Regional Action Framework on Improving Hospital Planning and Management in the Western Pacific
Regional Action Framework on Improving Hospital Planning and Management in the Western Pacific
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# Abbreviations

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<th>Abbreviation</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>GIRFF</td>
<td>Goal, Institutional arrangements, Regulation, Financing and Feedback</td>
</tr>
<tr>
<td>HKAPo</td>
<td>Hong Kong Alliance of Patients’ Organizations</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and communications technology</td>
</tr>
<tr>
<td>IPC</td>
<td>Infection prevention and control</td>
</tr>
<tr>
<td>MSM</td>
<td>Men who have sex with men</td>
</tr>
<tr>
<td>NCDs</td>
<td>Noncommunicable diseases</td>
</tr>
<tr>
<td>NSW</td>
<td>New South Wales</td>
</tr>
<tr>
<td>OOP</td>
<td>Out-of-pocket payment</td>
</tr>
<tr>
<td>PROMs</td>
<td>Patient Reported Outcome Measures</td>
</tr>
<tr>
<td>UHC</td>
<td>Universal health coverage</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
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</table>
FOREWORD

Achieving universal health coverage (UHC) and the health targets in the Sustainable Development Goals requires full engagement on all levels of the health system. Hospitals are a vital part of service delivery and core to advancing UHC. They are often the first point-of-care contact and shape public perception of the performance of the country’s health system.

Hospitals account for 30–50% of current health expenditures in Member States in the World Health Organization (WHO) Western Pacific Region. That figure may grow as many Member States are experiencing an increase in the use of hospital services. These increases have led to overcrowding of hospitals in some Member States, often compromising quality and safety and increasing patient dissatisfaction.

When hospitals function well, they can be a trusted source of services across the life course. However, Member States face challenges in improving hospital performance. At the system level, challenges include inadequate links with primary health care, a lack of financial incentives and weak regulation. Facility-level challenges include weak managerial capacity, inefficiencies and poor clinical governance. These challenges occur against a backdrop of an increasing burden of chronic diseases, climate-related health risks, financial and service pressures, and growing public and political expectations.

The WHO Regional Committee for the Western Pacific in October 2018 endorsed the Regional Action Framework on Improving Hospital Planning and Management in the Western Pacific. The Framework offers practical guidance on hospital planning and management for Member States to adapt to their contexts.

WHO stands ready to support Member States in improving hospital planning and management. Working together, we hope we can secure equitable access to high-quality, efficient and effective health care for everyone, everywhere.

Takeshi Kasai, MD, Ph.D.
Regional Director
EXECUTIVE SUMMARY

Hospitals play a vital role in health service delivery systems across the Region. Achievement of universal health coverage (UHC) requires clear determination of the role of hospitals in service delivery and targeted efforts to optimize their performance. Many countries struggle to improve hospital planning and management, at both the facility and health system level.

Facility-level challenges include weak management, inefficiencies, high costs, poor clinical governance, quality and safety. At the system level, challenges include limited integration and coordination with other hospitals and primary health care, inadequate feedback mechanisms and procedures, perverse financial incentives and weak regulation. These challenges occur against the backdrop of rapid population ageing, the predominance of chronic health conditions, financial and service pressures, new medical technologies and pharmaceuticals, growing provision of private care and increasing public expectations.

Given the importance of hospitals and the range of challenges, improving hospital planning and management is a critical issue for countries in the World Health Organization (WHO) Western Pacific Region. Progress towards UHC requires a whole-of-system approach, linking hospitals to other parts of the health system, to ensure equitable delivery of integrated, people-centred services, with due reorientation towards primary care.

An action framework

The Regional Action Framework on Improving Hospital Planning and Management in the Western Pacific aims to assist Member States to improve hospital performance through better regulation, financing and feedback, as part of overall efforts to increase equitable access to people-centred health services of adequate quality without undue financial hardship. It supports the regional action framework for UHC, Universal Health Coverage: Moving Towards Better Health, which provides guidance for improvement in the five UHC attributes of accountability, efficiency, quality, equity, and sustainability and resilience, as a foundation for accelerated progress towards UHC.

Hospitals must fulfil their role to advance the overall goal of UHC, as described in the regional UHC action framework. To improve hospital performance, policies and actions are needed at the facility level and for the health system overall.
Improvements in hospital performance are important for advancing towards UHC. When health facilities perform well, the overall performance of the health system improves. At the facility level, this requires attention to the institutional dimensions that influence accountability, efficiency, quality, equity, and sustainability and resilience – the five inter-related attributes of a high-performing health system.

Action at the facility level must be taken in the context of system-level policies and actions. Improved performance requires clear goals for the hospital sector within the broader health system and clear functions for institutions supporting hospitals to reach these goals. At the system level, the key drivers for UHC compliance are financing, regulation and feedback. Further, considering the stewardship role of governments, governance and service planning are overarching institutional elements for improving hospital planning and management.

Member States can use the framework of GIRFF (Goal, Institutional arrangements, Regulation, Financing and Feedback) as a governance tool to improve hospital performance
## OVERVIEW OF ACTION AREAS AND DOMAINS

<table>
<thead>
<tr>
<th>ACTION AREA</th>
<th>ACTION DOMAIN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. FACILITY LEVEL: Improving hospital planning and management</strong></td>
<td></td>
</tr>
</tbody>
</table>
| 1.1 Accountability | • Institutional governance structure and processes  
| | • Regulatory compliance  
| | • Performance monitoring |
| 1.2 Efficiency | • Patient management  
| | • Supply and logistics management  
| | • Human resource management |
| 1.3 Quality | • Clinical governance structure and processes  
| | • Patient safety  
| | • Technical quality  
| | • Patient and family experience  
| | • Continuity of care |
| 1.4 Equity | • Service coverage and access  
| | • People-centred service models |
| 1.5 Sustainability and resilience | • Infrastructure management  
| | • Institutional learning and renewal  
| | • Managing shocks |
| **2. SYSTEM LEVEL: Improving hospital planning and management** | |
| 2.1 Goal – Hospitals as a path to UHC | • Links with primary health care  
| | • Links with non-state providers |
| 2.2 Institutional arrangements | • System-level governance  
| | • Service planning  
| | • Service delivery architecture |
| 2.3 Regulation | • Facility and provider licensing  
| | • Accreditation and external quality assurance  
| | • Patient rights  
| | • Reporting requirements |
| 2.4 Financing | • Delineation and coherence of funding streams  
| | • Benefit design and service packages  
| | • Payment methods |
| 2.5 Feedback | • Quality and patient safety monitoring  
| | • Access and equity monitoring  
| | • Efficiency and productivity monitoring  
| | • Risk monitoring for resilience and response |
| **3. Strengthening capacity to drive hospital reforms** | |
| 3.1 Capacity at the system level | • Policy and situation analysis  
| | • Policy planning and design  
| | • Implementation and change management |
| 3.2 Capabilities at the facility level | • Leadership  
| | • Planning and operations  
| | • Financial and business management  
| | • Quality and patient safety  
| | • Human resource management  
| | • Information management  
| | • Partnerships and community relations management |
in terms of accountability, efficiency, quality, equity, and sustainability and resilience. These performance outcomes can be used as measures to test the effectiveness of policy choices and interventions. GIRFF offers a typology of policy dimensions that governments can apply, depending on the country context.

Building high-performing hospitals and health systems requires the capacity to formulate policies and implement action to improve planning and management. The health sector needs to expand its skills and strengthen its capabilities to drive change. Equally important is the health sector’s institutional capacity to anticipate and respond in a timely manner to changes at both the system and facility level.

At the system level, the lead government agency (usually the ministry of health) must have the capacity to analyse the current situation, identify needs, and then design and implement responsive policy. Better information is needed to guide policy formulation. A thorough understanding of the effectiveness of current policies and the ability to anticipate future needs are also needed.

At the facility level, hospital management teams must be capable of improving the quality and efficiency of day-to-day operations. Effective leadership is needed to manage finances, to lead and support staff, and to develop partnerships to improve the quality and efficiency of hospital services.

**The way forward**

**Member States**

In the Western Pacific Region, there is considerable variability in hospital systems, arising from different institutional legacies, constitutional arrangements, traditions of state intervention in health, stakeholder constellations, power distribution and values. However, there are some commonalities, as evident when countries are grouped into four categories: advanced economies; transitional economies; small island developing states; and highly decentralized countries. Although there is no single journey for hospital transformation, there are common decision points.

Given the diversity in socioeconomic contexts and health system arrangements across Member States, solutions to the challenges in the hospital sector need to be tailored to country-specific contexts. The action framework does not provide a “one size fits all” solution, but rather offers a menu of actions across different areas of hospital policy reform. In this way, Member States can customize actions to their own socioeconomic and political contexts and needs.

**WHO in the Western Pacific Region**

WHO is committed to supporting Member States to improve hospital planning and management, in line with each country’s UHC road map. WHO assistance will include
policy advocacy and dialogue, technical collaboration in policy-making and implementation, and capacity-building for governments and hospitals. WHO will convene gatherings of stakeholders, analyse country experience, synthesize lessons learnt and support better monitoring to improve hospital performance.

**ACTION PRIORITIES FOR COUNTRY GROUPS**

- **Advanced economies**
  - Cost control
  - Equity in service delivery
  - New technologies

- **Transitional economies**
  - Health service planning
  - Hospital quality
  - Accountability
  - Efficiency
  - Hospital resource use and performance management

- **Small island developing states**
  - Health service planning
  - Hospital quality
  - Accountability
  - Efficiency
  - Hospital resource use and performance management

- **Highly decentralized countries**
  - Governance
  - Information and management capacity
  - Hospital resource use and performance management
  - Equity in service delivery
1. INTRODUCTION

Service delivery is the most visible face of universal health coverage (UHC), and hospitals play a vital role, often as the first point of access for care. Hospitals shape public perception of the performance of a country’s health system. They also take a prominent share of health spending, including a high proportion of current health expenditure. To achieve UHC, it is essential to clarify the role of hospitals in service delivery and to optimize their performance.

Hospitals are extremely diverse entities, making generalizations difficult. For the purpose of this document, a hospital is a health-care facility that provides inpatient health services, with continuous supervision and care of patients, 24 hours a day, seven days a week (American Hospital Association, 2014). Hospitals should also link to and support primary health services and health promotion in the community.

Many countries struggle to improve hospital planning and management, at both the facility and system level. Facility-level challenges include weak management, inefficiencies, high costs, poor clinical governance, quality and safety. At the system level, they include limited integration and coordination with other hospitals and primary health care, inadequate feedback mechanisms, perverse financial incentives and weak regulation. These challenges occur against the backdrop of rapid population ageing, the increasing burden of chronic health conditions, financial and service pressures, new medical technologies and pharmaceuticals, growing provision of private health care, and increasing public and political expectations.

The goals of health systems also vary across the World Health Organization (WHO) Western Pacific Region, especially with respect to the role of the hospital. Irrespective of the system in which they operate, the core function of hospitals should be to support progress towards UHC.

1. Current health expenditure is the total health expenditure minus capital expenditure.
Given the continued importance of hospitals and the range of related challenges, improving hospital planning and management has become a critical issue for countries in the Region. Many governments have attempted policy reform, often aimed at the control of hospital spending. They have also taken steps at the system level to improve public hospital performance, such as optimizing hospital autonomy, reforming payment and purchasing mechanisms, strengthening regulation and updating monitoring systems. Facility-level efforts aim to strengthen management skills, improve efficiency and clinical governance, reduce the gap between clinical and managerial cultures, and bring the functions of management and quality assurance closer together.

Successful progress towards UHC requires a whole-of-system approach, linking hospitals with other parts of the health system, to ensure equitable delivery of integrated, people-centred services. It also involves reorientation towards primary care. Planners need to take account of population health needs, local conditions and new care models. Funding should be orientated to performance, with incentives to increase efficiency. Hospital staff, from front-line staff to managers, need new skills, competencies and ways of working. Regulation and monitoring should focus on quality and safety, with sharing of information among providers, patients, families and communities. Supply-side (geographic proximity, cost and availability of services) and demand-side (knowledge, information, cultural beliefs, preferences, and financial and opportunity costs) barriers need to be addressed to achieve more equitable access and outcomes. Patients, families and communities need opportunities for greater input into the design, delivery and use of hospital services.
2. AN ACTION FRAMEWORK

This Regional Action Framework on Improving Hospital Planning and Management in the Western Pacific aims to guide Member States on improving hospital performance through better regulation, financing and feedback, as part of overall efforts to ensure equitable access to high-quality, people-centred health services without undue financial hardship. It supports the UHC regional action framework, Universal Health Coverage: Moving Towards Better Health, which provides guidance on improving health system performance through the five UHC attributes of accountability, efficiency, quality, equity, and sustainability and resilience, as a foundation for accelerated progress towards UHC.

Hospitals must fulfil their role to advance the overall goal of UHC, as described in the regional action framework for UHC. To improve hospital performance, policies and action are needed at the facility and health system level (see Fig. 1).

At the facility level, policies and action are needed to improve the accountability, efficiency, quality, equity, and sustainability and resilience of hospital services (the same attributes as those of a high-performing health system). However, these improvements will depend on clear goals, policies and action plans in the hospital sector and in supporting institutions within the broader health system.

The key system-level factors determining UHC compliance are financing, regulation and feedback, as well as governance and service planning. Governments influence the effectiveness of hospital planning and management through policies and actions aimed at both the facility and system level.

Member States can use the framework of GIRFF (Goal, Institutional arrangements, Regulation, Financing and Feedback) as a governance tool to plan improve hospital performance in terms of accountability, efficiency, quality, equity, and sustainability and
### TABLE 1. GIRFF – Questions to clarify policy dimensions

<table>
<thead>
<tr>
<th>Goal</th>
<th>What is the role of hospitals in achieving UHC? How are hospitals linked to primary health care? What are the links with non-state providers?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional arrangements</td>
<td>What hospital governance models are useful for us? What is the government’s role as principal provider and/or purchaser of hospital services? How does hospital planning address the service delivery arrangements of health facilities, in both public and non-state sectors?</td>
</tr>
<tr>
<td><strong>PERFORMANCE DRIVERS</strong></td>
<td></td>
</tr>
<tr>
<td>Regulation</td>
<td>What is the regulatory framework? What specific regulatory approaches can be used in choosing among the policy options?</td>
</tr>
<tr>
<td>Financing</td>
<td>What are the available funding streams and how are they aligned to meet population or community health needs? How are health service packages and provider payment approaches designed? Who does this?</td>
</tr>
<tr>
<td>Feedback</td>
<td>What are the information and reporting requirements to guide (or monitor) hospital performance? How can feedback be used to improve service planning and to strengthen regulatory and financing strategies? How can information be used to improve service quality, equity, efficiency and resilience?</td>
</tr>
</tbody>
</table>
resilience. These performance outcomes can be used as measures to test the effectiveness of policy choices and interventions. GIRFF offers a typology of policy dimensions that governments can apply, depending on the country context. For each policy dimension, desired improvements in the performance outcomes will drive the specific policy choice. Table 1 suggests questions that can be addressed for each parameter of the framework.

