The competitive healthcare system and healthcare environment, modern hospitals with substantial investment, healthcare reforms, availability of specialized persons in hospital management, health services management, the success of quality management programs in developed nations and high interest of international health organizations like WHO has led the developing countries like Pakistan to pay due attention to quality in national healthcare system. Since the time of independence healthcare system in Pakistan is striving for improvements. Despite of the physical infrastructure and availability of qualified workforce for service delivery there are gaps in strategic and operational planning which resulted in poor quality health services. The leaders in healthcare has little awareness that the quality management is an organized specialty to improve the quality of healthcare. It is need of the hour that healthcare leaders in Pakistan must integrate quality improvement activities in strategic and operational planning process of healthcare system. This the only way to maximize the benefits of healthcare system and restore the rapidly deteriorating public trust.(1)

The developing countries are undergoing through the process of developing their own national accreditation standards and accreditation systems for regulating and improving healthcare services(2). Pakistan with three tiers public health delivery system has strong healthcare infrastructure and network of MCH Centres, GRDs, BHUs, RHCs, THQs, DHQs and teaching hospitals. The low utilization of this strong infrastructure has been attributed to inadequate financing, lack of resources and structural mismanagement. Health care management in Pakistan is primarily the responsibility of provincial governments. The provincial health departments are responsible to protect the health of people through preventive and curative services and also regulate private health care providers. Private sector is providing services to nearly seventy percent of the population primarily through fee-for-service system and covers a range of health care providers ranging from trained allopathic physicians to faith healers operating in the informal private sector. The main regulatory body for provision of quality health services to the people of Pakistan are Pakistan Medical & Dental Council (PM&DC), Pakistan Nursing Council (PNC), Pakistan Council of Homeopathy, Council of Tibb and Punjab, Sindh and KPK Healthcare Commissions. These healthcare commissions were formulated by local acts which have been approved by the provincial assemblies and are in the process of implementation. The act consists of regulations for the healthcare facilities in the provinces. The main purpose of these acts is to register all the healthcare facilities in concerned provinces followed by licensing and accreditation process. Minimal Service Delivery Standards (MSDS) for primary and secondary healthcare facilities have been developed for accreditation of these healthcare facilities. Pakistan Nuclear Regulatory Authority (PNRA)
provides regulation for safe operations of the nuclear imaging facilities in the country and also ensure licensing of such facilities. Recently the national accreditation standards for Primary Health Care and Secondary to Tertiary Care Hospitals has been formulated by Pakistan Standards and Quality Control Authority (PS&QCA). For the laboratories Pakistan National Accreditation Council (PNAC) started voluntary accreditation (3). The challenges which the health sector of Pakistan is currently facing include (i) slow progress in effective management of newly emerging and re-emerging health issues including non-communicable diseases and disasters (ii) issues of access to essential and cost effective health services especially for the poor and vulnerable (iii) little or no emphasis on quality of healthcare and services at all levels (iv) poor institutional arrangements and management of health care delivery system (v) academic institutes output is not aligned with the needs of health system and inadequate quality of education and training (vi) poor or no engagement of private health sector and civil society organizations to improve health outcomes (vii) underdeveloped pharmaceutical sector and access to quality medicines (viii) No effective research, monitoring & surveillance system to measure results and evidence based decision making at all levels (3). The Institute of Medicine of England (IOM) defined health care quality as “The degree to which health services to individuals and populations increases the likelihood of desired health outcomes and are consistent with current professional knowledge.”(4) Donabedian was one of the first to view healthcare as a system composed of structure, process, and outcome. He believed that quality of care is not only related to each of these elements individually, but also to the relationships among them (5). Assessing Pakistan's healthcare quality using Donabedian model help us understand the phenomenon in a structured way. Structure component of Donabedian’s Paradigm designates the conditions under which health care is delivered. The conditions included may be material/physical resources, such as facilities and equipment; human resources and intellectual capital, such as the number, variety, and qualifications of professional and support personnel; and organizational characteristics such as the organizational structure and the hierarchy. Starting with the human resource in the form of qualified and competent healthcare professionals in Pakistan are really becoming scarce. Brain drain to Golf Countries, America and European countries due to reputable training programs, quality of life and difficult law and order situation in Pakistan is becoming a challenge. In order to ensure ongoing clinical competency and knowledge among the doctors, PM&DC made a mandatory requirement of certain CME hours for renewal of licensures but failed due to inappropriate planning and non-availability of infrastructure to obtain CME hours for primary and secondary healthcare providers mainly. A machine in terms of appropriate medical and nonmedical equipment is also challenge especially in the public sector. Extremely expensive and high-tech equipment has been observed lying idle in the hospitals either due to non-availability of expertise to operate or poor maintenance. Reliability of medical equipment is also a challenge where false results due to poor periodic maintenance and calibration are posing threats to patient safety (6).

