

# Health Systems and their Impact on Improving Health Services : A Simple Review

## Abstract:

**Introduction:** The past decade has witnessed a renaissance of interest in health systems in academic discourse and policy dialogue, specially within the development community. It has been well known that level of health system affects the general health and outcome of the patients. The World Health Organization has described health systems as the totality of the individuals, organizations, and assets positioned together to uphold and enhance the health of the population they serve. Good health services are those which deliver effective, safe, high-quality interventions for both personal and non-personal health are provided when and when they are needed, with the least amount of resource waste. So, improving the health system including improving in all of this items. This study aims to evaluate the impact of health system level and health system development on improving health services. **Conclusion:** In conclusion, health system and health care levels depending on good management, planning, recording and behavior. All the workers should be highly trained and professional and updated to the recent ways in recording data and interacting with equipment and individuals to be able to sustain a developed recording system which makes it easier to get higher levels of safety and satisfactory outcomes with patients. Improving the health system is a continuous necessary needs updating to improve health services in general and patients' health in particular.

**Key words:** health system, recording, health, health services, patients, safety, outcome.

## Introduction:

Public health can be defined as "the art and science of preventing disease, extending life, and promoting health through the organized efforts of society". "It includes all organized efforts to promote, protect, and improve, and when necessary, restore, the health of individuals, particular groups, or populations and in general, it is understood to focus on population health rather than individual health activities and to use a population health approach while acknowledging how socioeconomic, genetic, and behavioral factors (such as housing, social networks, and education) affect people's health and well-being" [1]. "The avoidance,

mitigation, and amelioration of unfavorable outcomes or injuries resulting from the procedures of providing healthcare constitutes the subset of patient safety” [2].

“The World Health Organization has described health systems as the totality of the individuals, organizations, and assets positioned together (in line with pertinent policies) to uphold and enhance the health of the population they serve. A health system also responds to people's reasonable expectations, works to shield them from the financial burden of poor health, and places the development of population health as its main priority (WHO 2005: [www.who.int/features/qa/28/en/index.htm](http://www.who.int/features/qa/28/en/index.htm)) Moore et al. (2007) go further, suggesting that a health system encompasses” [3]. “Health systems have multiple goals, improve consistency and safety in patient care, in ways that are responsive, financially fair, and make the best, or most efficient, use of available resources. In order to get from inputs to health outcomes, it is necessary to increase access to and coverage of efficient health interventions, while sacrificing efforts to guarantee provider quality and safety” [4].

“One of the biggest barriers to scaling up interventions to make the attainment of internationally agreed upon goals like the MDGs a realistic respect is the existence of failing or inadequate health systems. Additionally, people's wants, preferences, and right to respect should be taken into account by health systems” [5]. “Global health systems must adapt to a changing environment on many levels, including epidemiologically due to shifting age demographics, the effects of pandemics, and the emergence of new threats; politically due to shifting views on the role of the state and its relationship with the private sector and civil society; and technically due to the growing awareness that health systems are falling short of expectations and are frequently unequal, backwards-looking, and dangerous. In its Knowledge Network on Health Systems (WHO Commission on the Social Determinants of Health, 2007), the World Health Organization argues that these systems are crucial because, like income, ethnicity, or gender, they can act as determinants of health”. “It describes aspects of successful health systems. The research finds evidence to support the notion that well planned and managed health systems can have a positive impact on health equity, taking into account (for the most part) evidence from low- and middle-income countries. A strong healthcare system may also have broader positive effects on communities and populations by fostering feelings of safety, well-being, and social cohesiveness” [3]. “High-quality

care involves thorough assessment, identification of asymptomatic and co-existing conditions, accurate diagnosis, timely and effective treatment, referral for hospital care and surgery when necessary, and the capacity to monitor the patient and change the course of treatment” [6].

“Although a lot of consumer services priorities the user experience, health systems, like other public sector systems, are frequently challenging to use, unconcerned with people's time and preferences, and reluctant to disclose decision-making procedures” [7]. “In the meantime, health professionals might not get the encouragement and respect they need to lead fulfilling professional lives. Finally, systems can be ineffective, wasting scarce resources on pointless treatment and on subpar clinics that consumers avoid at the expense of charging exorbitant prices to customers” [8]. “Every nation must uphold its moral obligations and ensure that everyone has access to high-quality healthcare” [9]. Moreover, health systems are a powerful engine for improving survival and wellbeing and they are the focus of our report.

