ESS - Extension of Social Security

Costing essential health-care packages based on the framework of national floors of social protection

An innovative ILO approach for countries with limited availability of reliable data

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ESS Working Paper no. 39

INTERNATIONAL LABOUR OFFICE, GENEVA

ILO Cataloguing in Publication Data

Scheil-Adlung, Xenia; Obermann, Konrad

Costing essential health-care packages based on the framework of national floors of social protection: an innovative ILO approach for countries with limited availability of reliable data / Scheil-Adlund, Xenia, Obermann, Konrad ; International Labour Office. - Geneva: ILO, 2013

ESS paper ; No.39 , ISSN 1020-9581 ; 1020-959X (web pdf)

International Labour Office

health insurance / medical care / cost / social security financing / ILO Recommendation / role of ILO

02.07.1

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Printed in Switzerland

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Acknowledgements

This paper results from work carried out over many years by the Social Protection Department of the International Labour Office. The main authors of the paper are Konrad Obermann and Xenia Scheil-Adlung, but our work has greatly benefited from the valuable comments and suggestions made by the staff of the ILO Social Protection Department and by colleagues in the field, through their practical and conceptual work as well as research. Special thanks go to Krzysztof Hagemejer, Anne Drouin, Emmanuelle St-Pierre Guilbault and Hiroshi Yamabana.

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Executive summary

The ILO has long been involved in debating the concept of essential health and has developed a number of important approaches to put such care into a coherent and applicable framework. Recommendation No. 202 concerning national floors of social protection (Social Protection Floors Recommendation, 2012) is the ILO's latest international instrument on this theme. It places emphasis on making access to essential health care one of the four basic social security guarantees that should constitute national social protection floors.

Essential health care is frequently provided in countries where resources are scarce and statistical data limited, particularly regarding utilization rates and related health-care costs. Costing the extension of essential health care to achieve universal coverage is thus hindered, which might be considered as an obstacle to progress in this field. This report provides concepts and recommendations for a macro approach to assessing the cost of providing essential health care to a population. In contrast to a "bottom-up" calculation that focuses on the cost of individual needs and services of a defined essential health-care benefit, the proposed ILO approach is based on aggregate data that is more easily available and uses indicators for staff, medicines and infrastructure as inputs to a health-care system. We argue that these inputs are, in principle, sufficient for costing essential health care for the whole population in a country.

We propose a data-lean approach that would allow for an initial rapid assessment of financial implications at the country level. This should be regarded as an additional tool to technical and actuarial studies in supporting policy-making and informing discussions between government, social partners, health-care providers and other stakeholders. It may also be used in conjunction with other approaches for triangulating and hence improving forecasts.

The following conceptual model is proposed for this "top-down" indicative costing.

The **first part** comprises a macro-level analysis of current spending patterns and the development of an appropriate and simple model:

1. Rather than detailing medical needs and defining adequate forms of care to be applied, we use whole-system inputs: staff, infrastructure and medicines. These three inputs will determine what level of care is available.

2. The model will derive the distribution of inputs (i.e. the percentages of the total cost going to staff, infrastructure and medicines) from existing national health accounts.

3. Indicators for the three inputs are defined as follows:

    (i) **Staff**: the ratio between the total number of health-care staff in relation to the whole population;

    (ii) **Medicines**: the national total per capita expenditure on medicines, or the total pharmaceutical expenditure (TPE); and

    (iii) **Infrastructure**: the percentage of total health expenditures spent on infrastructure, as derived from national health accounts.

The **second part** will attempt to approximate the appropriate spending level to be achieved:

4. It is necessary to define the "acceptable" level of resource input for each of the three indicators. This will be achieved by using the relation of the current spending levels for staff, infrastructure and medicines as an approximation of technical efficiency. We will further assume that scaling up to some desirable level will at least provide the resource basis for an adequate level of care.

5. In order to determine adequate levels of resources, we propose to examine resource input levels within peer groups of selected countries. As resource inputs are likely to vary minimally between peer group countries, comparisons within these groups may provide an effective and realistic approach to identifying benchmark countries for successful resource inputs.

6. The reference level for the three indicators are defined as follows:

   (i) **Staff**: ILO Access Deficit Indicator using the availability of the health service workforce, based on data from ILO calculations;

   (ii) **Medicines**: the mean per capita expenditure on medicines in the three countries of the group with the best health indicators, adapted to the price level of medicines in the country under analysis; and

   (iii) **Infrastructure**: here, the model will not use an external benchmark, but rather increase the spending for infrastructure on a pro-rata basis derived from the actual identified increase in spending for staff and medicines.

7. Additional aspects, such as changes in poverty level, extent of the informal economy, demography, and medical inflation may be used to improve and fine-tune forecasts derived from the model.

8. The result will be calculated as **the per capita health-care expenditure for delivering an essential health care package (EHCP) for all people in a country**.

9. All direct private expenditures above an out-of-pocket (OOP) rate of 35 per cent (the OOP in high vulnerability countries) will be considered to be inadequate levels of financial protection. Such cost will need to be borne out of other sources, such as taxes, social health insurance and international aid.

10. The gap between the calculated requirement and the actual funding with OOP at 35 per cent will be called the **funding gap**.

It must be noted here that the proposed costing approach relates to three ILO dimensions of access, i.e. availability, affordability and financial protection. Although these dimensions are not specifically reflected in the calculation report, the key assumption of this "top-down" model is that it is, to some extent, correlated with the input level. It appears reasonable to assume that the affordability of services is directly linked to their availability. The model, however, will probably not account for accessibility issues due to ethnicity and social class, which will require further targeted efforts. Financial protection and affordability are related to the need for OOP expenditures, and this in turn is partially determined by the resources from some form of public spending.

Quality is not specifically addressed in this model, as it is assumed that with the provision of inputs, quality will follow. The reasons for this are two-fold: first, it is very difficult to disentangle quality from the quantity of inputs; and second, at a later stage, a composite indicator ─ such as one composed of (some derivatives of) the number of births attended by a professional and maternal deaths ─ may be used to examine quality independently of input quantities.

This rapid and data-lean costing model will be used in the attempts to analyse the financial implications of an essential health-care package (EHCP) and to prepare accordingly. The magnitude of required resources should be fully assessed *before* the complex and time-consuming task of developing an essential package. As such, this model has been created with the purpose of providing an up-front initial assessment of the financial requirement of an EHCP.

Acronyms and abbreviations

ASEAN	Association of Southeast Asian Nations
CESCR	UN Committee on Economic Social and Cultural Rights
EHCP	essential health-care package
EPHS	essential package of health services
ESSP	essential systems and services package (Nigeria)
GDP	gross domestic product
HIV/AIDS	human immunodeficiency virus/acquired immunodeficiency syndrome
HMIS	health management information system
IAWG	Inter-Agency Working Group
IEC	information and education campaign
IHEA	International Health Economics Association
ILO	International Labour Office/Organization
IMR	infant mortality rate
IR	infrastructure ratio
LE	life expectancy
LGA	local government authority
MDG	Millennium Development Goal
MMR	maternal mortality rate
NHA	national health accounts
OOP	out-of-pocket
PHC	primary health care
QALY	quality-adjusted life-year
SHI	social health insurance
SMART	specific, measurable, action-oriented, realistic and timely
STD	sexually transmitted diseases
STI	sexually transmitted infections
SPF	social protection floor

TB	tuberculosis
THE	total health expenditure
TMS	total medical staff
TPE	total pharmaceutical expenditure
UDHR	Universal Declaration of Human Rights (1948)
UHC	universal health coverage
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USMR	under-5 mortality rate
WHO	World Health Organization

1. Introduction

> For most countries, achieving universal health coverage will be a lengthy journey along a tortuous road. For nearly every country, defining the essential benefits will be one of the critical milestones along that journey. (Quick, 2012)

According to the ILO Social Protection Floors Recommendation, 2012 (No. 202), access to essential health care constitutes one of the four basic social security guarantees that should be ensured at least at a minimum level over the life cycle to all in need. Thus, all countries should strive for universal access to such health care and ensure related funding. But what is essential health care and how much does it cost?

Essential health-care packages (EHCP) have been frequently proposed in an attempt to specify legal entitlements, to contribute to technical discussions, to rationalize existing medical treatment standards, and to contain costs. They are also promoted as an effective and efficient way of improving health service delivery, and are intended as a guaranteed minimum level of services, resources and personnel for all residents (WHO, 2008). EHCP are context-dependent and will necessarily reflect differences in national priorities, burdens of disease, and capacities. However, there are financial repercussions to any proposed health-care package, and consequently a need to carefully assess the financial impact of a specific EHCP, particularly at the national level. In this endeavour, several steps can be identified:

(i) defining and ascertaining the criteria for inclusion into an EHCP;

(ii) reviewing country experiences; and

(iii) costing of a defined EHCP.

A number of challenges present themselves in these tasks. For instance, a precise calculation of the financial consequences of introducing an EHCP is often highly time-consuming. Additionally, the availability of reliable high-quality data is difficult to guarantee at a national level, particularly in low-resource settings. Despite these challenges, devising an approximation of the *magnitude of additional funding required* for implementing a defined EHCP is helpful and should remain a national health policy priority.

This paper is organized as follows. First, the concept of essential health care will be discussed, coupled with an overview of existing international legal instruments, technical agreements and development goals pertaining to essential health care. This will be followed by a discussion of technical definitions (i.e. determining inclusion/exclusion criteria) of an essential health-care package and delivery mechanisms. We will then focus on the challenges of costing an EHCP and outline an alternative and data-lean approach for a rapid assessment of the cost of introducing an EHCP at the national level. Finally, we will list possible next steps.

1.1. Essential health-care packages (EHCP): Definitions, objectives and historical overview

1.1.1. Definitions and objectives

> There exist many interpretations and expectations of the role of EHCPs, depending on a wide range of socio-political, economic and epidemiological considerations. Generally, EHCPs have the following distinguishing features (Wong and Bitrán, 1999):

- They contain a *limited* scope of health-care interventions, including medical technology and personnel.

- The inclusion of these interventions rely on a specific prioritization process to achieve specific technical and/or social objectives.

- The interventions included in the package are synergistic with each other; that is, they are chosen to complement or reinforce each other, enhancing cost-efficiency.

Due to the finite scope of EHCPs, it is impossible to include the resources required to meet the health needs of all members of the population (WHO, 2008). Therefore, deciding on a basket of services to be included in the package will require a conscientious effort on the part of decision-makers to determine the services that meet the most basic and/or urgent health-care needs of the population. Moreover, these interventions will aim to maximize health benefits as well as cost-effectiveness, among other elements. These considerations in decision-making will be elaborated further in Chapter 2 of this paper.

The World Health Organization (WHO) gives the following definition of an EHCP (WHO, 2008):

> An Essential Health Package (EHP) in a low-income country consists of a limited list of public health and clinical services which will be provided at primary and/or secondary care level. In contrast, in richer countries, packages are often described according to what they exclude. EHPs obviously include different interventions in different countries – reflecting variation in economic, epidemiological and social conditions. (…) EHPs are intended to be a guaranteed minimum – some clients will have needs which cannot be met by the EHP.

This description of an EHCP illustrates some of its most important qualities. First, it highlights its context-dependent nature, in that there is no one-size-fits-all approach. EHCPs will necessarily reflect differences in the social and epidemiological profile between countries, as well as the economic capacity and development levels of each country or region. Secondly, EHCPs exist to provide only a *minimum* set of services and resources, and as such are not intended to meet the health-care needs of all residents. However, in principle all people are legally entitled to and should be guaranteed access to at least this basic range of services, health professionals and resources. Furthermore, this entitlement must be protected and enforced by legal and regulatory measures, so that no one is turned away from seeking this minimum package of care. Finally, the WHO definition implies that an EHCP usually entails some combination of both public health and clinical interventions, with a particular focus on primary and/or secondary levels of care in low-resource settings. A suggested list of activities pertaining to such interventions has been outlined in the World Bank's landmark report (1993) on budgeting for health-care interventions in low-income countries (see box 1.1).

