Invited Article

Patient safety in primary and outpatient health care

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Abstract

Primary care services provide an entry point into the health system which directly impact's people well-being and their use of other health care resources. Patient safety has been recognised as an issue of global importance for the past 10 years. Unsafe primary and ambulatory care results in greater morbidity, higher healthcare usage and economic costs. According to data from World Health Organization (WHO), the risk of a patient dying from preventable medical accident while receiving health care is 1 in 300, which is much higher than risk of dying while travelling in an airplane. Unsafe medication practices and inaccurate and delayed diagnosis are the most common causes of patient harm which affects millions of patients globally. However, majority of the work has been focussed on hospital care and there is very less understanding of what can be done to improve patient safety in primary care. Provision of safe primary care is priority as every day millions of people use primary care services across the world. The present paper focuses on various aspects of patient safety, especially in the primary care settings and also provides some potential solutions in order to reduce patient harm as much as possible. Some important challenges regarding patient safety in India are also highlighted.

Keywords: Family, outpatients, patient safety, primary health care, solutions

Introduction

Patient safety is defined by World Health Organization (WHO) as 'the prevention of errors and adverse effects to patients associated with health care' and 'to do no harm to patients.'[1,2] Unsafe medical practices are leading to disabilities, injury or death of millions of patients each year globally, and may lead to the unnecessary use of scarce hospital and specialist resources. As a result of this, patient safety has been given a wider recognition and patient safety approaches are being incorporated into the strategic plans of various health care organizations worldwide.[3]

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Patient safety in primary healthcare settings has not been explored to the same depth as hospital settings but now more research is being focused on primary and outpatient care.[4,5]

It has been reported that as many as 20-25% of the general population experience harm in primary care settings in both developing and developed countries[6] [Figure 1]. Various factors that contribute towards poor patient safety in primary care settings include errors in diagnosis, communication breakdown, unsafe medication practices and fragmentation of care.[7] Patient harm which is caused by preventable safety lapses also exerts a considerable health burden across the globe, which can be compared to diseases like malaria and tuberculosis. There is also considerable direct financial cost of harm on health systems. It has also been reported that 15% of the hospital's expenditure goes

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towards the additional tests and interventions needed to treat the direct effects of harm, especially in the developed countries.[8]

Patient safety can be improved by addressing numerous issues that occur when patients move between primary and secondary care. In primary care, the relationship between the clinician and the patient is a key to high quality, safe and effective healthcare. Patient and family engagement in primary care helps to build trusting relationships that promote safety. The present paper focuses on various aspects on patient safety and strategies to improve patient safety in primary care and ambulatory settings.

Factors influencing safety in primary care

Ensuring patient safety in primary or ambulatory care setting poses a unique challenge for both the health care providers and the patients. A proposed model for patient safety in chronic disease management was cited in an article. This particular model broadly encompasses three concepts that influence safety in primary care.[9]

- The role of patient and caregiver behaviours
- The role of provider-patient interaction
- The role of the community and health systems.

Since face-to-face interactions between patients and providers in primary care settings are limited and may occur weeks to months apart, patients must take greater responsibility in understanding their illness and managing their own health. However, specific errors have been found to be linked with the above-mentioned three concepts. Inherent flaws in the health system can increase the risk of medical errors, particularly medication and diagnostic errors; issues that are vital in ambulatory safety.[10] These types of errors are very common in primary or ambulatory care as according to findings of some landmark study, 4.5 million ambulatory care visits take place yearly due to adverse drug events. Similarly, prescribing errors are also very common in primary care practice. Moreover, low health literacy and poor patient education contribute to elevated error risk as patient's understanding of the indication, dosage schedule, proper administration and potential adverse effects are linked to medication error [Figure 2].[11] According to a recent data, timely information availability and managing test results contribute to delayed and missed diagnoses in outpatient care. Impact of problems identified at the primary care interface include:[12]

- Increase in mortality
- Increase in morbidity (temporary or permanent)
- Increase in adverse events
- Appropriate treatment delay and community support
- Additional visits to the primary care or emergency departments
- Duplicated or additional tests and tests lost because of follow-up
- Preventable re-admissions to hospitals
- Emotional, physical pain and suffering for service users and families
- Patient and provider dissatisfaction.

