

Health SYSTEMS

ATHYNA.EDUCATION

"If access to health care is considered a human right, who is considered human enough to have that right?" Dr. Paul Farmer

Partnership with Patients by Regina Holliday



DR. SHARUNA VERGHIS

LEARNING OUTCOMES

By the end of the lecture and tutorial, students should be able to:

1. Describe the building blocks of health systems
2. Identify key healthcare financing models
3. Identify key components of the Australian health system
4. Discuss the importance of 'systems thinking' in health system and the role of adverse patient outcomes in the improvement of healthcare delivery

This E-Book should be reviewed alongside the lecture videos and the *required reading* materials. This PDF is interactive. Please click on the links to navigate through the E-Book content.

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CONCEPTS

HEALTH SYSTEM

All organizations, people, and actions whose primary intent is to promote, restore, or maintain health (WHO, 2007).

HEALTHCARE SYSTEM

The part of the health system focused mainly on the organization and delivery of personal health care services (Hillger, 2008).

WHO HEALTH SYSTEM BUILDING BLOCKS

Six core components of a health system including service delivery, health workforce, health information systems, medical products, vaccines and technologies, financing, and leadership/governance (WHO, 2007).

UNIVERSAL HEALTH COVERAGE

All people can access the health services they need without suffering financial hardship, and the care they receive is effective and of sufficient quality (WHO, 2010).

OUT-OF-POCKET PAYMENTS

The direct costs people pay themselves at the time of using health services. These costs are not covered by prepayment or insurance (WHO, 2010).

SYSTEMS THINKING IN HEALTH SYSTEMS

An approach that views the health system as a set of interconnected components, focusing on their relationships, feedback loops, and dynamic behavior to design and evaluate interventions (WHO, 2009).

ADVERSE PATIENT OUTCOME (IN SYSTEMS THINKING)

An injury, complication, or harm associated with health care that is used as a signal to identify underlying system weaknesses and guide improvement (de Savigny & Adam, 2009; Machen, 2023).

INTRODUCTION

Health systems have played a major role in rising life expectancy and better health outcomes throughout the twentieth and twenty first centuries. These systems encompass not only individual health services delivered in clinical settings but also public health interventions such as vector control campaigns, anti-tobacco initiatives, and the promotion of healthy lifestyles (WHO, 2007). The COVID-19 pandemic highlighted the critical need for resilient, interconnected health systems both within and between countries, bolstered by seamless intersectoral collaboration to navigate and mitigate global health crises effectively (WHO, 2021).

Understanding health systems requires moving

beyond a narrow focus on healthcare delivery to individuals. A health system is broader than a healthcare system. While healthcare systems typically focus on the delivery of medical care to individuals, health systems are concerned with healthcare delivery as well as the wider social determinants of health that shape population health outcomes (Kruk et al., 2018).

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HEALTH
SYSTEMS

HEALTH SYSTEMS

Goals & Building Blocks

WHAT IS A HEALTH SYSTEM?

The World Health Organization defines a health system as "all organizations, people, and actions whose primary intent is to promote, restore, or maintain health" (WHO, 2007, p. 2). This definition emphasizes that health systems include everybody, every process, and every action involved in improving health. The scope extends from clinical care providers to policymakers, from essential medicines supply chains to health information systems, and from community health workers to national governance structures.

GOALS OF HEALTH SYSTEMS

The overarching goals of a health system identifies several interrelated goals that effective health systems should pursue (WHO, 2007):

Improved health outcomes:

Health systems should demonstrably improve the health status of populations through effective prevention, treatment, and rehabilitation services.

Equity in access: Services should be accessible based on need, not ability to pay, ensuring that vulnerable and marginalized populations receive care.

Responsiveness: Health systems should be responsive to people's legitimate expectations regarding how they are treated, respecting dignity, autonomy, confidentiality, and timely attention to their needs.

Financial protection:

People should be protected from financial catastrophe or impoverishment due to healthcare costs. Out-of-pocket payments should not drive households into poverty.

Efficiency: Health systems should optimize scarce resources to achieve the best possible health outcomes, minimizing waste, corruption, and inefficiency.

Achieving these goals requires that different components of the health system work together in a coordinated and integrated manner.

THE SIX BUILDING BLOCKS OF HEALTH SYSTEMS

To achieve the goals outlined above, WHO conceptualizes health systems as comprising six interrelated building blocks (WHO, 2007). These building blocks, working together, provide the foundation for equitable, efficient, and responsive care that improves population health. The six building blocks are:

Service Delivery

Service delivery involves the provision of essential, quality health services to individuals and communities, focusing on preventive, curative, promotive, and rehabilitative care. A well-functioning service delivery system ensures that services are accessible, safe, effective, and patient-centered (WHO, 2010). Key considerations include geographic coverage, quality of care, safety, and integration across levels of care (primary, secondary, and tertiary).

Health Workforce

The health workforce is defined as all people engaged in actions whose primary intent is to protect and improve health. This broadly includes health service providers, as well as

health management and support workers. It encompasses both private and public sector health workers, unpaid and paid workers, and both lay and professional cadres. A well-performing health workforce must be sufficient in number, appropriately distributed geographically, adequately trained and competent, motivated, and supported by enabling working conditions. Human resource management policies, continuous professional development, and effective regulation are essential to ensure workforce performance and accountability (WHO, 2007).

Health Information Systems

Health information systems ensure the production, analysis, dissemination, and use of reliable and timely health-related information to guide decision-making, monitor health trends, and evaluate health system performance (WHO, 2023). Effective information systems support evidence-informed policy, resource allocation, disease surveillance, and accountability. They facilitate tracking of health determinants, service coverage, quality, and health outcomes, enabling health systems to respond

rapidly to emerging challenges.

Medical Products, Vaccines, and Technologies

Ensuring availability, affordability, quality, and appropriate use of essential medicines, vaccines, diagnostics, and health technologies is crucial for treating diseases and promoting health (WHO, 2025). A well-functioning system in this area includes robust regulatory frameworks for drug safety and efficacy, national essential medicines lists, transparent procurement systems, rational prescribing practices, and supply chain management to prevent stockouts and wastage.

Health Financing

Health financing refers to the mechanisms used to raise, pool, and allocate funds for health services, ensuring that everyone can access needed healthcare without suffering financial hardship (WHO, 2010). Key functions of health financing include revenue collection (how money is raised from households, businesses, and external sources), pooling (how revenues are accumulated and managed to spread health risks), and purchasing (how

services are bought, from whom, and at what price). Effective health financing promotes universal health coverage, reduces reliance on out-of-pocket payments, and ensures equitable and efficient use of resources.

