




# Integrated and People-centred Hospital toward Universal Health Coverage in WHO- European Countries

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Received: 6 Dec 2020

Published: 31 Dec 2021

## Abstract

**Background:** Ensuring integrated people-centred health services (IPCHS) that offer universal access, social equity, and financial protection within a primary health care method is important toward universal health coverage and health sustainable development goals. Hospitals are part of this ambitious agenda. The purpose is to review the health system and to list and summarize hospital interventions.

**Methods:** Document review. As part of our review, we selected health systems reports for conceptualizing IPCHS frameworks at the country level as well as those focusing on the hospital sector. Our research team collected and analyzed data including governance, financing, human resource, provision service, and reforms based on the health system report of 14 countries.

**Results:** The review showed 26 challenges, most of which were in Eastern European countries, with 48 interventions in 3 themes and 13 subthemes.

**Conclusion:** Due to the paradigm shift, there is a need for change. However, a much better positive view is needed to determine the role of hospitals in the service delivery system.

The IPCHS framework provides guidance for countries in setting priorities, and formulating, implementing, and evaluating national policy/strategic plans for their hospital sector. Although the vision and interventions should be adapted to local context, different policy instruments may be needed to specifically tackle the most pressing local issues. Recognizing differences in countries' contexts will help to develop realistic and applicable solutions.

**Keywords:** Hospitals, Integrated, People-Centred, Universal Health Coverage, European, Narrative Review

**Conflicts of Interest:** None declared

**Funding:** None

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**Cite this article as:** Nemati A, Jafari M, Ravaghi H. Integrated and People-centred Hospital toward Universal Health Coverage in WHO- European Countries. *Med J Islam Repub Iran.* 2021 (31 Dec);35:198. <https://doi.org/10.47176/mjiri.35.198>

## Introduction

Recommendations endorsed by the 56th session of the World Health Organization (WHO) regional committee for the WHO Regional Office for the Eastern Mediterranean (EMRO) and the 65th World Health Assembly (WHA69.24 {Link to WHA resolution}) highlighted the importance of hospital management. In addition, resolutions adopted by the 66th regional committees (EM/RC66/R.4 {Link to the RC resolution}) addressed

health system strengthening and moving towards universal health coverage (UHC) through strengthening service provision. Hospitals have a vital role to play toward UHC and sustainable development goals (SDGs) as key actors for health services delivery and as major social and economic actors. To achieve UHC, it is necessary to clarify the role and function of hospitals in service delivery (1). Setting individuals and communities at the centre of

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### ↑What is “already known” in this topic:

The world health organization (WHO) framework on IPCHS is a call for an essential shift in the way health services are delivered. It supports countries to achieve universal health coverage and health-related sustainable development goals by shifting away from health systems designed for people.

### →What this article adds:

This article demonstrates main interventions in 14 countries that affected people-centred hospital services based on the WHO framework.

health care services makes services more benefits, responsive, integrated, and available, and provides a coherent approach to addressing the different scope of health needs confronting humankind. There are very much reported advantages of a people-centred approach that includes better access and satisfaction with care. Improved delivery efficiency, reduced costs, more equitable absorption; better health literacy and self-care; improved relationships between patients and providers; and more prominent capacity to respond to health care emergencies and crises (2).

According to the WHO Report 2000 (3), demonstrated three goals for health system: to achieve good people health, ensure that healthcare services are responsive to the people, and ensure fair payment mechanisms. The hospital plays a key role in attaining these objectives (4).

Many hospitals around the world are facing with the same threats and opportunities: the elderly population and the growth of serious illnesses. All these translates to a higher demand for medical services and more care. Patients, on the other hand, are demanding a higher level of quality care. In European countries, financial strains have resulted from increased demand and higher patient expectations (5, 6). The paradigm shift towards people-centred hospitals subsumes new relationships between hospitals and the communities they serve. It means placing the needs of the people, not diseases, at the forefront, and empowering people to take charge of their own health. Ensuring integrated people-centred health services (IP-CHS) that offer universal access, social equity and financial protection within a primary health care-led approach is therefore critical to achieving universal health coverage and health-related Sustainable Development Goals. In this paper, we describe and discuss intervention from its implementation in health-care systems across countries.