The starting point is to make sure that the role or purpose of the hospital sector is aligned with the overall health system goal of UHC. This alignment helps to define the role of hospitals within overall health service planning. For instance, a hospital may be a stand-alone facility serving a discrete population, it may compete within a group of facilities, or it may function as part of an integrated service delivery network. It is important for all stakeholders to understand the role of hospitals within a country’s UHC road map. Fig. 2 sets out the key policy levers that governments can use to maximize the hospital sector’s contribution to UHC.

Governments are responsible for health service planning and for monitoring health system performance against approved plans and strategies. Good health service planning improves system performance through more effective use of current and future resources – funds, staff and infrastructure. The plans need to optimize the contribution of hospitals to UHC by directing services to specific geographic areas and population groups, and to defined clinical or service streams. For hospital services to be efficient, equitable and people-centred, they must be supported by appropriate financing, regulation and feedback mechanisms. Regulatory mechanisms such as licensing and accreditation can be used to rationalize the numbers of hospitals and/or the services they provide. Effective financing levers can shape provider behaviour, with better results for individuals and their families. Feedback and information are important for improving system performance and to guide service planning. If public hospitals are dominant in the system, service planning should align resources with population needs with a focus on equity and quality. In a private hospital-dominant system, governments can use regulatory and financial policy to achieve similar ends, while making use of the potential for improved flexibility and efficiency in a competitive environment.

Improving hospital planning and management is integral to service delivery reform for equitable, integrated and people-centred care, but what works in one setting may not be appropriate or relevant in others. Solutions need to be tailored to each country. Therefore, instead of offering a “one size fits all” solution, the Regional Action Framework offers a menu of reform actions across important areas of hospital policy that Member States can customize to their own socioeconomic and political contexts and needs.
FIG. 2  Key policy levers

GOAL
Hospital as path for UHC

Role of hospital
Hospital in primary health care
Linked with non-state providers

Institutional arrangements

System governance
Relationship with government
Relationship between facilities

Service planning

Service delivery architecture

Regulation

Facility
Licensing
Reporting

Health provider
Accreditation/Quality assurance
Patient’s rights

Financing

Funding flow
Delineation and coherence of funding stream

Service package
Evidence-based benefit design
Payment method

Feedback

Monitoring and evaluation
Quality and patient safety monitoring
Access and equity monitoring
Efficiency and productivity monitoring
Risk monitoring
3. THE SITUATION OF HOSPITALS IN THE WESTERN PACIFIC REGION: OPPORTUNITIES AND CHALLENGES

3.1 SITUATION ANALYSIS

Member States of the Western Pacific Region have different histories, cultures and political experiences, resulting in different arrangements for funding and ownership of hospitals. It is necessary to understand the institutional arrangements and identify the constraints and possible approaches for each Member State.

Hospital ownership and financing arrangements – that is, whether they are public or private or a combination of both – are key institutional factors that shape the dynamics and influence the available policy choices for health system development. In the Region, there is diversity in hospital ownership and financing arrangements. For instance, in countries such as Japan, health care is publicly financed, but services are provided by predominantly privately owned hospitals. In contrast, health services and hospitals are publicly funded and publicly owned in most small island developing states. In addition, publicly funded health systems of transitional economies are witnessing an expansion of private sector involvement. In many countries, the tendency has been to converge towards a mixed public–private system.
In countries and areas across the Region, the term “hospital” covers a wide range of institutions, from super-specialized tertiary care facilities to district hospitals and smaller, community-based facilities. While all hospitals provide inpatient health services with around-the-clock supervision and care of patients, some countries have more precise definitions of the term “hospital” (see Box 1).

Whatever the terminology, hospitals remain the central focus of health care across the Region. They provide training for health professionals, as well as referral services, and are often used as the benchmark for the overall health system. Hospitals consume by far the largest share of capital investment in the health sector and 31–56% of current health expenditure across country groups (see Fig. 3).

Information on the distribution of public and private hospitals is available for selected countries (see Table 2). In general, the number of hospitals and number of hospital beds have either not increased significantly or decreased (in the case of advanced economies), as a result of policy shifts towards provision of treatment and care outside hospitals. However, recent years have seen an increase in hospital bed use, driven partly by supplier-induced demand.

Hospitals play a critical role in improving a country’s health system performance. However, a range of issues and challenges, at both the system and facility level, impact their overall performance.

**BOX 1. Definitions of hospitals in selected countries and areas**

In Japan, the Medical Care Act defines a hospital as “a facility with 20 or more beds”.

In the Republic of Korea, the Medical Service Act defines a hospital as “a medical institution... where doctors... render their medical services, which is complete with facilities capable of receiving not less than 30 inpatients”.

China has three types and five categories of hospital, namely: general; traditional Chinese medicine; integrated traditional Chinese and Western medicine; national; and specialized and nursing hospitals.

In the Philippines, hospitals are grouped by ownership arrangements (private and public), type (general and specialized) and service capability (primary health care, secondary health care, tertiary health care and teaching/training).

In Hong Kong SAR (China) and Singapore, hospitals also include nursing homes and maternity homes.

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2. Current health expenditure is the total health expenditure minus capital expenditure.
3. THE SITUATION OF HOSPITALS IN THE WESTERN PACIFIC REGION: OPPORTUNITIES AND CHALLENGES

3.1.1 System level

At the system level, a country’s policy choices may be limited by historical tradition, the existing legislative framework and established political institutions. In a system dominated by public hospitals, the need to account for government spending may constrain financial and administrative autonomy or flexibility, which might otherwise facilitate improvements. In a private-hospital-dominated system, accountability is oriented towards owners, shareholders and employees, as well as to the state as regulator (for example, business operating licence, value-added tax licensing). However, accountability can be extended to the population as a whole if appropriate regulatory, financial and performance feedback drivers are used, as seen in Japan and the Republic of Korea. Table 3 shows examples of legal and regulatory frameworks used in the Western Pacific Region.

FIG. 3 Percentage of health expenditure on hospitals, selected countries

*Lao People’s Democratic Republic ** Federated States of Micronesia

Note: Data for the Lao People’s Democratic Republic and Malaysia are as a share of total health expenditure.

### Table 2: Distribution of public and private hospitals

<table>
<thead>
<tr>
<th>Country or area</th>
<th>Year</th>
<th>Number of hospitals</th>
<th>Number of beds</th>
<th>Number of admissions*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>Public (%)</td>
<td>Private (%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private (%)</td>
<td>Total (000s)</td>
<td>Public (%)</td>
</tr>
<tr>
<td>Australia</td>
<td>2016</td>
<td>1331</td>
<td>53</td>
<td>47</td>
</tr>
<tr>
<td>Cambodia*</td>
<td>2017</td>
<td>126</td>
<td>87</td>
<td>13</td>
</tr>
<tr>
<td>China</td>
<td>2016</td>
<td>29140</td>
<td>44</td>
<td>56</td>
</tr>
<tr>
<td>Hong Kong SAR (China)</td>
<td>2016</td>
<td>54</td>
<td>78</td>
<td>22</td>
</tr>
<tr>
<td>Fiji</td>
<td>2015</td>
<td>26</td>
<td>85</td>
<td>15</td>
</tr>
<tr>
<td>Lao People’s Dem. Rep.</td>
<td>2012</td>
<td>153</td>
<td>100</td>
<td>-</td>
</tr>
<tr>
<td>Malaysia</td>
<td>2014</td>
<td>331</td>
<td>43</td>
<td>57</td>
</tr>
<tr>
<td>New Zealand</td>
<td>2017</td>
<td>52</td>
<td>52</td>
<td>48</td>
</tr>
<tr>
<td>Philippines</td>
<td>2009</td>
<td>1796</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>2012</td>
<td>3248</td>
<td>6</td>
<td>94</td>
</tr>
<tr>
<td>Singapore</td>
<td>2016</td>
<td>28</td>
<td>46</td>
<td>54</td>
</tr>
<tr>
<td>Solomon</td>
<td>2010</td>
<td>12</td>
<td>67</td>
<td>33</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>2016</td>
<td>1179</td>
<td>91</td>
<td>9</td>
</tr>
</tbody>
</table>

* Data from government representatives.

** For New Zealand, the number of discharges was reported instead of the number of admissions.

Sources: Health system review: Australian Institute of Health and Welfare (2017); Annear et al. (2015); National Health and Family Planning Commission of the People’s Republic of China (2017); Ministry of Health and Medical Services, Fiji (2016); Hospital Authority Hong Kong (2017); Akkhavong et al. (2014); Ministry of Health Malaysia (2017); Ministry of Health New Zealand (2017); Department of Health, Philippines (2012); Kwon et al. (2015); Singapore Ministry of Health (2017b); Hodge et al. (2015); General Statistics Office of Vietnam (2016).
### TABLE 3. Examples of legal frameworks for hospitals, selected countries and areas

<table>
<thead>
<tr>
<th>Country or area</th>
<th>Related legislation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>• National Health Reform Act 2011&lt;br&gt;• National Health Reform Agreement&lt;br&gt;• National Health Reform Amendment (Administrator and National Health Funding Body) Act 2012&lt;br&gt;• Hospital and Health Boards Act 2011 (Queensland)</td>
</tr>
<tr>
<td>Cambodia</td>
<td>• Law on Management of Private Medical, Paramedical, and Medical Aide Practice (2000)</td>
</tr>
<tr>
<td>China</td>
<td>• Medical Institutions Administration Regulations 1994 (PRC) and detailed&lt;br&gt;• Rules of Implementation (amended in 1994)</td>
</tr>
<tr>
<td>Hong Kong SAR (China)</td>
<td>• Hospital Authority Ordinance</td>
</tr>
<tr>
<td>Macao SAR (China)</td>
<td>• Decree-Law no. 22/99/M – Establish a new regime of licensing and monitoring of private healthcare units with in-patient department and post-operative recovery room</td>
</tr>
<tr>
<td>Japan</td>
<td>• Medical Care Act (6th Revision, 2014)&lt;br&gt;• Health Care System Reform Law (2015)</td>
</tr>
<tr>
<td>Lao People’s Democratic Republic</td>
<td>• Law on Health Care (2015, amended)*&lt;br&gt;• Decree on Private Hospitals (2014)</td>
</tr>
<tr>
<td>Mongolia</td>
<td>• Health law (revised in 2011)&lt;br&gt;• Mental health law (revised in 2013)&lt;br&gt;• Health insurance law (revised in 2015)&lt;br&gt;• Medical service law (2016)&lt;br&gt;• Law on Standardization, Technical Regulation and Accreditation (2016)&lt;br&gt;• Donor’s law (revised in 2017)</td>
</tr>
<tr>
<td>New Zealand</td>
<td>• Health Act (1956)&lt;br&gt;• Public Health and Disability Act (2000)&lt;br&gt;• Health and Disability Service (Safety) Act 2001</td>
</tr>
<tr>
<td>Philippines</td>
<td>• Hospital Licensure Act (1965)&lt;br&gt;• Republic Act No. 5901 (1969)&lt;br&gt;• Republic Act 8344 (1997)</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>• Medical Service Act No. 10387 (2010)&lt;br&gt;• National Health Insurance Act No. 8153 (2006)</td>
</tr>
<tr>
<td>Singapore</td>
<td>• Private Hospitals &amp; Medical Clinics Act (Revised, 1999)&lt;br&gt;• National Standards for Health Care</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>• Law on Medical Examination and Treatment (2009)</td>
</tr>
</tbody>
</table>

* Data from government representatives.

**Source:** World Health Organization and Organisation for Economic Co-operation and Development (2015).
### TABLE 4. Public and private hospital financing mechanisms, selected countries and areas

<table>
<thead>
<tr>
<th>Country or area</th>
<th>Provider</th>
<th>Funding source</th>
<th>Payment method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Public</td>
<td>Government budget and/or national health insurance, private health insurance, OOP</td>
<td>Scale payment, DRG</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>Government budget and/or national health insurance, private health insurance, OOP</td>
<td>DRG, FFS</td>
</tr>
<tr>
<td>Cambodia</td>
<td>Public</td>
<td>National budget, OOP, health equity funds</td>
<td>FFS, pay-for-performance</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>OOP, voluntary community-based health insurance</td>
<td>FFS, pay-for-performance</td>
</tr>
<tr>
<td>China</td>
<td>Public</td>
<td>Government budget, social health insurance, OOP, private medical insurance</td>
<td>Scale payment, pay for capitation, DRG, FFS</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>Social health insurance, OOP, private medical insurance</td>
<td>FFS</td>
</tr>
<tr>
<td>Hong Kong SAR (China)</td>
<td>Public</td>
<td>Government budget, OOP</td>
<td>Global budget, user fee</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>OOP, private health insurance</td>
<td>FFS</td>
</tr>
<tr>
<td>Fiji</td>
<td>Public</td>
<td>Government budget; OOP (user fee)</td>
<td>Global budget, user fee</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>OOP, private medical insurance</td>
<td>FFS</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>Donors</td>
<td></td>
</tr>
<tr>
<td>Malaysia</td>
<td>Public</td>
<td>Government budget, OOP</td>
<td>Global budgets, case rates</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>Private health insurance, OOP</td>
<td>FFS</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Public</td>
<td>Government budget, social security, OOP</td>
<td>Global budget</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>Private insurance, social security, OOP</td>
<td>FFS</td>
</tr>
<tr>
<td>Philippines</td>
<td>Public</td>
<td>Social health insurance, OOP</td>
<td>FFS, case rates</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>Social health insurance, OOP</td>
<td>FFS, case rates</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>Public</td>
<td>National health insurance, OOP, government budget, social security funds</td>
<td>FFS, DRG</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>National Health Insurance, OOP</td>
<td>FFS, DRG</td>
</tr>
<tr>
<td>Singapore</td>
<td>Public</td>
<td>Medical saving programme, public medical insurance, private medical insurance, OOP</td>
<td>Scale payment, DRGs</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>Private medical insurance, OOP</td>
<td>FFS</td>
</tr>
<tr>
<td>Solomon Islands</td>
<td>Public</td>
<td>Government budget, external donors, OOP (Information not available)</td>
<td>Global budget (Information not available)</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>(Information not available)</td>
<td></td>
</tr>
<tr>
<td>Viet Nam</td>
<td>Public</td>
<td>Government budget, social health insurance, OOP, private insurance</td>
<td>Capitation, DRG, FFS</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>OOP, private insurance</td>
<td>FFS</td>
</tr>
</tbody>
</table>

* Data from government representatives – DRG, diagnostic-related group; FFS, fee for service; OOP, out-of-pocket payment; SHI, social health insurance.
Hospital services in the Western Pacific Region are funded through a variety of sources, including government budgets, health insurance, out-of-pocket (OOP) payments and external funds. Unfortunately, there may be limited integration of public (government) and health insurance funds at hospital level, so many hospitals are not clear about their sources of revenue and associated expenditure categories (see Table 4). In many small island developing states, as well as some transitional economies (such as Cambodia, the Lao People’s Democratic Republic, Mongolia and Viet Nam), public fund allocations to the overall hospital budget are based on historical trends (that is, historical line-item budgeting). This reduces the flexibility of budgeting and planning processes to respond to changing needs. It also limits the role of front-line clinicians and communities in planning and setting priorities.