Box 1.1. Public health interventions and clinical services

Public health interventions

- Immunizations
- School-based health services
- Information and selected services for family planning and nutrition
- Programmes to reduce tobacco and alcohol consumption
- Regulatory action, information, and limited public investments to improve the household environment
- AIDS prevention

Essential clinical services

- Services to ensure pregnancy-related (prenatal, childbirth, and postpartum) care
- Family planning services
- Tuberculosis control, mainly through drug therapy
- Control of STDs
- Care for the common serious illnesses of young children – diarrheal disease, acute respiratory infection, measles, malaria, and acute malnutrition

Source: World Bank, 1993.

The WHO report urged that, as a guaranteed minimum, an EHCP should contain a comprehensive mix of these essential services, paid for by taxes, health insurance, donors, and/or OOP, with public or private providers at various levels (World Bank, 1993). In this endeavour, countries must consider a wide array of factors in deciding to include certain interventions, while excluding others from their basic basket of services. This process will in turn reflect a country's prioritization of specific values and its broader goals, not only in determining what interventions it considers to be "essential", but also its rationale for establishing an EHCP in the first place. For instance, an EHCP may be intended as an instrument for advancing such high-level goals as the reduction of poverty and inequities; at the same time, it may be used in conjunction with other programmes and policies as a practical tool for improving cost-effectiveness and service delivery (WHO, 2008). Furthermore, governments may intend an EHCP to serve as a comprehensive set of services accessible to all residents, or as a "partial package" for targeting particular diseases or vulnerable groups. These justifications are elaborated in box 1.2. In addition, the objectives for developing an EHCP will be as diverse and context-dependent as the factors that influence *how* they will be implemented in a country or jurisdiction.

It is apparent that many of these objectives will conflict with each other: for instance, the goal of cost-containment may clash with those of equity and universality – expanding the availability of a wide range of public health and clinical services to all members of the population could prove to be a costly endeavour. This is particularly the case when the appropriate steps for costing and budget planning are not carried out, with subsequent costs having to be borne out of other facets of the public system. Another example is the conflict arising from prioritizing interventions that protect high-risk minority groups against acute, catastrophic illness events, such as TB control in rich countries (Zenner et al., 2013) over eliminating "high burden of disease" conditions that may be non-acute but are more widespread, such as obesity. Further complications may arise from including public participation in the decision-making process, as a public majority may support the exclusion of interventions that affect identifiable minority groups, even if the conditions affecting these groups could yield catastrophic results (Söderlund, 1998). The likelihood of such conflicts demonstrates the importance of carefully deliberating and establishing a clear understanding of the purposes of an EHCP before it is developed and implemented.

Box 1.2. Goals and objectives of an EHCP

Four high-level goals (WHO, 2008):

- *Priority setting on the grounds of effectiveness and relative cost*. This approach favours both cost-effective and cost-containing strategies, and is the most commonly cited rationale for an EHCP.
- *Poverty reduction*. Because ill health and paying for health care are major causes of poverty, EHCPs can be linked to poverty reduction.
- *Equity*. EHCPs generally describe a basic package of interventions that should be guaranteed as a minimum to all residents without discrimination. Equity can only be achieved through the implementation of additional policies and programmes aimed at improving access to the most vulnerable.
- *Political empowerment and accountability*. Although EHCPs are not a solution for weak management, they can hold various stakeholders such as service providers and insurers accountable through a clear description of the minimum range of services guaranteed for all.

Additionally,

- *Improving service delivery*. EHCPs focus attention on effective interventions and can help clarify the levels at which these interventions may be available.

Eight possible objectives (Söderlund, 1998):

- To protect against catastrophic illness events
- To ensure social risk pooling
- To improve allocative efficiency in the health system
- To eliminate "high burden of disease" conditions
- To improve equity of access to services
- To combat cost escalation
- To encourage competition between insurers
- To facilitate public participation and transparency in decision-making

Sources: WHO, 2008; Söderlund, 1998.

1.1.2. EHCPs: A brief history

The conceptualization of EHCPs originates from a long debate in international health diplomacy, leading to various legal and technical instruments that stipulate the basic human right to health care as well as the specific obligations regarding the coverage of benefits, as provided by the State. Furthermore, various declarative and policy statements need to be considered. A short historical overview of the development of the major legal instruments toward the achievement of EHCP is provided in this section.

The international legal background

Key instruments include the Universal Declaration of Human Rights, the International Covenant on Economic, Social and Cultural Rights and the International Convention on the Rights of the Child (see box 1.3).

Box 1.3. International legal tools in the conceptualization of EHCPs

Universal Declaration of Human Rights (1948)

Article 25

1. Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services.

International Covenant on Economic, Social and Cultural Rights (1966)

Article 12

1. The States Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health.
2. The steps to be taken by the States Parties to the present Covenant to achieve the full realization of this right shall include those necessary for:
   (a) The provision for the reduction of the stillbirth-rate and of infant mortality and for the healthy development of the child;
   (b) The improvement of all aspects of environmental and industrial hygiene;
   (c) The prevention, treatment and control of epidemic, endemic, occupational and other diseases;
   (d) The creation of conditions which would assure to all medical service and medical attention in the event of sickness.

International Convention on the Rights of the Child (1989):

Article 24

1. States Parties recognize the right of the child to the enjoyment of the highest attainable standard of health and to facilities for the treatment of illness and rehabilitation of health. States Parties shall strive to ensure that no child is deprived of his or her right of access to such health care services.
2. States Parties shall pursue full implementation of this right and, in particular, shall take appropriate measures:
   (a) To diminish infant and child mortality;
   (b) To ensure the provision of necessary medical assistance and health care to all children with emphasis on the development of primary health care;
   (c) To combat disease and malnutrition […];
   (d) To ensure appropriate pre-natal and post-natal health care for mothers;
   (e) To ensure that all segments of society, in particular parents and children, are informed, have access to education and are supported in the use of basic knowledge of child health and nutrition, the advantages of breastfeeding, hygiene and environmental sanitation and the prevention of accidents;
   (f) To develop preventive health care, guidance for parents and family planning education and services.
3. States Parties shall take all effective and appropriate measures with a view to abolishing traditional practices prejudicial to the health of children.
4. States Parties undertake to promote and encourage international co-operation with a view to achieving progressively the full realization of the right recognized in the present article. In this regard, particular account shall be taken of the needs of developing countries.

Article 26

1. States Parties shall recognize for every child the right to benefit from social security, including social insurance, and shall take the necessary measures to achieve the full realization of this right in accordance with their national law.
2. The benefits should, where appropriate, be granted, taking into account the resources and the circumstances of the child and persons having responsibility for the maintenance of the child, as well as any other consideration relevant to an application for benefits made by or on behalf of the child.

Since the declaration in the **Universal Declaration of Human Rights (1948) (UDHR)** that "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services" (Art. 25), the right to health has become widely accepted as a fundamental human right, explicitly recognized in various international and regional treaties as well as in national constitutions, domestic laws, policies and programmes.

The **International Covenant on Economic, Social and Cultural Rights (ICESCR), 1966** articulates the corresponding rights outlined in the UDHR in considerable detail, specifying the steps required for their full realization. The Covenant elaborates on a comprehensive view of States' obligations to respect, protect, and fulfil the right of individuals to the enjoyment of the highest attainable standard of physical and mental health, and to medical care.

Furthermore, the Covenant mandates that States have a core obligation to ensure the satisfaction of, at the very least, minimum essential levels of each of these rights. With regard to the protection of social security (Art. 9), in conjunction with the right to health care (Art. 12), these obligations signify the duty of the State to ensure access to a social security scheme that provides minimum essential levels of benefits to all individuals and families that will enable them to acquire at least essential primary health care.

These provisions also encompass the protection of the rights of children, who according to the **International Convention on the Rights of the Child** (1989) are also entitled to full rights to health (Art. 24) and social security (Art. 26).

Further legal instruments include the monitoring of the ICESCR by the **UN Committee on Economic, Social and Cultural Rights (CESCR)**, the independent expert body in charge of interpreting States' obligations and of examining their compliance with these obligations. The CESCR adopted a General Comment on the Right to Health in 2000 and on the right to social security in 2008, which clarify and operationalize the above provisions and provide guidance on their content. Specifically, the Committee interprets the right to health as being comprised of the following interrelated elements and principles relating to social protection, the precise application of which will depend on the conditions prevailing in a particular State: (i) availability; (ii) accessibility; (iii) acceptability; and (iv) quality (CESCR, 2000). These criteria are crucial in defining and implementing any EHCP and are also mentioned in the **ILO Social Protection Floors Recommendation, 2012 (No. 202).**

Technical agreements

The Declaration of Alma-Ata adopted at the International Conference on Primary Health Care (PHC), Alma-Ata, USSR (1978), reaffirms the responsibility of governments in ensuring the rights of individuals to the highest attainable level of health and health care, to be fulfilled by the provision of adequate health and social measures. PHC was recognized as the key to attaining this target as part of development and was defined as essential health care based on practical, scientifically sound and socially acceptable methods and technologies made universally accessible to everyone at a cost that the community and country can afford. It placed a strong emphasis on the delivery of essential services, especially mother-and-child health, acute infectious disease and basic surgery, as well as the treatment of chronic conditions. Based on the Alma-Ata Declaration, the PHC approach has been considered by the WHO member States as an important means to achieve the Organization's goal of "Health for All". The WHO now promotes universal health coverage (UHC) as a priority objective that is consistent with its concepts of health for all and primary health care.

The UN General Assembly Resolution 67/L.36: Global Health and Foreign Policy (6 December 2012), also reaffirms the right of all people to the enjoyment of the highest attainable standard of physical and mental health, as well as the right to a standard of living adequate for the health and well-being of oneself and one's family, including food, clothing, housing and medical care and necessary social services. It invites UN Member States to recognize the importance of universal coverage in national health systems, especially through primary health care and social protection mechanisms, including nationally determined social protection floors.

The Millennium Development Goals (MDGs) have also been a milestone in defining worldwide development and agreeing on concrete and measurable results. There are three health-related MDGs:

- Goal 4 aims to reduce infant mortality by two-thirds of the under-5 child mortality rate between 1990 and 2015.

- Goal 5 is two-fold and vows to improve maternal health. It sets the target of reducing the maternal mortality rate by three-quarters and achieving universal access to reproductive health.

- Goal 6 aims to halt the spread of HIV/AIDS, malaria and other diseases by 2015, largely through the achievement of universal access to treatment for these illnesses.

Achieving these health-related MDGs as well as the next wave of target goals beyond 2015 will depend largely on how countries succeed in moving towards universal health coverage (UHC) – a broad, encompassing but simultaneously flexible goal. The WHO has defined UHC thus:

> Ensuring that all people can use the promotive, preventive, curative and rehabilitative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship. (WHO, 2012)

This definition embodies three related objectives: (i) equity in access to health services; (ii) good quality of health services; and (iii) protection from financial risk. This gives rise to several questions:

(1) Does "coverage" entail de jure (i.e. on paper) or de facto coverage (i.e. in practice)? This is a crucial point of consideration, as the existence of legislation may not always ensure delivery, due to factors such as health worker absenteeism and unavailability of drugs (ILO, 2008).

(2) Do providers deliver appropriate care, from correct diagnosis to prescription of the right treatment? One needs to consider not only the number of visits with a provider, but also the quality of care during, and after, the contact.

(3) How much are people required to pay for their care? The de jure and de facto distinction discussed above also has implications for the financial coverage dimension. Beyond the payments people should make "on paper", financial coverage is what people pay in practice, and how affordable these payments are to them (Moreno-Serra et al., 2011).

These questions can be addressed to some extent by stipulating a catalogue of essential benefits, coupled with a standard treatment guideline – namely, an EHCP. While these are not novel concepts, they may allow for quantifying the extent of services needed (including the personnel and facilities to deliver them), and provide some guidance on the quality of care to be expected. Although the inherently probabilistic nature of medical care and the necessary element of "art in delivery" care inhibit full control over quality

management, defined diagnosis−treatment pairings could support a move towards more responsibility and quality improvement.