## Methods

As part of our document review, we selected health systems reports for conceptualizing IPCHS frameworks at the country level, as well as those focusing on hospital sector and interventions.

Document analysis is a systematic approach for evaluating or reviewing printed and electronic documents. Skimming, reading, and interpreting documents are all part of document analysis. This technique combines content and thematic analysis elements (7). Thematic analysis is a type of information processing within the data, with combining themes becoming the categories for analysis (8). Our research team collected and analyzed data based on the health system report (HiT) 2012-2018 of the 14 countries include Tajikistan (9), Uzbekistan (10), Armenia (11), Belarus (12), Ukraine (13), Georgia (14), Estonia (15), Czech (16), Bulgaria (17), Austria (18), Denmark (19), German (20), Switzerland (21), France (22) on the website: [www.euro.who.int](http://www.euro.who.int). The Health Systems in Transition (HiT) reports provides extensive descriptions of European country health systems as well as a few OECD countries.

Depending on the position paper Framework (WHO) and EMRO framework (23) data were extracted. The

EMRO framework recommended three core action areas for system level. At the System Level, the Framework builds on three sets of interrelated domains (Design, Drivers and Enablers) aligned towards the realization of the strategic vision for the countries' hospital sector.

## Trustworthiness

The researcher for the trustworthiness criteria used by prolonged engagement for 6 month, member checks and agreement, investigator triangulation and researcher credibility to ensure rigour of qualitative findings were selected and extracts were taken and used as data.

## Results

Tables 1 and 2 show main interventions and challenges respectively. The review showed 26 challenges and most of challenges were in Eastern Europe and 48 interventions in 3 dimensions and 13 subdimensions.

## Discussion

The results showed that the most challenging aspects, the role and the function of the hospital, are important parts of the health system that need to change, and many countries have initiated a transformation to improve the performance. To continue to deliver as expected, hospitals need to adapt themselves in order to respond to the health system shortcomings and internal deficiencies. Many countries restructure the model of care by reducing the number of beds, developing home care programs, and having day surgery to increase efficiency. The interventions implemented in these countries have 3 main dimensions based on models. Strategic vision that will guide the development of policies within these 3 dimensions are governance and accountability, service planning integration, and people engagement (system design), feedback, payment methods, regulatory (performance drivers), and infrastructure and technologies, workforce, and the development of information systems (performance enablers).

High performing hospitals should respond to community needs and ensure integration of services (24). Comprehensive approaches are needed to explicitly define the missions of hospitals and set objectives for the hospital sector and subsectors within national or subnational health development plans and hospital sector policies. These measures can substantially increase the contribution of hospitals to improve access to high-quality services, increasing their internal performance as well (25). For example, the Health System Reform Strategy for Ukraine 2015-2025 was designed to build a people-centered, outcome-oriented health system that responds to health needs through reprioritisation of primary care as well as enhanced service quality and efficient, sustainable finance.

In both lower and higher income countries, reforms of first referral or community hospitals offer many examples of comprehensive approaches guided by a clear vision of the role of hospitals and their function within the health system. Thus, strengthening the ability of hospitals to respond to evolving local needs and making the best of opportunities offered by new technologies are of high importance. For instance, in Czech, Georgia, Germany, and