Across the Region, patient responsibility for payment of hospital treatment and drugs is an important cause of household financial catastrophe or impoverishment. As the share of funding for hospitals in the health budgets of transitional economies declines, the shortfall is made up by user fees and social or commercial health insurance, exposing many service users to financial hardship. Exemptions to user fees and/or subsidies for insurance premiums can help protect low-income or disadvantaged groups. Retaining inflexible line-item budgeting can also result in inefficiencies, with reduced service provision and/or user fees hurting the poor the most.

The latest available information on inpatient service utilization (see Table 5) shows that hospital bed occupancy rates are lower than the optimal 80% in some countries, while in others, such as the Philippines and Viet Nam, occupancy rates exceed 100%.

**TABLE 5. Hospital bed occupancy rates, selected countries**

<table>
<thead>
<tr>
<th>Country or area</th>
<th>Bed occupancy rate (%)</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>85</td>
<td>2010</td>
</tr>
<tr>
<td>Brunei Darussalam</td>
<td>63</td>
<td>2013</td>
</tr>
<tr>
<td>Cambodia</td>
<td>88</td>
<td>2015</td>
</tr>
<tr>
<td>China</td>
<td>88</td>
<td>2014</td>
</tr>
<tr>
<td>Cook Islands</td>
<td>15</td>
<td>2016</td>
</tr>
<tr>
<td>Fiji</td>
<td>60</td>
<td>2015</td>
</tr>
<tr>
<td>Japan</td>
<td>75*</td>
<td>2015</td>
</tr>
<tr>
<td>Malaysia</td>
<td>68</td>
<td>2015</td>
</tr>
<tr>
<td>New Zealand</td>
<td>68</td>
<td>2016</td>
</tr>
<tr>
<td>Philippines</td>
<td>114**</td>
<td>2011</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>64*</td>
<td>2015</td>
</tr>
<tr>
<td>Singapore</td>
<td>88*</td>
<td>2015</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>118</td>
<td>2011</td>
</tr>
</tbody>
</table>

* Bed occupancy rate for acute care ** Bed occupancy rate for third-level hospitals

Sources: World Health Organization Global Health Observatory (2017); Bontile (2013); Healthcare Big-data Hub Korea (2018); Singapore Ministry of Health (2017b).
Hospital-based care is an increasingly dominant part of health service delivery because of the growing prevalence of chronic disease and the use of new medical technologies. Related capital expenditures, maintenance and training costs for complex and costly equipment (for example, diagnostic procedures, haemodialysis) are a severe drain on limited recurrent budgets in many countries (see Fig. 4). Without planning and reform, hospitals may be unable to cope with the expected increase in demand.

Many governments have made efforts to improve the efficiency of health systems, especially of hospitals. Coordination among hospitals and with other providers can improve both efficiency and quality of care. In many countries, coordination is hampered by the independence of subnational or decentralized governance units, the lack of ties with private providers outside the publicly financed health system, fragile public administration and weak coordination mechanisms. In addition, fragmentation has increased with increasing specialization, resulting in proliferation of specialist centres that may have poor links to primary care and community-based services. Fragmentation and inefficiency results when a hospital receives funding from the budget of the ministry of health, from health insurance and from fees for services, all for the same intervention.

Many advanced economies have introduced reforms to control growth in hospital expenditure, with a trend away from global budgets towards case-mix funding. The governments of these countries increasingly negotiate contracts with hospitals that reward efficiency, innovation, quality of care and patient-centred approaches. For example, in 2009, the Australian Government National Health and Hospitals Reform Commission recommended a series of cost-saving measures, including activity-based funding (in which hospitals are paid a fixed price for each episode of care), which tied federal funding to performance through national partnership agreements. The Commission also introduced Medicare Locals (now Primary Health Networks) and Local Hospital Networks. In addition, new federal structures were created to coordinate workforce planning, practitioner registration, preventive health and e-health, and health-care service pricing and funding.

In transitional economies, data for relevant decision-making and monitoring may be lacking or may cover a smaller set of metrics, with limited relevance for funding. For example, less than one third of low- and middle-income countries in the Western Pacific Region have data on average length of hospital stay; only 18% report hospital spending as a percentage of total health expenditure; and 13% monitor and report bed occupancy rates. Indicators of hospital safety and outcomes, such as nosocomial (in-hospital) infection, avoidable morbidity and mortality, and surgical complications, are even less frequently tracked.

Most countries in the Region have introduced procedures for internal or external quality assessment and accreditation, with activities ranging from voluntary processes to compulsory quality assessment by a third party, a peer-review organization or a government body. The process may be linked to formal accreditation. National accreditation systems differ in terms of the specific hospital functions and quality outcomes assessed.
(see Table 6). The status of implementation of quality systems also varies. Compliance may be hampered by poor monitoring, ineffective enforcement and lack of financial incentives for licensing and/or accreditation.

The accountability and governance arrangements at the system level have implications for a country’s efforts to improve hospital planning, management and performance.

**TABLE 6.** Quality assessment systems for hospitals, selected countries and areas

<table>
<thead>
<tr>
<th>Country or area</th>
<th>Accreditation</th>
<th>National standards for hospitals</th>
<th>Type of accreditation</th>
<th>ISO certification programme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>✓</td>
<td>✓</td>
<td>Mandatory</td>
<td>✓</td>
</tr>
<tr>
<td>Brunei Darussalam</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Cambodia</td>
<td>–</td>
<td>✓</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>China</td>
<td>✓</td>
<td>✓</td>
<td>Voluntary</td>
<td>✓</td>
</tr>
<tr>
<td>Hong Kong SAR (China)</td>
<td>✓</td>
<td>✓</td>
<td>Voluntary</td>
<td>✓</td>
</tr>
<tr>
<td>Macao SAR (China)</td>
<td>✓</td>
<td>✓</td>
<td>Voluntary</td>
<td>✓</td>
</tr>
<tr>
<td>Japan</td>
<td>✓</td>
<td>–</td>
<td>Voluntary</td>
<td>✓</td>
</tr>
<tr>
<td>Lao People’s Democratic Republic</td>
<td>–</td>
<td>✓</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Malaysia</td>
<td>✓</td>
<td>✓</td>
<td>Voluntary</td>
<td>✓</td>
</tr>
<tr>
<td>Mongolia</td>
<td>✓</td>
<td>✓</td>
<td>Voluntary (mandatory for health insurance funding)</td>
<td>✓</td>
</tr>
<tr>
<td>New Zealand</td>
<td>✓</td>
<td>✓</td>
<td>Mandatory/Voluntary</td>
<td>✓</td>
</tr>
<tr>
<td>Philippines</td>
<td>✓</td>
<td>✓</td>
<td>Voluntary</td>
<td>✓</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>✓</td>
<td>✓</td>
<td>Mandatory/Voluntary</td>
<td>✓</td>
</tr>
<tr>
<td>Singapore</td>
<td>✓</td>
<td>–</td>
<td>Voluntary, but there is mandatory licensing</td>
<td>✓</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>–</td>
<td>✓</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>


### 3.1.2 Facility level

At the facility level, hospitals grapple with the challenge of having sufficient flexibility to deliver efficient, high-quality care amid changing patient loads and pressure to use more technology. Countries such as China and Viet Nam are experimenting with hospital autonomy to improve organizational efficiency. However, in the absence of strong accountability mechanisms and robust oversight, greater hospital autonomy can result in higher costs, higher OOP spending and perverse incentives for overtreatment.

Hospital leaders play an important role in setting the organizational culture and in aligning functions such as finance, human resources, information systems and supplies
to deliver integrated care. In many transitional economies and small island developing states, trained and experienced hospital managers may not be available. Clinicians may predominate as hospital leaders, but they may not have the ability to motivate and build trust among staff and to introduce inclusive decision-making. Many advanced economies require hospital directors to have strong management skills. For instance, New Zealand aims to engage more clinicians in management and leadership positions alongside generalist managers.

Many countries have introduced evidence-based, clinical practice guidelines to improve decision-making by health professionals for appropriate health care and to engage patients in the process. Fifteen countries in the Western Pacific Region report having clinical practice guidelines (see Annex 2). In addition, many have infection control policies that include hand hygiene initiatives, sterilization of equipment, and guidelines on appropriate use of antibiotics, to reduce the risk of infection and promote patient safety. In other countries, the lack of effective and flexible governance structures, including dedicated resources, represents a missed opportunity to improve hospital performance. For example, in Australia, New Zealand, the Republic of Korea and Singapore, hospital-level data on clinical processes, quality of care and patient satisfaction are widely available and comparable, and in Australia, the results have funding implications.

Some countries use indicators of health-care-associated (nosocomial) infections, reported through the health information system, to measure and benchmark hospital performance. In the Western Pacific Region, 10 countries have public reporting on patient safety and quality of care, and in most of these cases, the government publishes the results online. However, the reported information is used within a punitive culture, hospital managers might not feel comfortable reporting poor safety and quality outcomes. Table 7 lists the availability of governance mechanisms and procedures to safeguard patient safety for selected countries in the Western Pacific Region.

Active engagement of the patient, family and community in health care can improve health-care outcomes, such as satisfaction with care received, as well as health system outcomes, such as the cost-effective service delivery. Although countries in the Region acknowledge the importance of patient engagement, implementation depends on various individual, organizational and system-level factors. Often, the health facilities regard patients as passive clients instead of active partners in their own health and well-being. Organizational incentives may not support patient and family engagement. However, countries such as Australia and Malaysia have made progress on patient engagement and empowerment, resulting in important shifts in perspective.

Regular review and monitoring of physical infrastructure, equipment and administrative and financial procedures are important for the sustainability and resilience of hospitals. However, several small island countries, among others, face financial and capacity challenges in ensuring timely maintenance of hospital infrastructure and equipment. Financial sustainability is hampered by inadequate systems for regular monitoring of cash,
<table>
<thead>
<tr>
<th>Country or area</th>
<th>systematic measurement of patient experience</th>
<th>patient organizations</th>
<th>public reporting on quality of care</th>
<th>regular national reports on quality of care</th>
<th>national patient safety programmes</th>
<th>adverse events reporting systems</th>
<th>systems to address medical malpractice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Brunei Darussalam</td>
<td>–</td>
<td>✓</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>✓</td>
</tr>
<tr>
<td>Cambodia</td>
<td>✓</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>✓</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>China</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Hong Kong SAR (China)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>–</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Macao SAR (China)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Japan</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>–</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Lao People’s Democratic Rep.</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>✓</td>
</tr>
<tr>
<td>Malaysia</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Mongolia</td>
<td>–</td>
<td>–</td>
<td>✓</td>
<td>–</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>New Zealand</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Philippines</td>
<td>✓</td>
<td>✓</td>
<td>–</td>
<td>–</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>✓</td>
</tr>
<tr>
<td>Singapore</td>
<td>✓</td>
<td>–</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>–</td>
</tr>
</tbody>
</table>

revenue and expenditure, as well as instability in revenue. These factors also reduce the ability of hospitals to anticipate and withstand financial shocks resulting from sudden loss of revenue.

As several joint external evaluations have shown, hospitals often have limited capacity to maintain services during outbreaks, epidemics and disasters. They may also be unable to respond adequately to a steady increase in service demand. For example, the rise in incidence of noncommunicable diseases (NCDs) in small Pacific island states has increased demand for specialized tertiary care, such as dialysis and cancer services, putting significant pressure on already stretched health budgets and crowding out essential investment in primary or secondary prevention or health promotion. Further, many small island states cannot by themselves achieve economies of scale to improve cost-efficiency in relation to specialized care equipment, maintenance and associated recurrent costs.

**3.2 LESSONS LEARNT AND CHALLENGES AHEAD**

This section summarizes the lessons and challenges for hospitals, first at the facility level and then at the level of the health system (see summary in Fig. 4).

**FIG. 4** Facility- and system-level challenges
3.2.1 Facility level

- **Resources.** The demand for health care often outstrips available resources. Hospitals are likely to face highly constrained budgets, unpredictable financial resources, and inadequacies in the number and/or skills mix of health workers.

- **Service fragmentation.** Hospital services are often poorly planned and then implemented in a fragmented manner, which disrupts patient flow and impacts continuity of care.

- **Limited management expertise.** Hospital managers have a critical leadership role in shaping policy, systems, procedures and organizational culture to facilitate change. However, hospital managers (clinical or non-clinical) often have limited leadership and managerial skills. Only a few countries in the Region offer opportunities for potential managers to develop essential managerial competencies.

- **Uncoordinated care.** Hospital services need to be structured around patient needs. However, professional boundaries and scopes may impede coordination among service providers, including multidisciplinary teams.

- **Inadequate capacity in ICT.** Information and communications technology (ICT) is a critical component of health service delivery, but there is often limited capacity at the facility level to collect, analyse and use information well.

- **Inadequate analysis of management challenges.** Technological progress will continue to drive hospital services and costs. Facility staff may be unable to conduct root-cause analysis and identify measures to improve quality and safety of care. Hospitals also face the challenge of improving service quality with limited technical and financial resources.

3.2.2 System level

- **Supply-side inefficiencies.** Hospital systems face major supply-side inefficiencies including misalignment of service structure with current and future health needs, fragmented funding, disjointed patient journeys and suboptimal patient flow, new and high-cost treatments and technologies, an inflexible health workforce structure, and bias towards professional interests rather than patients.

- **Distortion of service provision between hospital, primary care and communities.** Increasingly, countries face pressure to improve the technical and allocative efficiency of their services, as well as quality and people-centredness. The existing medically centred and hospital-dominated approaches can be modified with alternative structures that strengthen links and flows to secondary, primary, community and social care. While hospitals remain important, some recent trends are expected to continue, such as further reductions in hospital length of stay and greater use of ambulatory and home care.

- **Inefficient funding mechanisms.** Given the dynamic nature of health systems and constant pressure to contain costs and improve efficiency, hospital funding mechanisms will undergo continued developments.
4. IMPROVING HOSPITAL PLANNING AND MANAGEMENT AT THE FACILITY LEVEL

4.1 BACKGROUND

When all health facilities perform well, the overall performance of the health system improves. Hospitals are a dominant component of health service delivery and can be considered a microcosm of the broader health system. Improvements in hospital performance play an important role in a country’s progress towards UHC. Therefore, improving hospital planning and management is critical, requiring continual monitoring and adjustment. We must give attention to the factors that influence the five interrelated attributes of a high-performing health system: accountability, efficiency, quality, equity, and sustainability and resilience. These factors are discussed below, each with a summary of suggested actions.

4.2 ACCOUNTABILITY

While there will be differences within and between countries in the use of accountability mechanisms, all hospitals need measures to ensure compliance with system-level
financial, regulatory and other requirements. Hospitals should provide information and justify their decisions and actions, including the imposition of sanctions and rewards. This transparency also helps to build community trust in hospital systems and services.