Leadership and Governance

Leadership and governance provide the strategic policy direction, oversight, regulation, and accountability essential for effective health system functioning (WHO, 2007). Good governance involves transparent decision-making, stakeholder participation, coordination across sectors and levels of government, and stewardship to ensure that health resources are used effectively and equitably. Leadership ensures that health system goals are clearly articulated, that roles and responsibilities are defined, and that there is accountability for performance and outcomes.

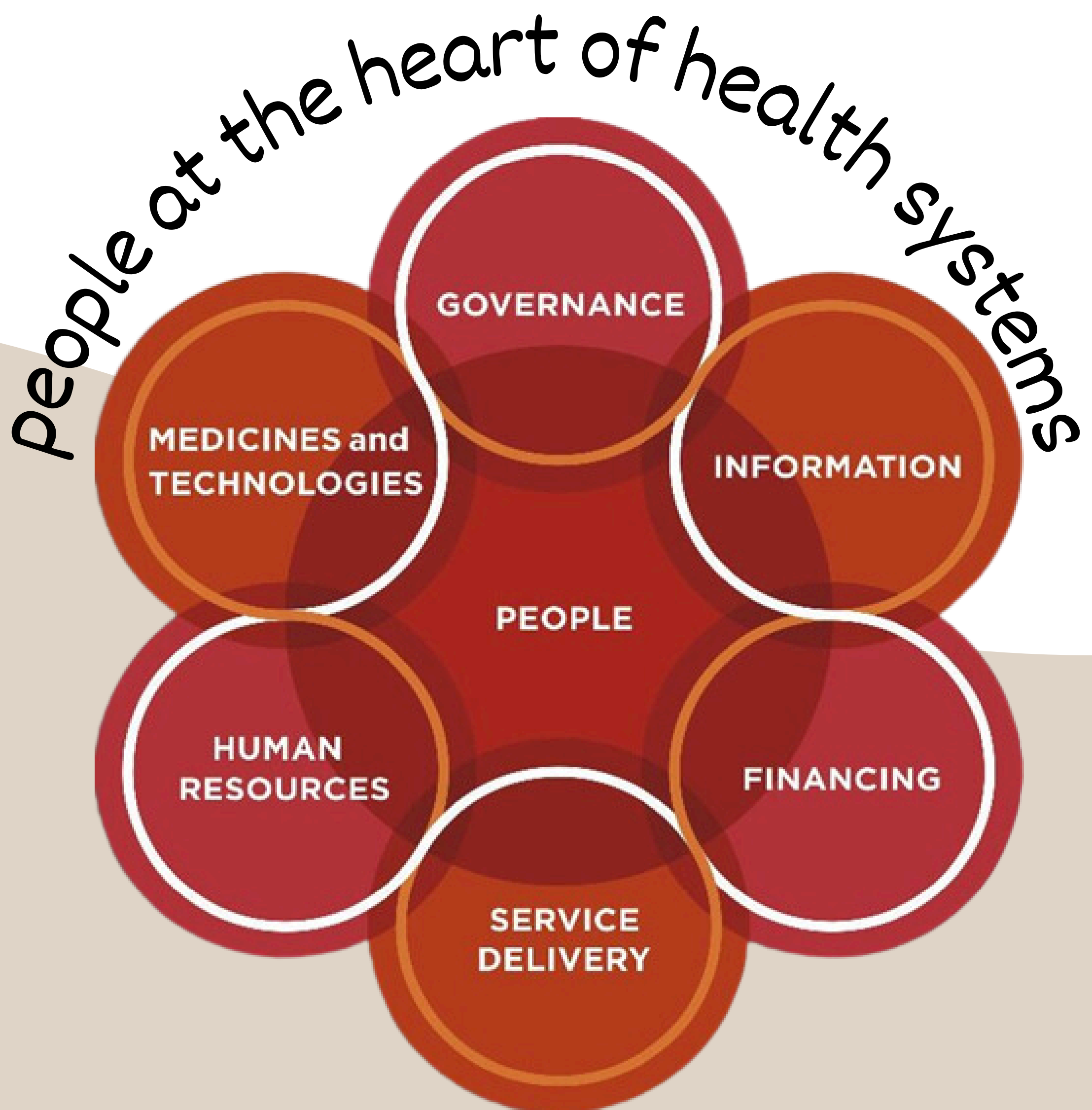
Inter-linkages of the Building Blocks

These building blocks do not function in isolation. Effective health systems depend on synergy and interaction across all six components. For example,

service delivery depends on a trained and motivated workforce, adequate financing, reliable information systems, and availability of essential medicines. Weak performance in one building block can undermine the entire system. Conversely, strengthening one area can create positive ripple effects across others. This interconnected nature of health systems is central to the concept of systems

thinking, which will be explored again later in this eBook.

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HEALTHCARE FINANCING MODELS



Access based on need or ability to pay?

WHY HEALTHCARE FINANCING MATTERS

Healthcare financing models describe how resources to use health services are raised, pooled and paid to providers, and these arrangements strongly influence who can obtain care, how much financial protection they enjoy, and ultimately population health outcomes (WHO, 2010). Understanding these models is critical to pursuing health equity and is guided by principles of fairness, solidarity, and the collective pursuit of well-being.

Fairness in healthcare refers to the equitable distribution of resources, opportunities, and access to services, regardless of socioeconomic status, ethnicity, gender, or other demographic factors. It emphasizes the principle of equal opportunity to attain the highest enjoyable standard of health and

involves addressing health inequities, discrimination, and ensuring access especially for the most vulnerable or marginalized populations (Culyer & Wagstaff, 1993).

Solidarity encompasses shared responsibility for health, recognizing that the health of one group can impact the entire community. It emphasizes collective support for the health needs of all, recognizing that a healthy society is one where everyone has access to essential healthcare services (Prainsack & Buyx, 2017).

Collective action to pursue well-being underscores the shared societal commitment beyond the health sector, to promote health, prevent disease, and address the root causes of health inequities. (Marmot et al., 2008).

KEY FUNCTIONS OF HEALTH FINANCING

Before examining specific models, it is important to understand three core functions of health financing systems (WHO, 2010):

Revenue collection

How is money raised to pay for health services? Revenue can come from general taxation, payroll contributions, insurance premiums, external aid, or out-of-pocket payments at the point of care.

Pooling

How are revenues accumulated and managed to spread health risks? Pooling involves combining funds from multiple sources so that the financial risk of illness is shared across a population rather than borne by individuals. The larger the pool of members, the greater the opportunity to protect individuals from catastrophic health expenditures. When everyone's contributions are pooled, money from the pool is used to pay for care for those who fall ill, protecting individual members from large, unexpected expenses that

could wipe out savings and drive them into poverty.