Table 1. Reports critical interventions at the system-level

Dimension	Intervention	Country	
Vision	National health strategy and policies towards achieving UHC and SDG	Armenia, Ukraine, Georgia, Uzbekistan, Czech, Bulgaria, Austria, Denmark, Germany, Switzerland, and France	
	Governance and accountability	Establish local health authorities with clear responsibilities to promote local decision-making	Armenia, Belarus, Ukraine, Uzbekistan, Estonia, Czech, Bulgaria, Austria, Denmark, Germany, Switzerland, and France
		Establish governance structures with clear responsibilities and a role to ensure coordination of services Enhance accountability mechanisms between hospitals and all different stakeholders	Ukraine, Uzbekistan, Estonia, Czech, Bulgaria, Denmark, Germany, Switzerland, and France Armenia, Ukraine, Georgia, Tajikistan, Uzbekistan, Estonia, Czech, Austria, Denmark, Germany, Switzerland, and France
System design	Service planning	Evidence-based planning and community health needs assessment	Belarus, Ukraine, Estonia, Austria, Denmark, Germany, Switzerland, and France
		Develop a mechanism and establish hospital service packages and standards for different settings/levels Developed Palliative care	Belarus, Armenia, Georgia, Czech, Germany, Uzbekistan, Estonia, Bulgaria, Switzerland, and France Belarus, Ukraine, Tajikistan, Bulgaria, Austria, Denmark, Germany, and France
		Coordinate a medium-to-long-term planning approach to align health service delivery Develop hospital strategic plan according to the national/subnational strategic plan Develop day care, day surgery and home care to good utilization of resources	Estonia, Bulgaria, Switzerland, and France Ukraine, Denmark, Germany, Switzerland, and France Belarus, Ukraine, Czech, Denmark, Tajikistan and Austria
	Integration and coordination	Clearly define integrated care pathways, identify the contribution of each partner Improve the referral system, hospital networking and coordination between hospitals and PHC Develop a coordinated health system at the regional level Specialized ambulatory and secondary care based on an integrated method	Armenia, Uzbekistan, Estonia, Bulgaria, Austria, Denmark, Switzerland, and France Ukraine, Tajikistan, Estonia, Austria, Denmark, Switzerland, and France Georgia, Czech, Denmark, Switzerland, and France Belarus
		Public private mix	Regulate private hospital sector and promote public private partnership (PPP) Support synergies and collaboration between private and public health providers
	People and participation		Engage patients' representatives, family, society organizations representatives in governance and planning Enhance public reporting Patient right and Complaints procedures

France the statutory health insurance system is based on universal coverage. In Switzerland, health policy management is improved by (i) strengthening collaboration between the federal government and cantons and clarifying responsibilities, (ii) improved planning, and (iii) utilizing new responsibilities to overcome challenges in fee negotiations.

### System Design: Defining Governance and Accountability of Hospitals

Fortified social accountability needs instruments to notify individuals of their rights and accomplishment of providers and empower people to openly discuss some issues. For instance, Armenia, Ukraine, Austria, Denmark, Czech, and Bulgaria shifted health service provision to regional governments where these regional governments would have to comply with national orders and set proper policies. In Uzbekistan, the fundamental rationale of hospi-

tal reform has been to provide a clearer division of responsibility and improved resource allocation. They aim to attain higher coordination between care levels by taking advantage of economies of scale through increasing the scale of the reference population. In Estonia, hospital providers are permitted to organize themselves as joint-stock businesses (for profit) or foundations (not-for-profit). The autonomy of hospital administration has expanded as a result of these organizational and managerial reforms, resulting in cost-efficient hospital services. In Czech, several local governments have decided to change the legal form and the management structure of their hospitals from "contributory budgetary organizations" to "joint stock companies," which are primarily owned by local governments as a result of rising budgetary deficits and insufficient accountability mechanisms in newly established regional hospitals. In Austria, they have implemented a planning framework of health care provision for the health system. In Germany, there is a national commit-