4.2.1 Institutional governance structure and processes

The hospital’s governance mechanism is responsible for its overall performance. The governance team can improve and maintain hospital performance through consistent operational review and financial oversight. Depending on the country context, the governance structure can help to mobilize resources and meet staff expectations and patient needs.

**SUGGESTED ACTIONS**

- Establish a governing body to impose discipline, inform planning and operations, and monitor performance. Involve the governing body and its subcommittees in oversight of ethics and disciplinary action, infection control, supplies and infrastructure, financial and human resources, quality of care and clinical audits. The body should provide feedback to management on needed improvements.
- Decide on the roles of the governing body and the management structure so that the functions are allocated to the appropriate level.
- Require the governing body to be represented by both professionals and community members, with the right skills. Require members to undergo orientation and conduct regular self-assessments.
- Require appropriate skills and competence for recruitment and advancement in all posts with a managerial role, and link senior management incentives to meeting hospital performance targets, where possible.

4.2.2 Regulatory compliance

Compliance with regulatory standards avoids potential problems of misconduct or abuse and enhances public trust in hospitals.

**SUGGESTED ACTIONS**

- Set out and implement minimum standards for service quality, safety, sanitation and infection prevention and control.
- Verify the registration status of professional staff to ensure they are appropriately qualified and meet statutory registration requirements.
- Adopt and implement a code of ethics and professional standards, consistent with the values of the organization.
• Define ethical behaviour for hospital staff and associated parties, and effectively communicate the code of ethics to internal and external stakeholders, including the public.

4.2.3 Performance monitoring

Monitoring of hospital performance improves transparency and accountability, empowers patients and communities to make more informed choices, assists purchasers to ensure the value of goods and services, and motivates providers to self-regulate.

SUGGESTED ACTIONS

• Implement monitoring tools such as scorecards, dashboards and online reporting on the use, quality, safety and costs of hospital services. Reports should include information on public health notifications, pharmacovigilance and compliance with financial norms.
• Use hospital performance reports for benchmarking and actions to improve performance.
• Use audit processes to review and appraise the effectiveness of the hospital’s governance, risk management system and internal controls with respect to the impartiality and reliability of operational and financial information; operational efficiency and effectiveness; protection of assets; and compliance with laws, regulations, contracts, policies and procedures.
• Share reports with patients, families and communities to inform them about hospital performance.

BOX 2. Performance monitoring in New Zealand

New Zealand has set national health targets, which are a set of performance measures designed to improve health service performance, in line with public and government priorities. The targets are reviewed annually to ensure that the health and disability system contributes to maintaining and improving key health outcomes. The seven targets for 2017–2018 are related to:

1) shorter stays in emergency departments
2) improved access to elective surgery
3) faster cancer treatment
4) increased immunization coverage
5) better help for smokers to quit
6) raising healthy kids
7) more heart and diabetes checks.

Source: Ministry of Health, New Zealand (2018)
4. IMPROVING HOSPITAL PLANNING AND MANAGEMENT AT THE FACILITY LEVEL

4.3 EFFICIENCY

Service efficiency refers to maximizing output from a given level of input, that is, making the best use of existing resources. At the facility level, efforts should be directed towards effective operational management, including streamlined patient flows, streamlined supply and logistics management, and appropriate health staff numbers and competencies.

4.3.1 Patient management

Improving patient management can reduce delays and waiting times as patients move through the stages of care. Poor patient flow can result in crowded, stressful and unsafe clinical settings; admission of patients to wards that are not suited to their care; increased waiting times for procedures and services; overburdened staff; and waste of patient and carer time. Improved patient management will result in satisfied providers, patients and families.

SUGGESTED ACTIONS

• Set up systems to schedule appointments and reminders in accordance with clinical pathways.
• Improve the physical layout of hospitals to optimize location of clinics or resources, considering the needs of people with disability; improve traffic flow and eliminate redundancy.
• Identify critical barriers to efficient patient flow and improve collaboration between departments or units. For example, use patient health records and tracking systems to monitor the patient journey and improve discharge planning.
• Regularly review pathways and individual patient journeys with patients to identify where flow is impaired, understand patients’ perspectives, and improve processes and systems.

4.3.2 Supply and logistics management

Efficient supply and logistics management involves using the minimal level of resources to meet institutional objectives. Improved hospital performance depends on streamlining logistics and supplies and reducing waste.

SUGGESTED ACTIONS

• Optimize logistical and supply chain management by streamlining processes such as through use of technology for effective scheduling, bulk purchasing, outsourcing of housekeeping functions, or resource sharing across departments.
• Develop and implement standard operating procedures for efficient inventory management as well as for appropriate storage space and conditions, ensuring commodity safety and quality and reducing waste and disposal needs.

• Establish a mechanism to review data and issues on logistics management and share findings with stakeholders.

• Perform on-site preventive maintenance to ensure equipment functionality and prevent failures or repairs. Identify equipment failure and initiate prompt corrective maintenance.

**BOX 3. Efficiency through public hospital reform in China**

In 2012, Sanming, an inland prefecture in Fujian province, started public hospital reform, which has since become a highly regarded model. The reform includes innovations in governance, disease reference group payments, amalgamation of insurance schemes, service packages for NCDs, price reform, drug procurement, human resource management, remuneration and health insurance management. Telemedicine connects the teaching hospitals with the more than 100 provincial hospitals. An assessment in 2013 found significant improvement in the performance of the public hospital, including a 6.1% reduction in cost per outpatient visit, a 15.4% decline in inpatient admissions, and decreases in drug expenditure by 29% for outpatient visits and 53% for inpatient admissions. Since 2015, patient satisfaction has risen from 70% to nearly 90%. In addition, the annual growth rate in the total health-care expenditure has fallen from 15% to 8–10%, which is lower than both the provincial and national averages. Savings from the reforms are expected to reach over 2 billion CNY/yuan by 2020.

*Sources: KPMG International Cooperative (2016) and Fu et al. (2017)*

### 4.3.3 Human resource management

Staff numbers and competencies should be aligned to health service demands and meet the expectations of patients and their families. Hospitals should aim to manage their staff skills and levels in such a way as to address patient needs and also contain labour costs.

**SUGGESTED ACTIONS**

• Use techniques such as staff rostering and scheduling, and strategies such as task shifting and sharing, to optimize efficiency and contain labour costs.

• Adopt team-based approaches to manage complex care and support patient empowerment.

• Make the best use of professional cadres, ensuring a balance between generalists and specialists, to provide responsive care via well-structured multidisciplinary teams.
• Implement transparent recruitment and promotion procedures to ensure that staff meet the requirements for qualifications and professional experience.
• Create a supportive and respectful environment for staff, including non-clinical staff; develop a culture of continuous learning and improvement, supported by opportunities for career development, progression and skill enhancement.

4.4 QUALITY

For many hospitals, a gap still exists between the approved standards of care and the actual quality of services provided. Teamwork is part of a continuous quality improvement approach.

4.4.1 Clinical governance structure and processes

Clinical governance is concerned with core issues in service delivery, such as professional performance (technical quality), resource use (efficiency), risk management (the risk of injury or illness associated with the service provided) and patient satisfaction. It involves a systematic approach that aims to maintain and continuously improve the quality of patient care within clinical settings.

SUGGESTED ACTIONS

• Establish a clinical review committee to assess patient needs, exposure to clinical risk, medication safety and use, regulatory requirements, staff capabilities and training needs, and to make a realistic comparison of current practices with good practice standards.
• Regularly review patient management via case conference and/or review-of-care plans to monitor adherence to clinical guidelines and protocols. Use these mechanisms to identify failures in standards of care as well as to recognize and replicate good clinical practices.
• Create a supportive environment for care providers to routinely report incidents, including minor incidents and “near misses”. Focus reviews on incidents and not individuals, analyse the root causes (for example; understaffing, poor system design, inadequate skills), and promote a culture of continuous learning.
• Provide ways for staff to safely raise concerns without fear of reprisal or victimization.
• Raise awareness among providers about medico-legal risk and adopt informed consent, rigorous clinical record-keeping and engagement with continuing professional development to mitigate the risk.
4.4.2  Patient safety

Hospitals need to take a systematic approach to prevent, identify and respond to medical errors and adverse events. Treating each reported event as a learning opportunity, by analysing systemic issues and identifying solutions, can reduce preventable harm.

**SUGGESTED ACTIONS**

- Develop and distribute routine (for example, monthly, quarterly) hospital-wide safety reports or dashboards that focus on patient safety.
- At a minimum, establish systems to report, monitor and reduce hospital-acquired infections; to improve infection prevention and control (IPC) and medication safety; and to train health-care providers on the importance of these aspects of patient safety.
- Link the monitoring efforts to a quality committee or patient safety committee to create accountability and assist with action planning and reporting mechanisms.
- Implement actions to address the identified clinical risk factors, such as training, modifying systems or processes and/or use of checklists and protocols to prevent recurrence. Communicate the results of the investigation and actions taken to care providers.
- Incrementally improve the segregation, destruction and disposal of clinical waste with oversight and regulation in line with national and international standards.

**BOX 4. Incident reporting system in Japan**

The Japanese Medical Law and the accompanying Enforcement Decree mandate all health facilities in Japan to report adverse events. The hospital director first reports incidents to the Committee of Adverse Event Investigation and Support under the Ministry of Health, Labour and Welfare. The hospital’s internal investigation team then investigates the causes and risk factors of the event. The committee provides advice and support to hospital directors to help them determine whether an incident is an adverse event, and during the internal investigation, the committee will send an external investigation team at the hospital’s request. The final report of the investigation is submitted to both the hospital and the Committee. The Committee publishes case studies based on collected incident reports to disseminate lessons learnt and prevent similar incidents.

*Sources: Motto (2016) and Ministry of Health, Labour and Welfare, Japan (2015), (2018)*

4.4.3  Technical quality

Health-care providers need to have the right clinical and social competencies to enable them to work in multidisciplinary teams to deliver good-quality and safe health care that is
responsive to patient needs. Clinical audit, peer review and evidence-based practice methodologies give providers the knowledge to understand and improve their clinical practice.

**SUGGESTED ACTIONS**

- Take concrete steps to build an institutional culture that focuses on improving outcomes for service users and a commitment to learning organization principles.
- Create a system of identifying and rewarding clinical quality improvement "champions".
- Implement clinical audits, peer review and feedback as important tools in the continuous quality-improvement cycle.
- Use patient experience data to assess clinical performance and monitor the effectiveness of interventions.
- Arrange for hospital staff to provide supportive supervision to staff in other health-care facilities.
- Prepare a professional development plan for mandatory continuing professional development. Include people-centred care themes in staff training, including induction programmes.
- Develop minimum curriculum standards, engage and support an active teaching faculty, and set up a method for programme evaluation and maintenance of the standards.
- Build the capacity of health-care providers in clinical research and evidence-based clinical care pathways.

**BOX 5. Senior nurse-led multidisciplinary teams in Anhui province, China**

Anhui, a province in central-eastern China, was one of the first provinces to implement primary healthcare reform at grassroots level. The reforms included integration of health services at county, township and village level and introduction of an innovative capitation payment system.

The service delivery network involves alliances between hospitals and community health centres. Senior hospital nurses are deployed for two years to community health centres to deliver a defined package of services for reproductive, maternal and child health and NCDs. The nurses lead multidisciplinary teams (including doctors), coordinate care and conduct initial consultations. Service contracts are signed with the families and services are customized to meet the needs of specific groups. For instance, home monitoring information for hypertensive patients is automatically sent to the community health centre. To encourage compliance, a "health coin" system rewards behaviour change or adherence; points accumulated can be exchanged for health products.

The advantages of using senior nurses include professional and career development to improve retention, harnessing their clinical experience to benefit a larger population group, strengthening clinical pathways and referral links with hospitals, and reducing the volume of hospital outpatients.

*Source: World Bank (2017)*
4.4.4 Patient and family experience

Keeping patients and their families adequately informed and involving them in decision-making promotes high-quality and respectful clinical care. Empowering communities to improve their own health and well-being enables the effective co-creation of good health. Monitoring patient experience provides insights into care processes that can be used for improvement.

**SUGGESTED ACTIONS**

- Improve communication among patients, family members and care providers, for example, through the use of patient decision aids, to enable shared decision-making and better self-care.
- Develop and/or select suitable patient experience survey instruments. Use input from patient organizations to improve clinical practices and patient journeys.
- Involve individuals from disadvantaged groups to ensure that the design and operation of facilities is responsive to these groups.

**BOX 6. Patient-reported measures in Australia**

The New South Wales (NSW) Agency for Clinical Innovation implements the Patient Reported Measures (PRMs) Programme to improve care based on direct, timely patient feedback about their outcomes and experiences. The agency uses two types of measures: Patient Reported Outcome Measures, which capture patient perspectives of their health and its impact on their life, and Patient Reported Experience Measures, which record patient perceptions of their health-care experience. The programme was designed based on a literature review and piloted in a few sites in 2015. The programme is now implemented in 11 sites across the state and contributes to assessment of progress in the NSW integrated health-care strategy.

*Source: Agency for Clinical Innovation (2018)*

**BOX 7. The Hong Kong Alliance of Patients’ Organizations**

The Hong Kong Alliance of Patients’ Organizations (HKAPO), comprising 44 affiliated patient groups, was established to increase accountability to patients and their representation in a changing health system. The Alliance advocates for patients as active and constructive consumers rather than passive recipients of services. It also lobbies for better representation and involvement of patients in treatment decisions. The Alliance has expanded patient input into local and territory-wide decision-making by partnering with individual hospitals and increasing links with the Hospital Authority Board. It has also increased media exposure, which
has helped strengthen representation so that patients are now present on all 11 Authority Committees established under the board and are asked for their views on patient care and service delivery, as well as more widely on health-care policy-making. The Alliance’s patient ambassadors programme trains patients as representatives at the ward level and within the local hospital committee. By building constructive relationships with hospital partners, HKAP0 affiliate organizations have been able to improve the training of hospital professionals and inform staff about patient engagement, advocating for new clinical interventions and a more patient-centred approach.

Source: IAPO Staff (2014)

4.4.5 Continuity of care

Care coordination (among hospitals and also between hospitals and other providers) and service integration across organizational boundaries are both critical to improving quality, efficiency and equity of access to hospital care. Success in these areas requires governance structures that support line integration and teamwork. Coordination can be improved by:

— using accountability mechanisms among providers and agreements on responsibilities;
— developing communication channels and information systems for tracking referrals and care transitions;
— creating a proactive patient care plan; and
— tightening the regulation of relationships among providers.

Leadership and commitment are needed at all levels of the system to implement and maintain integrated care over the long term.

