SUSTAINABLE DEVELOPMENT SOLUTIONS NETWORK
A GLOBAL INITIATIVE FOR THE UNITED NATIONS

Health in the Framework of Sustainable Development

TECHNICAL REPORT FOR THE POST-2015 DEVELOPMENT AGENDA

18 February 2014

Prepared by the Thematic Group on Health for All of the Sustainable Development Solutions Network

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The Sustainable Development Solutions Network (SDSN) engages scientists, engineers, business and civil society leaders, and development practitioners for evidence-based problem solving. It promotes solutions Initiatives that demonstrate the potential of technical and business innovation to support sustainable development (www.unsdsn.org).

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Foreword - Working For a Better World

Health equity cannot be concerned only with health, seen in isolation. Rather it must come to grips with the larger issue of fairness and justice in social arrangements, including economic allocations, paying appropriate attention to the role of health in human life and freedom. Health equity is most certainly not just about the distribution of health, not to mention the even narrower focus on the distribution of health care.

- Amartya Sen (2002)

The collective efforts of the global community towards ending extreme poverty and hunger and to promote gender equality were successfully directed by the Millennium Declaration and the Millennium Development Goals (MDGs). The importance of health as a key feature of human development was recognized, with three MDGs explicitly linked to health indicators and the others structured around major determinants of health.

While considerable health gains have been achieved through the MDGs, there needs to be a continued commitment for accelerating progress related to those goals, many of which will not be achieved by 2015. Epidemiological and demographic transitions accompanied by changing exposures to risk factors have brought forth non-communicable diseases as major global contributors to preventable death and disability. At the same time, health inequities have persisted within populations, despite improvement in aggregate national health indicators. There is also a concern that segmentation into specific age or risk groups such as childhood and pregnancy misses critical periods of life like adolescence, a critical period as it lays the foundation for adult health. Similarly, the health needs of the elderly must also be addressed.

The fifteen-year period of MDGs will end in 2015. In 2012, the Rio +20 Summit further resolved to put an end to extreme poverty and hunger by placing poverty reduction in the broader context of sustainable development. The Summit's final outcome was the call for new Sustainable Development Goals (SDGs) to be adopted by the United Nations (UN) post-2015. These SDGs will set global priorities for action and promote sustainable and equitable development worldwide. While continuing the commitments to the Millennium Development Goals (MDGs) set in 2000, the SDGs will provide a framework for integrating actions across multiple sectors to enable human development to proceed in a manner that optimizes the equitable use of planetary resources whilst minimizing threats to sustainability.

The Sustainable Development Solutions Network (SDSN)

The SDSN was launched in August 2012, under the auspices of UN Secretary General Ban Ki-moon, as part of his efforts to promote sustainable development. The SDSN mobilizes global scientific and technological knowledge to address the challenges of sustainable development. The SDSN is an independent body of multi–disciplinary and multi-institutional experts from different sectors relevant to the SDGs. The SDSN was mandated to: (i) assist the UN process by providing well argued, evidence-informed and succinctly summarized policy briefs which would flow to the High Level Panel of Eminent Persons, the UN Secretary General's office, and to the Member States of the UN engaged in the inter-governmental process of defining the SDGs; (ii) to identify and evaluate innovative solutions that will overcome barriers to the attainment of those goals and accelerate progress towards sustainable development at the global level; and (iii) to enlist and strengthen universities and institutions in

different countries/regions that can become catalysts and enablers of transformational processes leading to sustainable development, especially through the design, delivery and evaluation of innovative solutions.

The SDSN has established 12 Thematic Groups (TGs) comprising leading scientists, engineers, academics and practitioners from civil society and the business community to promote solutions to the key challenges of sustainable development. A Leadership Council oversees the work of the UN SDSN. Health has been a prominent focus area of the SDSN. The Thematic Group on Health for All has been discussing the priorities and position of health in the post-2015 development agenda. The mandate of the TG on Health is:

1) To prepare a more detailed document, amplifying the evidence for goals prioritized by the SDSN and profiling the intersection of those goals with other development goals for submission to the UN *(this paper).*
2) To continue to engage with the UN process for framing the post-2015 SDGs on health between September 2013 and September 2015.
3) Identify and appraise innovations of transformational value in advancing the health MDGs and future SDGs, with an emphasis on both health system interventions and multi-sectoral initiatives.
4) To work with the Leadership Council of the SDSN in building and strengthening institutional networks that will align with and assist in the implementation of the SDGs in the post-2015 phase of global development.

The TG on Health for All aims to review the global evidence related to health and its relevance to sustainable development, link health to the social and environmental determinants influenced by other sectors and identify pathways by which universal access to health can be advanced across the world. Through this effort, the TG aims to assist in the vision for a better world in the 21st century, wherein all people on earth can benefit from the fruits of sustainable development and lead long and productive lives enriched by health and wellbeing at all ages.

Executive Summary

The framework for sustainable development in the 21st century must maximize healthy wellbeing at all ages through universal health coverage and pro-health policies in all sectors. Adopting a life course approach that will benefit all persons, we recommend the health goal ***Achieve Health and Wellbeing at All Ages.***

To accomplish this objective we propose that ***all countries achieve universal health coverage at every stage of life, with particular emphasis on primary health services, including mental and reproductive health, to ensure that all people receive quality health services without suffering financial hardship. Countries implement policies to create enabling social and environmental conditions that promote the health of populations and help individuals make healthy and sustainable decisions related to their daily living.***

Health is crucial for sustainable human development, both as an inalienable human right and an essential contributor to the economic growth of society. Health is also a good summative measure of the progress of nations in achieving sustainable development. It contributes to national development through productive employment, reduced expenditure on illness care and greater social cohesion. By promoting good health at all ages, the benefits of development extend across generations. Investments in primary health care can promote health across all social groups and reduce health inequities within and between countries. Improving performance of health systems by enhancing financial and human resources, appropriate use of technology, community empowerment and good governance will advance this agenda. The potential for providing large-scale employment as frontline health workers, particularly to women and young persons, should be utilized to strengthen the economy and improve health services.

We believe that universal health coverage (UHC), delivered through an adequately-resourced and well-governed health system, will be capable of addressing these and other health challenges, especially if supported by policies in other sectors which promote health and environmental sustainability and reduce poverty. Universal health coverage must ensure equitable access to affordable, accountable, appropriate health services of assured quality to all people. These must include promotive, preventive, curative, palliative and rehabilitative services. This includes public health services such as infectious disease monitoring and ensuring food safety. They must be supported by policies and services addressing the wider social and environmental determinants of health for individuals and populations. Governments must play the role of both guarantor and enabler, mobilizing all relevant societal resources for the delivery of health services. National commitment to Universal health Coverage must be legally embedded in a rights-based framework.

Since the determinants of health extend across multiple sectors, the post-2015 development agenda must promote synergies and partnerships that align actions for better health. Improved health of individuals and populations will also help in achieving other development goals such as poverty reduction, gender empowerment, and universal education. Several common determinants also link health to the environment, agriculture and food systems, water and energy security, urban development and transport, trade and investment, communications, and human migration.

Apart from intrinsic value of health, UHC can create positive externalities for development, women's empowerment and gender equity, and social solidarity. Within the health sector, primary health care

should be accorded the highest importance because of its ability to provide maximum health benefits to all parts of society and to ensure sustainable health care expenditure levels.

We recommend the following actions be undertaken at global and national levels to achieve health and wellbeing at all ages:

- Build on the successes of the MDGs and address gaps in achievement of MDGs 4, 5, and 6, while expanding the agenda to include action on other major causes of disease burden such as non-communicable diseases (NCDs) and neglected tropical diseases (NTDs).
- Adopt a life course approach to health promotion, disease prevention and health care, with particular attention to prevention and control of communicable diseases (including but not limited to HIV/AIDS, TB, and malaria), NCDs, NTDs, mental illness, injuries and disabilities; promotion of child and adolescent health; sexual and reproductive health and rights, including ensuring safe pregnancy; elderly care; and emergency health services.
- All countries make progress to allocating at least 5% of national GDP as public financing for health (with low- and middle-income countries reducing by at least half the gap between 5% of GDP and current public funding); reduce private out-of-pocket spending (OOPS) on health care; and ensure voluntary health insurance and out-of-pocket funding is less than 30% of all health expenditure.
- High-income countries allocate at least 0.1% of GNI as international assistance for health, for supporting the efforts of low- and middle-income countries for implementing UHC, as part of meeting commitments for 0.7% of GDP in assistance and an additional $100 billion in per year in official climate finance by 2020.
- All countries provide high quality health care based on comprehensive primary health services (which include public health services as well as acute, chronic, and emergency clinical services, in both community-based and facility-based settings) to rural and urban populations, without financial, geographic, gender or other social barriers to access.
- Create and support a skilled, adequately resourced workforce to deliver the health services envisaged under UHC, with emphasis on expanding the size, skills and role of a cadre of socially empowered community health workers who are enabled to use appropriate technologies.
- Ensure access to essential medicines, vaccines, commodities, and technologies, using pooled procurement and distribution of quality-assured drugs, utilizing low cost generics and price controls to make drugs affordable to the health system as well individual patients.
- Effectively implement comprehensive tobacco control programs, including all obligations contained within the Framework Convention on Tobacco Control (FCTC) to substantially reduce the one billion person death toll from tobacco-related diseases WHO projects for the 21st century, reaching a tobacco-free world by 2030, and use analogous demand and supply reduction measures to decrease the harmful use of alcohol.
- Align agriculture and food systems to assure that every person has access to a composite diet that is both calorically adequate and nutritionally appropriate, at each stage of life.
- Ensure availability of clean water for drinking and personal hygiene, improved public and domestic sanitation, and reduction in exposure to air (indoor & outdoor), water, light and sound pollution.
- Increase use of modern fuels and technologies for domestic purposes and reduction in exposure to air pollution. Specifically there should be targets to substantially reduce exposure to ambient (outdoor) and household air pollution.
- Adopt pro-health policies in other sectors, such as trade and investment, urban design and transport, while promoting policies and actions that mitigate climate change and develop adaptive strategies to make populations more resilient to the effects of climate change on health.
- Engage and empower communities to play an active role in the design, delivery, and monitoring of health policies and programs.

