters of meaning described in the previous section to identify, investigate, and prioritize the key factors of success related to the success of the ED diversion program at the St. Charles rural critical access hospital in Prineville, Oregon. In each of the interviews a number of factors were discussed related to the success of the program. From interview to interview many of the factors listed were the same. Without leading or prompting from the interviewer, the interviewees shared their understanding of the Central Oregon ED diversion program and the factors necessary for its success. The top factors were listed by more than half of those interviewed, with the top factor (communication) mentioned by all interviewees as an important factor related to success. Listed in order of frequency mentioned, the top factors were:

1. Communication
2. Mental and Behavioral Health Integration
3. Trusting and Caring Relationships Developed With Patients
4. Patient Education
5. Team-Based Care
6. Patient Access
7. Community Resource Support

Other factors less frequently mentioned included provider engagement and CEO support.

## Communication

Communication among the ED diversion team was listed as the most important factor related to ED diversion success. This includes the use of the EMR and EDIE systems, the liaison role performed by the system CHWs, and positive interpersonal relationships across multiple organizations. When asked about key factors related to success, one RNCC responded "Communication between providers for continuity of care. Getting that information from outside providers."

Communication allows the local healthcare organizations to act as one unit in the effort to reduce non-urgent overuse of the ED. EMR and the integration of EDIE play critical roles in providing the ED diversion team the ability to monitor, discuss, and deploy community care plans. "The EDIE system, it gets every ADT (admission, discharge, transfer) that happens at the hospital and feeds into that system." This system sends patient information to the patient's PCP, and allows the PCP to communicate care plan guidelines to ED staff. As a system CHW shared related to EDIE, "It's been phenomenal in reducing ED usage. It's exactly because we are able to put these care guidelines into place. They are updated instantly, as soon as I update it, it's there."

Clear communication between the primary care clinics and the ED through the use of care guidelines was identified by multiple people as a critical part of ED diversion. Some mention was made of communication breakdowns between clinics and ED doctors over the course of the program. Related to the use of EDIE, one RNCC shared "It's a

helpful piece if it's utilized, and I would say it's being utilized more in the ER. It's not always being followed in the ER. Some of the doctors understand, and some don't." The overall perspective seemed to be that this situation was improving over time. "…we're trying to get our ER doctors…they've been really good at it lately, but until EDIE came in I don't think we had them all on board on how to divert these people. Now they're really getting into it."

The use of the electronic systems and management of the ED diversion workflow seem to be facilitated primarily by the system CHWs. The system CHWs provide updated patient lists to each clinic, check in with provider teams, clinic CHWs, and RNCCs, and promote correct usage of EDIE among the sites. When asked about key factors one person responded that facilitation of the communication process through administrative support was one such critical factor. "Understanding the workflows of the people actually doing the work and putting supports for that to be able to happen smoothly. Bumps make people not want to do it…" The system CHWs also had a strong sense of their role in facilitating the program across organizational boundaries, as one system CHW shared "I think that again, a lot of the communication between the ER and the clinics ends up falling to me and Megan and our boss Kristin, especially with things like EDIE…"

Additionally, the size of the healthcare community in Prineville is small enough that most of the providers know each other and communicate on a regular, first name basis. The system CHWs and RNCCs seem to be especially well connected with each other. The RNCC at Mosaic Medical related to me how he faced a difficult situation with an ED high utilizer and he directly called the system CHW and ED nurse to alert them

about the patient. Also, in their liaison role, the system CHWs act as hubs of the ED diversion program, managing relationships across organizational boundaries.

### Mental and Behavioral Health Integration

The integration of mental and behavioral health into the ED diversion program was identified as critical to helping patients make better choices about accessing healthcare. Referring to patients, one RNCC said, "Plugging them into mental health for a little bit of counseling is the biggest thing." Among the interviewees there was a strong sense that many high utilizers frequent the ED due to socially rooted mental health issues, and that behavioral health support was a critical piece in helping them divert from the ED to their PCP. "A lot of patients have anxiety, have depression. That's everywhere, not just in Prineville, but anywhere behavioral health is key."

Despite the awareness that behavioral health is key to ED diversion, frustration was voiced related to providing adequate behavioral care. The shortage of staff, especially the St. Charles BHC position that has been vacant for over 2 years was cited as a challenge. Also the BHC at Mosaic shared the difficulty in changing ED usage behavior due to the ED providing nearly instant care of felt needs, with no downside to patients.

> We live in an environment where pressure is incredibly high on people. People are out of work. People are suffering. If they are anxious or sick, why not go to he ER? It's a safe place where people talk nice to me, and give me IV fluids and they pat me on the head and give me a pill. I feel better. I feel cared about. For 4 hours someone is doting on me, whereas at home, it's a hell-hole.

These sentiments show the behaviorism that forms the foundation of ED diversion. Because the ED does not carry any "punishment" for high-utilizers with OHP insurance, a more attractive option must be presented. For patients to divert they must find more positive reinforcement and support at their primary care clinic than at the ED.