SUGGESTED ACTIONS

• Develop personalized care plans for patients with chronic disease and older patients to define and facilitate coordination among providers and services. These care plans might cover specialty referrals, ancillary services, community services, and support for high-risk and/or high-cost populations.
• Use case managers or care coordinators to ensure coordination among facilities and providers.
• Introduce effective discharge planning procedures to ensure smooth patient transition from the hospital to the community.
• Use e-health tools to strengthen continuity of care. For example, patient health records, bed tracking systems, e-visits, etc. enable faster and more accurate information sharing, especially between inpatient and outpatient or community settings.
Information system to strengthen continuity of care in French Polynesia

The Programme de Médicalisation des Systèmes d’Information (PMSI) information system is being used in public and private health institutions in French Polynesia for standardized coding of medical conditions as well as budget allocation to health facilities based on a fee schedule. In the system, each patient is assigned a medical unit summary that includes a primary and secondary diagnosis, including details regarding all medical procedures performed during hospitalization. Data collection is standardized, that is, clinical diagnosis is coded using the International Classification of Diseases, and procedures are coded based on the Classification of Common Medical Procedures. If patients transit between health facilities or providers, their medical unit summary is shared with the respective unit or health-care provider. This facilitates coordination and continuity of care.

In addition, a homogeneous group system, which consists of about 600 case-mix groups, is used to categorize the clinical diagnosis and cost of patient care. The fee schedule is annually updated, and health facilities are paid standard rates based on the services delivered. This system is currently being implemented in the main hospital and private clinics.

Source: Ministry of Health, French Polynesia (2018)

4.5 EQUITY

Hospitals can contribute to UHC by ensuring that there is equity in access to health services.

4.5.1 Service coverage and access

Access to and use of hospital services often depends on a person’s socioeconomic status, ethnicity, sex or other personal characteristics unrelated to their health condition. Reducing systematic, avoidable differences in health between socially advantaged and disadvantaged groups should include processes to measure inequity and to reduce barriers to access and use of hospital services.

SUGGESTED ACTIONS

- Identify barriers to access (geographical, financial, architectural, sociocultural) and address them through strengthening transport, offering subsidies to reduce OOP payments, improving disability-enabled physical access and using telehealth, especially in rural and remote areas.
• Monitor service use by socially disadvantaged populations as a key indicator of hospital performance and take appropriate corrective action.
• Train health-care providers and introduce incentives for them to deliver safe, high-quality, culturally responsive patient-centred care.
• Provide interpreting services and multilingual patient decision aids to serve the needs of linguistically diverse populations.

4.5.2 People-centred service models

Besides addressing barriers to access and use, hospitals can tailor the service delivery mix to address expectations and community health needs, including use of different types of service models that optimize the patient experience.

**SUGGESTED ACTIONS**

• Expand access to hospital services through flexible visiting hours, greater use of outreach and mobile units, provision of “out-of-hours” services, expansion of the role of generalists and provisions for disabled access, etc.
• Educate health-care providers to avoid unconscious or overt bias or discrimination.
• Involve community groups to support people in their own homes, combat social isolation and improve prevention.

**BOX 9. Customized care for vulnerable populations in China**

Ditan Hospital in Beijing is the home of Red Ribbon House, an initiative that provides care, support and peer networks for people living with HIV. The House is a one-stop source for access to services for HIV, sexually transmitted infections, and hepatitis B and C, as well as referral for mental health care and peer education. The hospital staff are trained to be sensitive to the needs of populations vulnerable to HIV and other sexually transmitted infections. For example, the hospital regularly monitors a cohort of HIV-negative men who have sex with men (MSM). In addition, for the mobile MSM group, the hospital’s infectious disease clinic screens over 600 clients a year. To improve access, an after-hours clinic operates from 16:00 to 22:00. A total of 3290 clients from the MSM community visited the evening clinic from March 2017 to March 2018. The hospital has also partnered with community-based organizations to support equitable access to services.

*Source: WHO Collaborating Centre for Comprehensive Management of HIV Treatment and Care*
4.6 SUSTAINABILITY AND RESILIENCE

A high-performing hospital is made up of individual high-performing units or departments, functioning as a coordinated whole. A sustainable and resilient hospital system is based on sound governance practices and is able to adapt to changes in the external environment and mitigate risks.

4.6.1 Infrastructure management

Hospitals are often seriously damaged during emergencies, disasters and other crises, resulting in disruption of health services to affected communities when they are most needed. Hospitals can be made more resilient and functional by improving the environmental sustainability of infrastructure, including the reliability of power and water supply systems and the reduction of harmful waste.

SUGGESTED ACTIONS

• Use approved standards to design and build safe and resilient hospitals that can remain functional during emergencies and disasters, and cope with risks such as climate change.
• Allocate adequate financial resources for facility preparedness, maintenance of infrastructure and equipment, repairs and refurbishment.

BOX 10. Sustainable and resilient health facility in Solomon Islands

In 2015, the Fred Hollows Foundation of New Zealand built a Regional Eye Centre in Honiara, Solomon Islands, with funding from the New Zealand Government and the public. The foundation handed ownership of the centre to the Solomon Islands Government, and it is now managed by a local team within the Solomon Islands Ministry of Medical Health and Services.

The centre’s building is powered by solar panels, relies entirely on rainwater for its water supply and has its own sewage treatment system. As electricity for health facilities in the Pacific is usually expensive, the building’s self-sufficiency results in significant cost savings and contributes to environmental sustainability.

Source: The Fred Hollows Foundation, New Zealand (2018)
4.6.2 Institutional learning and renewal

Established processes for institutional learning and renewal can strengthen resilience and lay the foundation for improved hospital performance. They can also mitigate or reduce unwanted outcomes or the impact of external shocks, while increasing the likelihood that objectives are achieved.

**SUGGESTED ACTIONS**

- Adapt service delivery methods to changing health needs, through outreach or by adapting the scope, hours and location of services for skilled care, especially in rural and underserved areas.
- Take steps to cultivate institutional harmony, wherein the interests of individuals and units are aligned with the overall organizational plans, processes and goals.
- Train health-care managers and leaders in evaluation, planning and implementation of procedures, tactics and strategies to reinforce institutional change.
- Institutionalize training and development plans, link training to career progress, and encourage managers and service providers to share their information and experience.
- Reduce service interruptions by developing succession plans for key positions.

4.6.3 Managing shocks

Hospitals should have inbuilt readiness and capacity to respond to and recover from emergencies, disasters and other crises. Capacity-building and effective human resource management are important for managing risk and ensuring that hospitals and the entire health system function in emergencies. This includes capacity and flexibility to deploy available resources to retrofit facilities and maintain essential systems based on planning, training and simulation exercises to improve emergency and disaster risk management of hospitals, health systems and communities.

**SUGGESTED ACTIONS**

- Train hospital administrators to manage health expenditure, including austerity policies in periods of financial constraint or crisis, to ensure maintenance of core hospital functions.
- Use risk information to ensure preparedness, response planning and investment, as well as clinical audit and training.
- Train administrators and care providers to use lessons from past emergencies and disasters to design improvements in safety and preparedness.
5. IMPROVING HOSPITAL PLANNING AND MANAGEMENT AT THE SYSTEM LEVEL

5.1 BACKGROUND

Within the diverse configurations of national health systems in the Western Pacific Region, hospitals play different roles in providing services. The Region’s hospital systems are characterized by multiple stakeholders with differing agendas, finances and organizational structures. Priority actions for improving hospital planning and management at the system level include:

- strengthen government stewardship
- clarify relationships among state and non-state providers
- improve regulation
- coordinate funding flows and mechanisms
- monitor performance in a transparent manner.

5.2 GOAL – HOSPITALS AS A PATH TO UHC

Hospitals are powerful, competitive institutions that form a core component of service delivery. They must play an important role for countries to achieve UHC. The role of
hospitals may range widely, from a focus on complex multi-specialty care services and technologies to the delivery of conventional primary care. Depending on the country and the health system, hospitals may either function as standalone facilities or be affiliated to a network or group of hospitals.

5.2.1 Links with primary health care

Within any health system, the role of hospitals will determine their relationship with and support to primary and community-based care settings. It will also determine how hospitals complement each other, that is, through specialization and the organization of care pathways.

SUGGESTED ACTIONS

• Define the role of hospitals with regard to primary health care, including deciding whether hospitals are to deliver primary care and, if so, which primary care services.
• Strengthen hospital functions to support primary health care, such as:
  – discharge planning and referral systems for discharged patients;
  – community outreach in catchment areas; and
  – awareness-raising among health staff in community and hospital settings.
• Improve planning of hospital services in order to coordinate care across service levels and adapt to local needs and capacities.
• Foster horizontal integration through partnerships and/or networks with other hospitals; foster vertical integration through closer links with primary and alternate care settings.

5.2.2 Links with non-state providers

In pluralistic health systems, governments need to build and sustain partnerships with all health-care providers, including non-state providers. There needs to be a clear understanding of the place of state and non-state providers within the national strategy to expand health services to advance UHC. As stewards, governments need clear policies, strategies and codified approaches to oversee state and non-state providers. Non-state providers may play an important role in care provision, financing, health supplies and health education. Types of partnership with non-state providers include service contracts, outsourcing contracts, management contracts or leases, concessions and divesture contracts. Sometimes less formal arrangements are appropriate, but generally, a robust legal and institutional framework for governance and oversight is important to optimize these partnership models.
SUGGESTED ACTIONS

- Define the nature of the government’s or hospital’s relationship with non-state providers (for example, whether core, supplementary or adjunct to public sector hospitals) and the type of partnership agreement (for example, memorandum of understanding, contract).
- Regularly review related financing, regulation and feedback policies and guidelines, and their contribution to improving health system performance.
- Specify the reporting responsibilities of non-state providers based on minimum standards.
- Use public reporting to ensure clarity and a shared vision about the goals of the system at all levels and among all stakeholders, including the community.

5.3 INSTITUTIONAL ARRANGEMENTS

Governments have overall responsibility to ensure that people have equitable access to high-quality, affordable hospital care. Governments have the stewardship role in setting the legal frameworks and policy direction for the hospital sector.

The government’s oversight and policies define the nature, scope and functional capacity of the hospital sector, as well as the institutional arrangements with providers in both the public and private sectors. Interaction between governments and hospitals may be determined through informal links, such as providers working in both sectors, outsourcing of clinical and non-clinical services in public hospitals, co-location of public and private hospitals, private provision of services for public patients and sometimes the privatization of public hospitals. Close working relationships between public sector and non-state providers can be mutually beneficial, provided there is a strong system in place for regulation, feedback and provider payment.

5.3.1 System-level governance

There is evidence that hospitals could improve their overall performance if they had some autonomy and authority to plan services, manage staff and other resources, and respond flexibly to patient needs. Governments, however, must retain responsibility to ensure the accountability of hospital operations. This balance can be achieved through various modes of hospital governance, for example, a hospital run as corporation or state-owned enterprise and supervised by a governing board or committee. Irrespective of the governance model selected, clarity of roles and responsibilities is most important, allowing the providers to begin self-regulation, strengthen ethics and accountability, and interact with the government on regulatory matters.
SUGGESTED ACTIONS

• Decide the extent of managerial responsibility and flexibility to be granted to hospitals for them to plan their services effectively, manage staff and other resources efficiently, and respond to population health needs.

• Develop clear legislation and regulations on the role of the hospital governing body, including guidelines for membership, conduct and responsibilities. Specify the obligations for financial reporting, accountability, transparency and equity.

• Use the hospital governing body to enable flexibility in human resource and financial management, purchasing (except capital) and management processes.

• Require facilities to submit annual reports to legislative/executive committees and the public if they are statutory organizations. Mandate and regulate clear reporting on sources of hospital income and related expenditures, including surplus, such as through a standard chart of accounts.

• Outline fiduciary, quality of care and access requirements around defined categories of public-private hospital ownership/management models.

• Build the capacity of public institutions to adopt good governing mechanisms. Develop a strategy and guidelines around ownership category, market size and antitrust enforcement, in turn preventing dominance.

BOX 11. Hospital governing boards in Singapore, Hong Kong SAR (China) and the Republic of Korea

The SingHealth Duke-NUS Academic Medical Centre, consisting of three hospitals, five national speciality centres, 12 care centres and one medical school, is the largest public health-care provider in Singapore. SingHealth also operates several centres of excellence to identify and mitigate key risks in health facilities. The Medical Board of each hospital is in charge of the Infection Prevention and Control (IPC) Centre whose role is to identify and analyse IPC risks, review indicators, implement preventive measures and ensure best practices. The board ensures collaboration between the IPC centre and other centres in cluster-wide activities to improve safety and quality for patients and staff.

The Hospital Authority in Hong Kong SAR (China) is a statutory body that has managed Hong Kong’s public hospital service since 1991. To enhance community participation and improve hospital governance, 33 hospital governing committees have been established to cover 41 hospitals and institutions. The committees receive regular management reports from hospital chief executives, monitor the operational and financial performance of the hospitals, and participate in human resources and procurement functions, as well as hospital and community partnership activities.
The Republic of Korea has legally mandated boards for hospitals and local public health centres. For the local public health centres, the number of board members is set at eight to 10, comprising experts in public health and hospital management as well as local citizens. Citizen participation helps ensure that the community’s needs are reflected in health service planning and delivery.

Sources: SingHealth Duke-NUS Academic Medical Centre (2017), Hospital Authority, Hong Kong SAR (China) (2018) and Ministry of Health and Welfare, Republic of Korea (2014)

5.3.2 Service planning

Significant gains can be made by guiding and encouraging the hospital sector to improve the geographic distribution, economies of scale and configuration of services for a defined population. A policy-based service planning approach helps to avoid fragmented and politically driven investment in hospitals and hospital services, such as the construction of unneeded hospitals or hospital wings, or duplicate procurement of expensive equipment. Planning also helps to ensure that new capacity is located in areas of population growth. To discourage unplanned growth, only facilities and departments whose capacities are included in the plan should receive public financing.

**SUGGESTED ACTIONS**

- Adopt a medium- to long-term planning perspective to align health service delivery with changing population health needs.
- Use data on disease burden, service utilization and community expectations to forecast different service planning scenarios.
- Use the service plans to decide capital investments, including in high technology medicines, diagnostics and equipment.
- Define the core services package (including public health functions) and delineate the roles of each facility. Strengthen mechanisms and approaches to provide care at the primary or community level.
- Establish accountability mechanisms among providers and agreement on responsibilities, communication channels and information systems for tracking referrals and care transfers.

**BOX 12.** Community rehabilitation services delivered to a dispersed population in Solomon Islands

Solomon Islands has a widely scattered population, with approximately 80% living in remote communities. Primary health care is delivered largely by local nurse’s aides. Provincial hospitals generally lack infrastructure and staff to offer any specialist services. Tertiary care is primarily provided in a 300–400-bed national referral hospital in the capital city, Honiara.
Community rehabilitation services are delivered by 24 community rehabilitation field officers and 11 rehabilitation officers. They are locally trained to identify people in need of rehabilitation, provide basic services, promote community awareness and link people with professional hospital-based rehabilitation services. The service delivery system includes community and hospital services connected through the referral system, including transportation that can be accessed by health-care providers, individuals, family members and caregivers.