Health is Central to Sustainable Development

Why is health central?

By prioritizing sustainable development, societies commit to progress across four dimensions: economic development including the eradication of extreme poverty, social inclusion, environmental sustainability, and good governance. Each of these dimensions contributes to the others, and progress across all four is required for individual and societal wellbeing. Health is inherently important as a human right, but is also critical to achieving these four pillars. National aspirations for economic growth cannot be achieved without a healthy and productive population. While health benefits from economic growth, its value as a critical catalyst for development led to health-related goals being centrally positioned in the MDGs. Child and maternal mortality became a measure of a nation's overall development, along with poverty eradication, the empowerment of women, and environmental sustainability. At the same time, it was acknowledged that combating the spread of HIV/AIDS and reducing the burden of TB and malaria was critical to human progress, as these diseases disproportionately impact the development potential of dozens of countries.

Further evidence of the importance of health to sustainable development are the growing number of reports (such as the WHO Commission on Macroeconomics and Health (1999)[60] emphasizing the need for greater investments in health through increased public financing. These reports have highlighted the multiplier effects of investment in health and the 'cost of neglect' from preventable death and disability, emphasizing the need to address not just diseases but the wider dimensions and determinants of health.

As the world prepares to formulate and adopt Sustainable Development Goals (SDGs), the health goal proposed by the SDSN (*Achieve Health and Wellbeing At All Ages*) must be recognized as pivotal to global development. Even as economic development is pursued with vigor by a world that wishes to reverse the economic downturn of the past five years, it must be clearly recognized that economic and social progress can neither be secure nor sustainable if sufficient investments are not made to protect and promote the health status of all people across the world.

Current status of global health and challenges

Considerable progress has been made in the achievement of MDG targets. Profound reductions have been made in under-five deaths worldwide from more than 12 million in 1990 to around 6.6 million in 2012, and maternal deaths worldwide have dropped by 47% over this period. Around 9.7 million people living with HIV/AIDS now have access to anti-retroviral treatments (ART) and more than 7 billion treatments for neglected tropical diseases have been disbursed since 2005. The spread of tuberculosis is on target to be reversed by 2015, and the global incidence of malaria has fallen by 17% since 2000. The global target of halving the proportion of people without access to safe, clean water has been met.

Despite these achievements, much remains to be done. National and regional disparities remain the most formidable challenge. Several countries did not meet the targets, while others have reached their targets but require further reductions. Many countries making progress have done so only in certain populations, increasing inequalities across socioeconomic gradients, ethnicity, gender, and geographically marginalized subgroups. In addition to the mandate set by the MDGs, epidemiological

and demographic transitions have driven an increasing burden of non-communicable diseases (NCDs), particularly in low and middle income countries, with increasing exposure to risk factors like tobacco and alcohol use and physical inactivity; and rising incidence of cardiovascular diseases, diabetes, cancer, respiratory diseases, and mental health conditions. This implies a need for reassessing health priorities in all countries, low-, middle-, and high-income, for the post-2015 development mandate, both to accelerate MDG achievement and to include emerging health concerns.

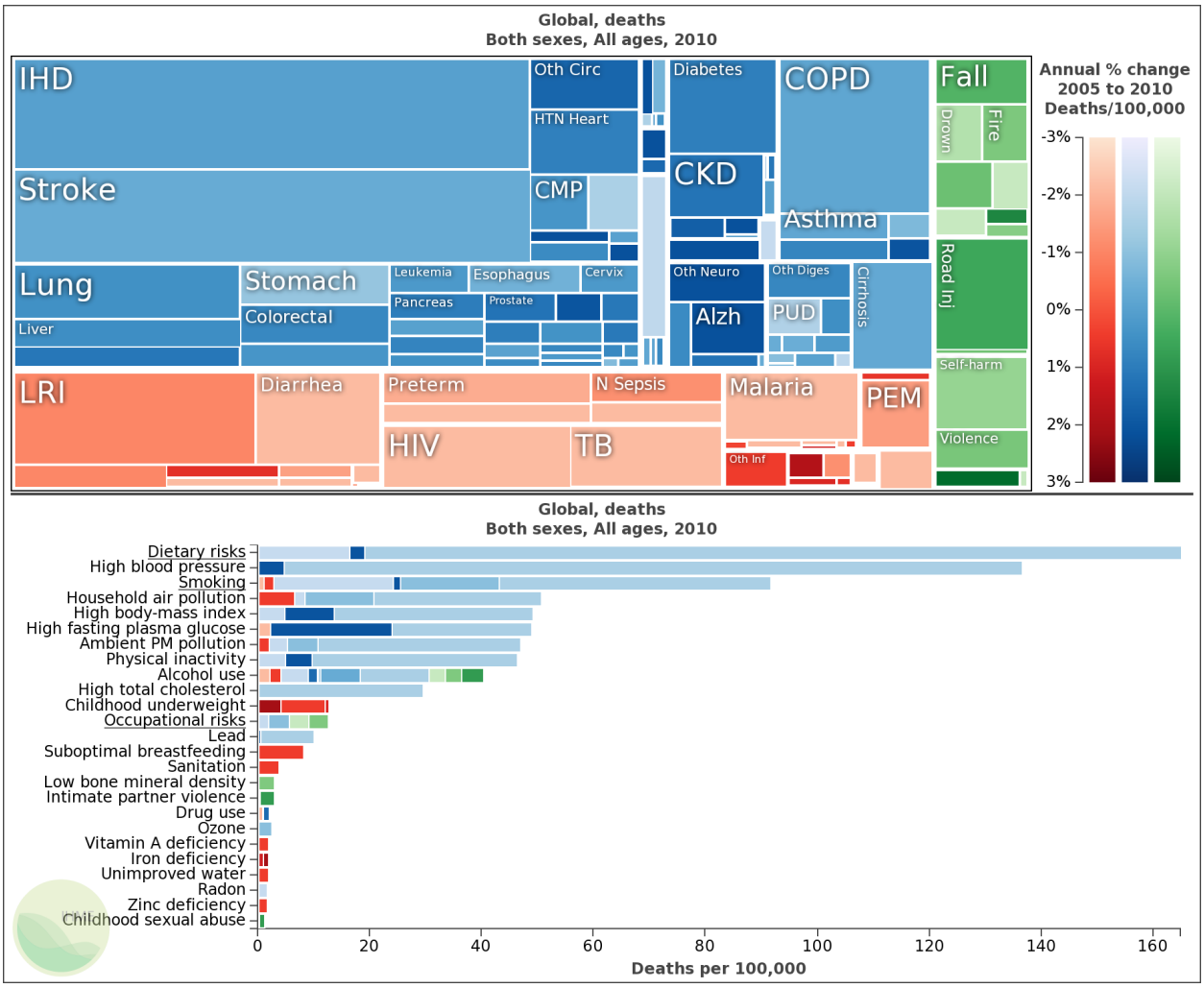

Figure 1: Snapshot of the Global Burden of Disease in 2010.

Source: Institute for Health Metrics and Evaluation (IHME). GBD Compare. Seattle, WA: IHME, University of Washington, 2013. Available (and interactive) at http://viz.healthmetricsandevaluation.org/gbd-compare. Accessed October 21, 2013.

Figure 1 shows the global burden of disease in 2010; the area of the box represents the percent of the global disease burden. It is clear that many of the MDG priorities (for example HIV, TB, and malaria) will remain major concerns in the post-2015 period. However, the post-2015 period must also address additional health concerns, such as stroke, heart disease (represented as IHD), and diabetes, which represent a large share of the global burden of disease. In order to accomplish the goal of *Achieving Health and Wellbeing At All Ages*, a framework that addresses a greater diversity of issues than those prioritized by the MDGs is needed.

The major barriers to achieving health for all relate to health systems challenges and the socioeconomic inequities and environmental exposures that predispose, precipitate and perpetuate vulnerability of individuals and populations to health risks. The Thematic Group on Health for All strongly advocates global, national and regional actions for addressing these barriers.

Proposal for a Health SDG

The MDGs were successful as a rallying point, clearly focusing on national policy efforts towards development. As simple, quantitative and measurable targets, they became important tools for assessing the progress made by nations in improving health policy. However, in their approach and implementation, the exclusive focus on disease-specific goals and the failure to integrate issues of inequity led to inter- and intra-national differences in progress towards achieving the goals. In the absence of a vision for strengthening systems ('horizontal' programs), the MDGs encouraged disease-specific programs ('vertical' programs), exacerbating the differences between nations in health status and disease burden. At the same time, the emergence of new health challenges demonstrates the need for reassessing the scope and relevance of the MDGs over time and to HICs.

The new SDGs must follow an inclusive framework, encapsulating equity and a systems-approach in achieving new health targets for 2030. The SDGs must be set using a broad framework that is universal (i.e. relevant to both LMICs and HICs), context-specific and adaptive. A number of consultations and high-level panel meetings have deliberated on potential candidates for a health SDG (Appendix 3).

After reviewing consultations and reports, the SDG proposed by the TG is ***Achieve Health and Wellbeing At All Ages***. This implies that ***all countries achieve universal health coverage at every stage of life, with particular emphasis on primary health services, including mental and reproductive health, to ensure that all people receive quality health services without suffering financial hardship. Countries also implement policies to create enabling social and environmental conditions that promote the health of populations and help individuals make healthy and sustainable decisions related to their daily living.***

In its deliberations, the TG identified 3 interrelated targets and several indicators. While this list is not exhaustive, these targets and indicators provide a useful starting point for measuring the progress towards achieving this SDG. The three targets are listed below, while their associated indicators are available in Appendix 1.

- Ensure universal coverage of quality healthcare, including the prevention and treatment of communicable [1] and non-communicable diseases, sexual and reproductive health, family planning, routine immunization, and mental health, according the highest priority to primary health care.
- End preventable deaths by reducing child mortality to [20] or fewer deaths per 1000 births, maternal mortality to [40] or fewer deaths per 100,000 live births, and mortality under 70 years of age from non-communicable diseases by at least 30 percent compared with 2015.[2]
- Implement policies to promote and monitor healthy diets, physical activity and subjective wellbeing; reduce unhealthy behaviors such as tobacco use by [30%] and harmful use of alcohol by [20%].