### Trusting and Caring Relationships Developed With Patients

Related to mental and behavioral health care, an important factor in the success of the ED diversion was developing trusting and caring relationships with patients. "I think the biggest success stories come from a trust…" shared the Mosaic RNCC. Many of the stories shared about patients related to how broken and unhealthy relationships contributed to their overuse of the ED. Because of this, developing trust was described as a key part of helping with behavior change. As one clinic CHW stated "It's establishing rapport, establishing relationship with patients and providing education through those means."

One system CHW shared a story of how building trust was vital to uncovering a patient's root issues. She gave the example of a patient who was embarrassed that they couldn't read and understand their medical paperwork, so they would skip their appointments with the PCP. She remarked, "Getting them to trust me enough to tell me… that is a process, for sure."

Part of developing trust with patients in Prineville includes living in the community. One system CHW who lives in Bend, Oregon shared that she was distrusted

as an outsider from the big city. She recognized that in Prineville, locality provides credibility in building relationships.

> I think the CHWs at Mosaic in Prineville used to go play bingo with their patients once a week at a church. That's something I never did. That shows a different level of trust and commitment to their patients, when they are going to the same places and doing the same things.

In contrast, the system CHW living in Prineville shared stories of greater success in reaching out to patients.

> My favorite is that here in Prineville you really get to know these people, and everyone gets to know them differently. You really get to find out what their background is, and what's going on in their life. I feel like that helps a lot with their care too.

### Patient Education

Patient education was also listed as related to success in helping high-utilizers better manage their conditions and seek appropriate medical resources. "I have a lot of success stories where we know they go so many times, we get them in, we educate them more, and there is a stop for a long period of time." This education primarily comes from interacting with the RNCCs and CHWs who help patients understand what is and isn't an emergency. They then redirect patients (when appropriate) to their medical home. As discussed in the previous section, behavior change is difficult to accomplish without developing a trusting relationship.

Multiple interviewees felt that the understanding of emergency situations has changed in recent years, driving more people to the ED. “The education like when I grew up…you either broke something or you’re really seriously dying…that’s when you go the ER.” These interviewees cited their upbringing as a shaping force on their understanding of ED usage. Related, they also shared that many of their patients’ understanding of when to use the ED is related to familial education. “I have patients whose whole family are on my list. It’s almost bred into them that if you have anything wrong at all in your life, whether it’s a medical thing, or an anxiety, or situational crisis, you go to the ER.”

The core of ED diversion education process is teaching the patient to accurately assess their real medical need and increase their awareness of available medical options. This process begins with the RNCC or CHW listening to the patient and developing rapport. Often the RNCC will educate the patient on their diagnosis so they can better understand their symptoms and how to appropriately react. Also, the CHWs provide access to resources, including helping get patients same-day appointments and navigate the medical system.

Education related to access issues was a topic that repeatedly came up in interviews. In Prineville the Mosaic clinic stays open until 8pm on Wednesday, and the St. Charles Family Care clinic is open on Saturday for walk-in appointments – improving patient access opportunities. However, it was believed that many patients are not aware of these options, and marketing these options to the community, where media channels are few, is difficult. “A lot of people are still operating out of the ‘well, if I don’t have an appointment 2 weeks in advance at Mosaic then if I have a hemorrhoid I have to go to the ER’ because that is the old-school paradigm.” The lack of education about medical access

among the general public was expressed as a difficulty in comprehensively addressing ED utilization for non-urgent issues.

As such, much of the education related to ED diversion is happening in the ED, addressing already identified non-urgent patients. For example, St. Charles is developing handouts for nurses to give patients in the ED so they can provide education to teach patients about appropriate use of the ED. Also, because the EDIE is updated in real-time, CHWs often try to catch high-utilizing patients in the ED when they see them check in. One system CHW shared, "Sometimes I'll come in and meet with a patient while they're in the ER; one that I can't reach. That's a huge thing. I can't reach a lot of these patients."

### Team-Based Care

The team-based care model of the patient centered medical home was recognized as vital to the success of the ED Diversion program. Interviewees referred positively to others on the team, recognizing their reliance on each other and giving examples of how they worked together on a regular basis. When asked about key people related to the success of the program the ED nurse positively mentioned the CHWs and RNCCs at Mosaic and St. Charles Family Care noting, "The two of them are like a team."

Also, multiple people suggested that the Mosaic Medical Prineville clinic was one of the most successful clinics at ED diversion due to the way their whole team collaborates on ED diversion. "Mosaic's the best example to be honest, they have their RN there, they have their CHW, they have their behavioral health, and they have their providers." Another person shared her experience with the clinics, stating "Having a

whole care team with the BHC embedded and everything else…I think that has made a huge difference."

