SANITAS MAGISTERIUM

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Received: 29.04.2018
Published: 24.07.2018

sanitasmagisterium.com
July 2018 •

A PRACTICAL FRAMEWORK FOR HEALTH SYSTEM REVIEW

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Abstract

In order to review a health system we have to understand the context first. For this we need certain information (general background and specific). The general background information pertains to the environment and the people of that country. This information is necessary for understanding the threats to the population health and the challenges the health system has to face and to tackle. The background information pertaining to people is very important because it gives us information about the threats to health associated with people activities, the health needs of the population and the way these are expressed as demand for health care services. Economic activities and occupational patterns can give us information about potential health hazards like pollution (air, water, ground, noise, light), or occupational hazards (occupational diseases). In conclusion all the above goals, functions, factors, methods, elements will be taken into consideration when analyzing the performance of the health system. Relevant indicators ought to be used, and correlations with health outcome indicators have to be made. Not correlated indicators should be avoided.

Keywords:
Framework, Health System, Review

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Citation: Sava, D. (2018). A Pratical Framework For Health System Review. International Health Administration and Education (Sanitas Magisterium), 4(2), 1-7.

Introduction

In order to review a health system we have to understand the **context** first. For this we need certain information (general background and specific).The general background information pertains to the environment and the people of that country. This information is necessary for understanding the threats to the population health and the challenges the health system has to face and to tackle.

The environment is about geographical information and climate. There is an ecological dimension of human health pertaining to habitats, natural, built or social environment. We know that many diseases have seasonal outbreaks. Weather is also a factor influencing certain diseases. The landscape is also important both for the human health and for the health system. Certain types of geographical environments favor certain diseases, whereas landscape is an important factor in the functioning of a health system, affecting mainly access to care. There is an environmental exposure to diseases. These in turn, spread over borders; there are well known areas infested with certain pests. The environment encompasses health risk factors concerning natural disasters (earthquakes, floods, fire, hurricanes, tornados, tsunami waves, volcanic eruptions, extreme cold and extreme heat). The geography provides us information about hazardous areas prone to be infested by infectious agents (bacteria, viruses, fungi, other microbes. The air and the water can be the developing environment for infectious agents or can support animal vectors of diseases.

The background information pertaining to people is very important because it gives us information about the threats to health associated with people activities, the health needs of the population and the way these are expressed as demand for health care services. Economic activities and occupational patterns can give us information about potential health hazards like pollution (air, water, ground, noise, light), or occupational hazards (occupational diseases). Furthermore, information about transport and its infrastructure is important in understanding health hazards (accidents), but also the support for the health system. For the same dual purpose we need historic, social and even religious information, because it influences social and gender attitudes. This is useful to understand behavioral patterns of the population pertaining to general hygiene, to food and nutritional habits, to vices (smoking, alcohol and drug consumption) and risky behaviors (promiscuous sex). Also within the useful social information is data about access to firearms and crime. Aside from assessing health challenges, this information is useful for tailoring the health system.

This specific social information should pertain to demographics: population statistical data (population numbers, life expectancy, birth rate, fertility rate, general mortality, infant mortality, mother mortality rate). The information pertaining to the above is very useful in understanding the health challenges, the demand and access to care.

In addition to this we need morbidity data to understand the incidence and prevalence of diseases. It is useful to know which are the main causes of death at certain ages, as well as which are the most prevalent diseases and which are the emerging diseases

Aside from situational snapshot data, it is very important data is displayed over time to see trends.

The health system's has certain goals out of which we mention:

- maintaining and improving the health of the population;
- responsiveness to the health needs of the population, pertaining to persons dignity, individual autonomy and confidentiality as well as addressing the health needs, providing basic amenities, access to family and social support and choice;
- fairness in financial contribution;
- access to care (geographical, financial, time);
- population coverage based on the following factors: meeting the health needs, affordability, access to care including technology and pharmaceuticals, well trained and motivated health professionals; coverage also relies on other sectors performance (transportation, education, local administration);

The health system has to perform 4 main functions: stewardship, resource generation, financing and provision of services

Stewardship

Stewardship pertains to:

- system design;
- integration of data and data analysis;
- policy making, defining a strategy and priority setting;
- creating, implementing and monitoring regulation;
- assuring a clear and fair environment for the actors in the system (patients, purchasers, providers)
- consumer protection;
- performance assessment;
- inter-sectoral advocacy and collaboration with other sectors for the control and management of external factors influencing the health system