[1] We recommend that countries adopt suitably updated MDG indicators for HIV/AIDS, TB and malaria, as well as for Neglected Tropical Diseases (NTDs).

[2] Countries that have achieved the mortality targets should set more ambitious aggregate targets that are commensurate with their development and ensure that the minimum quantitative targets are achieved for every sub-population.

Universal Health Coverage As a Priority for Post-2015

As debates concerning the post-2015 development agenda intensify, more and more governments, development agencies and civil society organizations are calling for prioritization of Universal Health Coverage (UHC) as either a health goal or the means to achieving health goals[6,16,49,51,55,63]. This can be attributed to a growing recognition that increasing health coverage delivers substantial developmental benefits - both in terms of better health indicators and improved economic performance, including reduction of poverty levels.[36] Furthermore, political leaders are realizing that moving towards UHC is popular with populations across the world. By improving the health and economic welfare of all people, governments can foster social harmony, enhance the legitimacy of the state and secure considerable political benefits. This is discussed briefly in in the next section.

Healthy Life Expectancy

There is growing support for healthy life expectancy as a superior metric than simple life expectancy for tracking health outcomes and overall function of the health system. Life expectancy does not take into account periods of ill health that do not result in death; however, many people can lose months or years to malaria, TB, cancer, and other conditions. Improvements in overall life expectancy are meaningless unless the additional years are healthy ones.

Healthy life expectancy seeks to address this by qualifying overall life expectancy with disability-adjusted life years (DALYs) and data on morbidity to determine how many years people live at their full potential for good health. As a metric, healthy life expectancy is sensitive to multiple factors, not just mortality. It takes into account changes in the prevalence of diseases over time, quality of treatment, cure rates, and other factors. This makes it a more robust measure of the overall health of a population.

One challenge with healthy life expectancy is that there is a great range between countries in terms of data availability. However, this metric crucial in assessing the state of global health, and therefore for the period 2015-2030 the increased collection of quality data is crucial.

In the past three years, several consultations (Appendix 3) have deliberated on the opportunities and challenges provided by the existing MDGs and the call for a new health goal which resonates with contemporary issues and concerns. These issues have ranged from universalism versus targeting, inclusion, equity, concerns regarding financial protection, and differences in interpretation, among others. This paper argues for a broad interpretation of UHC that includes promotive, preventive, curative, palliative and rehabilitative services, as well as addressing public health services such as infectious disease monitoring and ensuring food safety. We also advocate addressing the social, economic, and environmental determinants of health. Discussion on the core components of UHC is provided in Chapter 2, but below is a discussion of the several opportunities and challenges presented by the framework of UHC, when compared other pre-existing or potential frameworks.

Table 1: UHC provides several opportunities and Challenges

Opportunities:	**Challenges:**
Inclusion: UHC addresses a wide range of health problems across all age groups and through the life course.	*Diverse definitions and models:* Diverse definitions and conceptual models offer varying designs for implementation of delivery, thereby introducing difficulties in agreeing on a common goal or target for comparative assessment of progress.
Equity: If designed well (ensuring universal access to quality services), UHC has the potential for reducing health disparities.	*Measured by diverse metrics*: Adoption of specific metrics for measuring national and global progress towards UHC is a challenge.
Financial protection: UHC reduces out-of-pocket spending (OOPS), decreasing the risk of poverty from health care spending by individuals.	*Potential for narrow interpretation:* UHC may be understood narrowly as just the provision of health care and many exclude action on additional determinants of health that have a profound influence on populations and individuals. Such a restricted interpretation would overemphasize the biomedical model of clinical care without substantial impact on population health outcomes.
Livelihood generation: UHC emphasizes a multi-layered health workforce that delivers primary healthcare services. The employment of both physician and non-physician health care providers is encouraged, with particular emphasis on young women entering labor markets.	*Recognition of priority equity needs:* A 'universal' program may dilute the priority accorded to the needs of the poor and may permit the non-poor to benefit in a disproportionate manner though better access and negotiating power.
Common global vision: UHC is applicable to both HICs and LMICs, and can be implemented based on contextual priorities.	
Unifying global rallying point: UHC has been strongly endorsed by the WHO, UN, World Bank, Civil Society Organizations, many Governments and Private Sector Confederations, through reports, declarations, resolutions and statements issued in the past three years.	

Underlying Principles of UHC

The Life Course Approach: The TG proposes an inclusive health SDG that does not look at disease categories but instead looks at maximizing health and wellbeing through the life course. This goal is recommended based on criticisms of approaches that segment health and wellbeing into stages (such as healthy infancy, healthy childhood, and healthy pregnancy). A life course approach acknowledges that

individuals may be affected by infectious diseases (HIV/AIDS, TB) as well as chronic diseases (diabetes, cancer) and provides a continuum of care across the lifetime of an individual. It also recognizes that illness at a particular age may be preconditioned by factors operating at an earlier age (e.g., childhood under-nutrition can predispose individuals to adult cardiovascular disease and diabetes).

Primary Health Care a Priority: The mandate for a broader UHC acknowledges the multiple dimensions of health and wellbeing. The focus of this broader mandate continues to be primary health care achieved through horizontal programs that focus on strengthening health systems and providing public health services such as disease surveillance. This approach recognizes the need to address challenges of human resources, drugs and essential medicines, and nutritional policies among others.

Action on Determinants Through Multisectoral Initiatives: The TG recognizes that the agenda for the unfinished burden of disease and emerging health conditions cannot be addressed without the concerted engagement of a diversity of stakeholders, including government, civil society, academia, the media, and private industry. Further, health needs to become a priority for actors outside the health sector, and sectors must work together to accomplish health objectives. An analysis of some intersectoral linkages is provided in Chapter 4.

An independent review of the first ten years of Thailand's Universal Coverage Scheme (UCS) shows a dramatic reduction in the proportion of out-of-pocket spending (OOPS), decline in health expenditure and falls in impoverishment due health care costs11. Between 1996 and 2008 the incidence of catastrophic health care expenditure amongst the poorest quintile of UCS members fell from 6.8% to 2.8%. Furthermore, the incidence of non-poor households falling below the poverty line because of health care costs fell from 2.71% in 2000 to 0.49% in 2009. The review calculated that the comprehensive benefit package provided by the UCS and the reduced level of out-of-pocket expenditure protected a cumulative total of 292,000 households from health related impoverishment between 2004 and 2009. This is equivalent to the area between the two lines:

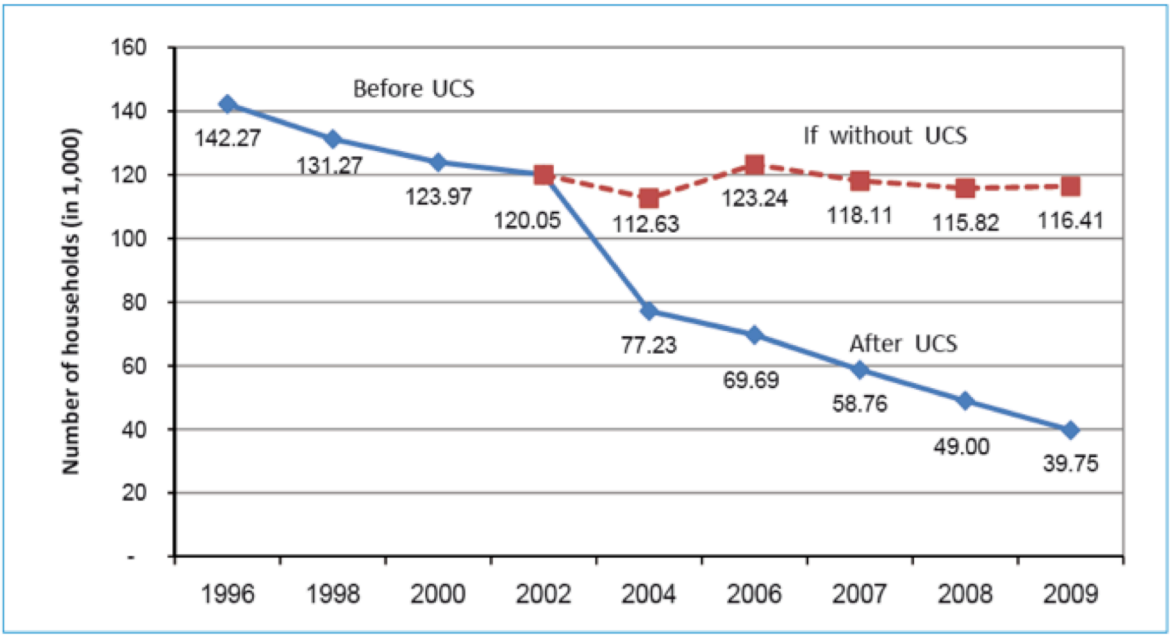

Figure 2 Number of households protected from health impoverishment in Thailand (1996- 2009)

Equity, Through Models for Financial Protection: The adopted SDG must recognize critical concerns regarding equity, in particular ensuring that poor and socioeconomically disadvantaged groups are protected financially from impoverishing expenditures. The TG proposes that the broader vision for UHC must disproportionately benefit poor and deprived populations, protecting them from high healthcare costs and from a diversity of conditions.

Making the case for UHC: Externalities and Synergies

Several arguments highlight the large positive externalities and impact of UHC on health outcomes. In addition to human rights and equity as the basis for UHC (Appendix 5), arguments in its favor also highlight its political and economic benefits. Below, we summarize some of these arguments:

UHC improves health outcomes

There is broad consensus that the ultimate goal of the health sector is to improve health outcomes (increasing healthy life expectancy, reducing maternal and child mortality rates and reducing the burden of disease). It is vitally important that health inequalities are reduced and that improvement is for everyone, not just certain groups. Making progress towards UHC, as defined above, will reduce health inequalities. Causal analyses from 153 nations[29] has shown that "broader health coverage generally leads to better access to necessary care and improved population health, with the largest gains accruing to poorer people."