The importance of the full team was highlighted in the absence of certain roles. This was most pronounced in the unfilled St. Charles Family Clinic BHC position, which has been open for over 2 years. One interviewee described how lack of a BHC seemed related to the number of high-utilizing patients. Referring to the number of high-utilizing patients, they said,

> It's worse at St. Charles family care than it is at Mosaic. Part of that can be explained because they really don't have stable staffing, they haven't had a behavioral health consultant for 2 years, which has been really hard to hire. I think they haven't had all the resources to serve those patients.

Patient Access

Timely patient access to primary care was listed by some interviewees as important to reducing non-urgent ED usage. The understanding is that "If we can't meet our population's need here in primary care they are going to use the ER." The recent passage of the Affordable Care Act (ACA) was perceived as increasing the patient load in the primary care clinics to a point beyond capacity. This increase in patient load has made it difficult for patients to be seen at their primary care clinic in a timely manner. Time to be seen in a primary care clinic was listed at 2 to 4 weeks by interviewees. One interviewee, an employee of St. Charles (and also a patient) shared, "Even when I call to set up an appointment with St. Charles, and I work for St. Charles, they're still telling me 'We're out 3 weeks.'"

The ED diversion program has tried to improve patient access in Prineville through the team-based approach, as well as creative scheduling for high-utilizing patients. The St. Charles RNCC shared how she tries to meet with patients and address their medical needs if they are within their scope of practice. She also works high-utilizing patients into the daily schedule if they feel they have an urgent medical need. A system CHW also shared other ways that clinics are attempting to adapt to their increased patient load. "Our clinics are trying to get bigger. They're trying to get on-call. We're trying to do weekends…night call. Any of that stuff, so we can have access to these patients."

Another innovation in providing access is the paramedicine program, a pilot program begun by St. Charles in October, 2015. This program sends a paramedic to a patient's home to provide check ups and assess the patient's situation. The paramedic can then provide care at the patient's home, or call for an ambulance and begin providing care if the situation is a true emergency. Related to the paramedicine program, one system CHW shared "We have noticed with the clinic a huge decrease in these patients that would just keep coming to the ER." Another said, "It's like its own little urgent care, in a way."

Though these programs are improving patient access, it was shared that even with improved access there are some high-utilizing patients that will continue to misuse the ED. One RNCC shared how he has helped patients get a same day appointment in the clinic, and find that they skipped their clinic appointment to go to the ED instead. Another person shared how her clinic had multiple walk-in slots at her clinic, as well as multiple open slots at a school-based clinic, yet she still knew some of her patients would

go to the ED that day. Sarcastically she laughed, “None of our patients should be at the ER today. Ha!”

### Community Resource Support

Related to many of the other factors, community resource support (often delivered through the CHW role) was mentioned as a key to ED diversion. The realization that many people are going to the ED for non-medical reasons has provided an opportunity to divert such patients toward more appropriate services. The CHWs all shared stories about providing basic needs to patients as a way to keep them out of the ED. This included things like food, shelter, firewood, and social support. The St. Charles RNCC shared the importance of providing community resource support to some of the most vulnerable patients.

> Community health educators help the RN with more resources. So, we’re looking at the pyramid of needs, Maslow’s pyramid, right? If their housing is stressful for them. Money. Food. Those kinds of issues are stressful for them. How can I engage with them? How are they supposed to want to engage with me in the clinic if they have these other basic needs that aren’t being met?

## ED Program Description

From the clusters of meaning and the identified factors related to the success of the Prineville ED diversion program, the experience of the ED diversion team can be

vividly described. Despite the decentralized structure of the ED diversion team, a shared reality emerged from the interviews that transcended organizations, roles, and training.

## Goals and Purpose of ED Diversion

Among those interviewed there was a united perspective regarding the purpose and the goals of the ED diversion program. The expressed shared purpose was to identify patients that frequently utilize the ED for non-urgent issues and to redirect them to a primary care clinic. This redirection is rooted in the philosophy that the PCMH model of team-based care better addresses patients' low-urgency needs than the ED.

Though none of the interviewees used the exact term "triple aim," the goals of better health, better quality and lower costs were described explicitly, and elaborated upon through examples. The foundation of this perspective is that the ED was not designed to provide care for low-urgency chronic conditions, or provide social and mental health help. One example was given of a patient who came to the ED so often for the stated reason of chest pain that they had been X-rayed 26 times, leading to an unhealthy amount of exposure to radiation. This story was shared to underscore the relationship between ED overuse, quality of health care provided, and cost. As such, the triple aim was seen as a collection of integrated, rather than divergent, goals. As the ED nurse said, "It's not that we want to cut people off, but we want them to have the best care that they can, and often that is provided by their primary care provider who knows them."

The firm, but caring attitude expressed by the ED nurse was shared amongst team members. Each expressed the desire to serve and care for patients, yet there was also a

palpable frustration related to feeling manipulated and taken advantage of by some patients. Those interviewed expressed a “tough love” mentality regarding their roles in caring for patients. This mentality blended the intrinsic drive to nurture and care for people, with the shrewdness that comes from experiencing exploitive behavior from patients.