UHC integrates the existing aspects of population coverage, extent and quality of services, and financial protection. Like the MDGs, UHC plays an important role in the following:

- to explore the means through which countries can progress towards universal health coverage;
- to share innovative solutions; and
- to identify the actions through which the global community can lend support, such as capacity building (WHO, 2013a).

1.2. EHCPs and the ILO

The importance of the discussion on the establishment of EHCPs and minimum benefits in health care has long been recognized by the ILO, and subsequently most recently developed into the framework of the Social Protection Floor Initiative, including the national social protection floors described in Recommendation No. 202. Prior to this, the discussion on EHCP has been described in the following ILO instruments:

The **Medical Care Recommendation, 1944 (No. 69)** specifies that the availability of adequate medical care is "an essential element in social security", on a par with income security. It states that:

- the nature and the extent of the care provided by the branch should be defined by law; and that
- comprehensive health care should be guaranteed to all members of the population, whether or not gainfully occupied.

The latter can be achieved through a combination of social insurance complemented by social assistance or through a public health service. Recommendation No. 69 also highlights basic principles specific to the organization and management of the medical care branch.

The **Social Security (Minimum Standards) Convention, 1952 (No. 102)** is a landmark instrument in establishing a separate branch of social security law as a system of legal rights unified by common principles and organized into a social institution. It is a legally binding instrument for those ILO member States who have ratified the Convention, which: (i) sets qualitative and quantitative standards of minimum protection and targets for social progress; (ii) establishes common rules of collective organization, financing, and management of social security systems; and /iii) complements them with fundamental principles.

Convention No. 102 contains Article 2 on medical care benefits that need to be provided "in respect of a condition that requires medical care of a preventive or curative nature", in case of "morbid condition" (ill-health), or maternity. It establishes minimum standards of coverage in terms of contingency by medical care benefits schemes, the personal scope of coverage (i.e. who should be protected), the type/nature of the medical care benefits to be provided, the length of the qualifying period for entitlement to the benefit, and its duration. The specific elements of essential care in case of illness (Art. 7) and for maternity care (Art. 49) are outlined in box 1.4.

Box 1.4. Social Security (Minimum Standards) Convention, 1952 (No. 102): Minimum medical care to be provided

Article 7. The *minimum* "benefit in respect of a condition requiring medical care of a preventive or curative nature" shall include:

a) In case of a morbid condition:

   (i) General practitioner care, including domiciliary visiting;

   (ii) Specialist care at hospitals for in-patients and out-patients, and such specialist care as may be available outside hospitals;

   (iii) The essential pharmaceutical supplies as prescribed by medical or other qualified practitioners;

   (iv) Hospitalisation where necessary;

Article 49. The maternity benefit should include medical care, covering at least:

a) Pre-natal, confinement and post-natal care either by medical practitioners or by qualified midwives; and

b) Hospitalisation where necessary.

The **ILO Medical Care and Sickness Benefits Convention, 1969 (No. 130)** outlines a more advanced set of standards than Convention No. 102 with respect to medical care. In addition to the provision of medical care benefits as required by that Convention, Convention No. 130 mandates the provision of necessary pharmaceutical supplies, dental care, and medical rehabilitation (Art. 13). Furthermore, it recognizes the different capacity of member States, particularly for those with limited financial and health resources, by outlining an adjusted list of services to be included as minimum medical care (see box 1.5).

Box 1.5. Medical Care and Sickness Benefits Convention, 1969 (No. 130): Minimum medical care to be provided

Article 13. Minimum medical care to be provided:

a) General practitioner care, including domiciliary visiting;

b) Specialist care at hospitals for in-patients and out-patients, and such specialist care as may be available outside hospitals;

c) The necessary pharmaceutical supplies on prescription by medical or other qualified practitioners;

d) Hospitalisation where necessary;

e) Dental care, as prescribed; and

f) Medical rehabilitation, including the supply, maintenance and renewal of prosthetic and orthopaedic appliances, as prescribed.

Article 14. Countries with insufficiently developed medical facilities and economic problems are able to opt for a narrower definition as a temporary exception:

a) General practitioner care, including, wherever possible, domiciliary visiting;

b) Specialist care at hospitals for in-patients and out-patients, and, wherever possible, such specialist care as may be available outside hospitals;

c) The necessary pharmaceutical supplies on prescription by medical or other qualified practitioners; and

d) Hospitalisation where necessary

Finally, the **Social Protection Floors Recommendation, 2012 (No. 202)** is the latest international instrument on social security that prioritizes access to essential health care,

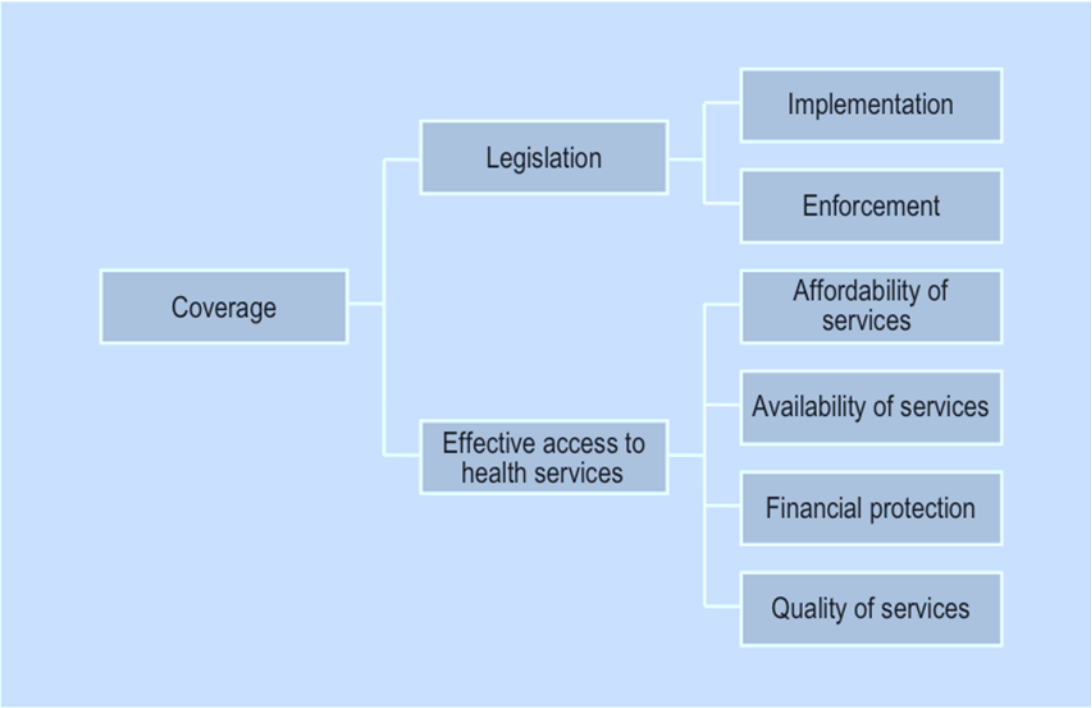
making it one of the four basic social security guarantees that should constitute national social protection floors. The Recommendation mandates that this guarantee should be extended to all residents and all children, subject to existing international obligations. Several WHO policies provide guidance on the content of the "essential health care" guarantee of the social protection floor (ILO, 2011).

1.2.1. Social health protection and essential health care in the light of ILO Recommendation No. 202

Social health protection, a concept rooted in the core values of universality, equity, solidarity in financing and responsiveness to special needs (Recommendation No. 202, Paragraph 3), is aimed at providing "public or publicly organized and mandated private measures against social distress and economic loss caused by the reduction of productivity, stoppage or reduction of earning or the cost of necessary treatment that can result from ill health" (ILO, 2008). It requires that all residents in a country have access, in an equitable manner, to an essential benefit package of adequate quality (Scheil-Adlung and Bonnet, 2011).

ILO Recommendation No. 202 is a major step towards the conception of a coherent social protection framework which includes such essential medical care and benefits. This paper draws on the following concepts and definitions in the Recommendation in discussing EHCPs: "access to a nationally defined set of goods and services, constituting essential health care, including maternity care, that meets the criteria of availability, accessibility, acceptability and quality" (Paragraph 5a); and "comb(ining) preventive, promotional and active measures, benefits and social services" (Paragraph 10a). States must ensure effective access to such health services by taking into account these dimensions (see also figure 1.1).

Figure 1.1. The concept of coverage



Source: Scheil-Adlung and Bonnet, 2011.

- **Affordability**. The affordability of services is defined as the absence of financial barriers to needed health care, with the goal of avoiding health-related poverty or impoverishment. The ILO uses four main criteria to define affordability of health care: (1) lack of financial barriers such as high user fees; (2) level of insurance

contributions set in relation to the household's ability to pay; (3) no risk of catastrophic health expenditure that would exceed 40 per cent of household income net of subsistence expenditure; and (4) no risk of impoverishment due to ill health (ILO, 2011).

- **Availability**. The physical availability of a specified range of health-care services, infrastructure, workforce, medical goods and products that can be provided in a timely manner while maintaining their affordability and adequate quality. This often includes access to information about the services available (Scheil-Adlung and Bonnet, 2011).

- **Financial protection**. Financial protection must address risks of impoverishment due to catastrophic health events and the capacity of individuals and households to finance any kind of out-of-pocket payments, such as user fees, co-payments, and transport costs to reach health-care facilities. This also entails the provision of some means of income support (i.e. compensation for lost income due to ill health).

- **Quality**. The quality of services and goods has a direct impact on an individual's utilization and access to these services. It also relates to a sufficiently qualified health-care workforce and sufficient infrastructure that would allow for the provision of services in response to needs in a way that is, for example, gender-sensitive and inclusive of all individuals.

Following this framework, all residents of a country, without discrimination, are entitled to a set of essential health services that is affordable, available and of good quality. In seeking and utilizing these services, individuals and households should also be provided with financial protection by the State against any economic burden that may place them at risk of poverty or catastrophic cost. In addition, social protection signifies that these rights are enshrined in law, thus implying the implementation and enforcement of legislation with a view to providing universal access to health services.

2. Developing and implementing an EHCP

2.1. What services should be included?

A package of essential health-care services is generally a limited set of public health and clinical interventions that meet certain predetermined inclusion criteria, such as cost-effectiveness and/or equity. EHCPs include a range of human skills, resources and services that are preventive, promotive, or curative in nature. In addition to the description elaborated in box 1.1, essential public health and clinical interventions can be classified as follows (from Wong and Bitrán, 1999):

Public health interventions

- services that foster changes in personal behaviour, or information, education and communication programmes (e.g. cessation of smoking, promotion of safe sex practices);
- services that control environmental hazards, or the development or regulation of safety products (e.g. malaria prevention programmes, seat belt regulations); and
- services that deliver specific health care to the population, such as immunization, chemoprophylaxis or screening (e.g. the provision of vaccines and immunizations to both children and adults, food supplementation for malnourished children and/or pregnant women, etc.).

Clinical health interventions

Clinical health interventions are generally curative in nature, and include services that pertain to ambulatory care (e.g. reproductive health, child health, infectious and chronic diseases, injury), dental care, inpatient and surgical services at all levels of care, and treatment of catastrophic illnesses (e.g. trauma, cancer, AIDS, organ transplant).

While the prioritization and subsequent rationing of services is inevitable in the organization of an EHCP, as a guaranteed minimum, it is desirable and necessary to include components of both types of intervention. It would also be highly impractical to dissociate public health care from clinical care, as they are intimately and synergistically connected: for example, in the efforts to improve sexual health, it would seem unreasonable to promote safe sex practices while excluding clinical treatment of sexually transmitted infections (STIs) from the basket of services offered to the population. This is especially salient for low-income countries, whose needs are generally complex and wide-ranging and cannot be fulfilled by simply one type or level of intervention (Pearson and Muschell, 2009). Although one of the most significant issues here would be the cost, Ethiopia's example demonstrates that a comprehensive mix of public health and clinical interventions that include preventive, promotive and curative services can indeed be provided in a low-income setting (see box 2.1).