Table 1. Ctd

Dimension	Intervention	Country	
Performance drivers	Feedback mechanisms	Design comprehensive performance assessment frameworks	Belarus, Estonia, Austria, Denmark, Switzerland, and France
		Establish a mechanism for reporting on hospital performance	Estonia, Austria, Denmark, and France
		Ensure joint monitoring on hospitals and primary care performance indicators to hold them accountable for patient and population	Tajikistan and Denmark
	Payment methods	Design blended payment mechanisms adapted to the various functions of hospitals, linked to the achievement of service delivery and public health objectives	Ukraine, Tajikistan, Uzbekistan, Czech, Austria, Denmark, Germany, Switzerland, and France
		Build up a system to promote hospitals' cost containment strategies	Armenia, Ukraine, Uzbekistan, Austria, Denmark, Germany, Switzerland, and France
		Introduction of a common standard for the financial management	Armenia, Tajikistan, Bulgaria, and France
Performance enablers	Legal and regulatory	Developed National Health Accounts	Belarus and Austria
		Use simultaneously a mix of regulatory instruments to ensure quality and safety	Tajikistan, Austria, Austria, Denmark, and Switzerland
		Strengthen regulations to enforce patients' and relatives' rights and give them a voice	Belarus, Austria, Denmark, and Switzerland
	Quality improvement and safety	Develop (re)licensing regulations	Austria and Switzerland
		Establish a national/local strategy to ensure continuous quality improvement and patient safety	Ukraine, Georgia, Tajikistan, Estonia, Czech, Bulgaria, Austria, Denmark, Germany, Switzerland, and France
		Define and adopt national health norms and standards for quality control	Armenia, Estonia, Czech, Bulgaria, Austria, Denmark, Germany, Switzerland, and France
	Capacity planning and modernizing infrastructure	Relate strategic purchasing and performance-based budgeting to quality of care indicators	Ukraine
		Consider investing in technologies that will help population benefit from specialized care in remote areas	Estonia, Czech, Bulgaria, Austria, Germany, Switzerland, and France
		Adopt and use systematically Hospital and Health Technology Assessment (HTA)	Georgia, Estonia, Czech, Denmark, Germany, and France
		E-health solutions and services such as electronic health records, digital images ...	Georgia, Estonia, Austria, Denmark, Germany, and France
Information systems	Adapt hospital design to changing technologies, new models of care, and users' needs	Ukraine, Denmark, and Germany	
	The strategic plan for efficiency allocation of the health care facilities	Tajikistan and Austria	
	Develop information and telecommunications (IT) infrastructures and standards	Belarus, Estonia, Czech, Austria, Denmark, Germany, Switzerland, and France	
	Establish integrated information systems to gather data on resources and activities	Uzbekistan, Estonia, Austria, Denmark, Germany, Switzerland, and France	
	Make information available to patients, the public and policy-makers	Belarus, Uzbekistan, Estonia, Czech, Austria, Germany, and Switzerland	
Human resources	Adopt plans to meet human resources for health (HRH) needs	Belarus, Estonia, Austria, Denmark, Switzerland, and France	
	Establish enabling conditions for the professionalization	Ukraine, Tajikistan, Estonia, Bulgaria, Austria, Switzerland, and France	
	Enhance the national hospital sector staffing plan, recruitment and retention as part of the national workforce strategic plan	Switzerland and France	
	Career path	Belarus, Estonia, Austria	
	A method for define norm the burden on health workers	Ukraine	

tee that has been set up to play a coordinating role in decision-making on benefits and reimbursement. In Denmark, planning and regulation are governed at the state and local level: the state is in charge of overall regulatory and supervisory task as well as fiscal functions. It is also re-

sponsible for more specific planning, for example, quality monitoring and distribution of medical specialties at the hospital level. In Switzerland, the licensing and monitoring of providers and the planning of inpatient care provision are the responsibility of the cantons. Hospital auton-