Impressive health outcome results have been demonstrated in low-income countries in Sub-Saharan Africa. In a Countdown to 2015 Case Study on Niger, published in the Lancet (2012), Amouzou et al1 celebrated the impact of Niger's UHC approach in reducing child mortality from 226 deaths per 1000 live births in 2000 to 128 in 2009 – an annual average reduction of 5.1%. They attributed this success to "government policies supporting universal access, provision of free health care for pregnant women and children, and decentralized nutrition programs." This provides evidence that increasing the coverage of effective services, combined with the removal of health service user fees that increased financial protection and improved access, is vital for success in achieving health MDGs and SDGs.

UHC Delivers Economic and Political Benefits

The World Health Report in 2010 demonstrated the catastrophic effects of healthcare costs, with nearly 150 million people worldwide suffering financial hardship and 100 million being pushed below the poverty line as a result of OOPS. In the affluent Indian state of Gujarat, 88% of households falling below the poverty line did so as a consequence of health care costs[24]. In the United States, over 50% of personal bankruptcies have been attributed to medical expenses[53]. As the WHO points out, the out-of-pocket costs incurred by poor households as a result of lack of sexual and reproductive health care are staggering. For example, the complications from unsafe abortion cost individuals and households in sub-Saharan Africa $200 million out-of-pocket each year (WHO 2012).

Avoiding financial losses associated with unaffordable, and sometimes sudden, health care expenditure can help households stabilize their disposable income and spend more on other goods and services, improving the welfare and future prospects of the family. At a macroeconomic level, greater ability to consume and invest stimulates growth. Worries about health care bills are the main cause of excessively high savings rates in some countries, such as China[31], with negative impacts on economic growth. Recent experience in Mexico highlights the tangible benefits of UHC reforms for households.

If financed and implemented well, UHC reforms can be popular with the public, reaping political benefits. Political leaders associated with such reforms have seen their personal popularity increase as a result. Many major UHC processes have been initiated by political leaders in the run up to elections and immediately following a transition of power. Political leaders in the process have derived substantial benefits from successful reforms, helping them retain power in subsequent elections such as in the United States[8]. Several political pioneers of UHC have become national heroes. In 2004, the Canadian public voted in a national poll for the Greatest Canadian[4] and chose the architect of their UHC reforms, Tommy Douglas.

For all these reasons, the Director General of the World Health Organization (WHO), Dr. Margaret Chan, has called UHC: "the single most powerful concept that public health has to offer. "[7]

Mexico recorded higher levels of financial protection from health care costs following nationwide UHC reforms. In 2002 approximately 60 million people in Mexico did not have adequate financial risk protection and had to pay for the majority of their health services through out-of-pocket payments[22]. Recognizing that this had a damaging impact on the health and economic wellbeing of households, the Government of Mexico introduced a national protection program called the Seguro Popular. This program was mostly financed through taxation with only richer households being asked to make modest annual contributions. Within a decade, 53 million people enrolled in Seguro Popular, the majority coming from the 4 poorest income deciles.

A 10-year review of these reforms shows an increase in the utilization of essential services by households, improved health outcomes and increased financial protection. From 2000 to 2006, effective coverage of a number of key maternal and child health interventions (e.g. antenatal care, immunizations, and treatment of diarrhea) increased significantly with Seguro Popular members achieving higher coverage rates than uninsured people. This increased service coverage contributed to a sustained fall in child and maternal mortality rates and a reduction in health outcome inequality. Looking at the economic benefits of increased financial protection, survey data showed falls in impoverishing health expenditure with greater reductions amongst Seguro Popular members. From 2000 to 2010, the incidence of catastrophic expenditure fell from 3.1% of the population to 2.0% and impoverishing health expenditure from 3.3% to 0.8%.

Universal Health Coverage as a Priority for the Post-2015 Agenda: Concept, Components and Collaborations

Concepts: What do we mean by Universal Health Coverage?

As UHC emerges as the common rallying point for health policy and advocacy, it is important to define its conceptual framework. Several definitions of universal health coverage exist with varying levels of complexity[56], reflecting the contextual interpretations in high, middle and low-income nations. A simple definition incorporating the key concepts is:

> Universal Health Coverage is when all people receive the quality health services they need without suffering financial hardship.

Underlying this definition of UHC is a complex framework that represents the interactions between health systems and populations. For this report, we have defined UHC comprehensively as referring to **equitable access to affordable, accountable, appropriate health services of assured quality to all people**, including promotive, preventive, curative, palliative and rehabilitative services. In defining UHC, it is crucial to recognize that UHC must be supported by policies and services addressing the wider determinants (social, environmental, and economic) of health, delivered to individuals and populations. The role of governments and public systems as guarantors and enablers is key, even as efforts are made to mobilize all relevant societal resources for the delivery of services. Governments must also ensure the engagement of all stakeholders, with particular emphasis on vulnerable groups, to safeguard access to quality care for all persons and maintain accountability.

This definition is consistent with earlier definitions provided by the WHO in 2010[56] and by the SDSN in 2013[36]. Recognizing that a narrow definition of UHC may exclude action on social and environmental determinants, the High-Level Expert Group on Universal Health Coverage in India[18] expanded the definition to include a package of essential health services as well as a broader set of policies relevant to public health. The goal as proposed by us includes both components.

Any definition of UHC, while including key principles, must also link to appropriate metrics for measurement of progress towards the goal. Metrics may be selected to include assured access (e.g., percent of children covered by immunization; percent of women having access to sexual and reproductive health services and rights; percent of population provided with essential drugs as prescribed by a doctor) AND financial protection (e.g., proportion of OOPS to total health expenditure; proportion of the population experiencing impoverishing health expenditures). Even as a set of essential services is provided to all, programs targeting the poor, for assured coverage of those services or the delivery of additional services, can still be accommodated within a UHC framework. Further, an equity measure can be added to each metric of UHC (e.g., gaps in access and financial protection between the highest and lowest income quintiles, different gender groups, age groups, etc. are narrowing as the UHC programs are progressively implemented). At each stage of the evolution of UHC in a country, the health needs of the poor and marginalized must be prioritized.

Components: What does Universal Health Coverage include?

Any definition of UHC must include two core components:

A. **UNIVERSALISM:** Everybody should have access to needed promotive, preventive, curative, palliative and rehabilitative health services. Furthermore, these services must be of sufficient quality to have an appropriate impact on the health of the people who are using them. It is no use having access to health workers if they are not trained to make a correct diagnosis or if they prescribe inappropriate or ineffective medicines.

B. **EQUITY:** When accessing services, people should not face high out-of-pocket expenditures that might lead to financial hardship or deter people from using services. It is imperative that three dimensions of equity be incorporated: equity in opportunity (the ability of individuals and populations to maximize their potential for better health), equity in access (in the design and delivery of health and other allied systems such as food, built environment and urban systems), and equity in outcomes (for the measurement of which evidence needs strengthening).

In 2010, the World Health Report depicted UHC as Figure 3 illustrating the policy choices faced by governments and exemplifying the two core principles of *universalism* and *equity*. The diagram asks three critical questions:

a) Populations: Who is covered?
b) Services: What services are covered?
c) Finances: What do people have to pay out of pocket?

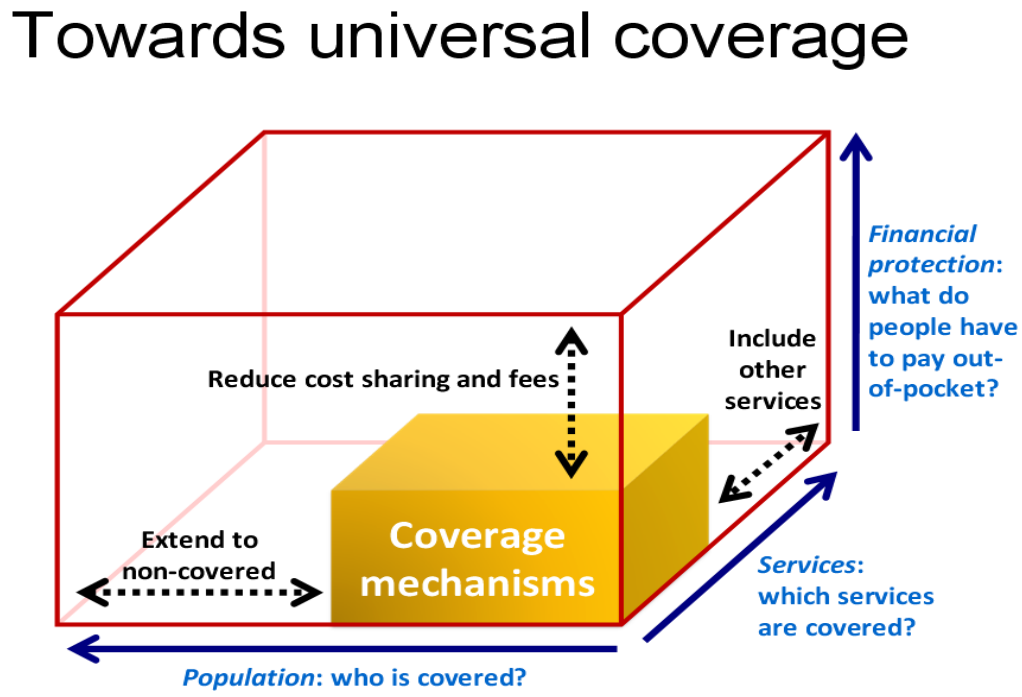

Figure 3: The Universal Health Coverage Cube[3]

[3] While the diagram does not show social, environmental, or other determinants of health, it is important that the health sector work with other sectors (for example water, sanitation, agriculture and food systems, urban planning, etc.) to address determinants as part of a comprehensive health system. This group interprets 'services' as including services at the level of both individuals (ex. vaccination or the treatment of malaria) as well as polulations (ex. infectious diesase monitoring).