Incident reporting in primary care

Incident reporting has been found to be the best way to assess patient safety in primary care. Evaluation of a locally implemented Incident Reporting Procedure (IRP) was done.[13] It seemed to be less suitable for dealing with serious undesirable events since it neglected the emotional needs of the healthcare workers involved in the medical error. It was also found that local incident reporting procedure enabled the health care workers to have more control on the assessment of the incident reports as compared to central procedure that collected reports from many settings and appeared to address common and recurrent safety issues more effectively. Therefore, it was finalized that both approaches deemed necessary and should be combined.[14]

According to reports of a systematic review conducted to evaluate types of incidents in primary care, the most frequent types of incidents were associated with medication and diagnostic errors and the most relevant contributing factor was failure of communication among workers in the health care team.[15]

Figure 1: Patients experiencing harm in primary and outpatient health care according to WHO

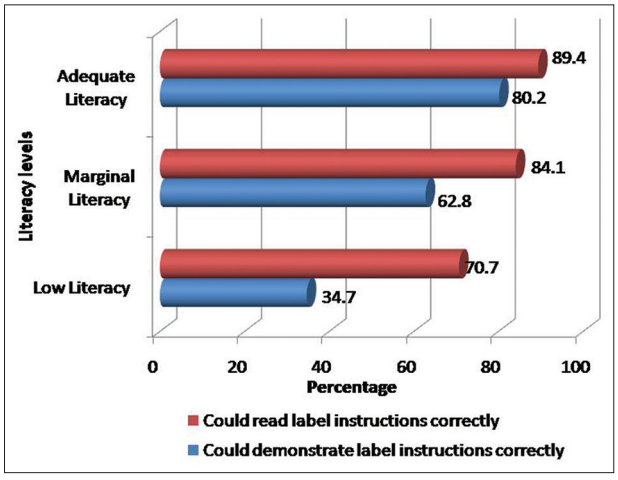

Figure 2: Influence of literacy on patients' ability to follow the prescription label instruction even when they are able to read dosage instructions correctly

In another Dutch study conducted on examining type, causes and consequences of potential patient safety incidents in out-of-hours primary care, it was found that the incidents did occur in out-of-hours primary care, but that most (70%) did not result in patient harm. Treatment errors (56%) constituted the most frequent encountered incident.[15] Failures in clinical reasoning (because of lack of access to the patient's medical history, insufficient medical knowledge, high workload, age and being high risk), proved to a major cause for these incidents.

Transitions of care

Movement between different parts of the health care system makes people vulnerable. Transitions of care refers to the various points where a patient moves to, or returns from, a particular physical location or makes contact with a health care professional for the purpose of receiving health care.[16] This includes transitions which take place between home and hospital, residential care settings and consultations between different health providers in out-patient centres. Primary care has an important role to play in improving transitions of care utilizing a multifaceted approach. Patients referred between different health care institutions may come up with new diagnosis, a new treatment or a change in functional status that can affect their ability to manage their illness outside of the health care setting. Most vulnerable to adverse and safety incidents are the older people who are suffering from complex health issues and need to undergo multiple transitions of care. Managing these transitions effectively from the primary care into hospital care and vice-versa are essential.[17]

Current situation of patient safety in India

In the recent years, Indian government has increased its attention towards improving quality of health care in India within the broader context of Universal Health Coverage. Patient safety has been recognised as one of the important components of providing quality health care to the population and many initiatives are being taken by the government both at the central and state level to address various issues regarding patient safety.[18] Some of the important challenges in patient safety in India are addressed below in brief. These are as follows:

- Laws, regulations, policies and strategies are quality of care in India are largely fragmented.
- Consumer Protection Act has failed to define the rights of the patients.
- Public reporting on quality of care needs adjustment and improvement. Demand from population side is not adequate enough to influence policy directions.
- Very few hospitals in private sector have implemented patient safety procedures but these constitute very small proportion of overall care providers.
- The public sector institutions are not currently actively involved in NABH Accreditation.
- Proper mechanism for overall burden of unsafe care in the country exists for only some of the programmes (Adverse Events Following Immunization, Pharmacovigilance Program etc.) but not for all.
- There is deficiency of adequately trained and skilled staff for patient safety and training provided to these persons is also not well documented.
- In public sector hospitals, there is no periodic assessment of awareness and understanding of basic principles of patient safety among health care workers.
- Other elements such as fire safety, seismic safety, device safety, the physical safety of health care facilities are also important in the Indian context but are usually not included in patient safety paradigm majority of times.
- There is a lack of infection control policies or guidelines which cover health care institutions at all levels.
- Healthcare Associated Infection (HAI) analysing and reporting procedure is not strictly followed in majority of the public and private sector health care institutions.
- Biomedical Waste Management Rules have helped in regulating management of biomedical waste by health care institutions to some extent.
- It was observed that sporadic institute based system for prevention and control of HAI does exist in the country, but not at the national level, and a lot of activities are happening that have not been institutionalized.
- Multiple guidelines for even up to Primary Health Centre (PHC) level for patient safety are available; Janani Suraksha Yojana, Janani Shishu Suraksha Karyakaram, Integrated Management Neonatal Childhood Illnesses, Sick Newborn Care Units, Indian Public Health Standards, BEmONC, CEmONC, SBA. However in private sector provision of desired services is not standardized.
- Regarding mechanism for drug storage, safety norms are not adequately followed at the sub centre level.
- Research activities regarding patient safety are very fragmented and not widely shared and utilized for decision making purposes.
- Funding on patient safety research is minimal in the country.
- There is hesitation to publish research on patient safety by both public and private sector health care institutions as this may tarnish the image of the institution.