Table 2. Reports on Main Challenges

No	Challenges	Country
1	Lack or Inadequate integrated health system	Austria, Belarus, Ukraine, Tajikistan, Uzbekistan, Czech, Bulgaria, Austria, Denmark, Switzerland, France, and Estonia
2	Fragmented health system organizational and financial structure	Austria, Tajikistan, Belarus, Ukraine, Georgia, Tajikistan, Uzbekistan, Czech, Austria, and Bulgaria
3	Inequitable geographical distribution of health professionals	Armenia, Belarus, Ukraine, Georgia, Uzbekistan, Bulgaria, Austria, Denmark, Switzerland, and France
4	Not well-defined and functioning referral network and Hospitals do not serve geographically defined catchment areas	Armenia, Tajikistan, Uzbekistan, Czech, Belarus, Ukraine, Austria, and Estonia
5	High levels of out of the pocket (OOP) expenditure	Armenia, Belarus, Ukraine, Georgia, Tajikistan, Bulgaria, Austria, and Switzerland
6	Inadequate regulatory systems and formal mechanisms to monitor the quality of hospital care	Armenia, Uzbekistan, Ukraine, Belarus, Tajikistan, Georgia, and Austria
7	Fragmentation of health information systems and inadequate integrated linking health care provides	Armenia, Ukraine, Tajikistan, Uzbekistan, Czech, Bulgaria, Austria, and Denmark
8	Severe shortage of health professionals	Armenia, Belarus, Tajikistan, Estonia, Bulgaria, Austria, and Germany
9	No comprehensive performance monitoring	Ukraine, Belarus, Tajikistan, Georgia, Czech, and Bulgaria
10	Emigration of health professionals	Ukraine, Uzbekistan, Estonia, Bulgaria, Germany, and Switzerland
11	Inadequate regulation (license and relicense) for health workers	Belarus, Ukraine, Georgia, Estonia, Denmark, and France
12	Not well define legal mechanism for patient right and complaints procedures in health system	Ukrainian, Georgia, Uzbekistan, Belarus, and Austria
13	Lack of engagement of patients, families and communities for hospital sector planning and governance	Belarus, Czech, Bulgaria, Armenia, Uzbekistan, and Georgia
14	Informal payment arrangements	Armenia, Tajikistan, Uzbekistan, Austria, Czech and France
15	Lack of accurate data on health services	Tajikistan, Belarus, Georgia, Tajikistan, Uzbekistan, and Czech
16	Lack of information systems for quality and patient safety (for medical error, analysing information and ....)	Belarus, Uzbekistan, Estonia, Czech, and Bulgaria
17	weak governance and lack of capable decision-making authorities	Tajikistan, Uzbekistan, Czech, Bulgaria, Austria, and Ukraine
18	Do not take a systematic approach to analysing population health needs when developing hospital strategic plans	Ukraine, Belarus, Czech, and Bulgaria
19	public hospital infrastructure and equipment are in poor conditions in some countries	Tajikistan, Belarus, and Ukraine
20	No clear pathway to coordinates patient care after they leave primary care	Ukraine, Tajikistan, and Uzbekistan
21	Not well-developed palliative, long-term and rehabilitation care	Armenia, Bulgaria, and Austria
22	No linkage of strategic planning with budgeting	Belarus, Tajikistan, and Estonia
23	Lack of comprehensive strategic planning for the HR	Ukraine, Tajikistan, and Bulgaria
24	Lack of systematic in-service training and continuing professional development, career path	Armenia, Tajikistan, and Czech
25	Low hospital service utilization	Tajikistan, and Ukraine
26	Lack of infrastructure for using (HTA)	Czech, Austria

omy has been implemented to increase technical efficiency and allocation of autonomy in hospitals in some countries, which helps them to be financially responsible (26, 27). For instance, in France, the Hospital, Patient, Health, and Territory Act (2009) increased the autonomy of public hospitals and organizational flexibility and also clarified their internal decision-making procedures.