The UHC approach is useful as it recognizes that progress needs to be made along multiple dimensions; progress along only one dimension may not be enough to improve outcomes. For instance, promising free health services is an ineffective strategy if there is inequity in access or if services are of poor quality. Similarly, UHC is effective in adjusting the relative burden of public and private financing on the health system, both in terms of service and population coverage, which is useful for financing institutions. Finally, UHC is also effective in the push towards increasing population coverage and expanding the beneficiary base. Similarly, the UHC approach makes the political system realize it cannot focus on curative services alone and must ensure effective prevention policies, such as policies to curb tobacco use, or infrastructure to ensure safe water and sanitation.

Collaborations: Who does UHC involve?

The responsibility for achieving UHC ultimately rests with governments, who must lead the development and implementation of UHC. However, to ensure success, all stakeholders must be involved in setting the strategy, including development partners, local and national governments, civil society organizations, the private sector, and, most importantly, the general population. Further, keeping in mind the country context is essential. This strategy should incorporate priority actions and investments along each axis, along with recognizing the necessary trade-offs. For instance, if greater financing resources become available to nations, particularly low- and middle-income countries (LMICs), more should be invested by purchasing medical equipment or eliminating co-payments for some services.

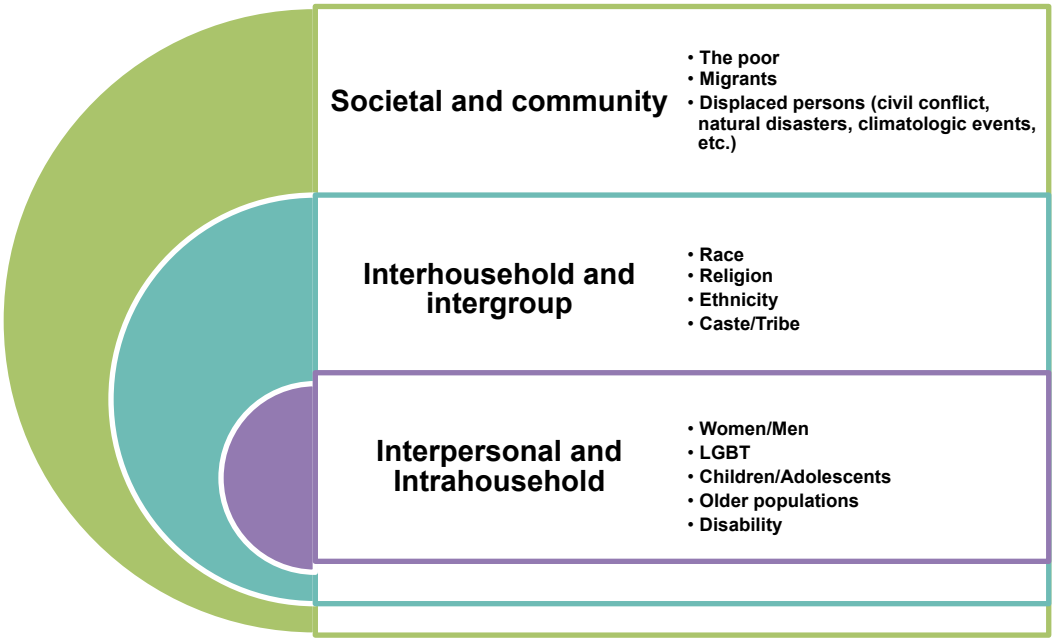

Figure 4: Key Stakeholder Groups at Multiple Levels

The agenda for UHC must be inclusive, and must recognize the disproportionate burden of disease and sickness faced by specific disadvantaged groups. UHC must consider determinants that **predispose, precipitate or perpetuate** individuals and populations to risks and reduce their resilience. A depiction of disadvantage within households, between households, between social groups, and at the societal level is presented in Figure 4. This representation reaffirms that, while UHC stresses Health for All, there is a need to strengthen equity mechanisms to make the delivery of UHC more effective.

Delivering Universal Health Coverage

There are four core requirements for implementing UHC:

1) Financing;
2) Human resources, equipment, and infrastructure;
3) Capitalizing on synergies between sectors and involving all stakeholders; and
4) Good governance.

All of these involve complex issues of policy, governance, equity and participation. Some of these are discussed below:

Financing

Globally, nations at all income levels have recognized that health financing reforms are essential to achieve UHC. In the strategies for undertaking such reforms, the WHO has advised[56] that governments must consider three main functions of the health financing system. These are:

1. Raising sufficient financial resources to cover the costs of the health system
2. Pooling resources to protect people from the financial consequences of ill-health
3. Purchasing health services to ensure the optimum use of available resources

Raising and pooling sufficient financial resources for UHC

The level of financial resources required for UHC in any particular country is a function of the 'UHC Cube' (i.e. the population covered and the range, quantity and quality of services covered). A key to UHC implementation is raising domestic funding to ensure access to quality services and financial protection to the **entire population**. In the past, low-income countries were advised to provide an 'essential package of services,' frequently focusing on MDG priorities (maternal and child health; HIV/AIDS, TB and malaria). Today there is increasing recognition that all countries must strive towards good quality, **comprehensive** primary healthcare (PHC) services for all. This comprehensive approach must incorporate greater equity, as evidence shows poor and disadvantaged groups have a greater service need and therefore reap greater benefits. While the majority of the current disease burden can be addressed in LMICs through primary care interventions (preventive, curative and rehabilitative), over time resources need to be increased and services expanded beyond PHC. Increased resources are also needed by governments to meet emerging challenges such as ageing, epidemiological changes and greater availability of new technologies.

An increasing global consensus on the better performance of public (or mandatory pre-payment) financing mechanisms has been emerging, in terms of both efficiency and equity[29,34]. This has been attributed to the compulsory nature of general taxation and other government revenue sources (e.g. royalties on the exploitation of natural resources) and social health insurance contributions. Governments have been successful in raising substantial levels of revenue with relatively low administration costs. When these resources have been pooled, mandatory pre-payment mechanisms ensure equity, as healthy and wealthy populations are compelled to subsidize the sicker poor. In contrast, point of service fees (which the President of the World Bank recently called "unjust and unnecessary"[63]) raise little revenue, are associated with high administration costs and are fundamentally inequitable because of their reliance on ability to pay. Private, voluntary health insurance (including community-based insurance) schemes tend to have low coverage rates, high administration costs and

often exclude the poor[5]. Several low- and middle-income countries have dramatically increased government revenue through improved collection efficiency and promoting greater tax compliance (e.g. South Africa[17], Kenya[21]). Similarly, domestic government revenue in LMICs could be dramatically enhanced through improved global governance on tax competition and tax havens, increasing transparency, especially on payments related to natural resource extraction and ensuring fair trade policies. Of equal importance to generating sufficient government revenue for the health sector is integrating funding from different public sources in large risk pools to avoid the inefficiencies and inequities associated with fragmented pools, which often translate into tiered health systems.

In 1988 Brazil initiated an extensive program of health reforms with the intention of increasing the coverage of effective services for poor and vulnerable people, especially those who had experienced poor quality care and high user fees. Following significant increases in public financing, the government was able to provide universal free health services to the entire population, focusing on the poorest, and as a result health indicators improved markedly. The Family Health Program (later Strategy) led to the introduction and scale up of primary care teams consisting of a doctor, nurse and community health workers that now cover over 100 million people. From 1990 to 2008, infant mortality in Brazil fell from 46 per 1000 live births to 18 and life expectancy for both sexes increased by 6 years over the same period. Moreover, these UHC reforms reduced health inequalities, with the

There is a growing trend amongst LMICs to develop homegrown systems appropriate for their own contexts. Of particular note have been the successes of health systems in Latin America (e.g. Brazil[32], Mexico[22] and Costa Rica[9]) and Asia (Thailand[11], Taiwan[25] and Sri Lanka[33]) to use increased public financing to scale up coverage. These models are subtly different but all have one common feature. In recognizing that it is very difficult to collect insurance contributions from those employed in the informal sector, they rely heavily on tax financing to fill gaps, including innovative tax structures like tobacco taxes that encourage behavioral change while raising funds. Funding the provision of comprehensive PHC services for everyone will not be feasible for the lowest income countries unless there is continued external funding support, through a mechanism that allocates external funding according to each country's shortfall in domestic funding, as these countries work to raise domestic funds (which is partly dependent on global action, e.g. to reduce avoidance of payment of taxes in LMICs by multinational corporations) and close the shortfall gap over time.

While mobilizing sufficient resources is essential for UHC, prudent and strategic purchasing of services is critical for ensuring efficient use of resources in order to maximize benefits and promote sustainability. In recent years, performance-based provider payment methods, which links payment to individual providers or institutions to predefined activities or service quality that have proven to be cost-effective in producing health outcome, have gained currency as a way for incentivizing providers to provide high quality of care. There are a number of successful examples, for example, in Rwanda, the Republic of Congo, Burundi, etc. (refs). Provider payment methods also need to be accompanied by quality review and audit, development and implementation of treatment guidelines, clinical protocol and other quality improvement programs. In areas where the population density can support more than one provider, competitive bidding and contracting can also be considered to improve providers and suppliers' responsiveness to the standards and needs of the purchasers

Human Resources, Equipment, and Infrastructure

The global push to UHC cannot be successful without a multi-layered, skilled, adequately compensated health workforce, contributing to preventive, curative and rehabilitative services[44]. Many challenges face human resources for health (HRH), including complex discourses on human rights and development (both of those consuming services and those engaged in service delivery), as well as around the economics of health and healthcare. Unresolved debates have led to a) global shortage of HRH, b) between-country and within-country disparities in the distribution of the workforce, and c) inadequacies in skills and training of the existing workforce. This equation has been further complicated by the growing burden of NCDs that require not just vertical program delivery, but the provision of both acute and chronic care. As plans for the post-2015 development agenda take shape, these unresolved questions need greater research and program implementation focus, while simultaneously dealing with the most urgent needs of health.