## The ED Diversion Process

The Central Oregon ED diversion process is not a static process; it is constantly evolving. The basic activities of ED diversion are: identifying high-utilizing patients, working with clinics to develop care plans, delivering care plans to the ED, and following up with patients and redirecting them to their primary care clinic. Though these activities remain the basis for ED diversion, the means by which these activities are accomplished have rapidly changed over the past five years.

In Prineville the original diversion program was managed through paper systems, which were then converted to an EMR system in 2013, and now includes the EDIE electronic system (which was introduced in 2014). In the current day process the system CHWs deliver a list to each clinic of their patients that are on the ED diversion list. At Mosaic, the system CHW meets with the providers as well as the RNCC. At other clinics the system CHW meets solely with the RNCC. On the clinic side, this list is managed by the RNCC, who works with providers to develop and administer community care plans, which are entered into the EDIE system, and made immediately available to the ED staff. The RNCC also works with the clinic CHWs and system CHWs to communicate with patients in an effort to understand why they are frequenting the ED, and if the patient

needs social or behavioral assistance from the CHWs or BHCs. The RNCC continues to closely manage the patient's case until they reduce their ED visit frequency to the point of no longer meeting the 6–visits-in-6-months criteria for the ED diversion list.

Regarding the care management, the RNCC, CHW, and BHC broaden and deepen the relationship with the patient, creating a unique social structure for the patient within the clinic. The team-based care allows the PCP to focus on medical issues, handing the patient off to the other team members as social and behavioral issues arise or are identified. The team then coordinates ongoing care and education for the patient. This care is built on the foundation of a trusting relationship, developed through listening to the patient, spending time with them, and encouraging them to take responsibility for their health. Also, the CHWs play an important role in helping the patient with social issues that may be acting as barriers to success. Multiple interviewees talked about the CHWs providing basic needs, or developing a caring relationship with patients – these actions were seen as vital to helping patients divert from the ED to their primary care clinic.

One of the key links between the clinic and the ED is the community care plan, which is transmitted through the EDIE system. In the ED, the community care plans are supposed to be implemented by the ED doctors when high-utilizing patients come to the ED. This part of the process seems to have somewhat broken down in the transition to EMR and EDIE systems. Additionally, staffing in the Prineville ED has been inconsistent over the past few years, resulting in a lack of understanding about the ED diversion process. As the ED nurse shared, "I feel like the thing has kind of fallen apart in the ER. We still get the EDIE reports; it's hit and miss sometimes. There doesn't seem to be a

link to the whole process where it works well." Other team members echoed this sentiment, though some thought that things were slowly starting to improve, both in terms of staffing and ED involvement in the ED diversion program.

Originally, the Prineville ED diversion team previously met as a group on a regular basis, but now do not meet across organizations; rather, the system CHW meets with each clinic individually. This change, along with the loss of the St. Charles BHC (who played a central role early on), seem to have contributed to the lack of communication between the clinics and the ED. Whereas some members were previously involved in a face-to-face meeting, the new decentralized model of communication has left some team members feeling disconnected to the program.

Despite the challenges of communication and process management, the ED diversion system was described as successful among most of the interviewees. Success was measured by moving names off of the list, or by certain patients no longer being "household names" in the ED. The success in diverting patients was celebrated, even though there was a broader recognition that, as one RNCC put it "For every 10 we help there are 15 more on the backup." This brings to light a basic tension revealed in most of the interviews, that the ED diversion process is doing what it is supposed to be doing, but systemic issues in society and in healthcare are not being addressed. Without addressing broader systems, the ED diversion process will not be able to fully and broadly address the issue of non-urgent overuse of the ED.

The two systemic issues that were brought up the most were free care at the ED for high utilizers, and the shortage of patient access to care. Since many of the high-utilizing patients are on OHP insurance, they do not incur personal cost for their ED visit.

Also, barriers to the ED are restricted by EMTALA. Though these issues are frustrating for providers on the local level, they cannot be directly addressed. However, these challenges at the ED have driven innovation in providing patient access.

To improve patient access Mosaic Medical in Prineville provides a 24-hour nurse helpline for patients, stays open until 8pm on Wednesday nights, and has implemented flexible scheduling to allow for same-day appointments. Mosaic has also opened a school-based clinic, on campus at an elementary school, to provide improved access for children.

St. Charles Family Care in Prineville has improved patient access as well, staffing their clinic on Saturday from 8am to 3pm to operate as an urgent care, and implementing a paramedicine pilot program. These innovations in improving patient access are relatively new, and their full effect on non-urgent, high frequency ED traffic has not been directly studied. However, a majority of the interviewees mentioned one or more of the new patient access options as positively affecting ED diversion.

# Chapter 5 – Discussion

ED diversion is an organizational adaptation of the healthcare system. The intention of ED diversion is to redirect non-urgent, high-utilizing patients from the ED to primary care clinics. For this research project, eight healthcare professionals were interviewed about their experience as ED diversion team members in the rural town of Prineville, Oregon. Their shared experiences revealed common themes and factors related to the success of the Central Oregon ED diversion process.