Good health services are those which deliver effective, safe, high-quality interventions for both personal and non-personal health are provided when and when they are needed, with the least amount of resource waste. In any health system, good health services are those which deliver effective, safe, good quality personal and non-personal care to those that need it, when needed, with minimum waste. Services – be they prevention, treatment or rehabilitation may be delivered in the home, the community, the workplace or in health facilities. Although there are no standardized models for providing good services, there are several well-known prerequisites. Effective providing requires well-trained personnel, the appropriate tools and medications, and sufficient funding.

Unwanted results that can be attributed to medical treatment rather than the underlying illness process are called adverse events (AEs). They happen as a result of the inherent dangers associated with treatments like surgery or medicine. They can also be the result of human error or flawed health system design. The subgroup of AEs brought about by mistakes is regarded as avoidable. Hospital acquired infections, adverse medication events, surgical complications, system errors, diagnostic errors, treatment errors, obstetrical injuries, procedural complications, and anesthesia-related injuries are some of the more common AE categories. 6–12 The type of AE must be determined because different preventative measures will be taken. Changing health demands, rising public expectations, and

ambitious new health goals are raising the bar for health systems to generate better health outcomes and higher social value, which is why adverse events (AEs), which are unfavorable outcomes, are a result. “However, continuing on the current course will not be sufficient to meet these needs. What is required are high-quality health systems that optimize health care in each specific context by consistently delivering care that improves or maintains health, by being valued and trusted by all people, and by responding to changing population needs” [6].

“Despite the fact that health outcomes in low- and middle-income countries (LMICs) have improved recently, a new reality is now upon us. The bar is being raised for health systems to achieve better health outcomes and higher social value due to shifting health needs, rising public expectations, and ambitious new health goals. However, continuing on the current course will not be sufficient to meet these needs. What is required are high-quality health systems that consistently provide care that enhances or preserves health, are respected and trusted by all people, and adapt to the changing demands of the population” [5]. “Quality ought to be ingrained in all healthcare systems, not only the elite or something to strive for in the future. The population's needs and expectations in terms of their health, the governance of the health sector and cross-sector partnerships, platforms for the delivery of care, the size and skills of the workforce, and tools and resources, such as drugs and data, are the cornerstones of high-quality health systems. Health systems must build the capacity to measure and use data to learn in addition to solid foundations. Four values—they are for people, they are equitable, they are resilient, and they are effective—should guide the development of high-quality health systems” [6].

According to previous study which examined the ethical aspects of providing high-quality care in environments with limited resources and went over the available metrics and improvement techniques. Five conclusions were drawn [7]:

**- People frequently receive subpar care, and poor care is prevalent in all circumstances and nations, with the most vulnerable populations faring the worst.**

“Data from a variety of nations and illnesses demonstrate a general lack of care quality. Less than half of suspected tuberculosis cases are

appropriately managed in LMICs, mothers and children receive less than half of the recommended clinical actions in a typical preventive or curative visit, and less than one in ten people with major depressive disorder receive minimally adequate care. For critical illnesses like pneumonia, myocardial infarction, and neonatal asphyxia, diagnoses are frequently inaccurate. For vulnerable populations, including the underprivileged, teenagers, persons with stigmatized conditions, and those on the periphery of health systems, such as those incarcerated, the quality of care is at its lowest” [8, 9].

**- In LMICs, superior healthcare systems might prevent almost 8 million deaths annually.**

In LMICs, about 8 million people each year pass away from illnesses that the healthcare system should be able to manage. These deaths caused US\$6 trillion in economic damages in just 2015 alone. “Today, inadequate access to care is less of a deterrent to mortality reduction than poor treatment quality. Poor-quality care is to blame for 60% of fatalities from treatable diseases, whereas the other 40% are brought on by underusing the healthcare system. A million infant fatalities, 900,000 tuberculosis deaths, 2 to 5 million cardiovascular disease deaths, and half of all maternal deaths annually could all be avoided with high-quality health systems. Poor care can have various unfavourable effects, such as unneeded suffering from illness, lingering symptoms, loss of function, and a lack of faith and confidence in healthcare systems. Poor-quality health systems have negative economic side effects such as resource waste and catastrophic costs. Because of this, just 25% of individuals in LMICs think their health systems are effective” [7, 10].