Box 2.1. Components of Ethiopia's EHCP (Health Extension Plan)

- ***Family health services***
  - Maternal and newborn care
  - Child health services (including immunization)
  - Nutrition
  - Family planning services
  - Adolescent reproductive health services
- ***Communicable disease prevention and control services***
  - Malaria
  - TB
  - Leprosy
  - HIV/AIDS & STIs
  - Epidemic diseases
  - Rabies
- ***Hygiene and environmental health services***
  - Control of insects, rodents and stinging animals
  - Water supply and safety measures
  - Building and maintaining a healthy house
  - Solid and liquid waste management
  - Food hygiene and safety measures
  - Personal hygiene
- ***Basic curative care and treatment of major chronic conditions***
  - First aid for common injuries and emergency conditions
  - Treatment of major chronic conditions and mental disorders
  - Treatment of common infections and complications
- ***Health education and communication services***

Source: Ethiopia Federal Ministry of Health, 2005.

While it can be assumed that the less costly upstream (primary, preventive) interventions should be given priority in low-resource settings where rationing is especially necessary, the Ethiopian example demonstrates that this does not have to be the case. Through the successful implementation of its EHCP, together with the establishment of efficient delivery mechanisms, regulations of the health sector including quality and standard assessment, and considerations of the most vulnerable segments of its society such as mothers and children, Ethiopia has been able to achieve a significant improvement in the health status of its citizens (AHO and WHO, 2013). Since the achievement of its EHCP, the Ethiopian Demographic Health Surveys of 2005 and 2011 show that infant mortality rate in Ethiopia has decreased by 23 per cent (from 77 to 59 deaths per 1,000 births), while the under-5 mortality rate has decreased by 28 per cent (from 123 to 88 deaths per 1,000 births). Although further research is required to assess the cost-effectiveness of this programme, the significant improvements in health status it has yielded has direct and long-term benefits for poverty reduction efforts, particularly in helping to build healthier, more productive communities. Ethiopia's achievement of a successful EHCP programme is also in line with its Plan for Accelerated and Sustained Development to End Poverty (PASDEP) (Ethiopia Federal Ministry of Health, 2007).

Additionally, in supporting the development of an essential package of health services (EPHS) for Somalia, UNICEF has described the role of such a package as "a prime mechanism for strategic service provision of the public sector health service" as defined along the three dimensions shown in box 2.2 (Pearson and Muscheli, 2009). Specifically, the recommendation outlines ten essential public health and clinical programmes to be included in the essential package of services. These include six core programmes: maternal, reproductive and neonatal health; child health; communicable disease surveillance and control including sustainable water promotion; first aid and care of the critically ill and injured (humanitarian care); treatment of common illness, as well as that of catastrophic, acute illnesses such as HIV, STIs and TB. UNICEF also recommends the addition of four supplementary programmes, including the management of chronic disease and other diseases as well as care of the elderly and palliative care; mental health and mental disability; dental health; and eye health (Pearson and Muschell, 2009). The UNICEF recommendation for Somalia has great pertinence for low-income countries in that, beyond simply advising on the services to be included in the basic package, it also lists the various levels of provision of these interventions (primary health unit, health centre, referral health centre, and hospital), as well as management and support components to ensure the efficient delivery and the sustainability of these services.

Box 2.2. Somalia: UNICEF recommendations for an essential package of health services

Four levels of service provision

- Primary health unit
- Health centre
- Referral health centre
- Hospital

Ten health programmes

- Core programmes:
  1. Maternal, reproductive and neonatal health
  2. Child health
  3. Communicable disease surveillance and control, including watsan (sustainable water) promotion
  4. First aid and care of critically ill and injured
  5. Treatment of common illness
  6. HIV, STIs and TB
- Additional programmes:
  7. Management of chronic disease and other diseases, care of the elderly and palliative care
  8. Mental health and mental disability
  9. Dental health
  10. Eye health

Six management and support components

- Finance
- Human resource management and development
- EPHS coordination, development and supervision
- Community participation
- Health systems support components
- Health management information system

Source: Pearson and Muschell, 2009.

As it is unlikely that public health interventions alone will prevent all morbidity, there will always be a need for clinical interventions at some level (Wong and Bitrán, 1999). Although determining the appropriate balance between the two types of interventions will necessarily be carried out via value- and need-based processes, it should also take an analytical approach, assessing the burden of disease and using applicable costing methodologies to determine cost-effectiveness and sustainability of certain treatments and the EHCP as a whole (World Bank, 1993). Our proposed costing tool will be discussed in detail below.

2.2. Provision and delivery of EHCPs

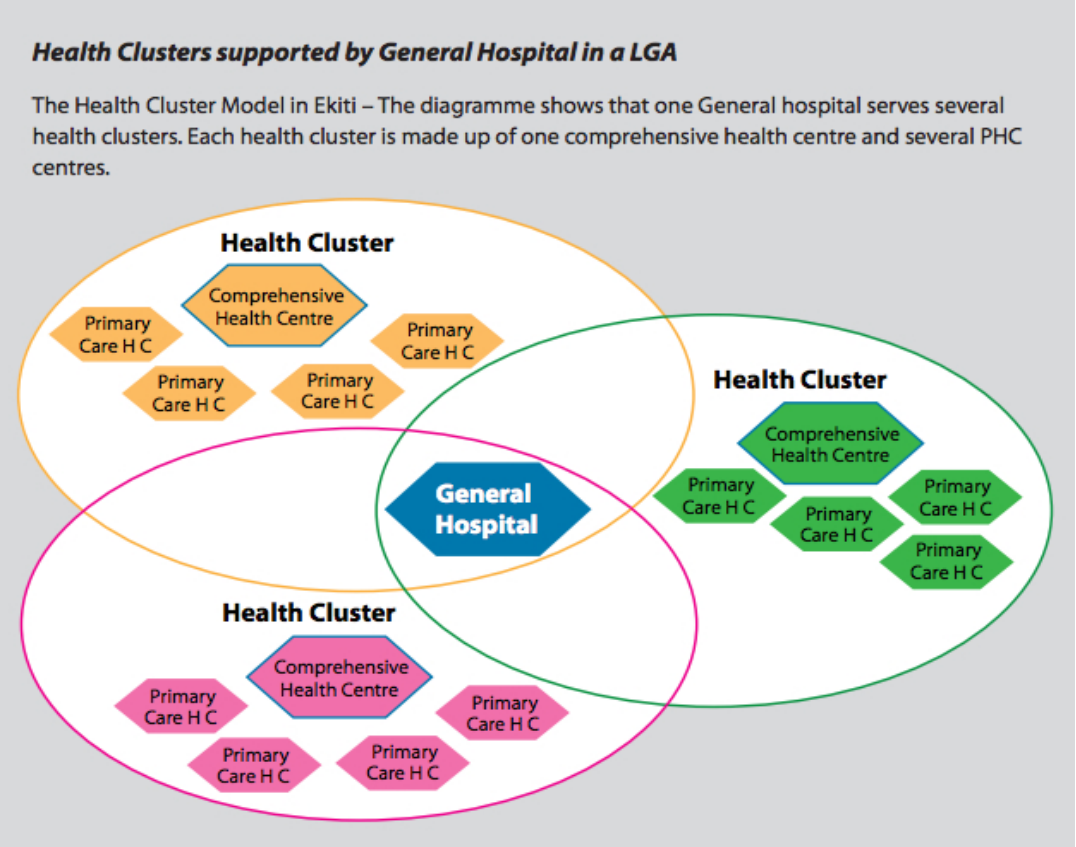
EHCPs, particularly clinical interventions, can be provided at different service levels − for example, groups of facilities including clinics or health centres, district hospitals and referral hospitals (Wong and Bitrán, 1999). In 2007, the Nigerian Government launched a free treatment programme for pregnant women and children under five years of age (Free MCH). The packages of services for the programme included a variety of child health

interventions, including malaria, acute respiratory infections, diarrhoeal diseases, nutrition and HIV treatment; and for pregnant women, services such as antenatal, childbirth, and postnatal care (up to six weeks after delivery) were provided. In the state of Kaduna alone, 255 facilities were renovated and equipped to handle delivery of these services, including additional human resources at facility and community levels. The various levels of service delivery facilities are described in the Nigeria Partnership for Transforming Health Systems (PATHs) Technical Brief for 2002−08:

- Health clinic serving a community or settlement with a population of around 2,000
- Primary health care centre serving a political ward with a population of around 10,000−30,000
- Rural hospital serving a rural local government authority (LGA) with a population of around 200,000–300,000
- General hospital serving an urban or peri-urban LGA with a population of around 300,000–500,000
- Specialist hospital serving as the apex referral centre for the State.

The scope of the services to be provided at each point of delivery was similar, but became increasingly comprehensive and complex at subsequent (larger) centres. This trend was also noted in the health system in the state of Ekiti, where the delivery system was organized in Health Clusters containing several Primary Care Health Centres (15,000 patients) and one central Comprehensive Health Centre (50,000 patients). These larger Comprehensive Health Centres, in addition to providing a similar range of services as the Primary Care Health Centres, also provided further examinations and subsequent referral to the main General Hospital (100,000 patients) – shared by several Health Clusters – as required (figure 2.1).

Figure 2.1. Ekiti, Nigeria: Essential systems and services package (ESSP) delivery model – Health Clusters



Source: PATHS, 2002–2008.

The WHO Technical Brief on essential health packages (WHO, 2008) identifies several prerequisites for the effective delivery of an EHCP:

- **Delivering an EHCP requires resources**. The implementation of an EHCP will require shifting existing resources and/or attracting new resources; hence, it is crucial to integrate the EHCP in allocation decisions and budgeting.

- **Support systems need to reflect the contents of the EHCP**. The effective delivery of an EHCP not only requires the availability of services, but also various support structures including human resources, drug supplies, infrastructure and equipment. In addition to the service aspects, the Nigerian ESSP included human resources and infrastructure development, an equipment plan, and the creation of an enabling environment and systems (e.g. drugs and supplies, transport, communication and logistic systems, referral system, and a Health Management Information System).

- **Effective "vehicles" are needed for EHCP implementation**. Once the EHCP has been specified and resources secured, "vehicles", such as contracting providers (both public and private), regulating and accrediting the facilities, and developing quality assurance protocols, must be put in place to ensure the provision of the package.

- **If the EHCP is to be universal, or a safety net for the poorest, there must be deliberate efforts to improve access**. In order for the implementation of an EHCP to be equitable and universally available, adequate monitoring systems must be established so that the most vulnerable are actually utilizing the services. In addition, similar monitoring systems could help to ensure that the legal guarantees are being properly enforced.

- **Implementing an EHCP is not just a technical exercise – political and institutional processes need to be engaged**. EHCPs are not a solution to weak management, and as such, it is crucial that governments and other managing bodies take proper ownership of EHCPs from development to delivery.

2.3. Criteria for specifying the content of an EHCP

There is currently no consensus on a standard method for determining the inclusion and exclusion criteria for an EHCP. Ideally, it would follow a holistic approach in which both technical criteria and social welfare are taken into account, with consideration of each country's health-care system, market structure, and characteristics of the demander and provider, as well as the capacity of each government's regulations (Yang et al., 2009). If possible, it would also reflect the historical and socio-cultural context of each country. Although currently it is the cost-effectiveness of interventions that is the most widely accepted and feasible criterion for inclusion in an EHCP, this alone cannot capture all of the relevant factors mentioned above, such as societal value (WHO, 2008). There are a multitude of possible approaches to determining EHCP criteria that must be taken into consideration. In this endeavour, it is helpful to revisit some of the key objectives of any such "core package" component of health care reform, representing Rawlsian (risk avoidance) and utilitarian (efficiency improvement) social welfare philosophies (Söderlund, 1998).