This research provides greater insight into the practices that have most influenced the success of the Central Oregon ED diversion program, from the perspective of those administering the program. In this section, the perspectives of those interviewed will be discussed in relation to the current literature on the subject, as well as reviewed through the lens of multiple organizational theories.

## Factors Related to the Success of ED Diversion

According to those most involved, the primary factors related to the success of ED diversion in Prineville, Oregon were:

1. Communication
2. Mental and Behavioral Health Integration

3. Trusting and Caring Relationships Developed With Patients
4. Patient Education
5. Team-Based Care
6. Patient Access
7. Community Resource Support

These factors are not unrelated; the way the factors were mentioned in interviews suggested that they make up an interconnected system.

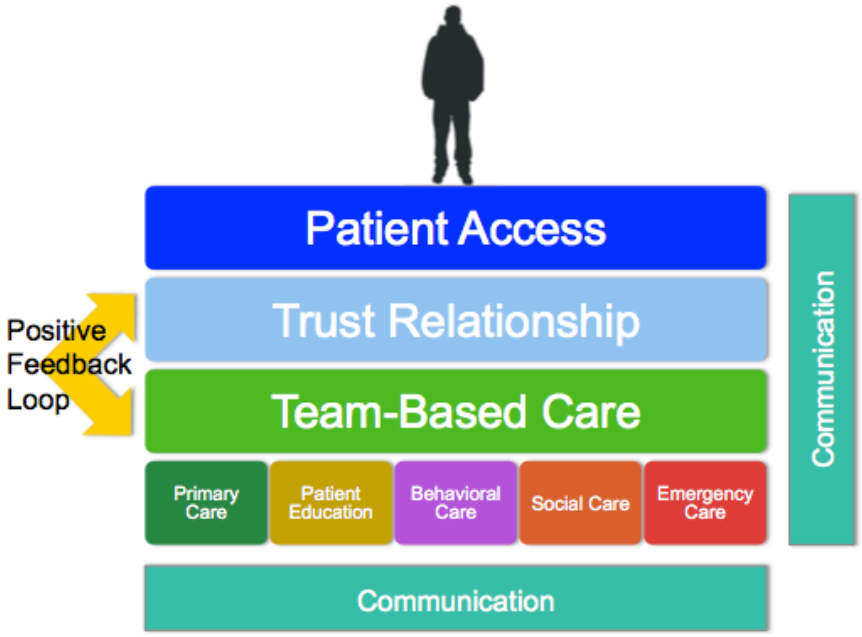


*Figure 3*. The Relationship between the Seven Factors

As Figure 3 shows, providing patient access is a critical step in engaging high-utilizing patients. Providing access means patients must perceive that they have access, which in many cases requires clinics to both provide access as well as clearly communicate access opportunities to patients in a way they understand. As was discussed in the literature review, patients' lack of awareness of primary care options is a real

barrier to providing care (Shaw et al., 2013). Once patients have access they are able to begin a trusting relationship with the provider team. The trusting relationship deepens as contact with the ED diversion team increases. The more trust is built, the more the patient feels comfortable engaging with the provider team; the more the patient engages with the provider team, the more trust is built. This is facilitated by communication among the provider team, allowing the team to clearly address the patient's needs with one mind. Providing comprehensive, holistic care at the medical home is at the heart of ED diversion. Getting patients to participate and commit to this model requires breaking down barriers to engagement and building up new channels for care that become more attractive to the patient than the near-instant gratification delivered in the ED.

## ED Diversion and the PCMH

Not surprisingly, most of the factors identified in this study are related to the principles of the Patient Centered Medical Home (PCMH) model, which was the organizational and philosophical basis for the Central Oregon ED diversion program (Figure 4).