In every healthcare system the organization in charge with stewardship the Ministry of Health. In certain cases it can also perform financing and health services providing functions, or even resource generator. As provider it can be owner of facilities and also employer of medical staff. Aside from this any MoH has to have other provider functions like epidemiological surveillance, public health maintenance, health promotion. To fulfil its duties the MoH must have an internal capacity (skilled staff) or to have some of its core functions delegated to competent public agencies. For the same reasoning any MoH must have "branches" subordinated institutions which have same duties in every province of the country. If the MoH does it all we can speak of a centralized system.

Resources

The resource generation pertains to human resource management and education of labor force, as well as managing the introduction in the health system of material resources, such as pharmaceuticals and other medical supplies. In some cases this function is performed by state – sponsored research for the

purpose of developing new medical procedures, and equipment, or accepting pharmaceuticals in the system.

Manpower

The main actors as human resources are: doctors, nurses, dentists, midwives, pharmacists, biologists, chemists and other ancillary personnel, managerial and secretarial staff. Recently, as the health services market shifts from a labor-intensive industry to a more capital- intensive one, new categories of manpower emerged: equipment technicians and IT specialists.

Aside from general numbers of professionals, it is important the educational background of these, positions in the system, career path. It is also important how the labor market is controlled, issues related to diplomas and licensures, staffing policies. Educational institutions can be part of the educational system or can develop within the health system. It is useful to know how many practice independently or hired as an employee.

Materials

Materials pertain to fixed costs / assets, like medical institutions, beds, general medical equipment (sterilizers, operating rooms), diagnostic equipment (lab and imaging), therapeutic equipment (surgical robots, laser and nuclear technology), medical emergency and transportation equipment.

There are also materials linked to variable costs (depending on the volume of activity) like general consumables, food, medical supplies and pharmaceuticals.

For the latter it is important to know how they are introduced onto the market, how prices are set, wholesale arrangements, distribution and retail paths, dispensing rules, (by recipe or OTC), reimbursement lists if any, pharmaceutical studies, advertising.

Financing

Financing pertains to three main functions:

Revenue collection; which is the mobilization of money from primary sources by:

- direct payments
- insurance contributions and medical health accounts
- taxes and excises
- donations and transfers

Fund pooling pertains to accumulation of revenues for the advantage of the individuals. Pooling is done for the purpose of risk-sharing because not all contributors share the same health risks, and not all the participants have the same income

Purchasing is the allocation of the pooled funds to various providers. Purchasing decision has to answer the questions: what is purchased, how is purchased and from whom it is purchased? For any question above there is a specific mechanism: service list or benefit package, bidding or price / volume negotiation, provider licensing / accreditation or program certification. Purchasing the services can range from simple budgeting of health care providers, direct purchasing of certain services and establishing framework contracts. There are several methods of contracting:

- block contracts;

- cost and volume;
- cost per case;
- case mix.

Contracting in a competitive market is associated with certain transaction costs, influenced by factors like resource allocation methodology, complexity of the market, opportunism, uncertainty, bounded rationality, asset specificity, and types of contract.

After contracting, there is the issue of procurement where it is important to define quantity and quality of inputs or services delivered the non-price criteria to consider and the measurement of those.

The provider payment methods are specific to the kind of services or items provided. For services in outpatient these methods include salary, capitation, fee-for-service. For inpatient services these might be cost reimbursement, per case, DRG, fee-for-service.

The pharmaceutical market trades large volumes and requiring significant amounts of money. Usually prices are controlled and payments are made based on commissions and reimbursement.

In the particular case of salary but also from a broader view of income, it is useful to compare the hourly wage of professionals in healthcare with hourly wage in other professions.

Aside from these "official" payments, there might be also "under-the-table" payments.

The flow of money must take into consideration the "money-follows-the-patient" principle.