**- The transition from poor to high-quality healthcare systems depends on new research.**

It is crucial, but not done, to assess the quality of the healthcare system as a whole and throughout the treatment continuum. Better regular health information systems for monitoring as well as new research, as suggested in this Commission's research agenda, would be needed to close these gaps. Research will be required, for instance, to thoroughly assess the costs and impacts on health, patient experience, and financial safety of suggested improvement measures. Studies on implementation science can aid in identifying the contextual elements that support or obstruct reform. It should be specifically planned for new data gathering and research to increase regional and national research capabilities [11, 12].

## **Improving Data Collection across the Health Care System:**

The first step of improving the health care system is improving the recording system; which is usually done in some steps including the following [2]:

### *Collecting and Sharing Data Across The Health Care System*

“A variety of public and commercial data gathering systems are utilised in the healthcare industry by different organisations, including hospitals, CHCs, doctors, and health plans. These systems include health surveys, administrative enrollment and billing records, and medical records. All of these organisations gather some information on race, ethnicity, and language, indicating the possibility that they may each contribute data on patients or enrollment” [5].

#### Hospitals

“Hospitals are in a good position to gather patient demographic information because they typically have information systems for data collection and reporting, staff who are accustomed to collecting registration and admissions data, and an organisational culture that is familiar with the tools of quality improvement. Additionally, hospitals have a history of gathering information about race. However, this data collection culture has some drawbacks. In the past, the data were only ever supposed to be used for analysis to make sure civil rights laws were being followed rather than for quality improvement. The categories that are gathered vary each hospital, and hospitals obtain the information through a variety of methods, hence hospital data gathering processes are less than systematic (e.g., self-report and observer report)” [10].

#### Health Plans

“Race, ethnicity, and language data can be systematically compiled and controlled by health plans, including Medicaid managed care and Medicare Advantage plans. As a result, these plans can play a role in quality improvement” [11]. Plans, however, might have few chances for face-to-face interaction during which data can be gathered and the need for the data can be communicated. While the information can be gathered at a variety of stages (such as illness management programmes, member surveys, and enrollment), the main opportunity for contact occurs at this stage since concerns about the use of the information for discriminatory purposes may be at their peak. The states of California, Maryland, New Hampshire, New Jersey, New York, and Pennsylvania forbid insurers

from asking applicants about their race, ethnicity, religion, ancestry, or national origin on application forms, although they are permitted to do so after they have been enrolled [12].

### Surveys

Plans, however, might have few chances for face-to-face interaction during which data can be gathered and the need for the data can be communicated. While the information can be gathered through a variety of sites (such as illness management programmes, member surveys, and enrolment), a basic aspect of surveys is that a respondent's race, ethnicity, and language needs are self-identified and not assigned by the interviewer, whether the survey is self-administered by mail, interviewer-administered in person, or administered over the phone. Nevertheless, cues from the interviewer, a respondent's perception of lack of secrecy, or the social and political context may have an impact on a respondent's response. Importantly, a primary occasion for interaction is during enrolment [13].

## **Impact of health systems on improving health services:**

### **1. The impact of health information technology on patient safety**

"The application of information processing involving both computer hardware and software that deals with the storing, retrieval, sharing, and use of health care information, data, and knowledge for communication and decision-making" is how healthcare information technology (HIT) is defined. Numerous prospects for enhancing and revolutionizing healthcare are presented by health information technology, including lowering human error rates, enhancing clinical outcomes, facilitating care coordination, increasing practice effectiveness, and tracking data over time. HIT has demonstrated effectiveness in preventing medical errors by enforcing clinical guidelines and care protocols. While the benefits of HIT on administrative functions are easily discernible, such as decreasing paperwork and the workload of health care professionals, increasing administrative efficiencies, and expanding access to affordable care. Patient data management systems (PDMS), retained surgical items detectors, electronic medication administration records (eMAR), automated medication dispensing cabinets (ADC), electronic physician's orders (CPOE), clinical decision support (CDS), electronic prescribing, electronic sign-out and hand-off tools, smart pumps, and patient electrification (EMR). Patient safety, medical errors, adverse events,

pharmaceutical errors, adverse drug events, and death were our main outcomes of interest [2].