Purchasing

Which health services should be bought, from whom, at what price, and how should providers be paid? Purchasing refers to an evidence-based process that defines the services to be funded, the mechanisms used to pay providers (such as fee-for-service, capitation, or diagnosis-related groups), and the rates of payment. In Malaysia, when a person is hospitalized in a government hospital, the Ministry of Health funds and directly provides the service through its own facilities and staff, so there is no separate "purchaser" buying care from an external provider. On the other hand, in Thailand's Universal Coverage Scheme, the National Health Security Office acts as a tax-funded public purchaser that contracts public district health systems and selected private hospitals to provide services and pays them using capitation and DRG-based payments (Patcharanarumol et al., 2018). In a different kind of arrangement, if an individual with private medical insurance is

hospitalized in a private hospital, the private insurer purchases the associated healthcare services.

In discharging these functions, health financing systems must balance efficiency, equity, and quality. Importantly, the WHO advises that health systems should minimize reliance on out-of-pocket payments for healthcare because such payments can lead to catastrophic expenditures that impoverish households, particularly in low- and middle-income countries (WHO, 2010).

FIVE MAJOR HEALTHCARE FINANCING MODELS

Although most health systems today adopt hybrid approaches combining elements of multiple models, they typically derive their key characteristics from one or more of the following four primary models: the Beveridge Model, the Bismarck Model, the National Health Insurance Model, and the Out-of-Pocket Model. The United States healthcare system remains a unique outlier, defined by its

extreme fragmentation and for-profit orientation, which creates a complex marketplace that lacks the universal coverage and centralized price controls central to the Beveridge, Bismarck, or National Health Insurance models. (Reid, 2009).

The Beveridge Model

The Beveridge Model, named after Sir William Beveridge and developed in the United Kingdom shortly after World War II, is characterized by healthcare financed and provided by the government through general taxation. In this model, the government acts as the single payer, and health services are usually delivered by government-employed providers or government-controlled facilities (Reid, 2009).

Patients do not pay for services at the point of utilization because they have already contributed through taxes. This system is premised on universal coverage for all citizens based on need, not ability to pay. The government, as the sole payer, controls what providers can do and what they can charge, thereby keeping costs relatively low (Mossialos et al., 2016).

While the United Kingdom's NHS remains the most iconic example of the Beveridge Model, its core features, namely, universal coverage, single-payer tax financing, and public service delivery, are deeply embedded in the healthcare systems of Spain, New Zealand, and Hong Kong. Malaysia also adopts this framework, maintaining a robust, tax-funded public system that provides care as a right of citizenship. Many analysts now group the Nordic countries (Sweden, Norway and Denmark) within the Beveridge family of tax-funded health systems, given their reliance on general taxation, universal entitlements and strong public governance of care. However, their service provision is increasingly mixed: in Sweden, privately run providers now deliver about half of all primary care, but under public contracts and regulation.

- **Advantages:** Universal access, equity, cost control, simplified administration.
- **Disadvantages:** Potential for long waiting times, risk

of service overutilization, possible constraints on patient choice and provider autonomy.

The Bismarck Model

The Bismarck Model, originating in Germany in the late 19th century in response to social and economic challenges of the Industrial Revolution, is a social health insurance system where healthcare is financed through mandatory contributions from employers and employees via payroll deductions (Reid, 2009).

These contributions fund "sickness funds" or statutory health insurance plans, which are typically operated as non-profit entities and are required to cover all citizens.

Healthcare providers in Bismarck systems are often private entities, but the government closely regulates insurance plans and negotiates prices, enabling cost control similar to single-payer systems while preserving private provision of care (Busse & Blümel, 2014).

While Germany remains the classic example of the Bismarck model, variants of this framework also underpin the health systems of France, Belgium and the Netherlands, where compulsory social insurance and regulated insurers finance care that is largely provided by non state providers. Japan too combines universal social insurance with a heavily private hospital sector, while containing costs through a tightly regulated national fee schedule that sets prices for virtually all services. Furthermore, experts often point to Switzerland and Austria as key examples where this model thrives, as their systems successfully balance a competitive, multi-payer insurance market with the core principle of social solidarity, ensuring universal access regardless of employment status (Mitonga & Shilunga, 2021).

- Advantages: Universal coverage, preservation of private insurance and provision, strong social solidarity, shorter waiting times compared to some Beveridge systems.

- Disadvantages: Administrative complexity, dependence on employment-based contributions (which may exclude unemployed or informal sector workers without additional mechanisms), potential cost pressures with aging populations.

The National Health Insurance Model

The National Health Insurance Model (also called the single-payer model) is financed through a government-run universal insurance program funded by taxation or contributions. In such systems, healthcare services are often delivered primarily by private providers, as exemplified by Canada where necessary medical and hospital services are entirely publicly financed (Tuohy et al., 2004).

While Canada's system is often cited as a classic example of the single-payer model, its core principles, namely government-led universal insurance combined with private service delivery, are reflected in Taiwan's National Health Insurance (NHI) program, a government-run, single-

payer national health insurance scheme, although the bulk of the healthcare facilities are privately owned. Taiwan's system has achieved around 96% enrolment (Cheng, 2003).

South Korea also operates under this broad framework: the National Health Insurance Service (NHIS) is a compulsory social insurance scheme under strong government oversight, financed by mandatory contributions to promote public health and social security, while most hospitals and clinics are privately owned and contracted to provide NHI-funded services (WHO, 2015). The state maintains a strong regulatory role, mandating participation for all residents and health-care institutions and obliging them to provide NHI services, but Korea's NHI relies mainly on a tightly regulated fee-for-service payment model in which the government controls the unit price of treatments yet lacks explicit macro-level spending caps, leaving overall health expenditures driven by service volume (Kwon, 2012).

- Advantages: Universal coverage, single-payer efficiency and cost negotiation power, preservation of private providers, reduced administrative burden compared to multi-payer systems.
- Disadvantages: Potential for waiting times for non-urgent services, government budget constraints may limit service availability, possible tension between public funding and private provision.

The Market-Driven Private Health Insurance Model

The market-driven private health insurance model relies primarily on private insurance purchased individually or provided by employers, with limited government involvement except for specific vulnerable populations. The United States is the primary example of this model, where private insurers operate on a for-profit or non-profit basis, and coverage is not universal (Reid, 2009).

The government may provide coverage for specific groups, such as the elderly through Medicare and low-income individuals

through Medicaid and may regulate insurance markets to varying degrees.

This model emphasizes individual choice, competition, and market mechanisms (Blomqvist, 2011).

While the United States remains the preeminent global example of a market-driven system, its landscape is defined by a fragmented hybrid of private enterprise and targeted public programs. The majority of non-elderly Americans receive coverage through an employer-sponsored insurance market, while specialized government programs like Medicare and Medicaid fill critical gaps for the elderly and those with limited financial means. While this market-centric approach may foster cutting-edge technological innovation and consumer choice, it struggles with record-low public satisfaction regarding affordability and the persistent challenge of ensuring universal access without a unified national framework.