The agenda of UHC emphasizes the need for equitable coverage and access to health services. A major obstacle to equity is the shortage of workers, which is particularly acute in rural areas, areas without access to transport or communication, low-income neighborhoods, and areas without other supportive infrastructure such as schools. In several LMICs, governments have been engaged in discussions on incentives to lure doctors and skilled medical staff to these areas. Inequities in the distribution of healthcare are further exacerbated by HRH-flight, or the relocation of trained medical staff from LMICs to HICs. The shortage of nurses and support staff in several LMICs is particularly serious. This places increasing pressure on existing staff, with impacts on efficiency and quality of services.

To reap the benefits of UHC, well-trained and well-resourced health workers, particularly those at the frontline, need to be at the core of the global health agenda. There are roles for highly skilled doctors, frontline workers, and village-level health and nutrition workers. Village-level health workers in LMICs play a crucial role in reducing mortality from communicable diseases, a large share of which is attributable to the undernourishment of the child. Simple but important skills such as training village-level health workers in weighing the child according to growth charts can play a vital role in the global war on under-nutrition. Similarly, frontline workers can play a major role in prevention by measuring and systematically recording risk factors for NCDs, in order to initiate risk reduction measures through counseling and guideline-based therapies. The role of simple technology in ensuring a systematic approach can be vital.

Burundi has recorded a spectacular decline in infant and child mortality, which each fell 43% in only five years, from 2006 to 2011[19]. The decline began when the government provided free universal health care for pregnant women and children under age five. In addition to removing financial barriers, therefore increasing demand and financial protection, the Government of Burundi also substantially raised public financing and introduced new performance-based financing systems. This helped channel public funds (including aid) to front line services, including NDT treatment and control, more efficiently and enabled the government to meet the huge increase in demand for services. The higher utilization of maternal and child health services has been one of the major factors contributing to Burundi's improved health indicators.

While the right to health of those consuming health services is important, the rights of those delivering services are equally critical. Nations cannot resolve issues around inequality in health care delivery without addressing the structural issues pertaining to socioeconomic conditions. A disproportionate

amount of research currently focuses on the 'push' factors, i.e. how to get the HRH to work in less-served areas. A greater emphasis is needed on both research and policy action around the 'pull' factors, i.e. how to attract a quality work force to work to rural or less-served areas, even if it is for stipulated periods of time (e.g. 3, 5 or 10 years). This complex agenda, involving some of the social determinants around rural-to-urban migration, rural prosperity and urban development, holds the key to finding sustainable solutions to health disparities.

Equally critical to achieving health objectives is ensuring that the health workforce has the equipment, infrastructure, and supplies needed to provide essential service. A skilled obstetric surgeon cannot provide a safe caesarean section without the proper anesthesia, surgical tools, and hygienic room. A skilled community health worker needs rapid diagnostic tests for malaria and medication.

Priorities for action in this area include solving supply-chain issues with critical drugs and ensuring their affordability; making sure service points have essential equipment, as well as electricity to run that equipment; and ensuring emergency transportation to higher-level service points when necessary (i.e. a midwife delivering in a household calling for transport to a hospital). Additionally, it is essential that care centers be supplied with safe water and sanitation facilities.

One Million Community Health Workers Project[28]
Community health workers have been recognized for their success in reducing morbidity and averting mortality in mothers, newborns and children. While they are most effective when supported by a clinically skilled health workforce, they have proven crucial in settings where the overall primary health care system is weak. Community health worker programs exist in several countries (Ethiopia, Kenya, Malawi, Nigeria, Rwanda, Senegal and Tanzania), but there is a critical need to scale them up and integrate them into national health systems. To succeed, it is essential that this work force is trained in delivering care according to standardized protocols, and provided technology through mobile devices for monitoring services.

The initiative estimates that training and financing health workers to serve an average of 650 rural inhabitants will cost $6.58 per patient per year, adding to an estimated $2.5 billion. This is estimated to fall under projected governmental health budgetary constraints and within the boundaries of donor assistance being pledged and anticipated. The program works through emphasis on four aspects: a) Point of care diagnosis, b) scalable supervision, c) standardized care, and d) rapid training

Synergies and Stakeholders

Health linkages with other major sectors such as agriculture, education, energy, transport, housing, and policies that address climate change, gender, women's empowerment, and urban development, provide an important framework for engagement. It is essential that the post-2015 development agenda and resulting policies recognize these linkages. When designing policies to achieve future development goals, impact across multiple sectors should be taken into account to increase synergistic effects and reduce detrimental results. In particular, health should be considered when designing policies in all of the allied sectors, and health outcomes included in the monitoring and evaluation of such policies. Some of these interlinkages have been developed and are discussed in the next chapter.

Several examples from policy show the benefits of intersectoral policies. Controlling indoor air pollution through improved cook stoves or fuel switching can benefit human health, while reducing fuel costs and carbon emissions. Policies on indoor air pollution with a narrow focus on health may increase greenhouse gas emissions for example if they depend on electricity generated by coal combustion; the key is in identifying possible co-benefits to be achieved in the policy design stage. When designing public transportation systems, urban air pollution can be reduced, traffic flow ameliorated, and road safety improved. Planning walkable and bikeable cities has the added benefit of increasing exercise and reducing greenhouse gas emissions. However, to reap all these benefits, urban planners must work with health officials to design coherent plans.

It is important to identify the potential positive and negative impact of policies while designing them, to ensure that these can be monitored. For instance, agricultural policies seeking to improve incomes by raising the yields of cash crops may reduce food security. A more thoughtful approach to agriculture policy would examine yields, linking them to socioeconomic prosperity, improved food security and nutrition. Carefully designed policies supported by economic analyses have the potential to capitalize on linkages between sectors, maximizing positive results supporting all four pillars of sustainable development: economic, social, environmental and governance[36]. It is therefore critical that health be prioritized when crafting policies on agriculture, education, women's empowerment and other future priorities.

A critical component to successfully achieving multiple policy goals is the involvement of all stakeholders throughout the design, implementation, and evaluation stages of a particular policy. Stakeholder participation ensures effective priority setting, as community representatives are best suited to identify key solutions. The involvement of the expert community, in the form of both academia and the private sector, encourages innovation in policymaking and the implementation of solutions, provided conflicts of interest are identified and excluded. Non-profits, community-based organizations, and aid organizations have proven to be critical in providing both knowledge and financing in interventions.

There is a significant call for greater participation of all stakeholders in the post-2015 agenda. The report from the Secretary-General called for participatory data collection ("crowd sourcing" as one example) as well as greater involvement of stakeholders in monitoring and evaluation[50]. The interim report of the Open Working Group also calls for greater participation of all parts of society in setting and achieving the post-2015 development agenda. Further, the SDSN report highlights involvement of stakeholders to be a key component of improving governance through increasing accountability and transparency.

UHC stands to benefit greatly from involvement of stakeholders from different health fields and other sectors. Many successful partnerships emerged to support the achievement of the MDGs, including the GAVI Alliance for vaccines and the Reproductive Health Supplies Coalition. Including representatives from a diversity of sectors and backgrounds is a major key to the success of these programs. Successful implementation of UHC will require similarly high levels of involvement from all groups, as will the inclusion of health in all policies to ensure the reaping of co-benefits.

Good Governance and UHC

However well designed, UHC will not achieve its objectives unless the governance of the health system can assure commitment, integrity, transparency and accountability at all levels. Far too often, inefficiencies in the supply chain of medicines and vaccines or corruption in the process of procurement lead to program failure. Corruption or lack of transparency in the recruitment or transfer of health workers affects morale, retention and performance. Effective monitoring and accountability mechanisms are essential to ensure quality and price control in the public and private sectors. This becomes even more critical when public-private partnerships are proposed. Community participation in learning and action has been shown to yield good results in improving maternal and newborn health in low-resource settings.[41]

HealthMap: Engaging the Virtual World for the Detection and Reporting of Outbreaks3
The use of technology and online systems for mapping emerging infectious diseases is increasingly acknowledged as a useful and participatory tool for monitoring and surveillance. While still in its early stages, the potential for reporting infectious diseases in diverse parts of the world is significant. As a tool, it delivers real-time information on a broad range of emerging infectious diseases for a number of consumers, including governments, local health departments and international travelers.

HealthMap and other similar applications are user-friendly. In an increasingly connected world, these systems use local contributions of information to simulate data that can be used for infection control and can be an aid to local surveillance systems, the latter of which may be inadequately resourced to deal with the challenges of emerging infections.

One challenge is the sensitivity and specificity of information when supplied by the general population instead of medical practitioners. However, these systems provide a bottom-up approach to information and can be a useful supplement to existing surveillance systems.

Linking Health to other Development Goals

Health is both a pre-condition for and an outcome of sustainable development, and relates to all four pillars of sustainable development (economic, social, environmental, and governance). It is universally recognized that several critical determinants of health and illness lie outside the health sector. Education, finance, agriculture, food processing, trade and investment, environment, urban design, transport, communications, law and human rights are some of the many areas where actions can enable or erode health. Health impacts several core dimensions of development. A sick child cannot go to school and malnourished students perform poorly in academics as well as sports. A sick employee either stays away from work ('absenteeism') or underperforms after turning up ('presenteeism'), affecting overall economic performance. At the level of household economics, poor health impoverishes families through costs for care, lost wages, and even permanent loss of employment. Long periods of illness lead to stress and domestic strife within households. For all of these reasons, every SDG should consider pro-health strategies. Achieving Health and Wellbeing at All Ages is impossible without intersectoral action and enabling policies that link diverse SDSN priorities. Some key areas of intersection are described below.

Health and its relationship with the eradication of extreme poverty and hunger: Poverty, at multiple levels, continues to be the most formidable challenge to improvements in health. The World Food Program estimates that 870 million people go to bed hungry each day, and 45% of under-5 mortality is caused by poor nutrition. Micronutrient deficiency is further responsible for much morbidity in children and adults. The SDGs must therefore prioritize the eradication of hunger, a key component of improving global health. Repeated infections, such as diarrhea in childhood, leave behind a legacy of serious, lifelong health problems such as stunted growth and impaired cognitive development, with further implications on work opportunities and overall productivity. In HICs and LMICs, the increasing cost of healthcare and rising out-of-pocket spending (OOPS) burdens households; in many regions healthcare costs are a major reason for households falling below the poverty line. Poor nations are unable to afford publically financed healthcare services for their populations and often rely on donor support, especially to reach vulnerable populations. In the absence of adequate resources, LMICs have had to adopt 'targeted' instead of universalistic approaches that often miss those in greatest need. By prioritizing UHC in the post-2015 development agenda, and with adequate resources, we can transform households impoverished by healthcare costs into resilient households that are active in the community. Over time, as poverty is reduced and incomes rise, countries will need to rely less and less on donor support and will eventually be able to finance UHC.