2.3.1. A multitude of possible approaches

First, given the **scarcity of resources**, there is a strong need for cost-effective interventions that will lead to a maximum health gain with given financial and human resources. However, the current global paucity of data on cost-effectiveness renders it virtually impossible to compile a comprehensive list of economic evaluations of the most common conditions and their possible treatments. There are nevertheless a number of examples of guiding tools for choosing cost-effective interventions, including the WHO's CHOICE league table, a tool developed to assess and report the costs and effects of a wide range of health interventions in various epidemiological subregions across the globe (WHO, 2013b).

Additionally, the policy perspective necessitates a targeted consideration of the **burden of disease**, or the impact on morbidity and mortality (as well as cost) in a population. This signifies that those diseases/conditions inflicting a heavier burden on the community should be tackled with greater priority. The World Bank's Disease Control Priorities Project (World Bank DCPP, 2006) provides an example of this approach, in which stakeholders assess disease control priorities and produce evidence-based analysis and resource materials to inform health policy-making in low- and middle-income countries. Here, the global burden of disease and evidence-based recommendations, as well as the effectiveness and efficiency of interventions, are compiled for ready use.

Another perspective, namely **equity** considerations, would place special emphasis on treating conditions that mainly afflict the poor. This may lead to what has been called the "equity−efficiency trade-off", as those interventions contributing to more equity may not necessarily be those that produce the most health gain for the resources used.

The acuteness of disease, or the "**rule of rescue**", is a powerful concept that most stakeholders will consider with regards to priority setting. This requires that those patients in an acute state of risk, such as after an accident, should always have priority over those requiring interventions for a non-acute disease or preventive measure, even if the cost-effectiveness of the acute interventions is lower. However, the rule of rescue is an intuitive approach that cannot readily be overruled, in addition to the possibility that people may

place greater value on egalitarian methodologies than simply those that maximize the overall outcome.

Finally, there is the issue of **impoverishment due to OOP expenditures for health**, or in its worst form, **catastrophic** health-care expenditures. Protecting people from catastrophic health expenditures has been given less attention in industrialized countries with their generally advanced social security systems (Nord et al., 1995), but for many low- and middle-income countries where such systems may not already be in place, impoverishment from direct health-care costs and indirect opportunity cost to earn an income remains a serious problem. For instance, major chronic illnesses such as inherited genetic disorders or cancer generally tend to be low-frequency but high-impact: they are likely to have a devastating health and financial impact on individuals and their families. They will definitely require social health protection for coverage of income benefits as well as of costs incurred from prolonged expensive treatment. Here it can be argued that without providing some degree of coverage for these interventions, individuals and their families are likely to face impoverishment from catastrophic OOP expenditure, and thus, it is an imperative to ensure that these services are included as part of the EHCP (as many other individuals could face similar situations). On the other hand, it could be argued that these interventions are not very cost-effective on a larger scale, given that the incidence of these events is relatively low and that they affect a relatively small subset of the population. However, most EHCP and related programmes – even in low- and middle-income countries – have made efforts to provide some means of protection for such catastrophic conditions.

Furthermore, the expectation of high cost may also be detrimental to seeking care. Thus, financial protection is not only about preventing catastrophic expenditures; it is also about lowering financial access barriers to care, such as upfront user fees. This raises several fundamental questions for consideration. For instance, who should bear the costs associated with access barriers? Is it fiscally feasible to eliminate these barriers for all who seek care, or should exceptions be made only for specific cases (e.g. emergencies, high risk to public health)? Should age, gender and economic productivity be taken into consideration? And should user fees be eliminated at all levels of health care?

2.3.2. Complexity and trade-offs

Overall, these theoretical deliberations reveal the complexity and need for trade-offs inherent in choosing amongst the principally unlimited needs and demands for those forms of care that will be financed by society (Wong and Bitrán, 1999). If the overall level of benefits is relatively small, common sense and clinical experience together with community involvement will go a long way and may help to form a blueprint of what should be publicly financed (e.g. via taxes or social health insurance) and what should be financed through other means. However, once the benefit package goes beyond providing elementary clinical care such as basic surgery, antibiosis, emergency obstetric care and acute asthma attacks, and when chronic conditions such as hypertension, coronary-artery disease and diabetes need to be considered, reliable data will be required to be enable stakeholders to make the necessary trade-offs. Furthermore, the establishment of national standards can provide a meaningful and practical framework to enable responsible decision-making (Paolucci et al., 2009; Söderlund and Peprah, 1998).

People with special needs should be given particular focus. Neuropsychiatric disorders serve as an example: schizophrenia and depression are often stigmatized and require greater efforts by doctors and nurses to reach affected families and to provide adequate care. It may be helpful to allocate funding specifically for dealing with such special cases that may arise from special family circumstances or from the severity of the condition. The task of efficiently and equitably distributing such funds within a community could be assigned to a local committee.

Poor quality of available data is a major impediment to providing robust technical input, especially when calculating cost-effectiveness ratios. National and international guidelines outlining standards for the quality of data could provide a solution to this problem. Thankfully, there has been a recent surge in global efforts to produce data on burdens of disease (Lancet, 2012). Similar efforts at the local and regional levels could also prove remedial to the issue of poor quality and/or insufficient data, and would effectively complement these higher-level initiatives. Regional health boards and committees may play an important role in this regard.

There is presently a great need for convincing theoretical and technical frameworks that allow for a structured discussion on the trade-offs between the different principles concerning priority-setting and care provision, such as universality, equity and essentiality of benefits.

2.3.3. Making decisions

Given these numerous concepts − which could lead to substantially different results − and the objections to simply measuring health or cost benefits, the issue becomes one of eliciting preferences from certain populations and subsequently aggregating them (Dolan and Olsen, 2002).

This is both a technical and a political challenge. A number of countries have initiated discussions on prioritizing funding, both in high-income countries and regions (e.g. Australia, Netherlands, New Zealand, Sweden, and the State of Oregon (United States), to name a few) and in low- to middle-income States (e.g. Indonesia, some first moves in China). Hutton (2000) found that:

1. None of the initiatives relied on a single indicator for ranking procedures, but rather, each used different approaches.

2. In all instances, some form of community involvement was used as a source of measuring preference.

3. Choosing a package of health services for a population requires a range of data, as well as the necessary technical expertise to know how to use the data, which additionally requires regular updates to reflect the changes and adjustments in health systems over time.

4. Decisions about selecting the range of services to be provided require more than just a ranking of cost-effectiveness ratios (which are lacking in most developing countries), "but [also] a full consideration of the demand for services, external costs and benefits of interventions, the distribution of the costs and benefits (e.g. whether pro-poor or not), and the potential for services to be provided privately".

The inherent complexity of the task and the need for high-quality data and balanced decision-making point toward an intense technical and political process with several phases of deliberation over an extended period of time. Moreover, technical and economic progress, as well as changing health policy goals, means that any such benefit package will be subject to almost constant revision and amendments.

Despite these difficult trade-offs and the many technical challenges, many countries of varying income and development levels have managed to greatly improve the health status of their respective populations by implementing a basic package of health services that include maternal and neonatal health, child health and immunization, public nutrition, communicable diseases treatment and control, mental health, disability services, and regular supply of essential drugs. Afghanistan's achievement in drastically decreasing its

formerly dismal maternal and child mortality ratio by concentrated focus on maternal, neonatal and child health demonstrates that this type of success can be accomplished in even the most fragile States (Quick, 2012).

Glassman and his colleagues from the Centre for Global Development have managed to identify at least 63 low- and middle-income countries that use explicit health benefit plans or packages to set the scope of benefits to be provided, indicating the interest and need of many countries to rationalize the priority-setting process with regard to the source of funding:

> By defining the "who" and the "what" more clearly via a benefits plan, many have suggested that an entitlement is created that allows governments and citizens to hold health systems to greater levels of accountability and thus impact. There's an evident gray area in between the positive and the negative list of benefits, but when the counterfactual is pro-wealthy, pro-urban, pro-tertiary public spending as is commonly the case in low- and middle-income countries, adequate funding and provision of at least the basic package for all could represent an improvement for health system outcomes (Glassman and Giedion, 2013).

3. Costing an EHCP

3.1. Current approaches and experiences

International instruments highlight, among other aspects, the importance of having at least some understanding of the financial consequences when aiming to provide essential health care to a certain population. For instance, Paragraph 8 of ILO Recommendation No. 202 states:

> When defining the basic social security guarantees, Members should give due consideration to the following: (a) persons in need of health care should not face hardship and an increased risk of poverty due to the financial consequences of accessing essential health care. Free prenatal and postnatal medical care for the most vulnerable should also be considered.

The World Health Organization Resolution 58.33 on sustainable health financing, universal coverage and social health insurance, adopted by the 58th World Health Assembly in 2005, urges WHO's Member States to ensure that health financing systems include prepayment and risk-sharing mechanisms in order to avoid catastrophic health-care expenditure. The principle of financial risk protection, as stated in the Resolution, ensures that the cost of care does not put people at risk of financial catastrophe. A related objective of health-financing policy is equity in financing: households contribute to the health system on the basis of their ability to pay.

WHO Resolution 64.9 on sustainable health financing structures and universal coverage, adopted by the 64th World Health Assembly in 2011, reiterates the basic principles for achieving universal health coverage outlined in Resolution 58.33 and also adds some precisions as to the means through which these principles can be attained, for example, avoiding significant direct payments at the point of delivery and including a method for prepayment of financial contributions for health care and services, as well as a mechanism to pool risks among the population and to aim for affordable universal coverage and access for all citizens on the basis of equity and solidarity.

Many national-level essential medicines guides and standard treatments are available and the challenge is to combine such guides and standards with existing demographical and epidemiological data and to derive financial implications from them. Costing exercises in different countries – for example, in Egypt (Frère et al., 1998), Indonesia (Guerard et al., 2011), and the Philippines (Mòdol, 2010) – have demonstrated the complexity and substantial resources needed for undertaking any such detailed costing with good quality. The summary from the EU-funded report on costing an essential health package in the Philippines (Mòdol, 2010) illustrates the inherent challenges of any such bottom-up approach:

> The methodology used is relatively complex. A standard international method (WISN) [Workload Indicators of Staff Needs] was used to estimate staff needs based on minimum teams and projected workloads. Only public sector salaries were considered. Drugs (items and quantities) were estimated using a combination of standard list of items and quantities (kits) developed by WHO, plus recommendations from the different DoH [Department of Health] programs. Only first line meds are considered. Prices, all local, come from different sources, including DPRI [Drug Price Reference Index], DoH and actual purchases by secondary hospitals.
>
> Presently, the public PHC [Primary Health Care] sector is in no position to offer the full array of services listed in the EHP [Essential Health Package]. Local health systems concentrate on public health interventions with little personal care. NCD [Non-Communicable Diseases] and cancer screening are virtually absent from the range of services offered. Supply of medicines to patients is limited at best.