5.3.3 Service delivery architecture

The design and delivery of health services should be based on assessed population needs. The assessment should also guide resource allocation and determine necessary levels of investment from public and private sectors. Priority should be given to primary care, including preventive, palliative and rehabilitative care. Within the service architecture, facilities should be adequately staffed and resourced to meet the service delivery objectives.

SUGGESTED ACTIONS

• Delineate the roles of health institutions at different levels of the system.
• Institutionalize coordination mechanisms across different levels and types of services and adopt people-centred service delivery models.
• Make more resources available for public health, primary-level services and disadvantaged population groups.
• Develop and maintain a secure, confidential, common e-health platform that integrates care plans and service records across all levels of service and is used by all providers for service coordination and planning.
• Use protocols and electronic tools to safely transition patients to another care level and reduce avoidable readmissions.

5.4 REGULATION

The overarching purpose of regulation is to ensure effective services are provided safely to the public. The regulation of facilities and staff is important to ensure equitable access to quality health services. Governments are responsible for monitoring and promoting compliance with established 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.
5.4.1 Facility and provider licensing

Licensing is the method by which governments oblige health-care providers to comply with standards, codes, and guidelines for facilities and services in the interest of effective care and public safety.

**SUGGESTED ACTIONS**

- Use licensing to encourage and ensure that health facilities meet a defined set of standards for quality, safety, sanitation, and infection prevention and control.
- Use certification or licensing to ensure that buildings can withstand disasters (for example, floods, fires, earthquakes) and comply with national standards.
- Mandate the registration and licensing of skilled health professionals as a requirement for practice in hospitals.
- Maintain the competencies of health-care providers through continuing professional development linked to relicensing, and maintain updated, publicly available registries of licensed professionals.
- Improve the availability of health-care providers in underserved areas through innovative financing and policy incentives, and include rural placements in clinical training and internships.

5.4.2 Accreditation and external quality assurance

Quality assurance systems aim to measure, monitor, control and modify the components of hospital (or other health) systems in order to maintain and optimize health-care outcomes. Quality assurance is based on the premise that deviation from the agreed standard can be corrected through established, evidence-based and administratively endorsed mechanisms.

Quality assurance as a basis for hospital accreditation processes can be peerled, with the intent to share good practices, learn and improve. The process of preparing for accreditation can influence the thinking of hospital managers and care providers, building a culture of goal-setting and orientation towards assessment of processes and outcomes. Accreditation, however, should not be pursued solely for branding purposes or mechanically followed.

**SUGGESTED ACTIONS**

- Create (or adapt) and adopt an external quality assurance system that ensures health facilities meet requirements and standards.
- Establish a body or committee to define the service and operational standards, information needs and reporting requirements for hospitals.
• Develop and promote compliance with the accreditation process. In the absence of a firm accreditation process, develop minimal operational standards for services that must be met for licensure.
• Tie accreditation to hospital licensing and access to financial resources.

**BOX 13. Country models of hospital accreditation**

Besides international bodies that accredit hospitals from a quality and patient safety perspective, some countries have a national system of hospital accreditation.

For example, the Hospital Accreditation Program of the Malaysian Society for Quality and Health is a voluntary and independent body that hospitals can use to assess their performance against national standards, on an iterative basis, for continuous quality improvement.

Japan’s Council for Quality Health Care is another independent body that aims to improve Japan’s health care and welfare. The Council identifies key challenges in hospital standards and supports measures to improve the quality of care. It also conducts assessments for hospital accreditation, provides clinical practice guidelines and promotes patient safety.

Sources: Malaysian Society for Quality and Health (2017); Japan Council for Quality Health Care (2018)

**5.4.3 Patient rights**

Hospitals should provide equitable access to quality services while protecting the rights of all individuals and communities. Patient rights include access to hospital services based on clinical need, information about their own health and treatment, shared decision-making, confidentiality, and personal privacy and respectful care, without discrimination on the basis of age, disability, race, sex, religion, culture or ability to pay.

**SUGGESTED ACTIONS**

• Use informed consent mechanisms at all levels of service delivery, with adequate follow-up, monitoring and evaluation.
• Assure confidentiality of patient records and promote the patient’s right to access their records, such as information on diagnosis and all biomaterials, including by public reporting on the process.
• Change institutional culture to raise awareness for reducing open or unintentional discrimination towards patients, using legislation as a tool, when necessary.
• Promulgate information on patient rights and obligations in the care process.
**Box 14. Patient charter in Malaysia**

A patient charter was established in Malaysia in 1995 with agreement of the Federation of Malaysian Consumers Associations, the Malaysian Medical Association, the Malaysian Dental Association and the Malaysian Pharmaceutical Society. The charter deals with patients’ rights and obligations as well as mutual trust between health providers and patients. The charter covers the following rights and responsibilities: 1) right to health care and humane treatment; 2) right to choice of care; 3) right to acceptable safety; 4) right to adequate information and consent; 5) right to redress of grievances; 6) right to participation and representation; 7) right to health education; 8) right to a healthy environment; and 9) patient’s responsibilities.

*Source: Patient Charter, Malaysia*

### 5.4.4 Reporting requirements

Timely and relevant data are needed to guide improvements in system design, financing and accountability. In most countries, reporting requirements and standardization still focus on public hospitals. However, hospital reforms in accountability and transparency are also relevant to the private sector. Hospital reporting requirements should apply to both the private and public sectors, and cover a range of indicators, including patient and hospital-level safety and quality.

**Suggested Actions**

- Establish a mechanism, scope and methods for reporting on hospital performance, including the safety of providers, further to clinical audit findings.
- Define reporting requirements for public-private partnerships and non-state providers.
- Make information about quality, safety and the patient experience available to service providers, patients, the public and policy-makers.
- Adopt mandatory reporting of notifiable diseases, events, syndromes and pharmacovigilance.

### 5.5 Financing

Financial accountability is crucial for ensuring good-quality care, as financial incentives drive provider behaviour. Hospitals need to have operational flexibility, provided through
modern governance practices, to set up financing mechanisms that provide adequate financial protection and protect against perverse incentives. Thus, performance-based budgeting and provider incentives need to be used with clear accountability and reporting mechanisms on funding, quality of care and use. Accountability becomes even more relevant in the context of increased hospital autonomy to invest small capital amounts (sources, constraints, conditions), adjust operating expenses, find additional funds and arrange loans. Performance (incentive)-based financing for hospitals can work well in both public and private facilities, if the facility is given enough flexibility to respond.

5.5.1 Delineation and coherence of funding streams

Hospital funds need to be pooled equitably across departments and spent efficiently, using appropriate financial levers that link the role of the hospital to the overall goals of the health system and also reduce the risk of financial catastrophe and impoverishment due to health expenditure. Ensuring the alignment of financial incentives across levels of care and within the hospital budget itself and actively purchasing health services are key. In general, health system performance improves if government funds are directed towards population services, using performance-based budgeting, while individual services (including most hospital services) are funded through health insurance, in those countries with health insurance.

**SUGGESTED ACTIONS**

- Delineate clearly the various funding streams to hospitals to avoid duplication and misalignment.
- In systems with social health insurance, use the government budget to pay for population-based services and use risk-sharing pools to pay for individual care.
- Develop performance-based budgeting to encourage hospitals to use government funding for population-based services.
- Align capital expenditures for public hospitals, corporatized bodies and state-owned enterprises such that major capital expenses continue to be met through the government budget, and smaller capital expenses through risk pools.

5.5.2 Delineation and coherence of funding streams

In setting priorities and allocating resources to improve efficiency, quality and affordability of services, all countries must decide what services should be publicly funded, regardless of the maturity of their health financing systems. With budget constraints and emerging new health interventions, countries must make critical decisions on benefit design and resource allocation. Ensuring evidence-informed and transparent decision-making, using clear criteria, with participation by multiple stakeholders, is fundamental.
SUGGESTED ACTIONS

• Outline the services covered in a budget-funded system. Use an evidence-informed, transparent approach, such as a health technology assessment, to support decisions on benefit design and service packages, including investment in high-cost medicines and health technologies.
• Involve stakeholders in determining what services are to be publicly financed and to what extent.
• Provide incentives for people to seek preventive services and strengthen the referral system.
• Reinforce gatekeeping; use appropriate patient cost-sharing arrangements to avoid bypassing of primary care without compromising access by disadvantaged populations.
• Use incentives to limit the provision of high-cost services, such as provider payments to discourage high-cost but low-priority services.
• Link performance-based budgeting and strategic purchasing to relevant quality-of-care indicators.
• Negotiate the price of medicines, for example, by using reference pricing or information on cost-effectiveness.

5.5.3 Payment methods
Payment methods influence provider behaviour. Strategic payment methods can improve efficiency, accountability, equity and quality, and reduce financial hardship. While governments may take the lead in deciding benefits, payment methods can be used as a purchasing lever to influence systems and providers, ensuring alignment with population health needs and preferences.

SUGGESTED ACTIONS

Individual services
• Align different payment methods to avoid overuse, underuse or inappropriate use of services and promote good-quality care.
• Introduce a review system to assess if the use of medicines and diagnostics is in accordance with approved clinical guidelines.
• Use bundled approaches, add-ons, global budgeting or other locally appropriate pay-for-performance methods to encourage care continuity.
• Incorporate total cost of services where all individual hospital care is funded by health insurance or fee for service.
• Regulate to ensure clarity of fee schedules.
• Use reduced payment or non-payment of claims to discourage dual practice providers.
Public health services

- If hospitals provide population-based services, ensure the use of performance-based budgeting.
- Provide policy guidance to exempt fees for selected services that advance priority population health goals or are based on equity-focused criteria.

5.6 FEEDBACK

To maintain standards and achieve improvements in quality, equity, efficiency and resilience, all hospitals must monitor their status and progress using appropriate data, especially for areas that include an element of risk.

Feedback of relevant information can reinforce hospital accountability by creating communication loops, improving both staff and community participation. The various monitoring and reporting channels need to be linked. For instance, patient safety monitoring needs to be tied to accreditation or licensing requirements and reporting. Linking the monitoring of productivity and efficiency can help to improve accountability in the use of resources. Monitoring access and equity can help achieve favourable population health outcomes. Risk monitoring is important to ensure the safety and reliability of care, including during a disaster or climate change-related event or other shocks.

5.6.1 Quality and patient safety monitoring

There is a range of indicators for systematic comparison of the quality of hospital care. Selection and use of appropriate indicators may be challenging. Meaningful assessment of performance requires adequate data-gathering infrastructure such as administrative databases, registries and electronic health records. The system must be structured and operated to ensure the privacy, security, confidentiality and integrity of the information.

SUGGESTED ACTIONS

- Establish minimal quality-of-care benchmarks and link recorded performance to relevant reporting and accreditation, licensing and health financing procedures.
- Establish a system to adopt and update public health standards, health service delivery protocols, clinical practice guidelines and pathways.
- Provide guidance to hospitals on how to collect data for a core list of quality and safety indicators and use this information to assess performance. The information should cover adverse events, pharmacovigilance and clinical risk monitoring.
• Create a system for patients to lodge their suggestions and complaints on services received. Monitor patient complaints and take corrective action.

• Develop a system to monitor professional negligence and misconduct and take appropriate action to prevent recurrences.

BOX 15. Hospital evaluation programme in the Republic of Korea

The Republic of Korea introduced a government-run hospital evaluation programme in 2004. The objectives of the programme are to improve national health-care quality by motivating hospitals to voluntarily improve the quality of care provided, and to satisfy the public’s right to know about the performance of hospitals by publicizing the evaluation results, thereby assisting the public to make informed choices of health-care providers. The programme evaluates all eligible hospitals on a three-year cycle, with each hospital re-evaluated every three years.

The first evaluation cycle was completed in 2006. The programme evaluated 78 general hospitals, each with about 500 beds, in 2004; 79 general hospitals with 260–500 beds in 2005; and 118 general hospitals with 100–259 beds in 2006.

The programme is designed to assess three domains of hospital performance specified by the health law: patients’ rights and convenience, quality of medical procedures and performance, and structure of care in terms of human resources and facilities.

The evaluation results for individual hospitals are published for each domain on a scale from A to D, where A is “excellent” (>90% of the perfect score of 100%), B is “good” (70–89%), C is “fair” (50–69%), and D is “unsatisfactory” (<50%). There is no “pass” or “fail” grade based on any cut-off score. Instead, the public can evaluate the overall rank for the performance of each hospital according to the number of domains with an “A” score.

Source: Kang HY et al. (2009)

5.6.2 Access and equity monitoring

Access and equity monitoring and associated feedback are key components for improving the role of hospitals in achieving UHC.

SUGGESTED ACTIONS

• Incorporate relevant social stratifiers, such as sex, socioeconomic status, ethnicity, rural–urban residence, etc., into relevant indicators (especially those for access, service utilization
and patient experience monitoring) in order to measure hospital performance and guide actions to reduce equity-related gaps.

- Identify the root causes of the access barriers and take appropriate corrective actions.
- Include access and equity monitoring and feedback into decisions related to performance-based payments, services and providers.
- Arrange for hospitals to provide outreach services to improve access in rural and underserved areas for disadvantaged populations and for those with special needs.

5.6.3 Efficiency and productivity monitoring

As major users of health resources, cost containment is an important priority for hospitals. Therefore, increasing efficiency and productivity to obtain value for money has become an important priority.

**SUGGESTED ACTIONS**

- Develop and use a core list of hospital indicators to measure technical and allocative efficiency and productivity. Benchmark performance on these indicators across comparable hospitals.
- Use epidemiological and economic information to guide decisions on investment in high-technology medicines, equipment and devices.
- Link the findings from efficiency and productivity monitoring with financial and other incentives.
- Allow flexibility in financial and human resource management, based on experience, to improve productivity.
- Use monitoring information to review and revise policies on hospital services and staffing.

5.6.4 Risk monitoring for resilience and response

Patients, staff and organizations are exposed to a wide range of risks receiving and providing health care. Hospitals need to assess, develop, implement and monitor risk management plans to minimize and track this exposure. Risk management is more than assessing physical risk during normal operations. It also includes investigating and addressing incidents, examining financial risks, and considering the psychological and human-linked risks to health-care delivery. Another important consideration is resilience, or the consistency of processes or systems in achieving appropriate levels of safety in the face of shocks. Hospital managers need to anticipate and prepare for natural disasters to ensure safe operations during an event.
**SUGGESTED ACTIONS**

- Regularly review hospital performance to assess the nature and degree of risk and take appropriate remedial measures.
- Regularly review and, where applicable, adjust hospital licensing requirements to include key indicators for adequacy of infrastructure, safety and functionality.
- Establish norms for natural disaster-related requirements as they relate to local building codes, hospital licensing and regulation.
- Undertake regular desktop simulation exercises to test the degree of preparedness of health facilities.
- Regularly review and update preparedness and response plans.

**BOX 16. PacNet and LabNet activities in the Pacific islands**

PacNet and LabNet are initiatives of the Pacific Public Health Surveillance Network (PPHSN).