Health and achieving development within planetary boundaries: The SDSN's report "An Action Agenda for Sustainable Development" states that all countries have a right to development that respects planetary boundaries, ensures sustainable production and consumption patterns, and helps to stabilize the global population by mid-century. UHC plays a key role in accomplishing this goal. UHC can help to ensure universal sexual and reproductive health and rights are upheld, empowering all women and men, including adolescents and youth, to make educated decisions about their own sexual and reproductive lives and healthcare, including family planning. Many policies to reduce greenhouse gas emissions and promote development within planetary boundaries can also benefit health through, for example, reduced exposure to air pollution, increased physical activity, and dietary change (see the section below in climate change for more information).

Health and its relationship with ensuring effective learning for all children and youth: Education and health are profoundly linked; both are human rights, and are inputs into human capital. Better education contributes to better health, through increased employment generating income, increasing the ability of households to afford better nutrition and healthcare. There is abundant evidence from across the world that education positively impacts the health status of individuals within countries, even independent of income. Education, especially women's education, is another key investment with a direct impact on family planning, child health and development, and family nutrition. This is because education increases awareness of risk factors, health seeking and health utilization behaviors. In turn, better health has significant impact on education. As discussed, healthy, well-nourished children do better in school. Stunting from under-nutrition in early childhood has been shown to have an impact on IQ and cognitive development, affecting learning and long-term career prospects. Vaccines have the power to transform lives, giving children a chance to grow up healthy, go to school, and improve their life prospects. The relationships between education and health are vital and cannot be ignored. In the post-2015 agenda, it is crucial that synergies between education and health be realized, such as described in the SDSN report "An Action Agenda for Sustainable Development."[4]

Universal education for all children must be advanced vigorously, and health literacy could be fast-tracked through mass media and settings-based non-formal health education. A variety of communication channels and social networks can be used for this purpose. Increasing the health literacy of young persons is an especially high priority to empower the global citizens of the 21st century with the knowledge, motivation and skills needed to help them to protect personal health and act as societal change agents for promoting population health. Youth-friendly health education is especially important in preventing unwanted pregnancy and the spread of HIV/AIDS, teaching values of human rights and gender equity, and encouraging healthy habits such as healthy diets, physical activity, and the prevention of alcohol, tobacco, and drug use throughout the life course.

Health and its relationship achieving gender equality, social inclusion, and human rights for all: UHC will be a significant step in realizing the right to health for all. UHC ensures equality in coverage and access to health services for all people. However, social policy at the national level cannot be successful without recognizing within-household and within-country inequalities based on discrimination due to gender, race, ethnicity, age, disability, religion, sexual orientation, refugee status, or other status. It is therefore important that health indicators are disaggregated and achievements between groups be compared to ensure equity in improvements. Where there are gaps in achievement between groups, countries must implement policies to ensure the closing of such gaps. In some instances this will require innovative programs to address cultural barriers to consuming health services. Further, by ensuring equity in both access to and utilization of health services by all people, inequalities in other sectors such as employment will be reduced. In addition, the post-2015 development agenda should call on countries to address assault and violence against women and other marginalized groups (including sexual violence), violent crime, female genital mutilation, service provision for displaced and refugee communities, and other determinants of health that are driven by political and/or cultural factors. Sexual and reproductive health and rights are especially critical, as women and girls bear the brunt of sexual and reproductive health problems. The primary health care system, as part of the delivery of SRH

[4] More information on the linkages between health and education can be found in the Report of the SDSN Thematic Group on Early Childhood Development, Education and Learning, and Transition to Work entitled *The Future Of Our Children: Lifelong, Multi-Generational Learning For Sustainable Development*. www.unsdsn.org/resources

services, should ensure detection and comprehensive responses to gender-based violence, offering a package of critical services to victims/survivors.[5]

Gender, Health Systems and Knowledge Translation:
Early marriage and related teenage pregnancies are a result of highly unequal gender relations and discrimination against girls and women. WHO reports that complications from pregnancy and childbirth are the leading cause of death among girls aged 15-19 years in many low- and middle-income countries. Stillbirths and newborn deaths are 50% higher among infants born to adolescent mothers than among those born to mothers aged 20-29 years. Health policies and programs that focus merely on institutional deliveries ignore these facts. In 2008, a project in Koppal, Karnataka (India)14,15 combined a nuanced gendered framework to strengthen evidence and advocacy to reduce maternal morbidity, mortality and violence against women. The project's verbal autopsies of maternal deaths and near misses since 2008 revealed systemic failures and the need for accountability in obstetric care and health systems that fuelled high levels of maternal mortality despite rising rates of institutional delivery.

Health and its relationship with improving agricultural systems and raising rural prosperity: The MDGs put emphasis on improving food security, but did not devote much attention to improving rural infrastructure (irrigation, safe drinking water, sanitation, fuel, power/electricity, banking, transport, health service provision, education, and information technology) as a means to improve rural livelihoods and increase production sustainably. The post-2015 agenda needs to consider how rural prosperity can improve the lives of millions of smallholder farmers while simultaneously improving diets and nutrition for both rural and urban dwellers, in all countries. This can also reduce the health impact of deforestation, air and water pollution and zoonotic diseases to which agriculture contributes. Since women are employed in very large numbers in farming, their health is directly linked to safety of agricultural methods and in turn on their ability to contribute to agricultural productivity.

A detailed framework for Sustainable Agroecological Intensification (SAI) and rural development can be found in the report of the SDSN's TG on Sustainable Agriculture and Food Systems[37]. A key component of this framework is expanding health coverage to smallholder farmers, especially the rural poor who currently have low access to care. Ensuring their health has implications for increasing farm productivity and improving food and nutrition security. Hitherto, the objective of agriculture systems was to provide energy (caloric) security, without taking into account the multiple nutrient needs that can only be obtained through balanced composite diets. This resulted in a disproportionate emphasis on supply of cereals as the source of calories. From now on, agriculture systems have to become better aligned to nutrition goals, so that all persons, everywhere in the world, will have access to diets that are calorically adequate and nutritionally appropriate.[6]

Health and its relationship with empowering inclusive, productive and resilient cities: The growth of cities and progressive urbanization of the global population presents challenges as well as opportunities

[5] More information on the linkages between health and social inclusion can be found in the Report of the SDSN Thematic Group on Challenges of Social Inclusion: Gender, Inequalities, and Human Rights entitled *Achieving Gender Equality, Social Inclusion, and Human Rights for All: Challenges and Priorities for the Sustainable Development Agenda*. www.unsdsn.org/resources

[6] More information on the linkages between health and agriculture can be found in the Report of the SDSN Thematic Group on Sustainable Agriculture and Food Systems entitled *Solutions for Sustainable Agriculture and Food Systems*. www.unsdsn.org/resources

for health. The urban poor suffer daily deprivations of shelter and food security, with millions living in slums and squatter settlements prone to water and sanitation-related diseases. Urban dwellers, rich and poor, are at greater risk of harmful health behaviors like smoking, alcohol and drug use, diseases like TB and dengue fever, and road traffic injuries, relative to their rural counterparts. Urban populations, particularly those residing in unplanned housing or densely populated areas, are disproportionately affected by environmental disasters.

Services related to the provision of clean water supply (for drinking and hygiene), sanitation, green spaces, community recreational facilities, protected cycling lanes, safe pedestrian paths, traffic safety, pollution control and public protection from crime are among the health needs that the SDSN's Thematic Group on Sustainable Cities address in their report[38]. It is important that UHC also be realized in urban settings, as a complement to better city planning policies. The health needs of rural to urban migrants and slum communities need particular attention, particularly as spatial design is developed for accessible primary health care through suitably located community health centers. The SDGs are an opportunity for health-friendly urbanization and to invest in gathering greater evidence on the costs and benefits of urbanization on human health.[7]

Health and its relationship with curbing human-induced climate change and ensuring sustainable energy: Air pollution is a leading cause of premature death, with most deaths occurring in LMICs. The 2010 Global Burden of Disease study found that 3.2 million deaths each year can be attributed to outdoor air pollution, with most deaths occurring in cities, and another 3.5 million due to indoor air pollution, mostly in rural areas. Fuel-based lighting also leads to burn injuries and dangerous fires. While urban and rural residents face different health problems as a result of energy use, there is a common solution: access to modern, clean energy services and increased energy efficiency. There are many innovative programs installing solar, wind and natural gas in both rural and urban settings, many done under the auspices of the UN initiative Sustainable Energy for All (SE4All). Modern and efficient energy services improve health outcomes, as delivery rooms are well-lit, vaccines refrigerated, and electrical equipment like EKG machines available. Access to modern and clean energy services, provided through either traditional grid-connected means or innovative models of off-grid wind and solar, are important for clinics to provide quality healthcare. In the developed world, healthcare is often energy-intensive, but new, efficient medical appliances offer solutions to improve load-management. Reduced energy consumption is not only eco-friendly and reduces health-risks from air pollution.

Improving energy efficiency and increasing the amount of energy coming from renewable sources also helps slow climate change, which is increasingly shown to affect human health. Vector-borne diseases, like malaria or West Nile virus, can shift range under global warming. Increased risk from natural disasters, like droughts, heat waves, floods, landslides, intense hurricanes (typhoons) and other extreme weather events are linked to climate change and pose direct threats to health. The effects on agriculture, livelihoods, mental health, population displacement and conflict have direct impacts on health. In a 2012 report, DARA estimated that climate change was already responsible for an additional 400,000 deaths in 2010. Inequity is an important aspect of this relationship since a disproportionate burden is borne by socioeconomically disadvantaged populations.