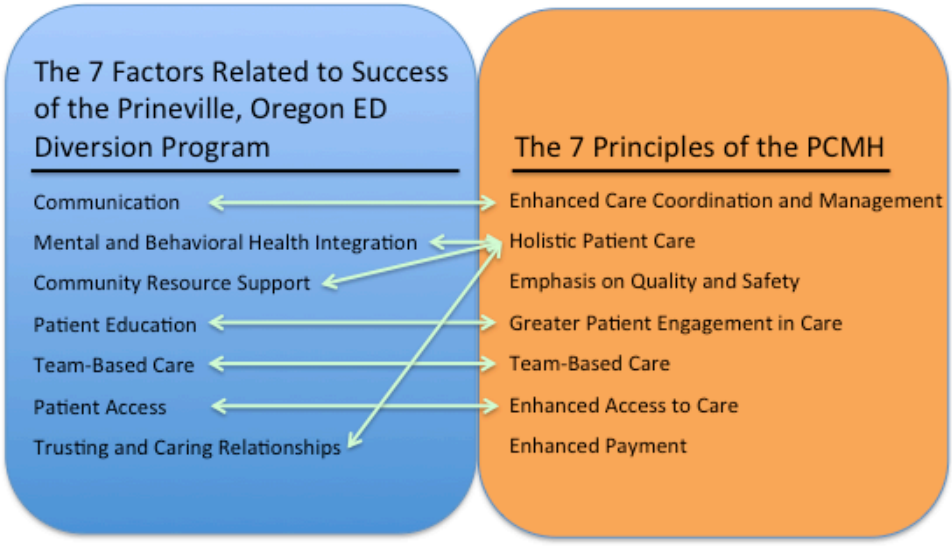


*Figure 4*. Prineville ED Diversion Factors of Success and Principle of the PCHM

These findings are congruent with the findings of the 2011 Central Oregon Health Council (COHC) report. The 2011 COHC report on ED diversion noted that behavioral health care, clinical health engagement teams, the introduction of community health workers (CHWs) and the existence of community care plans seemed to be important factors in ED diversion. The qualitative research in this report builds on these initial findings and provides greater insight into the factors related to success, based on five additional years of ED diversion program experience and the insights provided by key team members.

The current literature suggests that employment of the PCMH model is an important organizational element related to ED diversion success (Chaiyachati, et al., 2014; Choudhry, et al., 2007; Roby et al., 2010; Washington State Hospital Association, 2015). The research related in this paper shows a high amount of overlap between the factors related to the success of the Prineville, Oregon ED diversion program and the principles of the PCMH, as well as overlap between this report and the findings of other

ED diversion programs that are based on the PCMH. The consistency between these findings provides continued support for using the PCMH as a basis for success in ED diversion programs.

Building on the principles of the PCMH, the recently successful Washington State ED diversion program identified seven best practices for ED diversion: adoption of electronic health information systems between EDs, improving patient education of resources, identifying frequent users, developing patient plans for frequent users, implementing narcotic guidelines, prescription monitoring, and using feedback information to ensure interventions are working. All of these best practices are also part of the Central Oregon program in some measure, suggesting that these practices may be transferable; however this hypothesis requires verification through additional study.

## ED Diversion Challenges

Although the Central Oregon ED diversion program has been successful, many of the interviewees said that they faced challenges in their roles related to ED diversion. These challenges can be organized into three categories: scope, support, and systemic issues.

For many of the interviewees, the scope and aims of the ED diversion program presented a mental and emotional hurdle. A theme that was repeated by many of the interviewees was that for every patient worked off of the ED diversion list, it seemed the same number of patients, or more, were added to the list. The Mosaic RNCC said, “I think the biggest problem I have is the overwhelming number.” One of the system CHWs shared, “I had 7 people fall off my list yesterday, and I had 7 new referrals this week. It’s

a fluid process." Also, some of the interviewees shared their exasperation related to patients that did not seem to respond to the program. One interviewee said, "For me it gets frustrating seeing the same people over and over again feeling like they don't listen or they aren't understanding." These shared perspectives gave the impression that despite the program being successful in diverting patients to their PCMH clinic, the team members often felt overwhelmed by the overall scope of the project.

Related to support challenges, not having an urgent care, a lack of community social service supports, and deficiency in recruiting and retaining medical staff made many of the interviewees feel as though they were fighting an uphill battle. As the Mosaic BHC put it, "We just don't have resources here, but the ER is always there. It would be nice to have an urgent care, or late hours, or all-weekend visits that are highly promoted." As mentioned in Chapter 4, the rural geographic location of Prineville seems to be a primary factor of these resource challenges. As one interviewee said, "I do think that finding good people in rural communities like Prineville is really difficult." These challenges related to geography also seemed to contribute to a stigma about Prineville. "I hear nurses and doctors talk about how different it is to spend a day in Prineville, versus spend a day in Madras or Redmond. They would rather work in Redmond." The perception of some of the interviewees was that they were working harder and with fewer resources than other clinics and hospitals in the region, making their efforts at ED diversion all the more difficult.

In terms of systemic issues, the integration between various units of the broader healthcare system were mentioned as presenting challenges. In particular the relationship between the clinics, the ED staff, and the ED doctors presented a systemic challenge.

This issue was caused by differing goals between groups, variability in ED doctor staffing, and lack of locality in ED doctor staffing.

In regard to the alignment of goals, the PCMH clinics' aim is to reduce non-urgent ED overuse and provide consistent care for patients; however, the function of the ED is to quickly triage and stabilize patients. Additionally, the ED nurses and ED staff seem to be caught between these competing priorities. The ED nurse shared "One of the things that makes it challenging for me is when we get an ED report that the doctors seem inconvenienced by. I don't know that they see it as valuable information as much as they see it as someone telling them what to do, or not to do." This issue seemed magnified by the lack of consistent staffing and lack of local staffing of ED doctors, which reduced the ability of ED teams to develop rapport, trust, and consistent processes. The Manager for Health Integration related this conflict, saying,

> Some people would say "Well, it's more work for me as an ER doctor to try and figure out if this is one of 'those' patients. I don't know if Tom has been here 12 times or 6 times and I don't want to look at the record to determine it." So I think you have to have your leadership's cooperation and agreement with what you're trying to do and an understanding of why.