Potential solutions for improving patient safety

A range of strategies are needed that can bring improvement in patient safety in primary care settings.[19] [Figure 3]. These are discussed below:

1. By engaging patients and families
   There are four evidence-based strategies that promote meaningful engagement with patients and families in ways that improve patient safety.
   a. Be prepared to be engaged: It encourages patients and their families to prepare for and become fully engaged in their medical appointments. It is often seen that patients arrive at a primary care visit unprepared to discuss their concerns and questions. This will help patients and

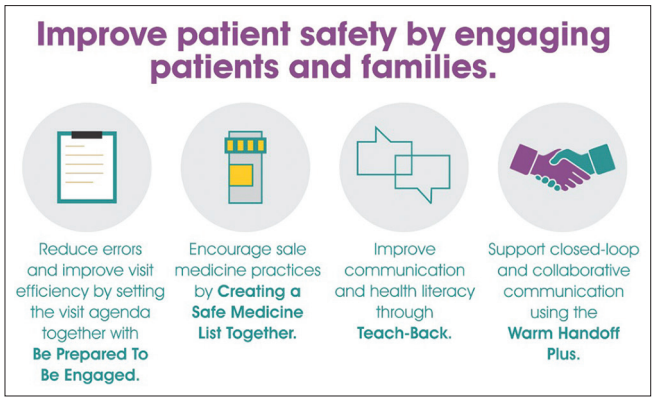

Figure 3: Guide strategies aimed at improving patient safety by engaging patients and families

families set their visit agenda and ensure that patients' questions are answered. Under this strategy, patients are provided with a Be Prepared Note Sheet and they are encouraged to write down about their questions and health goals. By this means, visit time is used more effectively and information exchange improves.

b. Create a safe medicine list together: This strategy is an effort to engage patients and families to actively participate in developing a complete and accurate medicine list. Patients are asked to bring all their medications which they take (prescribed and over the counter). Other staff at the centre will work with the patients and families to develop a complete and accurate medicine list and finally clinician will conduct medication reconciliation.
c. Teach-Back: It can evidence based health literacy intervention that promotes patient safety, patient engagement, adherence and quality. It ensures that the primary care physician has explained information clearly so that patients and their families understand. In this strategy, you ask the patients and their family members to explain in their own words the information that the physician has communicated to them to ensure that they have understood clearly.
d. Warm Handoff Plus: It is a handoff conducted in person, between two members of the health care team, in front of the patient and their family. Patient is also included as a team member so that he can hear the conversation regarding his clinical problem and treatment plan. It is specifically done within the primary care practice by engaging patient and the family and can occur between any two members of the health care team including clinicians, medical assistants, front and back office staff etc., It helps to build trusts and strengthen relationships resulting in improved patient outcomes.[20]

2. Medication Reconciliation
Medication errors are a common safety issue as more than 40% of these errors are believed to result from inadequate reconciliation in handoffs particularly during hospital admissions and discharge. 20% of these errors result in patient harm.[16] Many of these errors can be averted by medical reconciliation which is defined as the process of comparing a patient's medication orders to all the medications the patient has been taking. It also looks at patient's previous and discontinued medication and medications which are newly prescribed by the health care setting. This can help uncover medicine issues such as patients who are unintentionally overdosing by taking both the generic and name brand medicines, are taking outdated prescriptions or are taking supplements that negatively interact with their prescription medicines.
3. Sharing Information
Another strategy to improve patient safety in primary care particularly in transitions of care is to share information using 'yellow envelopes' (or discharge envelopes).[16] This a pro-active, low cost solution to communicate patient information. All the information regarding the patient is placed in an envelope. There is a checklist of crucial and agreed upon handover information which features on the back of the envelope during patient transfer. This has an advantage as it is continuously available and can be updated regularly to alert providers of patients who are at high risk of safety incidents particularly during transitions.

Conclusion and Recommendations

It is vital to understand the magnitude and nature of harm in primary care as significant proportion of healthcare is offered in this setting, yet there is little clarity about the most effective ways to address safety issues at this level. Improving safety in primary care is essential when striving to achieve universal health coverage and the sustainability of health care. A strong primary and ambulatory care sector is therefore of paramount importance in both developing and developed countries. Ensuring care provided in this setting is safe, effective and focused on the needs of the patient; it should be a top priority for policy makers and practitioners. Safe primary and ambulatory care improves the health and wellbeing of individuals, communities and societies.

- Patient and staff involvement is another important factor that should be considered by healthcare providers in both developing and developed countries
- Patients can help healthcare practitioners improve their practices, services and decision making processes through reflecting upon their experiences[21]
- Technology has become central to the process of healthcare delivery. Thus, developing countries need to invest in healthcare technology to ensure that patients are provided with better quality of care
- Supporting research activities associated with improving patient safety practices across healthcare organisations should be a priority especially in the developing nations
- Training and development programmes should be available for clinical and support staff throughout their careers so that patient harm is minimal.

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Conflicts of interest

There are no conflicts of interest.

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