### Electronic physician's orders and E-prescribing

The use of electronic or computer support for entering physician orders, including prescriptions, on a computer or mobile platform is known as "computerised physician order entry." electronic prescriptions and electronic doctor's orders [14]. "The implementation of a COPE with clinical decision support resulted in a significant reduction in medication errors (RR:0.46; 95% CI 0.31 to 0.71) and adverse drug reactions (RR: 0.47; 95% CI 0.35 to 0.60), according to a study evaluating the effectiveness of CPOE to reduce medication errors and adverse drug events in hospitals" [15]. "Hard-stops have been investigated and have been shown to be effective in reducing prescribing errors in CPOE systems as a measure of forcing function and error prevention. Hard-stops were used, although these led to clinically significant therapy delays" [16].

### Clinical decision support

"Information and patient-specific information are made available to the healthcare professional through clinical decision support. This information is sensibly filtered and delivered to the healthcare professional at the proper times with the goal of enhancing their decision. A variety of tools are included in clinical decision support to improve clinical workflow and decision-making. Some of these tools are clinical guidelines, condition-specific order sets, patient-specific clinical summaries, documentation templates, investigative and diagnostic support, among others. These tools are messages, alerts, and reminders to healthcare professionals and patients" [17].

### Electronic sign-out and hand-off tools

To ensure continuity of care and patient safety, sign-out or "hand-over" communication refers to the process of delivering patient-specific information from one carer to another, from one team of carers to another, or from carers to the patient and family [18].

### Bar code medication administration

"Electronic systems called bar code medication administration systems combine bar code technology with electronic drug administration records. By ensuring that the appropriate patient receives the appropriate drug at

the appropriate time, these systems work to prevent medication errors. Furthermore, different existing barcode systems have different degrees of sophistication. For instance, some software generates alarms when medicines with similar sounds or appearances may be mistaken for one another. When scanned, some others offer clinical advisories for particular prescriptions, while others could help with paperwork (namely, recording drug administration in the eMAR and other relevant clinical details” [19].

### Smart pumps

“Smart pumps are intravenous infusion pumps that have software for preventing drug errors. When the infusion setting is set outside the pre-configured safety limitations, this programme notifies the operator” [20].

### Automated medication dispensing technology

“Electronic drug cabinets called automated dispensing cabinets (ADC) provide for controlled medicine dispensing and distribution tracking at the point of treatment. Hospitals began using automated dispensing cabinets in the 1980s, but they have since developed to incorporate more advanced software and digital interfaces to streamline high-risk processes in the medicine administration process. Automated medication dispensing cabinets have been utilized successfully as a medication inventory management technology to automate the dispensing of medications by reducing the workload on the central pharmacy and keeping better track of medication dispensing and patient billing. There is only one published controlled trial<sup>26</sup> that examined the effect of ADC on patient safety, and it reported a 28% reduction” [21].

### Retained surgical items prevention technology

“Bar coding and radiofrequency (RFID) tagging of surgical items are two examples of the different technologies used to improve the prevention of retained surgical items” [2].

### Electronic incident reporting

“Healthcare professionals who are involved in safety-related events can voluntarily record such incidents using web-based electronic incident reporting systems. The electronic health record (EHR) can be coupled with such systems to provide data abstraction and automated detection of unfavorable events through trigger tools. The following benefits of electronic incident reporting systems may be possible: standardizing

reporting structure, standardizing incident action procedure, identifying major incidents and trigger events quickly, and automating data entry and analysis. According to studies that have been published, switching to an electronic reporting system has significantly increased the frequency of reports for healthcare organizations” [22, 23].