- Advantages: Consumer choice, innovation driven by competition, potential for rapid adoption of new technologies.
- Disadvantages: High costs, lack of universal coverage, fragmentation and administrative complexity due to multiple insurers and providers, difficulty covering individuals with pre-existing conditions without regulation, significant health inequities based on ability to pay (Mossialos et al., 2016).

The Out-of-Pocket Model

The out-of-pocket model requires individuals to pay directly for healthcare services at the point of use, without insurance or government funding. This model is prevalent in many low-income countries where formal health financing systems are underdeveloped or inaccessible to large segments of the population (McIntyre et al., 2006).

Individuals must use current income or deplete savings to pay for care, leading to significant financial barriers to accessing necessary healthcare. Out-of-pocket payments are the least equitable form of

healthcare financing and can result in catastrophic health expenditures, impoverishment, and forgone care due to inability to pay (Xu et al., 2007). Examples include many low-income countries in sub-Saharan Africa and South Asia where formal health systems and insurance coverage are limited.

- **Advantages:** None from a health equity or financial protection standpoint; this model reflects absence of organized financing rather than a deliberate design choice.
- **Disadvantages:** Severe inequitable access, financial catastrophe for households, high rates of untreated illness, poverty traps, lack of risk pooling, and no financial protection.

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We must ensure that treatment is made available to those who need it, most especially to those who cannot afford it. Health cannot be a question of income; it is a fundamental human right.

Nelson Mandela

THE AUSTRALIAN HEALTH SYSTEM

OVERVIEW

Australia operates a mixed public–private health system that provides universal health coverage through Medicare while allowing people to purchase supplementary private health insurance.

Medicare is a nationally administered, universal public health insurance program financed mainly through general taxation and a dedicated Medicare levy, and it coexists with a sizable private health insurance sector that covers private hospital care and some ancillary services (Australian Government Department of Health and Aged Care, 2026a).

FEDERAL STRUCTURE AND DIVISION OF RESPONSIBILITIES

Australia's health system

is jointly run by all levels of government: the Australian (Commonwealth) Government, state and territory governments, and local governments.

This federal structure means responsibilities for funding, planning, and delivering health services are shared and require ongoing coordination across jurisdictions (Australian Government Department of Health and Aged Care, 2025b).

Commonwealth Government Responsibilities

The Australian Government, mainly through the Department of Health and Aged Care, is responsible for the following responsibilities (Australian Government Department of Health and Aged Care, 2026a):

- Medicare (including the Medicare Benefits Schedule).
- The Pharmaceutical Benefits Scheme (PBS).
- Supporting and regulating private health insurance.
- Supporting and monitoring the quality, effectiveness, and efficiency of primary health care.
- Subsidizing and regulating aged care services.
- Collecting and publishing health information and statistics (via agencies such as the Australian Institute of Health and Welfare).
- Regulating medicines and medical devices through the Therapeutic Goods Administration (TGA).
- National immunization policy and vaccine procurement.
- Policy and coordination for national health emergencies and pandemics.

In the 2025–26 Federal Budget, the Australian Government announced a substantial multiyear investment package to “strengthen Medicare”, including several billion dollars aimed at

improving bulk billing incentives and access to primary care (Australian Government Department of Health and Aged Care, 2025a).

State, territory, and local government responsibilities

State and territory governments are primarily responsible for (Australian Government Department of Health and Aged Care, 2026a):

- Managing and administering public hospitals.
- Delivering many preventive health services, such as cancer screening and immunization programs.
- Funding and managing community and mental health services.
- Operating public dental clinics.
- Providing ambulance and emergency services.
- Patient transport and subsidy schemes.
- Regulating, licensing, inspecting, and monitoring health premises.

Local governments in some jurisdictions play roles in environmental health, local health promotion, and community-level services.

Shared responsibilities

- Some functions are jointly funded or overseen by the Commonwealth and state and territory governments through national agreements, including (Australian Government Department of Health and Aged Care, 2026a):
- Funding public hospital services.
- National cancer screening programs.
- Registration and accreditation of health professionals through the Australian Health Practitioner Regulation Agency (AHPRA) (with all governments as members of the national scheme).
- Elements of mental health reform, palliative care, and emergency preparedness.

MEDICARE: AUSTRALIA'S UNIVERSAL HEALTH INSURANCE SCHEME

What is Medicare?

Medicare has been Australia's universal health care scheme since 1984. It provides eligible people with:

1. Free treatment as public patients in public hospitals.
2. Subsidies for out-of-hospital services listed on the Medicare Benefits Schedule (MBS), including GP and specialist visits. (Australian Government Department of Health and Aged Care, 2026a).

Eligibility

Medicare is available to Australian citizens, New Zealand citizens residing in Australia, permanent residents, and people from certain countries with which Australia has reciprocal health care agreements (Services Australia, 2025).

How Medicare works

In Australia, the amount Medicare pays depends on where the patient is treated (inpatient vs. outpatient) and who treats the patient (GP vs. Specialist).

The Medicare Benefits Schedule (MBS) lists medical services subsidised by the Australian Government and sets a schedule fee for each item (Australian Government Department of Health and Aged Care, 2024).

Out-of-Hospital Services (GP and Specialist Consultations)

- For GP services, Medicare usually covers 100% of the MBS schedule fee for out-of-hospital consultations.
- For most other out-of-hospital specialist services, Medicare covers 85% of the MBS schedule fee; the patient is responsible for the remaining 15% plus any extra amount charged above the schedule fee.
- When providers “bulk bill”, they accept the Medicare benefit as full payment and patients pay nothing (Services Australia, 2024).
- If a provider charges more than the schedule fee, the difference between the provider’s fee and the Medicare benefit is known as the “gap fee” and is an out-of-pocket cost for the patient (Healthdirect, 2024a).
- For GP services, Medicare traditionally covered 100% of the MBS schedule fee for out-of-hospital consultations.

However in recent times, the schedule fee has not been indexed according to inflation. Hence, while there are a number of ‘bulk billing’ clinics, many patients now incur an out-of-pocket cost to cover clinic administration and service fees.

- By law, private health insurance is prohibited from covering these out-of-hospital medical gap fees to maintain the universal design of the system.

In-Hospital Services (Public and Private Patients)

- For public patients in public hospitals, treatment and accommodation are provided at no charge as Medicare and state governments cover 100% of costs.
- For private patients in public or private hospitals, Medicare pays 75% of the MBS schedule fee for inpatient medical services. Medicare does not cover hospital accommodation or theater fees; these are typically paid by private health insurance or the patient if they are self-funding their private stay (Australian Government Department of Health and Aged Care, 2024).

