Why we started ASCENT

We developed ASCENT to improve ambulatory patient safety in order to make health care more safe and reliable. Although the majority of health care occurs in ambulatory settings with **1.2 billion annual outpatient** [1] visits in the United States, outpatient safety issues are understudied.

Even though the majority of medical care occurs in ambulatory settings, the patient safety movement originated in, and remains focused on, adverse events among hospitalized patients. However, it is increasingly clear that the ambulatory setting is critically important; the Institute of Medicine recently theorized that adverse events may be more common in ambulatory settings compared to acute care settings.

It is understandably difficult to address ambulatory safety for the following reasons:

- These settings traditionally lack technological tools purposed to improve safety, such as electronic health records.
- Ambulatory patients play a central role in self-managing their care, in contrast to hospitalized patients that are observed and monitored by a care team throughout the day.
- The traditional visit-based model of outpatient care, in which patients are self-managing and have limited time with outpatient providers on a periodic basis, creates safety gaps.

The challenges of ambulatory safety are exacerbated in safety-net health care settings because they often lack critical technology infrastructure and resources to devote to safety programs. Because low-income and racial and ethnic minority populations are disproportionately cared for in these settings, safety-net health systems must lead the way in developing solutions in order to reduce health disparities. Accordingly, we chose to launch patient safety learning laboratory, ASCENT, in the public delivery system of San Francisco city and county.

How do ASCENT?s projects seek to improve patient safety?

We characterized the environment in which outpatient safety problems emerge and identified some of the major pain points and hazards that, if improved, have a great impact on ameliorating patient safety issues.

First, outpatient care remains fragmented because ambulatory settings have traditionally lacked comprehensive electronic health records and other technological tools that can be harnessed for safety. This lack of interoperability between health platforms can lead to missed and delayed diagnoses. By engaging stakeholders to identify the most pressing gaps in communication and tracking for subcritical test results we will be able to design and develop a health information technology (HIT) solution that allows for timely and trackable subcritical test result management. We will pilot this technological solution and iterate it based on feasibility, usability, and workflow considerations before implementing the solution at an evaluation site.

Second, since fragmentation of care constitutes a major barrier to patient safety despite the well-established risks of missed monitoring of high-risk conditions and treatments across clinical situations, we strive to develop a proactive an efficient strategy to detect high-risk situations in ambulatory care. The patient centered medical home (PCMH) movement, which conceives of primary care as continuous and team-based for a population of patients, regardless of who visits the office and when, affords the opportunity to re-conceptualize outpatient safety by using electronic data to inform healthcare needs of patient populations and pairing technological innovations with team-based workflows that don?t require a physician to be solely responsible for timely care. Thus, we seek to reduce gaps in ongoing monitoring of high-risk conditions through implementing HITs, such as an electronic population management tool, aligned with workflow innovations.

Finally, the role of the patient is very different in outpatient care settings than in the hospital in that outpatients must decide when to seek medical care, interact with outpatient health systems, and perform their daily health-related tasks. Additionally, current health care systems impose significant literacy and complexity demands on patients. Therefore, we seek to implement a re-design a vital self-management activity, taking medication, to reduce adverse events in primary care.

How do we plan on achieving the aims of ASCENT?

Our intention with ASCENT is to span the full spectrum of innovation, from open-ended problem analysis to practical, scalable solutions. We will look beyond the boundaries of traditional health services research methods as they do not provide the tools to move from problem identification to implementation of sustainable solutions. Therefore, we propose to draw on innovative methods and collaborations such as design thinking, reliability science, and health communication to develop creative solutions to these safety problems, and then apply implementation sciences methodology to characterize their reach, effectiveness, adoption, implementation, and maintenance.

As the aims across ASCENT?s projects have commonalities and we anticipate learnings from one project may inform another, we plan on nourishing a synergy among projects through a small investigator team and shared knowledge base.