Though relations between the clinics, ED staff, and ED doctors was mentioned as a challenge, multiple interviewees said that recently this alignment was improving, and that ED doctors were becoming more responsive to the care guidelines and supporting the goals of the ED diversion program. After sharing some of the struggles of synchronizing the goals and communication between clinics and the ED doctors, who previously worked as independent contractors, one system CHW said, "Now that the ER doctors are

part of St. Charles they're staring to understand it and work with us, because I think it's key for all of us to work together."

The other key systemic challenge is related to EMTALA and the ease of using the ED for non-urgent issues. Using the analogy of carrots and sticks, it was shared that there were only perceived benefits to patients overusing the ED, and no penalties or charges. As one person said, "Relying on the principles of human behavior…this is basic behaviorism at its core. People respond to carrots and sticks. Okay? That's rule number one. The ER is all carrots, no sticks." Also, when asked about what would be most helpful to his job, the Mosaic RNCC shared, "I would just say more resources would be great to help manage, but stopping the funnel at the emergency room is the biggest. Making it not so attractive."

These perspectives present the tension and challenge set by EMTALA; how can the ED be universally accessible, financially viable, and provide timely and excellent medical care, without the provision of unlimited outside funding and without being overused for non-urgent concerns? This is the question that the ED diversion program attempts to answer, though as the interviewees shared, it is not without challenges.

## ED Diversion in Prineville, Oregon

Though not direct factors themselves, local culture and the scale of the local healthcare community were mentioned by interviewees as impacting the ED diversion program in a number of ways. As discussed in Chapter 4, a lack of education, an attitude of entitlement, and economic disparity were mentioned as elements of the local culture that contributed to non-urgent overuse of the ED. However, the local culture also created

unique opportunities in supporting the ED diversion program as well. As one interviewee said “I think you are right on, that being in the community, especially in a community like Prineville that is a tight-knit community, seeing their providers in the grocery store and stuff like that, I think you are right, it lends some credibility.” Multiple interviewees made the point that a patient seeing their medical home team members outside of the clinic was an important part of developing and supporting their clinical relationships.

In addition, the small scale of the local healthcare community seemed to positively contribute to communication among the ED diversion team members. When speaking about each other, the interviewees showed a sense of familiarity with most of the other ED diversion team members. For example, the Mosaic RNCC, speaking of a particular patient case said “And then I alerted the ER, and I alerted [R4], and I talked to [R8], so we could update the care plan…" using the system CHW and ED nurses’ first names.

It should not be overlooked then, that the relatively small scale and unique cultural elements in Prineville, Oregon inherently color the findings of this research. The Prineville ED diversion team is made up of a relatively small number of people who care deeply about their mission and are working in a community where personal relationship is highly valued. Based on the interviewee’s responses, these attributes impacted the success of the ED diversion program, although it is difficult to discern their total effect. Such analysis is beyond the scope of this project, but should be noted as an opportunity for future research.

## Opportunities for Future Research

This study reveals opportunities for future research related to the organization of ED diversion programs. Broadly, it brings the PCMH to the forefront of models to be used in ED diversion. Many questions remain regarding the effectiveness of ED diversion in clinics employing the PCMH versus those not employing the PCMH. How much more effective are PCMH clinics? Are there nuances in how the PCMH is used that make clinics more or less successful? Additionally, interviewing the patients from the ED diversion program would bring broader perspective regarding the success of the program. Would they identify the same 7 factors, or would they identifying different or additional factors? Would they recognize the impact the PCMH has had in directing their care or is the impact of the model transparent from their viewpoint?

Also, this study recognizes that geography, culture, and scale impact ED diversion success. Are urban ED diversion programs more or less successful, and why? Does scale of the program (in terms of number of clinics and/or size of clinics) impact success? Furthermore, how do societal culture values impact ED diversion? Does the PCMH show similar effectiveness in ED diversion across cultures and national boundaries? How are organizational values and organizational culture related to successful implementation of ED diversion?

Also, as was briefly noted in this research, preventative models, such as paramedicine, are being put forth as another aspect of ED diversion. This is an area open for greater research, especially in identifying best practices and integration into the PCMH model of ED diversion.

## Implications for the Academy

This research provides a rich description of the lived experience related to team members involved with a PCMH-based rural ED diversion program. Available research on PCMH-based ED diversion is still limited, as this is a relatively new technique. Much of the prior research performed relies on quantitative analysis; the qualitative analysis provided by this research can help guide the formulation of research questions with greater nuance.

The seven factors identified in this study add to the body of literature regarding positive outcomes of PCMH-based ED diversion. Additionally, the integrated relationship between the success factors are put forward in a new way that supports new theory development.