Medicare Financing

Medicare is financed primarily through general taxation and a dedicated Medicare levy on taxable income. The Medicare levy is currently 2% of taxable income for most taxpayers, with some low-income exemptions and reductions. In addition, higher-income individuals who do not hold appropriate private hospital insurance may pay an income-based penalty payment known as the Medicare Levy Surcharge (MLS).

Depending on income, this surcharge is calculated at a rate of 1%, 1.25%, or 1.5% of taxable income (Australian Government Department of Health and Aged Care, 2024).

The Medicare Levy Surcharge is intended to encourage the uptake of private insurance and reduce pressure on the public system. The Australian Government also supports private health insurance uptake through measures such as the Private Health Insurance Rebate, which provides a government contribution toward the cost of premiums based on income and age (Glover, 2020).

Personal Financing Options

Australians typically choose between:

1. Relying mainly on Medicare (public hospital care and subsidised medical services).
2. Combining Medicare with private health insurance, which can cover private hospital treatment, greater choice of doctor, potential shorter waiting times for some elective procedures, and some ancillary services such as dental, physiotherapy, and optical care.
3. However, even when combined with private health insurance, Medicare offers only partial financial protection, because insurers are confined to paying the residual 25% of the MBS fee for in-hospital medical services and are legally unable to cover most out-of-hospital specialist gap fees, so patients remain exposed to substantial and often unpredictable out-of-pocket payments when doctors charge above the schedule fee (Zhang, 2025).

Table 1: Patient Pathways and Medicare Rebate

Location	Patient status	Who provides care	Medicare Rebate (% of MBS Fee)	What patient/insurance pays
Public hospital	Public in-patient	Hospital doctors	State funded – Medicare rebate not applicable	\$0 for treatment and accommodation (may pay for extras like TV)
Public hospital	Private in-patient	Treating doctor	75% of the MBS fee for eligible inpatient medical services	Private insurance usually covers the 25% difference; the patient pays any "provider gap" above the MBS fee.
Private hospital	Private in-patient	Treating doctor	75% of the MBS fee for eligible inpatient medical services	Private insurance covers the remaining 25% of the MBS fee. The insurance and/or patient pays hospital accommodation and theatre fees. The patient pays any "provider gap" (the amount charged above the 100% MBS fee) out-of-pocket.
GP clinic (out-of-hospital)	Outpatient	GP	100% of MBS Fee (for most consultations); no patient payment (GP accepts 100% of the MBS fee as full payment with bulk billing)	Patient pays the gap (the difference between the doctor's total fee and the Medicare rebate) if not bulk billed
Specialist rooms (out-of-hospital)	Any	Specialist	Specialist accepts the 85% rebate as full payment if bulk billed; no patient payment	Patient pays the 15% difference plus any extra fees out-of-pocket (Private insurance cannot cover this).
Emergency department (public hospital)	Public patient	Hospital staff	Covered under public hospital funding	\$0 for eligible Medicare patients



THE PHARMACEUTICAL BENEFITS SCHEME (PBS)

Objectives of the PBS

The PBS is a national program that aims to ensure Medicare-eligible residents in Australia, including citizens and permanent residents, have reliable access to safe, effective and affordable prescription medicines. The Therapeutic Goods Administration (TGA) assesses medicines for safety and quality before they can be sold in Australia, and the Pharmaceutical Benefits Advisory Committee (PBAC) evaluates the clinical and cost effectiveness of medicines before they can be listed on the Schedule for government subsidy (Australian Government Department of Health and Aged Care, 2026b).

How the PBS Works

For most PBS-listed prescription medicines, patients pay a co-payment up to a regulated maximum amount, and the Australian Government pays the remaining cost. People with concession cards (for example, pensioners and some

low-income groups) pay a lower co-payment (Healthdirect, 2024b).

PBS Safety Net

The PBS Safety Net limits how much individuals and families pay for PBS medicines in a calendar year. Once a person or family reaches the Safety Net threshold based on accumulated PBS co-payments, they receive further reductions for PBS medicines for the rest of that year:

- General patients pay a reduced co-payment after reaching the general Safety Net threshold.
- Concession card holders receive PBS medicines free after reaching the concessional Safety Net threshold.

(Australian Government Department of Health and Aged Care, 2026b)

For 2026, the key PBS co-payment and Safety Net settings are given in Table 2.

Table 2: PBS Co-Payments and Safety Net Thresholds

	General patients	Concession card holders
Prescription co-payment (maximum per PBS item)	\$25.00	\$7.70
Safety Net threshold (annual)	\$1,748.20	\$277.20
Post-Safety Net co-payment	\$7.70	Free

(Services Australia, 2026)

From 1 January 2026, the general patient co-payment has been reduced to \$25.00 under the National Health Amendment (Cheaper Medicines) Act 2025, while Safety Net thresholds continue to be indexed over time. The 2025–26 Federal Budget also includes additional funding to expand and maintain PBS listings and keep medicines more affordable.

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THE MALAYSIAN HEALTH CARE SYSTEM

OVERVIEW AND STRUCTURE

Malaysia operates a dual-tiered health system characterized by parallel public and private sectors. The public sector offers heavily subsidized and often free healthcare services through government-funded facilities, ensuring that a significant portion of the population, particularly lower-income and rural populations, has access to essential medical care. The private healthcare sector caters predominantly to urban populations and affluent demographics, offering faster access and more amenities but at higher cost (Jaafar et al., 2013).

Malaysia has achieved notable successes in improving health outcomes, including relatively high life expectancy and low maternal and infant mortality rates. The country has made substantial progress in

addressing communicable diseases through strong public health programs (Lee et al., 2023). However, challenges persist, including rising burden of non-communicable diseases (NCDs), regional disparities in healthcare infrastructure and resources, workforce shortages particularly in specialist care, and growing financial pressures on the public system.