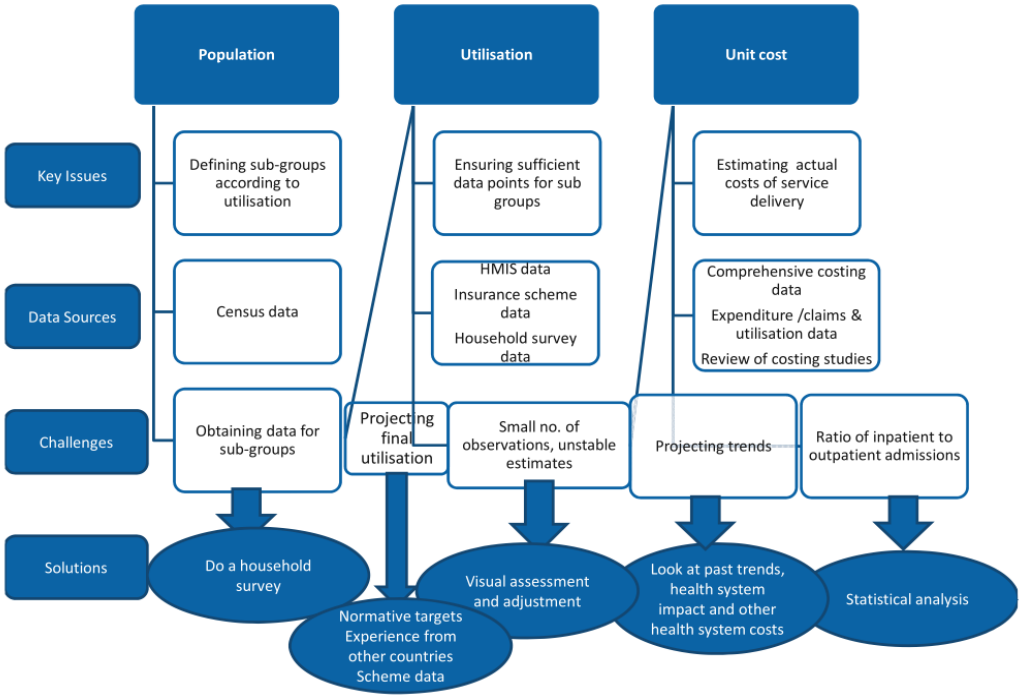
> A model system was roughly designed to calculate potential costs, developing the existing ILHZ [Inter-Local Health Zone] concept into an institution able to manage health care providers (of varied ownership) to offer the EHP interventions to a defined population. Basic teams are adjusted for a moderate level of consumption and high coverage of public health programs. The model calls for physicians to concentrate on the more technically demanding job while most care – including the curative one -- is taken by nurses and midwives. Similarly, most care is performed at BHS [Barangay Health Station] level. Even with this proviso, the number of physicians per RHU [Rural Health Unit] should increase (from 1 to 4) while BHS should be permanently staffed with at least one midwife. The model is complemented with inpatient capacity at municipal level and the existence of a Secondary hospital within the ILHZ.

Similarly, Geroy (2012) concludes:

> Although the Philippine Health Insurance Corporation may apply the recommendations given in previous studies (i.e. to subsidize diuretics, ACE inhibitors and calcium channel blockers), it is uncertain how much public funding is justified. There is an information gap on clinical data (transition probabilities, relative risks and risk reduction) and utility values on hypertension and related diseases from middle- and low- income countries. Considering the national relevance of the disease, a study on the costs of hypertension in the Philippines including in-patient, out-patient, out-of-pocket, local government and national government expenditure must be made.

McIntyre and Borghi (2012) provide a helpful graphical overview of this complex and data-demanding process (figure 3.1). This illustrates that beyond the challenges of defining some form of essential health, costing such health care will add another level of complexity. Furthermore, the system is inherently unstable, in that it faces constant changes in policy goals, required inputs and prices, as well as in utilization patterns due to pricing and availability. This leads to formidable challenges in calculating the required financial inputs in a timely manner with reasonable data and resource requirements.

Figure 3.1. Overview of key issues, data sources and challenges for expenditure modelling



Source: McIntyre and Borghi, 2012.

In response to requests from countries to harmonize the content, format and outputs of existing costing tools, an Inter-Agency Working Group (IAWG) on Costing – composed of UNICEF, World Bank, WHO, UNFPA, UNDP and UNAIDS – has been working on the harmonization of costing and impact assessment tools used for health sector planning. The resulting United Nations OneHealth Model (WHO-IHP+, 2012) is a software tool designed to strengthen health system analysis, costing and financing scenarios at the country level and to assess public health investment needs in low- and middle-income countries. OneHealth presents detailed components of existing disease-specific costing tools in a uniform format and links them together.

The model follows a comprehensive approach in incorporating the planning and costing of the various dimensions of a health system: human resources, facilities, equipment and transportation, medicines and supply chains, health management information systems, monitoring and evaluation, and governance activities such as policy, advocacy and administration. The model covers the national health sector, with a focus on public-sector health interventions. It also allows for incorporating activities in the private sector and the costing of selected non-health-sector activities that may have health impacts. There are direct links and checks, which are built in between different modules. For example, there is a direct link from the Infrastructure module to the Human Resources for Health module, which communicates the number of health facilities to be built in a year. This enables users to base human resources norms on the forecasted number of facilities per year.

Through its modular design, OneHealth has the potential to provide valuable input into health policy decisions concerning allocation, development of rural areas, and de-bottlenecking. It can potentially strengthen the development of national strategic health plans by facilitating health system analysis, costing and financing scenarios at the country level. It requires training and is heavily dependent on the availability of data, subject-matter experts and coordination among critical actors. At present, it has been introduced or is scheduled for introduction in about ten countries.

The substantial training required, expert inputs and decision-making processes will be greatly reduced, but nevertheless the OneHealth costing tool, like the other bottom-up approaches, will require time and, more importantly, robust data and the dedication and willingness of experts to validate, input and interpret the model. However, for many countries in low-resource settings, this data will be extremely difficult to obtain, if it is documented at all. As such, using the OneHealth tool would require the use of externally approximated proxy measures. This will at best give a rough estimation of the required data, which is not likely to be reliable. For countries where data collection and assessment remains a challenge, tools such as OneHealth will not be the most practical and readily available option for costing an EHCP and will therefore require alternative measures.

3.2. Development and discussion of an innovative approach

Against this background, how could the issues experienced in the costing of EHCPs, particularly scarce datasets, be overcome to rapidly inform countries aiming at extending coverage?

Any meaningful definition of an EHCP must be grounded in a detailed medical and socio-economic discussion, taking into consideration a range of factors pertaining to demography, epidemiology, medicine and health, and social policy. It will require a substantial amount of time and effort to engage all relevant stakeholders in initiating these comprehensive deliberations. This endeavour will require full dedication and support from ministries of labour, social security and health, and various other government institutions,

as well as a diligent process to bring together experts, civil society, administrators and politicians.

The WHO's Commission on Macroeconomics and Health (WHO, 2001) managed to calculate a worldwide average cost; and while its approach has proved to be very useful in stimulating debate and obtaining preliminary data at the global level, it may not be well suited to producing country-specific data.

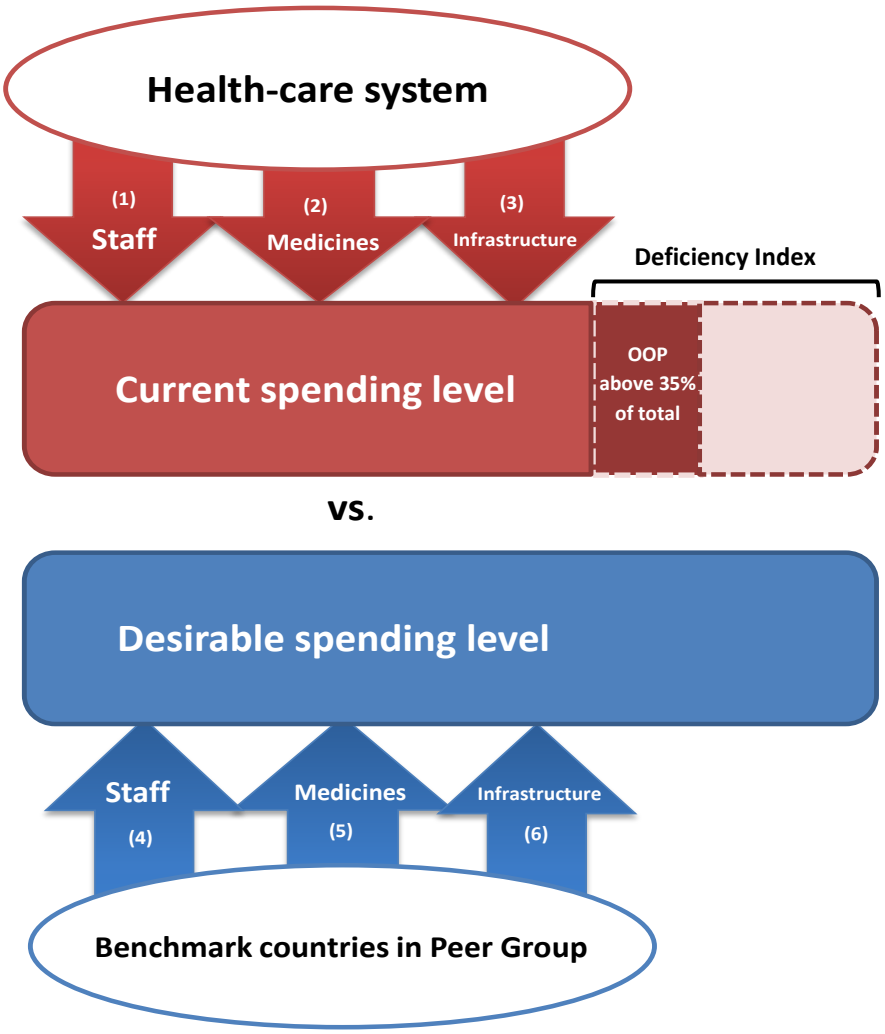
Conversely, the goal of the ILO is to obtain indicative data on the cost of implementing an EHCP for the country under study. The cost data is intended to inform policy dialogue and to indicate the level of financing required to provide adequate care and income support for the entire population. This refers to:

- The overall concept of national social protection floors as outlined in Recommendation No. 202; and

- The specific coverage concept outlined above, taking into account population/statutory coverage resulting in effective access to health care (ILO, 2010, p. 36).

For these purposes, some form of indicative top-down costing may be better suited for an initial assessment of financial needs in a wide range of countries. Such indicative costing may also be possible in the absence of clear national guidance on the components of an EHCP, but would not preclude any national debate on content. A conceptual model is proposed for this costing in figure 3.2.

Figure 3.2. The ILO's costing tool for EHCPs: A conceptual model



1) **Staff:** the ratio between the total health-care staff in relation to the whole population

2) **Medicines:** the total per capita expenditure on medicines or total pharmaceutical expenditure (TPE) in a country

3) **Infrastructure:** the percentage of *total* health expenditures spent on infrastructure derived from the national health accounts

4) **Staff:** ILO Access Deficit Indicator using the availability of the health service workforce

5) **Medicines:** the mean per capita expenditure on medicines in the three countries of the group with the best health indicators

6) **Infrastructure:** No benchmark measure; increases the spending for infrastructure on a pro-rata basis derived from the actual identified increase in spending for staff and medicines

In the **first part**, the current spending patterns are analysed at the macro level and a simple model is built:

- Instead of detailing medical needs and defining adequate forms of care to be applied, we will observe whole-system inputs: staff, infrastructure and medicines. Essentially, these three inputs will determine what level of care is available. Such a simple input-based model obviously does not take into account the quality of care and the allocation of care, but these are challenges also faced by any bottom-up model.

- The model will derive the distribution of inputs (i.e. the percentages of the total cost going to staff, infrastructure and medicines) from existing national health accounts. These three inputs have been chosen because they constitute the key inputs into any form of service provision within a health-care system. We will assume that the current distribution indicates the level of technical efficiency in the present health-care system of a country.

- We will follow the managerial concept of SMART (specific, measurable, action-oriented, realistic and timely) in defining indicators for the three inputs. Indicators will be defined as follows:

- Staff: the ratio between the total number of health-care staff (doctors, nurses, midwives, administrators, etc., both self-employed and in government service) in relation to the whole population;

- Medicines: the total per capita expenditure on medicines or total pharmaceutical expenditure (TPE) in a country, regardless of the source of payment and how they were obtained; and

- Infrastructure: the percentage of total health expenditures spent on infrastructure, derived from the national health accounts.

The **second part** is based on the question: What is the appropriate level to be achieved?

- For each of the three indicators, the levels of resource input that are deemed acceptable and adequate must be defined. This is complicated by the discrepancies in health systems, modes of care and distributions of health facilities that exist between countries. Nevertheless, if we use the relation of the current spending levels for staff, infrastructure and medicines as an approximation of technical efficiency and assume that scaling up to a desirable level would at least provide the resource basis for some level of adequate care, we could derive a "deficiency index", i.e. the relation between current and desirable spending.