PacNet is PPHSN’s early warning system for disease outbreaks in the Pacific region. If an outbreak occurs, a message must immediately be posted on the PacNet listserv to warn health professionals in the region about the potential threat and to encourage preparedness.

LabNet is a three-level (national, regional and international level) network of laboratories that helps Pacific island countries and areas assess the influenza burden, monitor influenza activity, and develop prevention and control strategies. The network obtains basic epidemiological data and respiratory specimens of patients from hospitals and regional health-care centres and tests the samples in laboratories.

*Sources: Pacific Public Health Surveillance Network (2012a and 2012b)*
6. STRENGTHENING THE CAPACITY TO DRIVE HOSPITAL REFORMS

6.1 BACKGROUND

Achieving and maintaining high-performing hospitals and health systems is a complex task; it requires capacity to set policy and lead actions for improved planning and management. The health sector needs to expand its skills and strengthen existing capabilities to bring about change. The health sector also needs the institutional capacity to anticipate and respond to change in a timely manner, at both the system and facility level.

The sections below provide a list of capacities and competencies needed at the system and facility level. Countries can select priorities from this list, based on the health system context and resources available.

6.2 CAPACITY AT THE SYSTEM LEVEL

Governments, especially the ministry of health, need to have a clear policy related to the role of hospitals in achieving the country’s health goals, and the relationships of hospitals to other parts of the health system. Governments should have capacity to analyse the current situation, identify policy needs, and then design and implement suitable policy
initiatives. Good information is needed to guide policy formulation and to thoroughly understand the impact of current policies and future needs (see Fig. 5).

**FIG. 5.** Capacity needs at the system level

6.2.1 Policy and situation analysis

Hospital planning occurs in a dynamic environment of changing community expectations, government priorities and technological advances. Policy development and planning should be based on a comprehensive analysis of the current situation, supplemented by planning that takes account of the anticipated changes and knowledge of the experience of similar countries.

**SUGGESTED COMPETENCIES**

- Know how to identify data needs and to compile, analyse, communicate and use information to maximize the role of hospitals in advancing UHC.
- Understand the use of quantitative and qualitative information\(^3\) to guide hospital planning.
- Be aware of current trends in medical technology and clinical practice as well as emerging public health problems.
- Know how to conduct, or commission, epidemiological and economic modelling for scenario- and evidence-informed planning, performance and policy analysis.
- Be able to engage with stakeholders and partners to understand different perspectives on the current situation and needs.

\(^3\) Quantitative information includes socio-demographic, economic, epidemiological, health status and health service data. Qualitative information includes needs, perceptions and preferences of stakeholder groups, including patients and communities.
6. STRENGTHENING THE CAPACITY TO DRIVE HOSPITAL REFORMS

SUGGESTED ACTIONS

• Analyse hospital performance based on factors such as population health, treatment outcomes, clinical quality, appropriateness of care, responsiveness, equity and productivity. Use the analysis to improve policy and service design.
• Evaluate hospital service utilization to identify reasons for unplanned admissions and readmissions. Introduce interventions to reduce avoidable admissions, such as risk prediction tools, structured planning for discharge, and advanced care, care coordination, outreach, telemedicine and self-management.
• Monitor service use by socially disadvantaged groups as a key indicator of hospital performance. Identify gaps and develop initiatives to reduce barriers to access.
• Conduct participative review of hospital procedures to improve efficiency and productivity.
• Introduce measures to increase accountability and encourage friendly competition with incentives for improved performance.

6.2.2 Policy planning and design

Governments in their stewardship role have a number of tools at their disposal. These include financial levers and regulatory approaches, as well as direct and indirect communication channels to inform, persuade and listen to stakeholders. Governments and senior managers need to have capacity to use these tools effectively to obtain the desired health and social outcomes. Governments need to strengthen their role in regulation, sector planning, standard setting, and performance monitoring of public and private hospitals. This will require strong coordination between all parts of the government that have policy levers for the health sector.

SUGGESTED COMPETENCIES

• Ability to formulate evidence-informed policies and adapt service elements in response to changing population health needs.
• Understand the use of legal measures including regulation to improve the quantity, quality, safety and distribution of services within health systems.
• Ability to use financial levers to optimize quality and contain costs, develop business plans and build the case for investments in hospital services.
• Ability to plan and manage staffing needs of the hospital sector.
• Understand the advantages and disadvantages of different regulatory and financial approaches in improving planning and management of hospitals.
• Ability to plan for equitable access to hospital services.
SUGGESTED ACTIONS

- Adjust the delivery of hospital services to changing patterns of need and use of services. Adopt a medium- to long-term perspective to improve the health of targeted populations, taking account of emerging trends in service delivery and new policy initiatives.
- Take action to build the capability of policy-makers and managers to develop, implement and evaluate laws, using public health, legal and financial expertise.
- Take steps to develop the capacity of regulatory authorities – in terms of finances, human resources and logistics – to align and coordinate the implementation of their responsibilities.
- Clarify the roles of different stakeholders, with clear separation of the tasks of funders, purchasers and providers.
- Use strategic purchasing for investment in infrastructure, staff, pharmaceuticals and technology in order to promote service efficiency, affordability and sustainability.
- Develop a health workforce plan that includes generalist as well as specialist skills, uses team-based approaches, promotes flexibility in task allocation, and strengthens succession planning, supervision and staff retention.
- Link hospital planning to other governance functions such as budgeting and regulation of facilities and providers, with particular attention to disadvantaged groups.
- Collect, analyse and use data on population health needs and perspectives for evidence-informed, hospital planning and management in collaboration with key ministries and departments.

6.2.3 Implementation and change management

Hospitals need to prepare themselves to provide a breadth of services to meet the changing health-care environment demands. Fiscal pressure can stimulate adoption of measures to reduce costs and improve efficiency in hospitals. Financial levers can be used to increase quality, patient safety and overall hospital performance. A competent and engaged workforce is critical for this purpose.

SUGGESTED COMPETENCIES

- Ability to use information for forecasting and scenario-based planning, and to develop strategies and solutions to adapt and cope with new trends.
- Ability to monitor and evaluate the effectiveness of current policy interventions and make appropriate adjustments.
- Ability to use different communication channels to reach key audiences.
- Ability to engage with different external agencies to review progress and advocate for change management.
6. STRENGTHENING THE CAPACITY TO DRIVE HOSPITAL REFORMS

SUGGESTED ACTIONS

- Select and institutionalize policy levers such as financial incentives, use of competition, contracting and commissioning, and enforcement of organizational and professional norms to improve hospital performance.
- Closely monitor hospital performance to assess impact, including on population health outcomes, and make adjustments over time. Anticipate areas of poor performance and develop contingency strategies around financing, staff and political support.
- Educate and retrain staff in multidisciplinary assessment and change management approaches, care delivery and coordination, and quality improvement. Identify and foster change champions.
- Map the accountability of identified links with non-state providers and assess the capacity to exercise oversight and sanctions.
- Invest in health information infrastructure; develop standards for data content and transmission; and encourage integration or harmonization of health information systems. Facilitate information sharing among stakeholders to promote communication and reduce duplication.
- Use information to assess performance outcomes (accountability, efficiency, quality, equity, sustainability and resilience), plan and implement interventions based on identified gaps, and increase transparency in reporting on hospital performance.

6.3 CAPABILITIES AT THE FACILITY LEVEL

At the facility level, hospital management teams must be capable of assessing and improving the quality and efficiency of day-to-day operations of hospitals. Effective leadership is needed to manage finances, lead and support staff, and develop partnerships (see Fig. 6).

6.3.1 Leadership

Effective leaders can influence organizational behaviour and culture through commitment, encouragement and modelling of appropriate behaviours.

SUGGESTED COMPETENCIES

- Managerial skills and experience related to change management, human resources and financial management, service quality and patient safety, information systems and communication, emergency preparedness and external relations.
• Ability to articulate the vision, mission and goals in order to give clear direction, purpose and benchmarks for the hospital.
• Ability to create a supportive and conducive work culture in the hospital.

**SUGGESTED ACTIONS**

• Provide a clear outline of the vision, mission and goals for the hospital.
• Lead a management team that provides a supportive environment for staff.
• Identify and respond to training needs, using methods such as modular training, mentoring and coaching, shadowing and observing, hospital site-visits, and institution twinning arrangements.
• Develop systems for continuing education and training for ongoing organizational learning, employee evaluation and career development.
• Incentivize training in hospital management by requiring hospital management competencies for professional advancement in order to create a new generation of leaders.

### 6.3.2 Planning and operations

Management skills are important for the successful operation of hospitals. Ineffective management can compromise quality and safety and exacerbate operational inefficiencies, revenue loss, service delays and patient dissatisfaction.
SUGGESTED COMPETENCIES

- Ability to use levers such as increased managerial flexibility, financial incentives, stringent internal controls and accurate financial reporting to improve effectiveness, efficiency and quality of operations.
- Know how to link services with financial and staff planning.

SUGGESTED ACTIONS

- Provide opportunities to professionalize management and improve managerial practices in hospitals, including financial accounting, clinical governance, operational management, maintenance of equipment, staff productivity and performance, and patient flows.
- Build the capacity and skills of administrative and clinical managers to mobilize resources and implement good practices towards agreed goals, values or outcomes.
- Coordinate across departments to plan, prioritize and forecast logistics, optimize use of resources, procurement and replenishment of supplies (including through sharing or bulk purchasing), and reduce waste.
- Improve operational efficiency by streamlining patient flows, supplies and logistics.
- Identify and address staffing gaps in areas such as biomedical engineering, health informatics, infection prevention and control, and patient safety and quality.

6.3.3 Financial and business management

In the context of fiscal constraints, hospital managers need to be able to control costs through strategic use of available resources and operational efficiency.

SUGGESTED COMPETENCIES

- Understand hospital accounting systems, and know how to prepare, maintain and use balance sheets, statements of account, etc.
- Ability to align budgets with the cost of service provision to maintain coherence in financing and service delivery.
- Understand the use of provider payment mechanisms to create value-based systems that support equitable, people-centred and integrated care.

SUGGESTED ACTIONS

- Prepare a business plan showing how the hospital plans to achieve its strategic objectives, including implementation of a standard chart of accounts.
- Introduce appropriate financial delegation for procurement and other financial approvals.
- Develop a sound system of performance measurement to implement incentives.
6.3.4 Quality and patient safety

Service quality and patient safety are the cornerstones of a high-performing hospital. Improving quality and safety requires a continuous quality improvement approach to evaluate current practices, avoid medico-legal risks, and improve systems and processes towards desired outcomes.

**SUGGESTED COMPETENCIES**

- Ability to use clinical governance to continuously improve the quality of care and maintain high standards (including dealing with poor professional performance).
- Capacity to review clinical performance of professional staff and identify areas for improvement.
- Capacity to regularly review patient care pathways to identify bottlenecks and improve processes and systems.
- Capacity to conduct or commission clinical research and adopt evidence-based clinical care pathways.

**SUGGESTED ACTIONS**

- Use clinical guidelines and care protocols to assist health-care providers and patients in deciding appropriate treatment for specific conditions.
- Create a learning organization where providers are encouraged to address even minor incidents and “near misses” in order to analyse problems and identify solutions.
- Regularly undertake root cause analysis to identify factors contributing to poor clinical performance and take appropriate corrective actions.
- Implement regular reporting of medication use, adverse events, and infection prevention and control. Review the reports and undertake necessary remedial actions.
- Strengthen the role of hospitals in education and training of health professionals.
- Adopt minimum standards for water, sanitation and hygiene.

6.3.5 Human resource management

Hospitals must recruit and retain competent staff who can work in multidisciplinary teams to provide equitable, people-centred care.

**SUGGESTED COMPETENCIES**

- Ability to use task shifting and other strategies to align staff skills with workload and needs.
- Ability to use performance incentives to increase staff productivity.
- Ability to manage staff expectations and needs.
SUGGESTED ACTIONS

- Develop a health workforce plan that corresponds to current and evolving health service needs.
- Institutionalize continuous learning and improvement, supported by measurement and feedback.
- Allocate resources for staff to expand their skills in accordance with preparedness and response plans and their individual career development plans.
- Promote a positive work environment, staff recognition and rewards, and create worker-management dialogue for better staff productivity and retention.

6.3.6 Information management

It is essential to know if the hospital is achieving its objective of providing equitable access to good quality and safe health services. Therefore, resources must be allocated to build and maintain infrastructure and personnel capacity to generate and use information on key aspects of the hospital’s performance. The information needs to flow in many directions – including from bottom to top, with feedback in the opposite direction, to preclude gaming behaviour and also to promote informed decision-making by providers and patients.

SUGGESTED COMPETENCIES

- Ability to identify data needs and to analyse, monitor, present and learn from information on performance, safety and quality.
- Ability to understand and analyse clinical data, including documentation and coding.
- Ability to analyse financial data pertaining to hospital budget, costs and efficiencies.

SUGGESTED ACTIONS

- Apply integrated and/or linked information systems to coordinate care within and across health facilities.
- Set performance measures for the hospital. Regularly collect, analyse and use information from indicators of financing, human resources, workload and patient flow to monitor performance, identify issues and improve operations.
- Develop infrastructure, standard operating procedures and skills in internal monitoring, follow-up and evaluation to improve hospital accountability and performance.
- Use routine management reporting to improve hospital operations.
- Use standardized coding systems, such as the International Classification of Diseases, to improve processing, analysis and comparability of clinical data.
- Integrate different hospital surveillance systems to optimize notifiable disease activities and provide tools to measure improvements in service quality.
6.3.7 Partnerships and community relations management

Hospitals are social institutions in which people invest their trust. Public perceptions of hospital services can provide legitimacy to hospitals and influence people’s health-seeking behaviour or adherence to clinical advice. Strengthening engagement with patients, communities and other stakeholders can improve a hospital’s performance as well as its reputation or standing in the community.

**SUGGESTED COMPETENCIES**

- Interpersonal skills and social and cultural competence to communicate effectively with patients, families, communities and other stakeholders.
- Ability to use patient feedback data to improve service design, quality, safety and patient satisfaction.

**SUGGESTED ACTIONS**

- Develop mechanisms, such as patient committees, to engage meaningfully with patients, families and communities in improving hospital services, as well as to understand and respond to their cultural needs and expectations.
- Consider ways to incentivize health-care providers to adopt a people-centred approach in care delivery.
7. MOVING FORWARD

Hospital systems in the Western Pacific Region vary considerably. The differences are the result of geographic, demographic and economic factors as well as institutional legacies, constitutional arrangements, government intervention in health, stakeholder constellations and power distribution. However, there are also some commonalities, most evident when Member States are grouped into four categories – advanced economies, transitional economies, highly decentralized countries and small island developing states. Within each category, the health systems share some fundamental characteristics and face broadly similar constraints. However, these are not completely mutually exclusive categories, and there may be some overlap.

Irrespective of differences, improving hospital planning and management remains an important part of the global and regional discourse on UHC and the Sustainable Development Goals. In many Member States, change is already under way, offering useful lessons for others. Member States’ efforts are bringing about a shift towards integrated care, stronger emphasis on primary care, evidence-based care pathways and protocols, the use of health technology assessments, and judicious use of payment and incentive mechanisms.