### Integration and Coordination

A fragmented system results in lower quality and efficiency of services, reduced outcomes, and duplication of services. Well defined referral systems are necessary to save lives and ensure continuum in the quality of care (28, 29). In Denmark, national specialty planning for hospitals has been implemented, while in Armenia, multi-use hospitals and their networks are integrated with a provision of ambulatory care. Most countries reported that they had benefit package service. For example, Tajikistan has a hospital-centred service management system with the hospital placed for the centralized management of most services. In Estonia, analysis of local health needs, service delivery volume, space requirements, and performance plans for service deliveries are part of the performance

development plan. In Bulgaria, efforts to reduce unnecessary hospital admissions are clearly defined for each hospital and clinical pathway. In France, the most recent regional strategic health plan has focused on better coordination between health sector and the health-related social sector. In Uzbekistan, multi-specialty polyclinics within the central district are planned to be merged with central district hospitals, creating a unified entity that will provide specialist outpatient and inpatient treatment.

### People and Participation

Reinforced social accountability requires mechanisms to inform people of their rights and performance of providers and facilitate dialogue to enable people's voices to be heard. For instance, in Ukraine, the gradual shift of the system has been geared towards real patient health needs. In Tajikistan, NGOs aim to increase the quality of health care or the access for people. In Estonia, patients are represented in the Guideline Advisory Board to raise the quality of health care by supervising the promotion of efficient and evidence-based clinical guidelines. In Bulgaria, some patient organizations work as providers of integrated health and social services and financial assis-

tance for the people in need, especially through fundraising plans, while in Austria, strategies are developed to engage communities. Patients can engage in three ways in Denmark: (i) through structured patient groups, national, regional or local level, (ii) through patient counsellors, and (iii) indirectly via feedback from a national and regional survey. In Germany, patient representatives have a right to be heard before the Federal Association of Sickness Funds. In Switzerland, there are two patient organizations, the Swiss Patient Federation and the Swiss Patient Organization. In France, the Health National Strategy has supported the need to engage and accommodate patients and their representatives within the organization and evolution of the health system.

### Feedback Mechanisms

Feedback is a critical component through which hospitals evaluate alignment of operations, outputs and outcomes of their mission, and the ultimate goal of delivering high quality, accessible, and acceptable care (1). Austria implemented a performance measurement framework and developed both national and local monitoring mechanisms. Belarus, created a monitoring system for the health status of their people, developing increased capacity of information and communications technology. In Estonia, professional organizations and the health board are responsible for monitoring the quality of health care services and providers. In Bulgaria, all health-care providers are regulated and monitored based on their contractual relationships. In 2002, a national model for quality assessment was established to monitor all publicly financed health care activities. In France, the National Agency to Support the Performance of Health and Social Care Institutions are responsible for developing instruments to monitor and enhance the performance of hospitals and social care organizations. Tajikistan has also developed a framework for monitoring and evaluation.

### Payment

The challenge in allocating resources and budgets can be due to rising hospital expenditure (30). As payment is an important procedure in hospitals, payment mechanisms need to move away from strict line-item budgets or activity-based payments towards models that better value the variety of roles and functions of hospitals, including community orientation. For example, in Armenia, health financing has been linked to the quality of care; hospitals use international accounting standards, and hospital managers have undergone capacity building management training as part of international aid programmes. Belarus developed National Health Accounts. In Ukraine, related payment to the intensity and quality of performance, according to transparent criteria, was one of the most significant components of the health financing reforms. In Georgia and Tajikistan, significant progress has been made in improving financial access to health services by reducing the OOP spending on services. As part of a comprehensive health system transformation agenda in France, health financing reforms go hand in hand with reorganization of service delivery towards greater integration and

coordination between care providers at the local level. In Tajikistan, basic benefits package was introduced to facilitate the establishment of a new model of financing and management in which health facilities are given more autonomy. In Uzbekistan, the financing and management of inpatient care providers have been developed. Uzbekistan also piloted diagnosis-related groups (DRGs) as new hospital financing mechanisms. Estonia introduced a DRG-based payment system for inpatient care in 2004. In Bulgaria, a unified standard was introduced for the financial management of public hospitals. Austria developed hospital sector cost containment and National health expenditure data. In Denmark, the system of politically controlled global budgeting and contracts, combined with cost-containment efforts at the local level, has proved to be an effective way of controlling expenditure on hospital services. In Switzerland, diagnosis-related group-based payment has initially increased transparency and is expected to lead to higher efficiency. In France, except for long-term care and psychiatry, all hospitals are financed using activity-based payments.