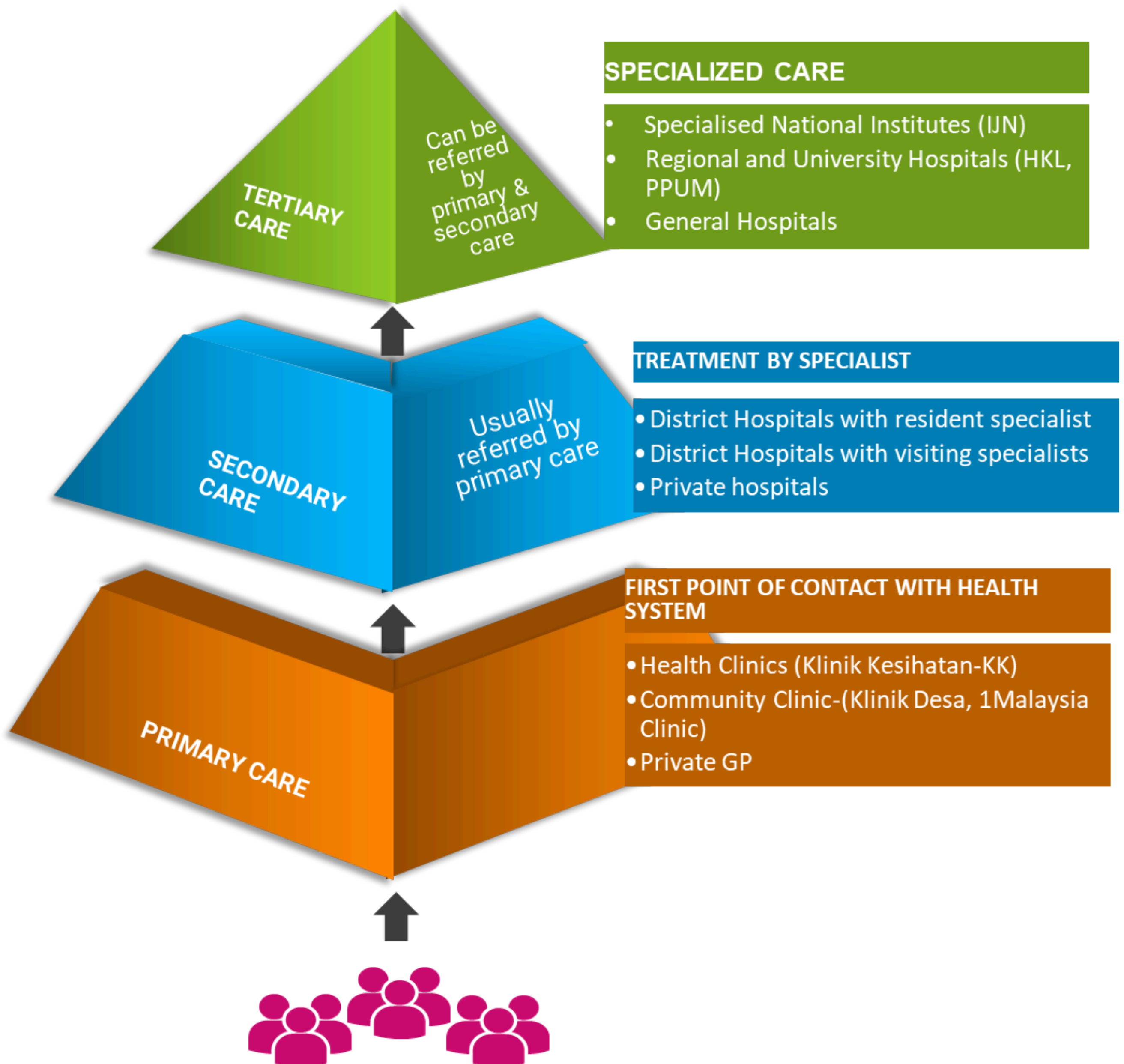
LEVELS OF CARE IN THE MALAYSIAN HEALTH SYSTEM

Malaysia's healthcare system is structured to provide a continuum of care across primary, secondary, and tertiary levels, delivered by both public and private sectors (see Fig-1).

Primary Care: The Core of the Malaysian Health System

Primary healthcare has consistently held a prominent

Fig-1: The Malaysian Health Care System – Levels of Care



NON-MOH SECONDARY AND TERTIARY CARE

Ministry of Higher Education – University Teaching Hospitals

Ministry of Defence – Military hospitals

Ministry of National Unity and Social Development

position in Malaysia, with a historical focus on maternal and child healthcare since the country's independence in 1957. This emphasis emerged as a response to critical concerns regarding maternal morbidity and mortality during that period (Jaafar et al., 2013).

Malaysia's primary healthcare system is mainly provided through an extensive network of public health clinics (klinik kesihatan) and community clinics (klinik desa). These clinics offer preventive, promotive, and basic curative services, with emphasis on maternal and child health, immunization, and health education. The private sector also contributes to primary care through general practitioners and private clinics (Jaafar et al., 2013).

Over time, Malaysia has progressively incorporated various types of care into primary healthcare, aiming to provide accessible promotive, preventive, curative, and rehabilitative services at the initial point of contact in the healthcare system. Presently, primary care services play a pivotal role in delivering anticipatory preventive care, early detection and intervention for

risk factors, curative services for common health issues, and ongoing management of chronic conditions such as diabetes, hypertension, and cardiovascular disease. Additionally, rehabilitative services are provided as follow-up care for individuals discharged from hospitals (Jaafar et al., 2013; Ministry of Health Malaysia, 2023).

Evidence for strong primary care demonstrates that well-resourced primary care systems:

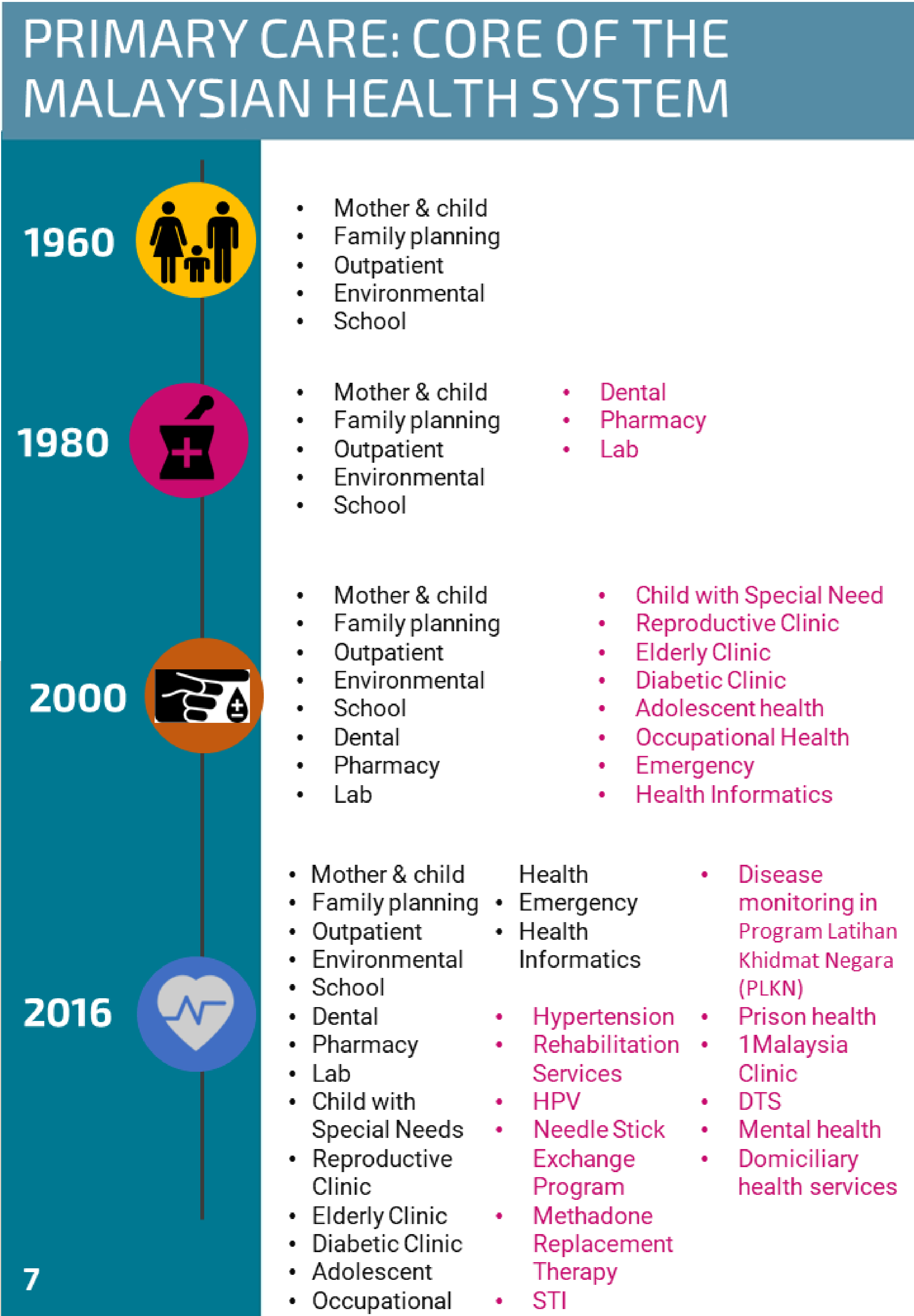
- Increase availability, accessibility, and equity of care at the first point of contact.
- Enable early detection and intervention, preventing illness and death.
- Improve population health outcomes.
- Ease pressure on secondary and tertiary care services through decreased hospitalization and reduced emergency department visits.