The way forward builds on lessons learnt from these efforts. Achieving the needed change requires an overall vision and a systems perspective, incorporating a continuum of care approach, with an appropriate mix of public health and health service interventions. It also requires adequate resources, policy support to develop a competent workforce, investments to upgrade and standardize information systems for wider information sharing, and improved governance mechanisms, including the engagement of patients, families and communities.
This Regional Action Framework is intended to assist Member States in identifying practical actions and strategic areas for policy consideration at the system and facility levels, for adaptation and implementation within each country’s context, and in line with the country’s own UHC road maps. The goal is to enable hospitals, as microcosms of the health system and as major users of health resources, to contribute more towards overall system improvements in accountability, efficiency, quality, equity, and sustainability and resilience – the five attributes of a high-performing health system.

Although there is no single journey for hospital transformation, there are some common decision points (see Fig. 7). The following menus may guide choices for policy development and actions for hospital improvement in the four groups of countries.

**FIG. 7. Menu of priorities for each country group**

<table>
<thead>
<tr>
<th>A. ADVANCED ECONOMIES</th>
<th>B. TRANSITIONAL ECONOMIES</th>
<th>C. SMALL ISLAND DEVELOPING STATES</th>
<th>D. HIGHLY DECENTRALIZED COUNTRIES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost control</strong></td>
<td><strong>Health service planning</strong></td>
<td><strong>Health service planning</strong></td>
<td><strong>Governance</strong></td>
</tr>
<tr>
<td><strong>Equity in service delivery</strong></td>
<td><strong>Hospital quality</strong></td>
<td><strong>Hospital quality</strong></td>
<td><strong>Information and management capacity</strong></td>
</tr>
<tr>
<td><strong>New technologies</strong></td>
<td><strong>Accountability</strong></td>
<td><strong>Accountability</strong></td>
<td><strong>Hospital resource use and performance management</strong></td>
</tr>
<tr>
<td><strong>Hospital resource use and performance management</strong></td>
<td><strong>Efficiency</strong></td>
<td><strong>Efficiency</strong></td>
<td><strong>Equity in service delivery</strong></td>
</tr>
</tbody>
</table>

**A. ADVANCED ECONOMIES**

**Cost control**

- Enhance the leverage of public funding flows for reform and improvements by:
  - implementing alternative payment systems for public hospitals, such as global budgets linked to performance, to replace line-item budgets, and build in incentives for quality and efficiency enhancement; and
  - improving contractual arrangements that specify the volume and type of services and priority targets, linking a proportion of the payment to performance, and building in incentives to comply with agreed targets.
- Introduce incentives to encourage team-based and people-centred approaches to service delivery.
- Enhance fiscal discipline and increase budget transparency and accountability.
- Address the high volume of hospital services by adapting and shifting suitable care processes to ambulatory settings and primary-care facilities.
• Undertake further analytical studies on hospital efficiency and costs to better inform efficiency improvement policies in hospitals.

**Equity in service delivery**
• Focus on identifying and reaching those who bear the heaviest burden of illness and suffering but have limited access to the resources and services they need.
• Assure confidentiality and promote patients’ rights to access their records, including information on diagnosis and all biomaterials.
• Introduce systemic changes to improve shared decision-making in patient care, including, for example, routine use of patient decision aids, reimbursement of the costs of preferred services and organizational incentives aligned to shared decision-making.

**New technologies**
• Strengthen systems for technology assessment and rational resource allocation.

**B. TRANSITIONAL ECONOMIES**

**Health service planning**
• Develop health service plans that rationalize supply and distribution of hospital services, including, where feasible, relocation of specific services closer to patients’ homes, along with investment to strengthen the scope, coverage and quality of primary care, linked to the hospital system.
• Design and implement service packages and standards for each level of care, in line with population needs, incorporating greater coordination of care across facilities and services.
• Strengthen policy-based financing for hospitals on the basis of regulatory approval or health service plans.

**Hospital quality**
• Develop and implement multipronged strategies to improve quality, based on systems for continuous quality improvement, mandatory licensing and regulation of facilities and providers, agreed quality standards, evidence-based care pathways, clinical governance, quality monitoring and incident reporting, and food safety management.
• Maximize the utilization of existing health staff through enhancement of professional competencies, including task shifting and the adoption of new and revised professional profiles, in accordance with health system needs.
• Provide opportunities for patients, families and communities to engage and give feedback on the patient journey, for example, through patient experience surveys.

**Accountability**
• Develop strategies, regulatory frameworks and implementation plans that offer some facility-level flexibility in managing finances and human resources, with output and outcome monitoring.
• Develop the capacity of regulatory authorities – in terms of finance, human resources and logistics – for effective monitoring of the performance of both public and non-state providers, including imposition of sanctions where needed.

• Formalize mechanisms for engagement with non-state providers to harness private sector resources towards achieving national public health goals.

• Design or adapt performance measurement systems to manage and improve hospital performance.

**Efficiency**

• Establish clear rules and regulations for accountability, monitoring, and effective rewards and sanctions that will encourage hospital efficiency.

• Reform regulations in order to align funding with established priorities, contain cost, enhance fiscal discipline, foster payment system consistency, and generate efficiency incentives for hospitals and managers.

**Hospital resource use and performance management**

• Build the capacity of hospital managers to plan, organize and manage the delivery of services both internally and in coordination with the service delivery network, including non-state providers.

### C. SMALL ISLAND DEVELOPING STATES

**Health service planning**

• Develop health service plans that rationalize hospital supply, including sharing of norms, services, skills and resources across countries, as needed; relocation of specific services closer to patients’ homes; and investments to strengthen primary care coverage and quality.

• Design and implement service packages and standards for each level of service delivery, aligned with population health needs, including pathways based on coordination of care across facilities and services.

• Strengthen policy-based investment and financing of hospitals, linked to regulatory approval or approved service plans. Use fair and transparent priority-setting practices to allocate resources in health systems and health-care institutions.

• Plan to create a balanced health workforce with capacity to provide medical and health support services by upgrading the skills of local staff and providing continuing professional development opportunities.

**Hospital quality**

• Develop or adapt national and regional benchmarking and public report card systems focused on efficiency and quality to build a culture of excellence and quality improvement.

• Evaluate the skills of hospital teams, including assessment of the skills mix, shortages and mismatches. Prioritize coaching and mentoring to realign skills to match service package requirements.

• Arrange for patients, families and communities to engage and give feedback on the patient journey, for example, through patient experience surveys.
Accountability

- Strengthen hospital information systems for effective management and planning, control of resources, and monitoring of hospital performance.
- Develop and promulgate laws and regulations, as well as regulatory implementation capacity, and share information on hospital performance.

Efficiency

- Develop or adapt a system for technology assessment, with criteria and methodology for setting priorities in technological resources.
- Review or develop standards for allocating human resources in hospital care to identify opportunities to manage hospital staff costs.

Hospital resource use and performance management

- Build the skills and capacity of hospital managers in leadership, resource planning and management, operational management, safety and quality improvement, and improved clinical governance.

D. HIGHLY DECENTRALIZED COUNTRIES

Governance

- Develop strategies for rationalizing the network of hospital services.
- Combine some budgetary decentralization with increased financial responsibility for subnational authorities and local governments, while maintaining oversight and support.
- Build the capacity of subnational authorities in service planning, development of new strategies, and financing and resource allocation methods.
- Strengthen hospital governance arrangements, including regulatory reform and enforcement, strengthening of contracting, and stimulation of competition where appropriate.

Information and management capacity

- Make use of information technology to support performance and outcome measurement, costing and financial analysis, access to clinical information, clinical decision-making, and coordination of health-care organizations and teams.
- Strengthen monitoring and evaluation systems, particularly for nationwide hospital benchmarking.

Hospital resource use and performance management

- Support the modernization of management structures and practices in public and non-state hospitals.
- Build the skills and capacity of hospital managers in planning and managing the delivery of services both internally and in coordination with the service network.
Equity in service delivery

• Focus on reaching people with the heaviest burden of illness and suffering but the most limited access to the resources and services they need.
• Put in place informed consent mechanisms at all levels of service delivery.
• Create patient committees to share consumers’ points of view, perspectives and experiences of the patient journey.

7.1 THE WAY FORWARD FOR MEMBER STATES

Member States will:

— Implement health service plans based on country-specific UHC roadmaps and the principles of primary care and equitable, integrated, people-centred services, which clarify and coordinate the roles and services of public and non-state providers within the service delivery network, including the hospital sector.

— Define the role and services of hospitals based on the priorities outlined in national health policies, strategies and plans, balancing public health and health service interventions.

— Allocate resources, including financial and human resources and technology, to promote efficiency and accountability of hospital services.

— Improve quality of hospital services by introducing appropriate regulatory frameworks and innovative financing mechanisms.

— Strengthen hospital management by establishing qualifications for hospital managers and arranging capacity-building to improve their effectiveness and efficiency.

— Monitor hospital performance based on agreed indicators, and encourage sharing of this information.

— Engage patients, families and communities in hospital governance, including through feedback mechanisms to improve quality and safety of care.
7.2 THE WAY FORWARD FOR WHO IN THE REGION

WHO in the Region will:

— Continue to support Member States, at their request, to improve hospital planning and management.

— Provide implementation advice and/or assistance in coordination with national and international partners and stakeholders.

— Synthesize and share available evidence on key policy levers for sustained improvements in hospital planning and management.

— Facilitate the development of a set of hospital performance indicators with field testing in selected countries.

— Foster cross-country learning and exchange of experiences through regional and country-specific policy dialogue, as appropriate.
8. CONCLUSION

Member States of the WHO Western Pacific Region – advanced economies, transitional economies, highly decentralized countries and small island developing states – have a commitment to achieve UHC. Hospitals are a major, essential component of service delivery and must be one cornerstone of efforts to build sustainable and effective health systems. Member States can improve hospital planning and management through a range of priority policies and actions suitable for their own UHC road maps, as well as their socioeconomic context and political environment. The Regional Action Framework provides a menu of policy and activity options as a contribution to this important endeavour. These have been implemented in many Member States and can usefully be adapted by others, based on their specific contexts.
REFERENCES


REFERENCES


## Annex 1. Key hospital data by country

### Table A1.1. Number of hospitals, public and private, selected countries

| COUNTRY                                    | per 100 000 population | Year | Total  | Year | Public | Year | Private | Year | Total  | Year | Public | Year | Private | Year |
|--------------------------------------------|------------------------|------|--------|------|--------|------|---------|------|--------|------|--------|------|---------|------|--------|
| Australia                                  | 1 322                  | 2014 | 698    | 2014 | 624    | 2014 |         |      |        |      |         |      |         |      |        |
| Brunei Darussalam                          | 1.44                   | 2013 | 6      | 2013 | 4      | 2013 | 2       | 2013 |        |      |         |      |         |      |        |
| Cambodia                                   | 0.57                   | 2013 | 126    | 2017 |         |      |         |      |        |      |         |      |         |      |        |
| China                                      | 25 860                 | 2014 | 13 850 | 2010 | 7 068  | 2010 |         |      |        |      |         |      |         |      |        |
| Cook Islands                               | 13.3                   | 2017 | 2      | 2017 | 2      | 2017 | 0       | 2017 |        |      |         |      |         |      |        |
| Fiji                                       | 26                     | 2015 | 23     | 2015 | 3      | 2015 |         |      |        |      |         |      |         |      |        |
| Japan                                      | 8 480                  | 2015 | 1 556  | 2015 |         |      |         |      |        |      |         |      |         |      |        |
| Kiribati                                   | 4                      | 2016 | 4      | 2016 | 4      | 2016 | 0       | 2016 |        |      |         |      |         |      |        |
| Lao People's Democratic Republic           | 2.25                   | 2013 |        |      |         |      |         |      |        |      |         |      |         |      |        |
| Malaysia                                   | 0.47                   | 2013 |        |      |         |      |         |      |        |      |         |      |         |      |        |
| Marshall Islands                           | 3.8                    | 2013 |        |      |         |      |         |      |        |      |         |      |         |      |        |
| Micronesia, Federated States of            | 4.89                   | 2013 |        |      |         |      |         |      |        |      |         |      |         |      |        |
| Mongolia                                   | 2.5                    | 2013 |        |      |         |      |         |      |        |      |         |      |         |      |        |
| Nauru                                      | 9.95                   | 2013 |        |      |         |      |         |      |        |      |         |      |         |      |        |
| New Zealand                                | 165                    | 2015 | 85     | 2015 |         |      |         |      |        |      |         |      |         |      |        |
| Niue                                       |                        |      |        |      |         |      |         |      |        |      |         |      |         |      |        |
| Palau                                      |                        |      |        |      |         |      |         |      |        |      |         |      |         |      |        |
| Papua New Guinea                           | 1.57                   | 2013 |        |      |         |      |         |      |        |      |         |      |         |      |        |
| Philippines                                | 1.81                   | 2013 | 1 781  | 2007 |         |      |         |      |        |      |         |      |         |      |        |
| Republic of Korea                          | 3.42                   | 2013 | 3 678  | 2015 | 212    | 2015 |         |      |        |      |         |      |         |      |        |
| Samoa                                      | 4.2                    | 2013 |        |      |         |      |         |      |        |      |         |      |         |      |        |
| Singapore                                  | 0.5                    | 2013 |        |      |         |      |         |      |        |      |         |      |         |      |        |
| Solomon Islands                            | 2.13                   | 2017 | 11     | 2017 | 11     | 2017 | 0       | 2017 |        |      |         |      |         |      |        |
| Tonga                                      | 4                      | 2017 | 4      | 2017 | 4      | 2017 | 0       | 2017 |        |      |         |      |         |      |        |
| Tuvalu                                     | 10                     | 2016 | 1      | 2016 | 1      | 2016 | 0       | 2016 |        |      |         |      |         |      |        |
| Vanuatu                                    | 1.37                   | 2017 | 4      | 2017 | 4      | 2017 | 0       | 2017 |        |      |         |      |         |      |        |
| Viet Nam                                   | 1 124                  | 2014 |        |      |         |      |         |      |        |      |         |      |         |      |        |
### Table A1.2. Number of hospital beds, public and private, selected countries

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### Table A1.3. Estimated expenditure on hospitals, selected countries

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Notes: Data are from WHO’s Global Health Expenditure Database (http://apps.who.int/nha/database/Select/Indicators/en. accessed 11 April 2019)
* GDP: gross domestic product
+ Data are from National Annual Health Reports ++ Data from government representatives
+++ Number includes spending on nursing and residential care facilities
### Annex 2. Quality and safety standards of selected countries and areas in the Region

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<th>Country or area</th>
<th>Policies and documents for quality of care</th>
<th>Specific quality or safety targets with set timelines</th>
<th>Organizations responsible for quality of care</th>
<th>Technology assessment study for medical devices</th>
<th>Standards on safe blood use</th>
<th>Assessment studies on drugs</th>
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