- For deriving such levels of adequate resources, we could examine a country's peer group and/or some form of defined resource level. A peer group seems appropriate, since resource inputs vary widely between different countries. As this health policy model uses technical efficiency and resource inputs as the basis for calculation, it seems appropriate to use the following as main indicators for grouping countries together:

  - gross domestic product (GDP);

  - the ILO's vulnerability index;[1] and

  - geography.

These three aspects combine common experience (the tendency of countries to compare themselves with their neighbours) with economic and social indicators. Within such a peer group, one would need to identify the most successful countries. These would serve as a benchmark with which to measure the inputs of any given country.

- The reference level for the three indicators will be defined as follows:

  - **Staff**: ILO Access Deficit Indicator using the availability of the health service workforce, based on data from ILO calculations on social health protection, coverage using WHO databases;

[1] See ILO, 2010, p. 43. Countries are grouped into five levels of "vulnerability" as defined by two criteria: (a) percentage of population below the poverty line of US$2 PPP per day, and (b) wage employment as a percentage of total employment. The highest vulnerability group includes countries with the highest poverty incidence and the lowest proportion of wage employment.

- **Medicines**: the mean per capita expenditure on medicines in the three countries of the group with the best health indicators (using LE, U5MR, MMR), adapted to the medicine price level of the country analysed; *or* (if it is available) the cost of an essential benefit package as defined by the WHO;[2] and

- **Infrastructure**: the model does not use any external benchmark here, but rather increases the spending for infrastructure on a pro-rata basis derived from the actual identified increase in spending for staff and medicines.

- Additional aspects, such as changes in poverty levels, extent of the informal economy, demography, and medical inflation may be used to improve and fine-tune forecasts derived from the model. This, however, would require further discussion and modelling.

- The result would be the calculated per capita health-care expenditure for delivering an EHCP for everyone in a country.

- All direct private expenditures above an OOP-rate of 35 per cent (the OOP in high-vulnerability countries[3]) will be considered as being an inadequate level of financial protection. Thus, such cost would require contributions from other sources (taxes, social health insurance and international aid).

- The gap between the calculated requirement and the actual funding with OOP at 35 per cent would be called the **funding gap**.

3.2.1. Notes on the proposed reference levels

ILO Access Deficit Indicator

The ILO Access Deficit Indicator provides information on the shortage of a skilled health workforce, using the relative difference between the density of health professionals in a given country and the median value in countries with a low level of vulnerability. (If available, additional information for this indicator could be skilled health workforce levels in rural and urban zones, which may provide insight into any existing inequity between rural and urban areas.)

Medicines

With respect to medicines, the deficits in health spending per capita are measured in comparison to the mean value of the three most successful countries in the peer group in terms of key health indicators (LE, U5MR, MMR). Such data may be derived from the literature, from data on health insurance schemes, or from calculations. Alternatively, if available, reliable cost calculations of an essential medicines package per capita as defined by the WHO could be used. It should be noted that this includes non-communicable

[2] For a definition see Chapter 2, section 2.1 above. At present, however, there is no readily available dataset that provides such cost data. The WHO (2011) has made a calculation for a range of countries on the cost of scaling up medical and non-medical interventions against non-communicable diseases.

[3] See ILO, 2010, p. 40; this is actually for the lowest of all vulnerability groups except the very low vulnerability group. It has thus been chosen over a peer group approach, as many countries de facto have a much higher OOP.

diseases such as hypertension, asthma or diabetes. In some countries the actual health-care expenditure pattern is extremely skewed towards expenditures for medicines (up to 80 per cent in countries such as Yemen) and it seems inappropriate to use this current level of technical efficiency to determine future health-care costs. The percentage would change, however, due to higher levels of expenditure for personnel and consequently for health infrastructure. Given actual results, it may be appropriate to introduce some benchmark for expenditures on infrastructure based on national income, vulnerability and geography.

It is strongly advised to examine the cost for HIV/AIDS and TB therapy separately, as the cost for these treatments will primarily depend on national prevalence rates. Simply including them in the calculations would have substantial and misleading implications for the overall cost for medicines. We propose to calculate the per-capita cost for medicines for an HIV-infected individual separately and, based on national prevalence rates, derive the overall cost. As Watal (2001) has pointed out:

> At this low level of purchasing power, it is clear that essential medicines will have to be distributed at very low cost for the majority of the world's population. Earlier annual per capita cost estimates of US$1 or US$1.60 for the provision of essential drugs sufficient to treat 85 per cent of illnesses in Africa (World Bank, 1993) do not appear to have considered the cost of the more expensive drugs required for treating the HIV/AIDS pandemic. [...] At the lowest-priced offer made public to date, the cost of triple therapy drugs for treating one disease condition, HIV/AIDS alone, would be about a dollar a day.

Although other conditions (such as hypertension or diabetes) will also substantially differ between countries, they have not been taken into account here, as despite their impact on the double burden of disease, their *cost* implications (at least when choosing low-cost treatment options) are moderate.

Infrastructure

We did not make use of any single infrastructure indicator, as all readily available indicators such as beds per population, number of facilities per population, number of operation rooms or X-ray machines do not adequately reflect (even as proxy indicators) the required infrastructure for providing essential medical care in any meaningful way. We therefore assumed that the current spending on infrastructure reflects, to some extent, the production function for health care in a country, and that any increase in spending on staff and medicines would require a corresponding rise in expenditure for infrastructure. This follows from worldwide experience that, although in principle most clinical primary care medicine requires very little technology, improved forms of medical care are usually reflected in the availability of a few, but good quality, instruments. The need for good equipment in secondary and tertiary care is obvious. As mentioned previously, it may be helpful at a later stage to consider a separate benchmark for infrastructure.

It should be noted here that the proposed costing approach relates to three of the **ILO dimensions of access**, i.e. availability, affordability and financial protection. The key assumption in this "top-down" model is correlated with the input level to some extent. It seems reasonable to assume that both availability and affordability will improve if more resources are made available. Nevertheless, accessibility issues due to socio-economic status and other factors will probably not be affected, but will require enhanced targeted efforts. Financial protection is related to the need for OOP expenditures, and this in turn is to some extent determined by some form of public spending.

Quality has not been specifically addressed in the concept, as it is assumed that with the provision of inputs, quality will follow. This, of course, is a rather bold assumption, but (i) it is very difficult to disentangle specific quality from the quantity of inputs; and (ii) at a later stage, a composite indicator − e.g. composed of (some derivatives of) the number of

births attended by a health-care professional and maternal death (as pregnancy should not be a cause of death) − may be used to explore quality independently of the input quantities.

3.2.2. Possible objections and topics for debate

It should be restated that the model does NOT examine technical efficiency, equity or distribution issues (regarding the latter, see Hayford et al., 2011). It assumes that current levels of spending determine the technical efficiency achieved. Of course, there will be a need to investigate means of achieving a more equitable distribution of services, as well as improving access for disadvantages populations. This, however, would be part of technical implementation and advice on reform. Essentially, the model indicates the level of spending needed to be able to provide some form of essential health care to the whole population. Thus, the model does not take into account any form of measuring quality (for example prenatal care/vaccination coverage and mortality of mothers, infants and children below 5 years of age), vulnerability or financial indicators such as OOP or catastrophic payments. Moreover, the model does not consider differences in marginal cost between rural and urban areas, nor are policy issues such as promoting gender mainstreaming or inclusion of vulnerable populations taken into account. As the three "best" countries will be chosen as benchmarks for spending on medicine, by definition those countries would not be required to enhance their efforts with regard to the availability of medicines. This remains a normative issue, which is beyond the scope of the model. One may assume, however, that economic and social development would be the driving forces of the achievement of higher levels of spending and care.

Furthermore, there are two important objections to the proposed approach. First, improving the way public health and medicine is provided in a country could potentially lead to substantial efficiency gains, hence the calculation provided here would seriously overestimate the financial needs and would unnecessarily deter governments from pursuing the goal of providing access to essential health care as part of the social protection floor. Second, working on a more equitable allocation of health-care services may require much greater inputs than those derived from extrapolating from current spending levels. Again, this objection points toward changing efficiency, in that providing for hard-to-reach areas and deprived populations may actually be more expensive than providing care in urban settings.

Both objections are valuable and cannot easily be dismissed. There are three arguments that may, however, lessen the possible impact of efficiency gains and losses. First, there are reasons to assume that there will be forces driving to improve efficiency as well as forces to lower efficiency – thus effects may offset each other, at least to some extent. Second, although in theory such efficiency changes may occur, empirical evidence from the field is scarce. Anecdotal evidence indicates that changes may indeed be rather small. For instance, while travel costs to reach geographically isolated areas will certainly be higher, the cost for staff will be reduced, as per-diems and allowances may be lower when working in the countryside. Also, the cost associated with accommodation and food will be lower. Finally, health-care systems, like most government-run or controlled systems, tend to be rather inert – change will usually take time and will only happen gradually.

Another issue is the definition and selection of a suitable "peer group", for which development economics may be helpful (Anand and Ravallion, 1993). It seems appropriate to group countries with similar geographic and socio-economic characteristics, especially with regard to poverty and vulnerability. The advantage of the ILO vulnerability index is that it combines poverty levels independent of GDP with the degree of the informal economy. Alternatively, a group of countries could define themselves as a peer group and work together in producing the necessary data for comparison. In the case of the Philippines, for example, the ASEAN countries would be a possible choice. In fact, such an approach may be more feasible and fruitful than a group chosen according to socio-

economic indicators, as there would be much less discussion about the quality of data within such a group. Having set up a working committee between countries, some form of "open benchmarking" among them could be performed. The ASEAN countries already have a common institution for this purpose: the SEAMEO-TropMed. Open benchmarking is a well-known and often applied technique in industry, which is based on the willingness to share data. It may provide stakeholders with valuable insight as to where the country presently stands in relation to its peers, and to the possible ways in which improvements can be made. The WHO, via its regional offices, could assume a leading role in this endeavour by offering an atmosphere of rational and scientific thinking as well as careful data gathering. Such a peer-group benchmarking approach could also be used to compare various measures of health development across countries and over time.

The first application of the benchmark concept has already been attempted with the "benchmark of fairness", focusing on fair exposure to risk factors, access to care and financing (Daniels et al., 2000). However, there was a lack of hard data and instead too much reliance on assumptions and subjective assessments. The scarcity of reliable data sources remains an issue, but in comparison to the alternatives, the proposed data-lean model is built on very little data that are also only needed at a fairly aggregated level; and thus, obtaining this data should be neither particularly difficult nor expensive.

3.3. Applying the approach: The example of "Ruritania"

The proposed approach can be best understood if we apply it to a country: "Ruritania" – a fictional country – is a low-income country (GDP per capita of US$600 per year) with more than 40 per cent of the population living below the poverty line and a predominantly informal economy. The country has a very high vulnerability level according to ILO classification.