## **2. The impacts of health information systems on patient flow management:**

Patient flow describes how patients migrate gradually through various care settings' departments or units. Patient flow management seeks to ensure the most effective use of resources while delivering safe and effective patient care [24]. Health information systems (HISs) are being used more often in a variety of healthcare settings to address patient flow difficulties, although there is still less proof of their overall effects. Hospitals all over the world have implemented a number of initiatives and techniques to address patient flow issues and to deliver high-quality care at the appropriate time and location. In the meantime, a significant amount of study is providing strategies and remedies for issues with patient flow [25]. A recent umbrella review discovered that hospitals around the world have employed over 25 different methods to address the issue of overcrowding in the emergency room (ED) [26]. “Health care professionals have started using HISs to enhance patient flow in a variety of healthcare settings. By updating information and enhancing patient navigation, the automatic push notification system, for instance, was employed in emergency care to alleviate ED congestion, shorten LOS, and decrease patient load” [27]. Despite the fact that there have been numerous systematic evaluations on interventions for improving patient flow, a summary of these reviews reveals that the majority of them concentrated on conventional, non-IT interventions like triage, streaming, and fast track. Although there are systematic reviews on employing health information systems (HISs) to address patient flow issues, they frequently focus on just one particular system, such as the computer provider order entry (CPOE) system[28]; methods such as computer simulation modelling [29]; or measures such as length of stay (LOS) [30]. management, revealing a knowledge gap in the literature despite the long history of research on the use of HISs in patient flow management. A thorough analysis of this subject will therefore offer more thorough insights into how HISs have been adopted for and have affected patient flow management practice. Due to their excellent scalability and integrability, HISs might be useful solutions for patient flow management

at the organisational or even network levels. HISs was frequently found to be beneficial in enhancing team member communication and care coordination, supplying prompt access to high-quality information for decision making, and streamlining care processes. These upgrades let patients move across the care continuum with greater efficiency [25].

### **3. Health systems and health-related behaviour change**

European epidemiological data from the past 30 years demonstrate that a number of diseases' associated mortality and morbidity can be avoided or delayed. For instance, lifestyle and behavior have a significant impact on the rates of cardiovascular disease (CVD) and numerous malignancies, which in turn have an impact on a number of social, economic, demographic, and structural factors. The behavior of individuals, communities and populations is one of the major determinants of their health outcomes. Western health budgets are heavily burdened by the cost of treating diseases that could be avoided by changing one's lifestyle or behavior, and there is enormous room for cost reductions from efficient interventions and programmes.

#### Improving health outcomes through patient education and partnerships with patients

“Physicians need to spend more time with patients in order to enhance health care results. The contact between the teaching physician and the patient must be enthused, driven, and attentive to the needs of the specific patient, Physicians must understand that making an informed medical decision is a process of education and has the ability to change the patient-physician relationship for the betterment of both parties. By empowering patients to make informed decisions, doctors must ensure that they are treated equally under the covenant. To make informed health decisions, patients must employ the educational process” [31]. Self-efficacy has improved as a result of interventions to enhance self-care. Self-efficacy is the conviction that one can succeed in particular circumstances or carry out particular tasks. How one tackles goals, tasks, and obstacles relating to one's health is greatly influenced by how confident one feels in oneself. Trials investigating lifestyle interventions in a variety of illnesses, including diabetes, coronary heart disease, heart failure, and rheumatoid arthritis, have shown clinical improvements. Through patient education and self-management programmes, there is enormous potential for better health outcomes. The causes of early death included smoking, eating poorly, not exercising enough, drinking alcohol,

being exposed to bacteria, using guns, engaging in dangerous sexual conduct, getting into car accidents, and taking illegal drugs. A low level of physical activity, poor food habits, and cigarette use together contributed to about 80% of early deaths [32]. “The medical profession holds the notion that food and exercise can lower the risk of developing coronary artery disease, hypertension, diabetes, and the metabolic syndrome. This belief was strengthened by a thorough systematic review, which found overwhelming data supporting the role of exercise in treating metabolic disorders, coronary heart disease, and heart failure” [33]. “By increasing their patients' health literacy, doctors must encourage patient education and engagement. The ability to find, comprehend, and apply health information is referred to as health literacy” [34]. “Low health literacy is assumed to result in poorly understood medical communication, which impairs self-health management, personal accountability, and health care utilization” [35]. “Physicians have a primary responsibility for ensuring that patients are literate in matters of health because it is they who set the conditions for a health interaction, including the physical environment, the time allotted, the communication style, the information provided, and the principles of making wise health care decisions and acquiescence. Avoiding medical jargon, asking patients questions, clarifying unfamiliar forms, and utilising "teach back" as a technique to confirm understanding are all communication strategies and practises that doctors can use to mitigate the possible dangers associated with low patient health literacy” [36].