### Legal and Regulatory Framework

The aim of regulation is to ensure effective services are provided safely. The regulation of facilities and human resource is made to ensure that equitable access to the quality of care is provided. Governments are responsible for monitoring and determining rules and standards. Regulation strategies include voluntary or mandatory self-regulation, command-and-control regulation, and market mechanisms in which markets define expectations for quality, select providers based on quality, pay for performance and otherwise using purchasing power to influence the behaviour of hospitals (1). In Austria, the Federal Hospital Act regulates establishment and operation of hospitals and outpatient clinics jointly. Legislation and policies are developed to regulate the quality of care. In Denmark, the state assumes the overall regulatory and monitoring functions as well as fiscal functions, but it increasingly takes responsibilities for more specific planning activities, such as quality monitoring and planning of the distribution of medical specialties at the hospital level. In Switzerland, the system is mandatory for accredited hospitals, and it uses routine discharge data. In France, the government controls human and physical resources of hospitals through different mechanisms. The Ministry of Health through the French National Health Authority ensures that public and private hospitals and hospital physicians meet standards of competence through a certification process every four years.

### Quality and Safety

A growing number of countries have established quality assurance measures such as national accreditation processes with different impacts. More generally, a European study reported that improved quality management systems can result when doctors are involved in strategic management decision-making (31). In Tajikistan, quality improvement committees have been established in large health facilities. In Estonia, the Board for Quality Indica-

tors has been established. All service providers are required to have a quality manual, which forms the basis of their internal quality assurance system. In Czech, a set of quality indicators is being developed to assess inpatient care. In Austria, a national/local strategy has been developed regarding quality of care. In Germany, Since 2000, hospitals have been responsible for implementing internal management programs and negotiating external quality assurance contracts with sickness funds that allow quality comparisons through standard quality index. It is accepted that the use of organizational quality systems in the health care helps to improve the quality of services provided (32). To this end, the Federal Office of Quality Assurance has been established and begun to publish annual hospital quality reports, which are also available to the public. In Switzerland, the National Association for Quality Improvement in Hospitals and Clinics (ANQ) was established in 2009 following the integration of 2 preexisting voluntary quality programs. An important development in the hospital has been the increasing focus and activity of various players in improving the quality and patient safety. In France, hospital quality indicators have been developed to measure hospital performance and improve service quality. Experiments with financial incentives have continued since 2012 as part of a quality improvement incentive program. In addition, France has set up specialized centers for rare diseases.

#### **Capacity Planning and Modernizing Infrastructure**

In 2030, health care facilities will be very different from today's existing facilities. Less space will be needed in future hospitals, and more waiting areas will not be required because most of the care is done outside the hospital (32). Hospital design therefore needs to be adapted to changing technologies, new models of care, and users' needs and preferences (34). In Belarus, infrastructure is planned on the basis of demographic need. In Ukraine, all medical equipment is subject to mandatory local registration. In Tajikistan, the strategic plan envisages that the number of hospitals in Ryn province, towns, and villages will be reduced by 30%, while the number of primary health care facilities is expected to increase. In Estonia, formal HTA procedures and capacity building practices were established to support evidence-based decision-making in healthcare.

Health technology assessment has become a significant instrumentation for Ministries of Health to help decision-making based on investments in new and emerging technologies (35). In Czech, the Ministry of Health has developed comprehensive guidelines for the HTA analysis. In Bulgaria, a special HTA commission has been established. In Denmark, at the national level, a number of comprehensive health technology assessments form the basis for health policy decisions. In Germany, the Health Technology Assessment Database has been established. Hospitals can use new technologies as long as the technologies are approved by the Federal Joint Committee. In France, there are many laws that regulate the construction and operation of hospitals, covering the infrastructure and supplies. Technologies are evaluated every five years based on

manufacturer's documents and the literature review.