The key indicators describing the status quo of the health system in Ruritania are as follows:

- Total medical staff (TMS): 8/10,000 population
- Total pharmaceutical expenditure (TPE) per capita: US$16.80 (excluding HIV/AIDS)
- Medicine cost per annum for treating HIV/AIDS: US$350, reaching 85 per cent of affected individuals; national prevalence rate 6.4 per cent; national treatment gap 15 per cent)
- Infrastructure ratio (IR, percentage of total health expenditures devoted to infrastructure): 10
- Current THE (total health expenditure) per head: US$28; OOP spending accounts for 60 per cent
- THE coming from either taxes, SHI or external aid: US$11.20 (40 per cent of total)
- Spending pattern: 30 per cent staff, 60 per cent medicines, 10 per cent infrastructure
- Life expectancy (LE): 49 years; MMR: 800 /100,000; U5MR: 180/1,000
- Peer group consists of six countries in the region with similar GDP and either high or very high levels of vulnerability. Of these, two countries fare substantially better in terms of LE, MMR and U5MR

The following benchmarks to be applied to Ruritania can be assumed:

- TMS: 35/10.000 (Access Deficit Indicator, using median density of medical personnel in low-vulnerability countries as the benchmark (see ILO, 2011, p. 42)
- TPE in the two most successful countries: US$20.00
- Medicine cost per annum for treating HIV/AIDS: US$350; national treatment gap: 0 per cent

Applying the proposed approach to cost essential health care will result in advice to adjust as follows:

- Staff cost per capita is currently US$8.40 (30 per cent of current THE at US$28)
- Moving from 8/10,000 to 35/10.000 would require a factor of 4.375, thus leading to a total staff cost per capita of US$36.75 (= 4.375* US$8.40)
- TPE per capita would have to rise from US$16.80 to US$20.00
- Total cost from staff and pharmaceuticals would therefore rise from US$25.2 (80 per cent of total) to US$56.75 (= US$36.75 + US$20.00)
- Infrastructure would correspondingly rise from US$2.80 (10 per cent of total, 11 per cent of the cost for staff and pharmaceuticals) to US$6.30 (11 per cent of US$56.75)
- **TOTAL COST of EHCP**: US$36.75 (staff) + US$20.00 (medicines) + US$6.30 (infrastructure) = **US$63.05** (excluding medicines for HIV/AIDS treatment) and not taking into account the source of funding
- OOP expenditures are at present 60 per cent and should, in order to allow for adequate financial protection, be reduced to 35 per cent of the total. Thus an additional US$7 ((60%-35%) * US$28) needs to be financed not from OOP
- **The funding gap is therefore US$63.05–US$28 (current spending) + US$7 (extra non-OOP financing) = US$42.05**
- Additional cost for treating HIV/AIDS: 15% (gap)*6.4%*total population*US$350

4. Next steps

Developing an EHCP is a complex and time-consuming task. Although we have proposed a model for an upfront initial assessment of the financial requirement of EHCP, the following steps would require real-life application and a "proof-of-concept" study:

(i) Attempt to validate the results derived from such a "top-down" approach with some form of "bottom-up" calculation. A key question is, however, whether any one approach is superior to another. It would be helpful to provide this comparison to national and international experts in the hopes of initiating an informed debate leading to a possible adjustment in the figures. It may be feasible to validate results in one of the countries that already use the OneHealth Model.

(ii) Conduct a "proof-of-concept" study in a country where the data and staff situation allows for reasonably fast and accurate calculations. This would entail the recruitment of local experts and the attainment of high-quality data for the purposes of imputing cost, triangulating with other available data, and calculating approaches (e.g. based on utilization rates). Cyprus has the potential to be a good candidate for testing the approach, as it already has good data and well-trained local experts to perform the analysis.

(iii) Calculate cost on a regional or even a worldwide scale and provide this data to the international health policy and financing community in order to stimulate debate and exchange.

The conceptual model proposed here will require intense discussion, with a view to attaining a clearer understanding of its advantages and challenges. This would allow for the next steps indicated above.

Progressing toward universal health coverage (UHC) will require improved (i.e. increased and sustainable) financing for many countries. The health financing options involve one or more of the following:

- raising funds for health domestically;
- reducing financial barriers to services by advancing forms of prepayment that entail a pooling of funds, rather than relying on direct out-of-pocket payments;
- improving the efficiency and equity of resource utilization (see WHO, 2013c); and
- raising funds externally, primarily via the assistance for health (see Institute for Health Metrics and Evaluation, 2012).

This rapid and data-lean costing model aims to assess the financial implications of an EHCP and to prepare accordingly. Gaining insight into the magnitude of resources required for the establishment of an EHCP should be achieved well before an essential package has been developed.

Bibliography

African Health Observatory (AHO); World Health Organization (WHO). 2013. Comprehensive analytical profile: Ethiopia. Available at: http://www.aho.afro.who.int/profiles_information/index.php/Ethiopia:Index [accessed 2 Sept. 2013].

Anand, S.; Ravallion, M. 1993. "Human development in poor countries: On the role of private incomes and public services", in *Journal of Economic Perspectives*, Vol. 7, No. 18, pp. 133−150.

Committee on Economic, Social and Cultural Rights (CESCR). 2000. Substantive issues arising in the implementation of the International Covenant on Economic, Social and Cultural Rights, General Comment No. 14. The right to the highest attainable standard of health (article 12 of the International Covenant on Economic, Social and Cultural Rights) (Geneva).

Daniels, N. et al. 2000. "Benchmarks of fairness for health care reform: A policy tool for developing countries", in *Bulletin of the World Health Organization*, No. 78, pp. 740−50.

Dolan, P.; Olsen, J. A. 2002. Distributing health care: Economic and ethical issues (Oxford, Oxford University Press).

Ethiopia Federal Ministry of Health. 2005. Essential health services package for Ethiopia (Addis Ababa).

—. 2007. Health extension program in Ethiopia: Profile, Health Extension and Education Center (Addis Ababa).

Frère, J. J. et al. 1998. *Costing the basic benefits package in Egypt*, Abt Associates Inc. Technical Working Paper, Report No. 32 (Bethesda, Maryland).

Geroy, L. S. A. 2012. "Economic evaluation for first-line anti-hypertensive medicines: Applications for the Philippines", in *Cost Effectiveness and Resource Allocation*, Vol. 10, No. 14.

Glassman, A.; Giedion, U. 2013. "What will universal health coverage actually cover?", available at: http://blogs.cgdev.org/globalhealth/2013/02/what-will-universal-health-coverage-cover.php [accessed 6 May 2013].

Guerard, Y. et al. 2011. *Actuarial costing of universal health insurance coverage in Indonesia: Options and preliminary results*, Health Nutrition and Population (HNP) Discussion Paper (Washington, DC, World Bank).

Hayford, K.; Privor-Dumm, L.; Levine, O. 2011. Improving access to essential medicines through public−private partnerships, International Vaccine Access Centre (IVAC), Johns Hopkins Bloomberg School of Public Health (Baltimore).

Hutton, G. 2000. "Issues in choosing which health care interventions to provide", in *Bulletin von Medicus Mundi Schweiz*, No. 79. Available at: http://www.medicusmundi.ch/mms/services/bulletin/bulletin200004/kap03/11hutton.html [accessed 28 Feb. 2013].

International Labour Office (ILO). *2008. Social health protection: An ILO strategy towards universal access to health care*, Social Security Policy Briefings Papers No. 1 (Geneva).

—. 2010. *World Social Security Report 2010−2011: Providing coverage in times of crisis and beyond* (Geneva).

—. 2011. *Social protection floor for a fair and inclusive globalization*, Report of the Social Protection Floor Advisory Group (Geneva).

Institute for Health Metrics and Evaluation, 2012. *Financing Global Health 2011: Continued growth as MDG deadline approaches, University of Washington* (Seattle).

Lancet, The. 2012. Multiple authors. "The global burden of disease study 2010 issue", Vol. 380, No. 9859, pp. 2053−2260.

McIntyre, D.; Borghi, J. 2012. "Inside the black box: Modelling health care financing reform in data-poor contexts", in *Health Policy and Planning*, Vol. 27, supplement No. 1, pp. 77–87(11).

Mòdol, X. 2010. Final report on costing of the essential health package and funding feasibility in the Philippines (European Commission Delegation to the Philippines and the DoH ,GTZ-International Service Consortium for the Technical Assistance to the Health Sector Policy Support Programme, Manila).

Moreno-Serra, R.; Millett, C.; Smith, P. C. 2011. "Towards improved measurement of financial protection in health", in *PLOS Medicine*, Vol. 8, No. 9. Available at: http://www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.1001087;jsessionid=3C90ABAEDA4F9F435573F143C0E81387 [accessed 6 May 2013].

National Department of Health, Pretoria, South Africa.2012. "Standard Treatment Guidelines and Essential Medicines List for South Africa. Hospital level adults. 2012." Edition 3 (Pretoria) http://www.kznhealth.gov.za/pharmacy/edladult_2012.pdf [accessed May 7, 2013].

Nigeria Partnership for Transforming Health Systems (PATHS). n.d. Developing essential minimum service package 2002−2008, Technical Brief (London).

Nord, E. et al. 1995. "Maximizing health benefits vs. egalitarianism: An Australian survey of health issues", in *Social Science and Medicine*, No. 41, pp. 1429–1437.

Paolucci, F.; Butler, J.; Niessen, L. 2009. "Socio-economic rationales to design national benefits packages: A conceptual framework and policy implications", presentation given at Harmonizing Health and Economics (iHEA) Conference, Beijing, July 2009. Available at: http://ihea2009.abstractbook.org/presentation/1807/ [accessed 20 Feb. 2013].

Pearson, N.; J Muschell, J. 2009. *Essential package of health services: Somalia* (New York, UNICEF).

Quick, J. D. 2012. "On the road to universal health coverage: The vital role of the essential package for health impact. Management sciences for health", in *Global Health Impact*. Available at: http://blog.msh.org/2012/10/31/on-the-road-to-universal-health-coverage-the-vital-role-of-the-essential-package-for-health-impact/ [accessed 7 May 2013].

Scheil-Adlung, X.; Bonnet, F. 2011. “Beyond legal coverage: Assessing the performance of social health protection”, in *International Social Security Review*, No. 64, pp. 21−38.

Söderlund, N. 1998. “Possible objectives and resulting entitlements of essential health care packages”, in *Health Policy* (Amsterdam, Netherlands), No. 45, Vol. 3, pp. 195–208.

—. Peprah, E. 1998. *An essential hospital package for South Africa: Selection criteria, costs and affordability*, Centre for Health Policy Monograph No. 52 (Johannesburg). Available at: http://www.wits.ac.za/chp. [accessed 7 May 2013].

Watal, J. 2001. Background note for the workshop on differential pricing and financing of essential drugs. Available at: www.wto.org/english/tratop_e/trips_e/wto_background_e.pdf [accessed 7 May 2013].

World Bank, 1993. *World Development Report 1993: Investing in health: World Development Indicators*. Available at: http://files.dcp2.org/pdf/WorldDevelopmentReport1993.pdf [accessed 4 September 2013].

World Health Organization (WHO). 2001. *Macroeconomics and health: Investing in health for economic development*, Report of the Commission on Macroeconomics and Health (Geneva).

—. 2008. *Essential health packages: What are they for? What do they change?* WHO Service Delivery Seminar Series, Technical Brief No. 2 (Geneva).

—. 2011. *Scaling up action against non-communicable diseases: How much will it cost?* (Geneva).

—. 2012. WHO Health Financing Department website. Available at http://www.who.int.health_financing/universal coverage definition/en/.

—. 2013a. *Towards universal health coverage: Concepts, lessons and public policy challenges*, Background document presented at the WHO/World Bank Ministerial-level Meeting on Universal Health Coverage (Geneva).

—. 2013b. “Tables of costs and prices used in WHO-CHOICE analysis”, in *CHOosing Interventions that are Cost Effective (WHO-CHOICE)*. Available at http://www.who.int/choice/costs/en/ [accessed September 4, 2013].

—. 2013c. Global Health Expenditure Atlas (Geneva). Available at: http://www.who.int/nha/atlasfinal.pdf [accessed 7 May 2013].

Wong, H.; Bitrán, R. 1999. Designing a benefits package, World Bank Institute Flagship Course on Health Sector Reform and Sustainable Financing Module No. 5 (Washington, DC, World Bank).

Yang, L. et al. 2009. *Strategies to develop an essential healthcare package: Evidence from international experience*, Submission for Harmonizing Health and Economics (iHEA) Conference, Beijing, July 2009. Available at: http://ihea2009.abstractbook.org/presentation/1722/ [accessed 7 May 2013].

Zenner, D. et al. 2013. “Active case finding for tuberculosis among high-risk groups in low-incidence countries”, in *International Journal of Tuberculosis and Lung Disease* (London), Vol. 17, No. 5, pp. 573−582.