#### **4. Improving patient safety through the systematic evaluation of patient outcomes:**

Many organisations have been very active in their efforts to enhance patient safety and have supported numerous expansive projects aimed at reducing avoidable injury [37]. Although some of these initiatives, most notably surgical checklists [38], have been linked to a positive effect in the clinical trial setting, recent data evaluating entire health systems suggest that we are generally no further ahead in improving patient safety and that hospital complications are no less frequent now than they were in the 1990s [39]. The primary cause of the health care system's apparent lack of progress on this crucial aim is its inability to consistently monitor patient safety [40].

Studies already conducted indicate that AEs have a significant effect on expenses and patient health. Numerous analyses of various AE kinds

have been done in terms of expenses. Zhan and Miller [41] used a countrywide cohort design to analyse administrative claims data in order to ascertain the expenses related to various AE kinds. They discovered that the majority of AE types were linked to significantly higher expenses and lengths of hospital stays. These increases were most pronounced for in-hospital sepsis, which resulted in an additional 10 days on average spent in the hospital and a cost of US\$ 57 000. The scientists discovered that other issues, like medical mistakes and procedural injuries, had a comparable effect. Similar findings were obtained by Eber and colleagues [42] who conducted a similar analysis with the only emphasis on hospital-acquired infections.

Clinical surveillance was employed by Bates and colleagues [43] and Classen and colleagues [44] to identify patients who had adverse medication events. They discovered that, depending on how preventable the incident was, an adverse medication event was typically associated with 2 extra hospital days and US\$ 2000–5000 in charges. Bates and colleagues [43] calculated the annual cost of adverse drug events for a typical 700-bed hospital to be US\$ 5 million or 5% of its overall expenses using this data and information on the incidence of adverse medication events [43]. Using a cohort design and a study of medical records, Baker and colleagues [45] discovered that, depending on the kind of institution, AEs had varying effects on hospital length of stay. AEs were determined to result in 6, 4, and 8 more inpatient days for teaching hospitals, big community hospitals, and minor hospitals, respectively. Charges stated in this study were not cost estimated, however based on average daily costs, this equates to up to \$10,000 each occurrence.

There are several research on the short-term impacts of adverse events (AEs) on patient health, but none on the long-term consequences of AEs on patient health. Prior studies typically assign a severity rating to the occurrence based on an evaluation of how it played out inside the hospital. The majority of the significant hospital AE studies specifically evaluated medical records and classified whether an AE resulted in temporary disability, permanent disability, or death. According to this research, 15% of AEs will result in mortality, 5% will result in a temporary handicap predicted to last at least six months, and 5% will result in a permanent disability. Although the remaining 75% of AEs are less severe, they nonetheless prolong patients' hospital stays, result in temporary impairment (lasting less than six months), and create other problems [45].

## Measuring harm getting the fundamentals right

One of the main contributors to AEs persisting has been recognised as health systems' inadequate ability to detect AEs and monitor their prevalence. It should go without saying that measurement is a crucial first step. First, it is impossible to define patient safety priorities without quantifying the exact types of AEs or their frequency. Second, incorrect classification of AEs hinders our ability to comprehend their causes and develop workable treatments. Finally, a lack of measurement makes it difficult for us to monitor our progress or evaluate how we stack up against our colleagues [40]. There are also some studies supporting an association between systematic measurement and improved health outcomes. The best-known example of such a system-wide approach is the National Surgical Quality Improvement Program (NSQIP) in the United States. There are numerous instances of organisations and health systems modifying care processes as a result of the NSQIP results, improving patient outcomes. Infection control programmes, which were shown to be effective in the middle of the 1970s, are similarly founded on systematic monitoring of adverse events [46].

## What is impeding the adoption of a systematic approach to AE detection?

The fact that AEs are "invisible" is the main factor impeding the implementation of AE detection technologies. In other words, it is common for patients and doctors to ascribe negative results to sickness rather than treatment because they are most likely caused by the illness' natural course. The only way to pinpoint the reason behind an outcome is through meticulous peer evaluation. Patients with diabetes, for instance, frequently have renal failure. Therefore, it is normal for patients and clinicians to believe that renal failure is caused by diabetes rather than an angiotensin converting enzyme inhibitor that was just prescribed. A professional evaluation of the case is required to separate the contributing reasons [40].