#### **Developing the Capacity of Human Resources for Health**

Human resources management is one of the key and strategic elements in the health system (36). Management and leadership have a significant role in the delivery of good health services and in the success of organizations. (37) Hospital leaders are expected to demonstrate competencies in leadership and management (38). In Uzbekistan, a framework has been developed for the annual evaluation of health care managers by special working groups.

These annual evaluations are expected to demonstrate weak management performances and, if necessary, more qualified candidates will be replaced. In Bulgaria, hospital managers, who are usually physicians or economists with management skills, sign contracts for 3 years with hospital owners. In Denmark, there is a licensing mechanism for health professionalism. In Switzerland, the cantonal medical associations are responsible for tariff negotiations, accreditation of professional training, and emergency out-patient care services. Increasing the national training capacity of health workers is a high priority in Switzerland. In France, the National Health Observatory of health professionals provides annual reports on information deficiencies needed to orient human resources. It also identifies gaps in strategic planning at national and regional levels.

#### **Developing Information Systems**

At the national level, access to quality care data is necessary for informing in policy development, monitoring, having efficient resources allocation, and ensuring good performance of the health system based on national policies and regulatory framework.

In Georgia, since 2018, it has planned to introduce e-prescriptions as criteria for hospitals. In Uzbekistan, an integrated national IT framework for the public health sector has been established, linking the Ministry of Health and regional health authorities to support reporting and exchange of information. In Estonia, e-health services include electronic prescriptions, online counselling, electronic ambulances, digital health records, and nationwide communication and archiving systems. In the Czech Republic, there is a plan to implement a national e-health system that regulates data standards. In Switzerland, the National e-Health Strategy was published in 2007, and Swiss e-Health, a joint federal and cantonal coordinating body, was created in 2011 to coordinate the development and implementation of health initiatives. The federal strategy introduced the DRG-based payment in hospitals in 2012, and all hospitals categorized their patients using Swiss DRGs, which improves the comparability of information between cantons. In France, in order to increase the quality of care and reduce redundancy in consumption, the electronic group of patient records of medical information and consumption of patient care in medical centers has been voluntarily launched. As a result, as of June 2013, fewer than 400,000 patients had an electronic history.

## Conclusion

Interventions and Challenges facing each hospital type can vary widely, and there is no single solution to the transformation of hospitals. Integration and coordination within the hospital sector is also an important challenge. The IPCHS framework provides guidance for country in setting priorities, formulating, implementing, and evaluating national policy/strategic plans for their hospital sectors. Engagement, ownership, and commitment on the part of national authorities are critical for successful implementation of policies. All key stakeholders, including civil society organizations representing patients and communities, should be involved in this process. Recent studies on the relationship between community participation and health outcomes show that this approach is seen as a key factor in supporting health progress, especially in low-income countries and regions (39). Special attention should also be given to models of health care that use community resources. Communities, health organizations, and countries all need to think about what kind of services should be provided, where and how they should be provided, and to whom they should be provided (2). Although the described vision is universal, the paths to the transformation should be adapted to the local context, so different policy instruments may be needed to specifically tackle the most pressing local issues. Recognizing differences in country contexts will help to develop realistic and applicable solutions. By analyzing the environment, we can suggest policies and regulations as a customized path to ensure the alignment of incentives and policy levers. It is of high significance to acknowledge potential vested interests and aligned political agendas to develop long-term targets as well as achieving short-term satisfactory goals.

## Acknowledgment

Main author would like to thank Dr Ann-lise Guisset - Service Delivery and Safety Department at the World Health Organization headquarters in Geneva - for the technical guidance and support

## Ethics Approval and Consent to Participate

Ethical approval was obtained from Iran University of Medical Sciences (NO: IR.IUMS.REC.1397.213) on August 26, 2018.

## Conflict of Interests

The authors declare that they have no competing interests.

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