In particular, this research gives perspectives from the vantage of multiple roles and organizations regarding implementation of ED diversion. This draws attention to the community healthcare coordination required for the success of the program. Other researchers focused on team-building and human resources development in healthcare should find these accounts useful. Also, the dynamic formation of the ED diversion program and the role-definition and self-organizational aspects described here should be of interest to those who are studying decentralized, complex and adaptive organizational systems in healthcare.

This study also adds to greater understanding of issues in rural healthcare delivery. The shared thoughts, feelings, and attitudes of Central Oregon ED team

members raise awareness of some of the underlying narratives regarding the operation of ED diversion programs, and healthcare in general, in rural areas.

## Implications for the Profession

Healthcare professionals involved or interested in ED diversion will find this research a vivid exploration of the challenges and success factors related to a rural ED diversion program. Leaders and team members of ED diversion programs will be able to learn from the experience of the Central Oregon ED diversion program and reflect on how elements from this report may be transferrable to other contexts. Certainly, the identification of the seven factors of success and their methods of implementation can serve as inspiration. Also, other health communities implementing ED diversion can use the description of the Central Oregon program as a case study to better reflect upon and understand their own program.

Another useful insight that can be gleaned from this study is the effectiveness of the systems method employed in the implementation of the ED diversion program. Although the regional rollout of the ED diversion program required top management support and coordination between multiple organizations, local team members have been given freedom to address the specific and unique needs of their community. Hierarchy and standardization have been kept to a minimum. Also, the narrative shared by the interviewees shows that the ED diversion program is an ongoing and ever-changing project. Though the initial pilot program had a discrete beginning and end, the project

overall seems to follow a process of organizational learning, opportunity recognition, and program adaptation.

## Limitations of Research

There are a number of identified limitations associated with this research. Limitations include the researcher's and interviewees' communication abilities, the researcher's analytical abilities, and the generalizability and transferability of the research.

In phenomenological research the researcher is the instrument. Accuracy is based on the researcher's ability to successfully probe the issue. This depends on the quality of communication between the researcher and interviewees. Human communication inherently introduces subjectivity.

This natural, human limitation of qualitative research was addressed through the rigor of phenomenological method, including the researcher conducting a bracketing exercise and keeping a research journal. These practices allowed for critical self-reflection during the research process. Also, all interviewees were provided interview transcripts for the purpose of validation, increasing the likelihood of clarity in communication.

Bias is also always a concern in communication. Roughly half of those interviewed personally knew or knew of the researcher prior to this study. Some of these relationships were social; some were through the researcher's wife, who is a physician and medical leader in Prineville. It is possible that interviewee responses could have been

affected by awareness of the researcher and his affiliations. However, the total consistency of responses and the lack of reticence during interviews suggest that bias did not play a major factor in outcomes.

The quality of phenomenological research depends greatly on the researcher's ability to analyze interview data and discern meaning units and major themes. Because the findings of this study are well supported by the literature and congruent with similar studies it is unlikely that the analysis of data for this project was far off base. Additionally, as this research is a dissertation project, the rigor inspired by the dissertation committee's review increases likelihood of that analysis being well conducted.

This research may not be generalizable to broader settings beyond the Central Oregon ED diversion program. However, the description of the ED diversion program may be transferrable to similar settings, prompting other practitioners to associate these findings with their own experiences.

## Conclusion

This research utilized a phenomenological approach to identify, investigate, and prioritize the key factors related to the success of the rural ED diversion program in Prineville, Oregon. The results found seven key factors: communication, mental and behavioral health integration, developing trusting and caring relationships with patients, patient education, team-based care, patient access, and community resource support. These findings were elicited from eight healthcare workers who are, or have been,

heavily involved with the Prineville, Oregon Emergency Department (ED) diversion program.

The results of this study agree with, and build on, the current literature that suggests that the patient centered medical home (PCMH) model is an important part of navigating patients to a primary care clinic, rather than the ED, for non-urgent health issues. This study also provides insight into the shared reality of the ED diversion team members on the Prineville, Oregon ED diversion team, describing their perspectives on what makes the program successful, as well as giving voice to their struggles and frustrations. The specific findings of this research should not be generalized; however, when viewed along with the existing literature these results can be used to shape future research and deepen awareness of issues surrounding ED diversion programs.

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## Appendix A: Research Questions

- What is your interest in the ED diversion program?
- What is your role in ED diversion at PMH?
- What incentive do you or your organization have in reducing ED non-urgent usage?
- How long have you been a part of the team?
- Please describe the ED diversion process to me.
- What elements of this process impact its success?
- How does the PCMH affect ED diversion at PMH?
- How does the involvement of other community health organizations impact the program?
- How does the rural geographic location of PMH affect ED diversion?
- Who are the key people related to the success of ED diversion at PMH?
- What has been your experience as part of the ED diversion team?
- What factors seem to impact the ED diversion program the most?
- What problems (if any) have you encountered?
- What changes have been made to the program since it's beginning?
- What changes would you suggest to improve the impact of the program?
- Who else should I interview related to this project?