The scattered nature of AEs is a second factor that makes it difficult to detect them. An AE frequently develops clinically days or months following the clinical interaction. For instance, a missed diagnosis could go unnoticed for months or even years, or a surgical site infection could be unnoticed until well after discharge. Because of this, it's possible that the clinician working on a case won't see how it turns out. Systems for detection and feedback must necessarily have a "systemic" perspective in order to get beyond this obstacle. To put it another way, the AE detection

system cannot be restricted to a specific area of the healthcare system, like a hospital or an outpatient facility. Instead, the detecting system must track the patient and determine the results no matter where the patient is when the outcome occurs. This requirement presents a significant design problem for the AE detection system, especially in view of privacy issues. Considerations about patient and provider privacy are important. Regarding the sharing of their private health information for uses other than their immediate care, patients have valid concerns. There are worries from the provider's perspective that they may unfairly be labelled as having high complication rates [40].

The third, and arguably most significant, factor limiting AE identification is the psychological impact AEs have on physicians. A doctor will always perceive a poor outcome for a patient as their personal fault. These sensations are substantially exaggerated if the treating physician believes an error was made (even if the perception of error is invalid) [47].

patient safety is lacking and that improving it requires a disciplined approach to measurement.

### **Patient Involvement in Health Care Decision Making**

Patient participation refers to the patient's involvement in decision-making or expression of ideas regarding various treatment modalities, which involves sharing knowledge, feelings, and signs as well as adhering to advice from the medical staff. Examining studies on health care reveals that patients' involvement in decision-making regarding their care and treatment has been the center of attention, utilising terms like "involvement," "collaboration," and "partnership," as well as "client," "customer," and "user" [48]. The idea of patient engagement is subject to a variety of viewpoints. One perspective takes into account the individual's involvement in treatment choices related to his own health conditions [49]. In another perspective, patient involvement entails the patient's sharing of knowledge, emotions, and compliance with medical professionals' directives [50].

People's civil rights include the right to patient involvement in health matters and the formulation of macro health policies. Adoption of such policies is also seen as a sign of moral rectitude and a demonstration of accountability and equality in many developed nations' healthcare systems. A major challenge for developed country health systems is the planning and delivery of patient-centered health care services based on

the opinions, needs, and preferences of patients, those who care for them, and the community. It is also a crucial component of enhancing and improving health care systems in order to win the public's trust and support. This results in the delivery of more pertinent and economical services, which in turn improves patients' satisfaction, quality of life, and health outcomes [51]. There many factors influencing patient participation in health care decision-making, patient-related factors, disease-related factors, factors related to health care experts, factors associated with health care settings and factors related to health provider tasks [52].

The advantages of patient involvement have been looked into in numerous studies. These advantages include improved patient trust and satisfaction, improved quality of life, reduced anxiety and emotional distress, a better understanding of individual needs, improved professional communication, patient empowerment and improved patient health, and the opportunity to hear from various patient viewpoints on a given topic, planning and decision making improvements through combined opinions of patients, improvement of monitoring and evaluating services, better decision making due to access to different views, increased trust in services due to increased freedom, knowledge and transparency, a substantial opportunity for dealing with inequalities in health and access to services, encouragement of sense of independent responsibility, career promotion for most staff due to positive feedbacks, reduced possibility of patient dissatisfaction [53].

The patient's humanity and individuality are valued when they are involved in healthcare decisions. Patient involvement is now acknowledged as a legal entitlement of the patient as well as the benchmark for healthcare systems around the world, and healthcare practitioners seek to meet this level. Patients must be included in choices regarding the organisation, delivery, and assessment of healthcare.

### **Conclusion:**

In conclusion, health system and health care levels depending on good management, planning, recording and behavior. All the workers should be highly trained and professional and updated to the recent ways in recording data and interacting with equipment and individuals to be able to sustain a developed recording system which makes it easier to get higher levels of safety and satisfactory outcomes with patients. Improving

the health system is a continuous necessary needs updating to improve health services in general and patients' health in particular.

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