(Starfield et al., 2005)



Fig:2 – Integrated Primary Care in Malaysia

Incremental integration of health services at the first point of contact within the health system (Primary Care)



Secondary Care

Secondary healthcare in Malaysia's public sector is delivered through district hospitals and specialized government hospitals. These facilities provide specialized medical care and offer diagnostic, therapeutic, and emergency services. The private healthcare sector also provides secondary care, ranging from general medical care to specialty treatments in private hospitals and specialist clinics (Jaafar et al., 2013).

Tertiary Care

Tertiary care in Malaysia is concentrated in major referral hospitals located largely in urban centers. These hospitals are equipped with advanced medical technology and highly specialized healthcare professionals, catering to complex and critical medical conditions. Public tertiary hospitals include teaching hospitals affiliated with medical universities, contributing to medical education and research. Private tertiary hospitals, while predominantly serving affluent populations, also contribute to providing advanced medical services (Jaafar et al., 2013).

Sources of Health Financing in the Malaysian Health System

The Malaysian health financing system is increasingly hybrid, although it is predominantly similar to the Beveridge model, where the government provides the majority of healthcare needs through public facilities financed by general taxation.

Key sources of health financing in Malaysia include:

- General taxation – Public healthcare is funded by annual budgets allocated by the Ministry of Finance to the Ministry of Health. This is the primary source of financing for public sector healthcare.
- Private health insurance – Purchased by individuals for themselves and their families or provided by employers as part of employee benefits packages.
- Managed Care Organizations (MCOs) – Some employers contract MCOs to provide healthcare to employees based on pre-negotiated packages of benefits from a panel of clinics.
- Social protection schemes – The Employees Provident Fund (EPF) and the Social Security Organization

(SOCSSO) make disbursements toward medical expenses for critical illnesses and work-related injuries and accidents, respectively.

- Public servant healthcare – Public servants and their dependents receive free medical services at public hospitals and clinics.
- Out-of-pocket payments – Direct payments by patients for healthcare services, particularly in the private sector, and for services not fully covered in the public sector.

Malaysia's Total Expenditure on Health (TEH) as a percentage of Gross Domestic Product (GDP) – the proportion of the country's income in a given year that is spent on all health and health-related activities from both public and private sources – increased from 3.94% in 2011 to 5.04% at the height of the COVID-19 pandemic in 2021, before declining slightly to 4.62% in 2023 (Malaysia National Health Accounts, 2025). In contrast, when looking only at Current Health Expenditure (CHE) as a percentage of GDP – the share of national income spent on running and

using health services such as hospital care, clinic visits and medicines, but not on building new facilities – Malaysia still lags behind more developed countries, including the United States (16.5%), the United Kingdom (11.1%), Australia (9.9%) and the Republic of Korea (9.4%), and also trails regional neighbours Thailand (5.6%) and Singapore (4.9%) (Malaysia National Health Accounts, 2025).

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Challenges of the Malaysian Health System

The following are some of the challenges of the Malaysian health system:

- A dichotomous dual-tiered healthcare system exists in Malaysia, characterized by a distinction between public and private healthcare sectors. The private sector predominantly serves urban locales and affluent patient demographics, offering primary and secondary healthcare services. In contrast, primary care services within the public sector are predominantly utilized by economically disadvantaged and rural populations.
- Secondary care services provided by the public healthcare sector are accessed by both socioeconomically disadvantaged and middle-class populations.
- Insufficient government expenditure on health coupled with a growing proportion of out-of-pocket expenditures for healthcare services.
- The expansion of infrastructural facilities and development has not aligned with the escalating patient load and their healthcare requirements.
- The healthcare system is excessively treatment-oriented and lacks adequate emphasis on primary and secondary prevention measures.
- The attrition of specialists from the public healthcare system has resulted in a scarcity of specialized care.
- Challenges pertaining to care utilization encompass the overcrowding of government clinics and hospitals, prolonged waiting times, escalating co-payment expenses, and increasing catastrophic health expenditures.
- Organizational challenges in primary care include a deficiency in continuity of care and undermining effective screening and treatment for non-communicable diseases (NCDs). Additionally, there is a lack of bi-directional coordination in the referral process in the referral process between primary and secondary/

tertiary care. Notably, some patients opt to bypass primary care, directly accessing secondary care services at hospitals.

- The oversupply of medical graduates coupled with a deficiency in housemanship posts, inadequate training infrastructure, and subsequent implications for the quality of human resources in health.

Some interesting links to current debates on health reform in Malaysia:

- [The Health White Paper by the Ministry of Health, Malaysia.](#)
- [The Health White Paper: Is an employment-taxed health financing scheme the right solution? By Chee Heng Leng & Lim Chee Han](#)
- [The Health White Paper – Transforming healthcare delivery.](#) By Dr. Michael Kumar Devaraj



SYSTEMS THINKING IN HEALTH SYSTEMS

WHAT IS SYSTEMS THINKING?