All health systems evolved from a direct market for health services where the demand was met by a specific supply. However, due to the fact that health services where expensive and price was a barrier for access, systems with third party payer have evolved. In these systems, from financial point of view, the supply does not meet the demand directly. In these systems the third party pays the providers. This third party intermediates the payment of money collected, or collects money from potential beneficiaries while they are healthy and pays for services on behalf of them when they are sick. The third party payer is present when there is the so called purchaser – provider – split; a separation between purchaser and provider. This quasi-market arrangement allows for better efficiency, flexibility, accountability, consumer empowerment. However there might be disadvantages of these markets, competition between providers leading to conspiracy, collusion, cartelization, corporatism, risk selection, market domination, self-contracting, manipulation of disease episodes, biased interpretation, over – treatment, cross – subsidization, segmentation. In the so called "national systems", the MoH is the third party payer. The third party can be also a publicly owned insurance company in so called "social health insurance", or private insurers. When insurers are public there may be a unique or parallel health funds; in this case there is no competition among them, but might exist some inequity in the benefit package. When insurers are private, they might act like a cartel or oligopoly or there might be competition among them; in the latter case, benefit packages vary a lot because private insurers tend to apply segmentation in order to transform direct competition into monopolistic competition.

A better understanding of the money flows within the health sector can be given by a System of Health Accounts which answers three basic questions: what services are consumed, who provides them and what money paid for them?

Provision of services

Provider structures

All the human and material resources are structured into and used by providers of healthcare services. These providers are:

- Primary health care offices / dispensaries; they should be the first contact of the patient with the health system and the medical facility most accessible;
- Specialist outpatient clinics;
- Hospitals; large medical providers whose main function is the treatment of patients who need care under medical supervision;
- Rehabilitation care providers;
- Long term care facilities which are in charge of treatment of chronic illnesses, with limited prospects for recovery;
- Palliative care for patients without recovery prospects but who need maintaining their quality of life;
- Home care and informal care;
- Providers of diagnostic services only, like laboratories and imaging centers.
- Dialysis centers
- Prosthetic providers
- Specific care institutions for treatment of specific diseases who can be inpatient (for mental care, TB, some infectious diseases which need isolation from community) or outpatient, like dental care;
- Ambulance services, in charge with first aid, maintaining vital functions, transportation to a more competent provider (hospital) and specialized referral transport;
- Pharmacies;

There is a growing trend towards getting out from the hospital certain treatments and shifting towards ambulatory, for the purpose of saving costs and increasing access

All these types of providers might exist independently or in various levels of integration. From the economic point of view, providers of healthcare services are also purchasers of materials and other resources. Both in the purchaser or the provider position integration might give an advantage over the competitors due to cost reductions as well as enhancing the market power towards customers by abusing a monopolistic position. There is a specific mechanism of demand creation through the system of referrals.

The providers of healthcare and the beneficiaries of these services (patients) interact within a highly complex system. If there was a free market where supply meets demand directly, due to complexity of services and the numerous imbalances (among which asymmetric information is the main one), this market would have many imperfections, if it wouldn't fail directly in certain areas. Therefore there are certain actors (mainly public) whose job is to regulate and control it, so that as many people as possible (ideally all) have access to, and benefit from these services at an affordable price, correcting the market imperfections.

From the economic point of view, most of the health services are private services (the patient is the only beneficiary) but certain services like vaccinations are public services (the patient and other people too

benefit from the services). This is another reason why public institutions might be involved in delivering the service, and act as providers.

The financial and provision functions of the health system might display vertical and and / or horizontal integration as well as vertical and / or horizontal segmentation.

To attain its goals the health system must consider concepts such as quality, equity and efficiency

Quality of care is a vast realm but its main dimensions are: efficacy, appropriateness, availability, timeliness, safety, effectiveness, and respect for patients. The external quality assurance methods pertain to licensing, certification and accreditation. These methods are based on minimal standards the providers have to comply with.

Equity pertains to the absence of disparities between various groups of population in regard to health care services. There is a horizontal equity regarding equal access to care in terms of geographical and social determinants and vertical equity regarding equal access to care, irrespective of income.

Efficiency pertains to:

- technical efficiency (producing maximum of outputs with a given combination of inputs)
- cost-effectiveness efficiency (producing a given output with minimum combination of inputs)
- allocative efficiency (producing the outputs which satisfy maximum of the demand)

Attention must be paid to how the legal framework defines various structures and how precise are defined the scopes of care of providers. Do they use guidelines?

In conclusion all the above goals, functions, factors, methods, elements will be taken into consideration when analyzing the performance of the health system. Relevant indicators ought to be used, and correlations with health outcome indicators have to be made. Not correlated indicators should be avoided.

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