Testimony by

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Thank you Chairman Sanders and Members of the Subcommittee for the invitation to speak today on a critical topic that I have spent my career working to address-- patient safety. My name is Tejal Gandhi and I am a board certified internist and President of the National Patient Safety Foundation, a non-profit that has been a leading voice in patient safety since 1997. I am also Associate Professor of Medicine at Harvard Medical School and was formerly the Chief Quality and Safety Officer at Partners Healthcare, a large health system based in Boston.

I would like to talk to you today about ambulatory patient safety and the priorities and challenges that we currently face. Much of the effort of the patient safety movement over the past 15 years, since the Institute of Medicine report To Err is Human *(http://www.nap.edu/catalog.php?record_id=9728),* has focused on improving patient safety in the hospital setting. However, it is important to remember that most care is given outside of hospitals, and there are numerous safety issues that exist in other health settings that are quite different from those we face in hospitals *(http://www.nejm.org/doi/full/10.1056/NEJMp1003294)*.

The setting that we know the most about, in terms of ambulatory safety issues, is primary care. I will touch on 3 areas in particular--medication safety, missed and delayed diagnoses, and transitions of care. Studies have shown that medication errors are common in primary care, and that adverse drug events, or injuries due to drugs, occur in up to 25% of patients within 30 days of being prescribed a drug (*http://www.ncbi.nlm.nih.gov/pubmed/12700376*). In addition, a key medication safety issue in ambulatory care, that is not an issue in hospitals, is non-adherence. Patients do not fill one out of 4 prescriptions --and these include prescriptions for important, highly prevalent chronic conditions such as high blood pressure and diabetes (*http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2842539/*). Better strategies are needed to reduce medication errors and improve adherence to medications. Of note, studies indicate that electronic prescribing systems show promise in the ability to significantly reduce errors, and much attention has been focused on expanding implementation of these systems.

Missed and delayed diagnosis is a key issue as well-- this is the most common type of outpatient malpractice claim (usually missed and delayed diagnosis of cancer in primary care). Missed and delayed diagnosis is complex-- in one study, a single malpractice case had on average 3 steps in the diagnostic process that broke down and led to the missed diagnosis (*http://www.ncbi.nlm.nih.gov/pubmed/17015866*). Some of the most common breakdowns include failing to order an appropriate test, as well as failure to follow up on test results. The answer is not simply to tell clinicians to try harder or think better. Better systems are needed to help minimize cognitive errors--failing to think to order a test--such as computerized algorithms (also known as decision support). Better systems are also needed to manage test results--ensuring that every test that gets ordered is completed and the provider receives the result, acts on it, notifies the patient, and engages them in their plan of care. This is called closing the loop, and electronic health records show promise in helping to do this, but there is much work still to be done to design these systems optimally.

Lastly, we know that patients are vulnerable during transitions in care. These transitions occur all the time in health care--hospital to home, nursing home to emergency department, rehabilitation center to visiting nurse. Transitions are high-risk times, when key pieces of information (such as medication

changes, pending test results, additional workups that need to happen) can be lost. For example, one study found that after hospital discharge, within 3 to 5 days, one-third of patients were taking their medications differently than how they were prescribed at discharge (*http://www.ncbi.nlm.nih.gov/pubmed/16534045*). Another study showed that 40% of patients are discharged with test results that are pending (the final result has not come back) and these results are often not seen by the patients' primary care providers (*http://www.ncbi.nlm.nih.gov/pubmed/16027454*). Efforts are underway across the country to improve transitions, particularly with the focus on reducing readmissions, such as having post-discharge follow-up phone calls with patients and better electronic discharge systems to ensure complete documentation and transfer of information. But there is much work that still needs to be done to address all of these varied transitions.

A major theme throughout ambulatory safety is patient engagement--partnering with patients to achieve safer care (*see NPSF Lucian Leape Institute whitepaper at http://www.npsf.org/wp-content/uploads/2014/03/Safety_Is_Personal.pdf*). Clinicians need to be better engaged with patients to ensure that patients understand and agree with their care plan--understand why the medication or test that is ordered is important for their care and understand what the plan is after leaving the hospital. This needs to be a partnership in order to really ensure that the goals of the patient are being met, and clinicians need to be trained to be better partners with patients.

It is also important to realize that the ambulatory setting is incredibly diverse. There are primary care practices, specialist practices, nursing homes, rehabilitation facilities, dialysis centers, ambulatory surgical centers, the list goes on and on. The safety issues in each of these settings differ, and not very much is known about what those distinct safety issues are, though some recent studies have been eye opening, such as a recent report from the Office of the Inspector General on adverse events in skilled nursing facilities, which found that approximately 16% of Medicare beneficiaries in nursing homes experienced preventable harm (*http://oig.hhs.gov/oei/reports/oei-06-11-00370.pdf*). We need better data in all of these settings to fully understand the risks and opportunities for improvement. Most of these settings do not have the type of quality and safety infrastructure that exists in hospitals, nor do they have robust mechanisms to identify errors or measure errors and adverse events. Many of these settings do not have dedicated quality and safety personnel with expertise to create a culture of safety (where staff feel comfortable talking about errors) or expertise to redesign processes of care to try to prevent errors.

A final point is that health information technology (HIT) is becoming ubiquitous in inpatient and ambulatory settings. We need to design better HIT systems to maximize patient safety benefits while minimizing new risks that can be introduced from these technologies, as outlined by reports from the Institute of Medicine (*http://www.iom.edu/Reports/2011/Health-IT-and-Patient-Safety-Building-Safer-Systems-for-Better-Care.aspx*) and the Office of the National Coordinator (*http://www.healthit.gov/sites/default/files/safety_plan_master.pdf*).

To summarize, there are numerous ambulatory settings, all with unique safety issues that need more focused attention, especially because most health care is delivered in these settings. Three key recommendations are as follows:

- We need to develop a more robust ambulatory infrastructure, with mechanisms for error reporting, culture change, and safety expertise across all of these settings.
- We need to identify better measures of ambulatory safety and to conduct more research to understand what the issues are and how they can be improved.
- For the safety issues we do know about, we must redesign processes of care and further engage patients and families to ensure that we are delivering the safest care.