Systems thinking represents a holistic and integrated approach to understanding and improving the delivery of healthcare services. While a health system encompasses all the organizations, institutions, resources, and individuals involved in the production, distribution, and consumption of health services, systems thinking is the conceptual framework that emphasizes the interconnectedness and interdependence of various components within that system (de Savigny & Adam, 2009).

In the context of healthcare, systems thinking involves recognizing the complex interactions between the different building blocks of the health system and the interaction between elements such as healthcare providers, patients, policies, technologies, and socioeconomic factors (de Savigny & Adam, 2009).

Systems thinking requires a shift from isolated, linear, reductionist problem-solving approaches to a more comprehensive and integrated understanding of the entire healthcare ecosystem.

The WHO framework for systems thinking in health emphasizes that health systems are complex adaptive systems that cannot be understood or improved using simple cause-and-effect models (de Savigny & Adam, 2009).

Instead, systems thinking focuses on:

- Interconnections – Understanding how different parts of the system relate to and influence one another.
- Feedback loops – Recognizing that actions in one part of the system can create ripple effects that feedback and affect the original component.
- Emergent properties – Acknowledging that the

behavior of the whole system may be different from the sum of its individual parts.

- Unintended consequences – Anticipating that interventions may produce unexpected outcomes in other parts of the system.
- Context dependence – Understanding that solutions effective in one context may not work in another due to different system configurations.

By adopting a systems thinking approach, stakeholders can identify underlying patterns, feedback loops, and unintended consequences that influence health outcomes, ultimately fostering more effective and sustainable solutions to the complex challenges facing healthcare systems globally (de Savigny & Adam, 2009).

Systems Thinking Within Hospitals and Health Systems

Systems thinking can be applied at multiple levels: within a single hospital or health facility, across a

local health network, or at the national health system level.

Systems Thinking Within Hospitals

Within hospitals, systems thinking helps healthcare teams understand how different departments, processes, and individuals interact to deliver patient care. For example, patient flow through an emergency department depends on coordination between triage nurses, physicians, diagnostic services, pharmacy, bed management, and discharge planning. A delay in one area creates bottlenecks throughout the system (Atalla et al., 2025). Systems thinking within hospitals encourages:

- Multidisciplinary collaboration and shared models of care processes.
- Understanding of workflow dependencies and handoff vulnerabilities.
- Analysis of how organizational culture, leadership, and resource allocation affect front line care.
- Recognition that safety incidents often result from systemic factors, not just individual errors. (Braithwaite et al., 2018)

Systems Thinking Across the Health System

At the broader health system level, systems thinking examines how the six building blocks interact. For instance:

- A policy to expand health insurance coverage (financing block) may increase demand for services (service delivery block), which requires more healthcare workers (workforce block) and better supply chain management for medicines (medical products block).
- Investment in health information systems (information block) enables better disease surveillance, which informs policy decisions (governance block) and guides resource allocation (financing block).
- Failure to address one building block undermines others. For example, recruiting more healthcare workers without ensuring adequate salaries and working conditions leads to high attrition and migration, negating the investment.

Systems thinking at this level helps policymakers

anticipate cross-sectoral impacts and design integrated interventions rather than siloed, vertical programs (de Savigny & Adam, 2009).

The Role of Adverse Patient Outcomes in Healthcare Improvement

A critical application of systems thinking is learning from adverse patient outcomes and safety incidents to drive system-level improvement. Historically, healthcare has often taken a reductionist approach to adverse events, seeking to identify a single "root cause" or individual to blame (Vincent et al., 1998). This approach, while sometimes identifying immediate proximate causes, often fails to address the deeper systemic factors that allowed the incident to occur.

Systems thinking, however, shifts the focus from individual fallibility to the conditions and structures that shape performance (Reason, 2000). Adverse events typically result from alignment of multiple system weaknesses rather than a single failure. These weaknesses may include:

- Organizational factors (e.g., inadequate staffing, poor safety culture, production pressure)
- Workplace conditions (e.g., high workload, fatigue, poor communication systems)
- Team factors (e.g., unclear roles, inadequate handoffs, lack of standardized protocols)
- Individual factors (e.g., skill level, knowledge gaps, human limitations)
- Technical factors (e.g., equipment design, information system usability)
- When an adverse event occurs, systems thinking asks not only "What went wrong?" but "Why did the system allow this to happen?" and "What systemic changes are needed to prevent recurrence?" (Vincent et al., 1998).

Creating a Learning Culture

Systems thinking supports the creation of a learning culture in healthcare where :

- Staff are encouraged to report near misses, safety concerns, and incidents without fear of blame.
- Organizations focus on improving system resilience rather than punishing individuals.
- Data from incidents are

systematically analyzed to identify trends and inform interventions

- Lessons learned are shared across departments and organizations
- Continuous quality improvement becomes embedded in organizational culture.

(Atalla et al., 2025)

Empirical evidence supports the positive impact of systems thinking on patient safety. Studies demonstrate that healthcare professionals trained in systems thinking show improved decision-making abilities, better recognition of system-level risks, enhanced interdisciplinary collaboration, and reduced rates of adverse events including medication errors and patient falls (Atalla et al., 2025).

Conclusion

Systems thinking is essential for understanding and strengthening health systems. It recognizes that health systems are complex adaptive systems where the six building blocks interact dynamically, and where interventions in one area can have unintended consequences in others. By adopting a systems thinking

approach, healthcare professionals, policymakers, and organizations can move beyond siloed, linear problem-solving to create integrated, sustainable solutions that improve population health outcomes.

Critically, systems thinking transforms how we learn from adverse patient outcomes. Rather than seeking individual blame, it

focuses on identifying and addressing systemic weaknesses that allow errors to occur. This shift supports creation of learning organizations where safety incidents become opportunities for improvement, where staff are empowered to report concerns, and where continuous quality improvement drives better care for all patients.

MUST KNOW

1. Concepts – what is a health system, WHO building blocks of the health system, key health financing models, and systems thinking in health systems.
2. The Australian health system – Medicare, the Pharmaceutical Benefits Scheme, sources of health funding of the Australian a health system.



Apples to Apples' is a painting by Regina Holliday, a patient-rights activist, artist and speaker who uses her family's experience of medical error and loss to advocate for better health IT and real-time access to health data for patients. You can read more about this work in her blog post: [Apples to Apples](#).

#health SYSTEMS

ATHYNA.EDUCATION

"If access to health care is considered a human right, who is considered human enough to have that right?" Dr. Paul Farmer



THEME II: POPULATION, SOCIETY HEALTH AND ILLNESS
Med1100/1200 Semester 1



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