Process component of Donabedian’s Paradigm refers to the procedures, methods, means or sequence of steps that are followed in order to provide care and produce outcomes. The “process” is a series of activities that transform inputs (resources from suppliers) into outputs (services/products to customers). No controls on supply-chain management encompassing
supplies of medicines and vaccines. Policies, procedures, protocols and clinical practice guidelines to standardize healthcare are lacking in most of the hospitals. Indicators to assess structures, processes and outcomes are either non-existent or poorly selected and monitored in most of the hospitals. With few exceptions like maternal mortality rate, under five-year mortality rate, disease burden, and polio eradication there are no standardized national measure sets for measuring the disease outcomes at national levels. There is hardly any concept of “process design” in most of the public-sector hospitals across the country. There is a lack of effective leadership and management processes from top to bottom in the overall national healthcare system. However, these processes are relatively better organized in the private sector due to defined responsibilities, accountabilities and sustainability of the organizations. Among the top root-causes for preventable medical mistakes the most important one in Pakistan is gap in communications between the healthcare providers and between the providers and patients. Verbal orders, lack of medical record documentation, care without documented care plans, lack of surgical notes and no concept of surgical “time-out” are a norm in most of the public-sector hospitals in the country. Lack of right patient identification, indications, specimen handling, quality assurance, proficiency testing and calibrations of the diagnostic procedures are common findings in most of the diagnostic facilities. Lack of evidence-based medicine, use of clinical practice guidelines, pathways and protocols are also common across the healthcare system in the country. This leads to too much variation in the therapeutic processes and ultimately poor outcomes (7).

The final component of Donabedian Model is the healthcare outcomes in terms of clinical, functional and perceptions. The lack of proper health information management system at the national level is the biggest challenge in measuring the health outcomes. The medical records management system has a great degree of variation across the nation at both the public and private sectors level. There is no concept of disease coding based on international ICD coding system and hence most of the healthcare facilities depend on manual registration systems despite the fact that IT is transforming the information management systems to provide real time data to its users. With no national regulations or poor implementation of the existing regulations, flourishing of quackery practices in the primary health care scope of Pakistan is determinant factor in the bad outcomes of care. Lack of control and regulation on other alternative ways of medicine such as homeopathy, Hikmat and spiritual treatments are also contributing to the outcomes. The SERVQUAL model uses five dimensions (assurance, empathy, reliability, tangibles and timeliness) of service quality as determinants of customer gap in services marketing. In the absence of a national healthcare accreditation system in Pakistan, few healthcare organizations in the private and public sector have voluntarily opted for ISO 9001:2008 Quality Management System. The only tertiary care academic hospital in Pakistan that is accredited by the Joint Commission International Accreditation (JCIA) is The Aga Khan University Hospital, Karachi. Shaukat Khanum Memorial Cancer Hospital and Research Centre in Lahore, Shifa International Hospitals in Islamabad and Rehman Medical Institute in Peshawar are among few other with best practices in quality and patient safety. In the public sector, the Sindh Institute of Urology and Transplantation (SIUT), Peoples' Primary Healthcare Initiative (PPHI) and National Program for Family Planning are few examples with some best practices (8).
Pakistan's healthcare quality initiatives are facing the challenges that include no national healthcare accreditation system and integrated national guidelines, policies and procedures on healthcare quality and patient safety, no quality healthcare indicators at national level, no regulatory audits for both public and private sector healthcare facilities, absence of an organizational culture that holds people accountable and lack of pre-service and in-service training for healthcare staff in quality care management and leadership.

Some of the options which can facilitate to improve the state of health care quality in Pakistan may include (i) upgradation and implementation of policies and procedures that regulate quality and patient safety issues in healthcare settings across the country (ii) introduction of a national healthcare accreditation program across the nation (iii) development of networks and consortia between public and private sectors in Pakistan (iv) capacity building of health care professionals in quality and patient safety (v) Formulation of quality improvement teams at national and provincial level (vi) development of a culture of accountability and ownership (vii) learning from experiences of other countries and implementation of quality care tools and locally validated indicators (9).

References