Health and its relationship with securing ecosystem services and biodiversity, and ensuring good management of water and other natural resources: Research in health is increasingly showing linkages

[7] For more information, see the publications from the SDSN Thematic Group on Sustainable Cities: Inclusive, Resilient, and Connected at http://unsdsn.org/thematicgroups/tg9.

between environment and health. The role of ecology is evident in the rise of new infections, particularly zoonotic infections resulting from the interface between humans and domestic animals in processes such as deforestation and livestock farming. Air and water pollution also impact health and the effects of marine pollution on seafood are a significant threat to the health of the coastal poor. Freshwater is essential for human life. Potable water is needed for daily drinking and cooking. Contaminated water is a cause of many infectious diseases, especially childhood diarrhea that is the second leading cause of under-5 mortality. Water is also needed for personal hygiene (bathing, hand-washing) and ablutions. As the availability of clean water is reduced, health is endangered. Protecting our water resources is an essential component of the SDG framework. UHC, implemented with an equity lens provides a safety net to buffer the effects and impact of the environment on human health.

Health and transforming governance for sustainable development: Trade and investment policies related to essential drugs, vaccines, commodities, health-relevant technologies, agricultural produce, food products, tobacco, alcohol and international agreements related to services (including health worker migration) have important implications for health. While trade and investment policies have largely remained agnostic or sometimes even antagonistic to public health concerns in the past, in the post-2015 development framework they need to become more sensitive and better aligned to public health priorities, in keeping with the goals of sustainable development. Additionally, the provision of UHC depends on adequate financial resources. All high-income countries should provide 0.7% of gross national income (GNI) in ODA, with 0.1% earmarked for health.

There are also strong linkages between poor governance, civil conflict and ill health. Political instability and sociocultural challenges have impeded the achievement of basic health targets of immunization linked to diseases that are eradicable. The cases of polio from northern Nigeria, Afghanistan, and lately, parts of Pakistan, provide daily challenges in implementation of immunization programs and personal safety of medical staff in sensitive areas. These factors have led to disparities in commitment towards health policy, in implementation of programs and in the resulting health outcomes. Global economic slowdown (recession) and resulting austerity measures by governments have affected public systems of health (apart from other social sectors) and have further exacerbated health disparities.

Health in All Policies: Case of Tobacco Control

According to the WHO, 100 million persons died due to tobacco related diseases in the 20th century. WHO also estimates that the death toll due to tobacco will be one billion human lives in the 21st century. Sustainable development is inconceivable and unachievable, if the elimination of tobacco is not an integral part of the framework for development.

Tobacco is not only a health hazard. It is a threat to the environment through deforestation (wood fuel is burnt for curing wood and cigarette machines use 4 miles of paper an hour), extensive pesticide use, high levels of water and soil nutrients depleted for cultivation, soil erosion and strewing of butts. It is a fire hazard, responsible for dangerous domestic and forest fires. It is unacceptable that around 4 million hectares of arable land are wasted on a killer crop instead of growing nutrient crops. Across the world, poor consume tobacco more frequently and consumption of tobacco products is a cause of families being pushed into poverty.

Recognizing this multi-dimensional nature of tobacco related harm to several areas of human development, WHO developed the Framework Convention of Tobacco Control (FCTC). 177 countries have ratified the first ever international public health treaty since its adoption in 2003. The treaty provisions call for actions across multiple sectors: raising tobacco taxes; comprehensive bans on all forms of advertising, sponsorship and promotion; bans on smoking in public and work places; strong rotating health warnings on tobacco products packs; control of illicit trade; support for cessation programs; provision of economically viable alternate livelihoods to tobacco farmers and workers; integration of tobacco control in health, education, development and poverty reduction programs. WHO also developed the MPOWER policy package to assist countries in implementing the FCTC. Raising tobacco taxes is an especially promising policy, as they raise revenue for health services within the UHC model while reducing the burden of future health care costs on the system.

As the FCTC is implemented by governments in both HICs and LMICs, we can expect to see an increase in overall health, a decrease in costs associated with health care as tobacco-related diseases decrease, and an increase of available funds at the household level for education, food, and/or housing.

Tobacco Control also exemplifies the need for a life-course approach, commencing from protection of the unborn child to cessation at any age. Health services too must integrate tobacco control within the ambit of UHC, both for prevention of primary uptake and promotion of cessation.

Appendix 1: Targets and Indicators

In the SDSN Report *An Action Agenda for Sustainable Development* 10 goals were proposed for the period 2015-2030. While nearly all 10 goals have implications for health, the most relevant are goals 1 and 5, for which we propose the following indicators:

GOAL 1: End Extreme Poverty including Hunger

Target 1A. End absolute income poverty ($1.25 or less per day) and hunger, including achieving food security and appropriate nutrition, and ending child stunting (MDG 1).

INDICATORS	**Target Range**[8]
Proportion of stunted children (low height for age)	0%
Percentage of population undernourished	0%
Share of calories from non-staple foods (%)	[X]%

GOAL 2: Achieve Development within Planetary Boundaries

Target 2c. Target 02c. Rapid voluntary reduction of fertility through the realization of sexual and reproductive health rights in countries with total fertility rates above [3] children per woman and a continuation of voluntary fertility reductions in countries where total fertility rates are above replacement level.

INDICATORS	**Target Range**
Unmet need for family planning	0%
Total Fertility Rate	TBD

[8] Even in well-resourced, healthy populations, it is nearly impossible to reach levels like 0% or 100%; countries should strive to come as close as possible to these targets.

GOAL 5: Achieve Health and Wellbeing at all Ages[9]

Target 5a. Ensure universal coverage of quality healthcare, including the prevention and treatment of communicable and non-communicable diseases, sexual and reproductive health, family planning, routine immunization, and mental health, according the highest priority to primary health care.

INDICATORS	Target Range
Preventing impoverishment from spending on health care: Number of persons falling below the poverty line due to out of pocket heath expenditures annually	0%
Out-of-pocket and private/voluntary health insurance (as percentage of total health expenditure)	<30%
Service coverage to continue progress on the MDGs and promote health at all ages: Average of all consultations (preventative and curative) with a licensed provider[10] in a health facility or the community (including CHWs but excluding pharmacists), per person, per year	4 per person per year (national average, based on data from countries with well-functioning health systems)
Ante- and post-natal care coverage (at least one visit and at least four visits, both pre- and post-)	>90%
Coverage of iron-folic acid or multiple micronutrient supplements for pregnant women (%)	100%
Proportion of births attended by skilled health personnel	>90%
Percent of pregnant women with one post-natal care visit	100%
Percentage of exclusive breastfeeding for the first 6 months of life	100%
Proportion of 1 year-old children fully immunized[11]	100%
Percent of children under age 5 and receiving appropriate treatment for diarrheal disease	100%
Proportion of children under 5 sleeping under insecticide-treated bednets	100%
Proportion of children under 5 with fever who are treated with appropriate anti-malarial drugs	100%
Proportion of population with advanced HIV infection with access to antiretroviral drugs	100%
Proportion of tuberculosis cases detected and cured under directly observed treatment short course	>90%

[9] A more detailed explanation of indicators can be found in Appendix 4: Evidence for Universal Health Coverage Indicators.
[10] Licensed providers include all adequately trained personnel registered and integrated in a national health system.
[11] Fully immunized children have received all immunizations recommended by WHO. For more information see http://www.who.int/immunization/policy/immunization_tables/en.

Proportion of pneumonia cases detected and treated with appropriate antibiotic regimen	100%
Deliver universal access to comprehensive sexual health and reproductive services, and realize rights	100%
Contraceptive prevalence rate	TBD
Unmet need for family planning	0%
Percent of women with cervical cancer screening	100%
Percent of women with HPV vaccine	100%
Percent with hypertension diagnosed & receiving treatment	100%
NTD cure rate	100%
Number of persons receiving depression diagnosis & treatment per 100,000	TBD
Percent of victims/survivors of gender-, ethnicity-, or other discriminatory violence receiving services[12]	100%
Waiting time for elective surgery [cataract placeholder]	[X] Weeks
Admissions, involving at least one night's stay, in a health facility, per year, per 1,000 population	Minimum of 70 per 1,000 people per year
Exposure to indoor air pollution	100% of households are below WHO recommended levels for particulate matter (PM) 10 and PM 2.5, carbon monoxide, and sulfur dioxide
Adequate resourcing of the health system, led by adequate domestic public funding for he services	5% of GDP for high-income countries or a 50% reduction in the gap between current spending levels and 5% GDP for low- and middle-income countries
Percent of ODA funding that goes to health programs as a proportion of donor country's GNI	0.1% of GNI
Ratio of health professionals to population (CHWs, nurses, nurse midwives, physicians, and emergency obstetric caregivers)	[23-50] Health workers per 10,000 people
Proportion of new health care facilities built in compliance with building codes and standards	100%
Percent of facilities with 24/7 electricity supply	100%

[12] Complemented by targets to reduce violence and discrimination proposed by the SDSN Thematic Group on Challenges of Social Inclusion: Gender, Inequalities, and Human Rights.

Target 05b. End preventable deaths by reducing child mortality to [20] or fewer deaths per 1000 births, maternal mortality to [40] or fewer deaths per 100,000 live births, and mortality under 70 years of age from non-communicable diseases by at least 30 percent compared with the level in 2015.

INDICATORS & SUB-INDICATORS	**Target Range**
Under 5 & Neonatal Mortality Rate	<20 per 1000 births
Maternal Mortality Rate (per 100,000)	<40 per 100,000 live births
Registry of all births and deaths	
Percentage of population covered by vital registration system (births & deaths)	100%
Incidence, prevalence, and mortality rates associated with communicable diseases including tuberculosis, malaria, HIV/AIDS, and hepatitis	TBD
Mortality and morbidity between ages 30 and 70 years due to cardiovascular disease, cancer (by type), chronic respiratory disease, diabetes, mental illness, and injuries/violence	30% reduction from 2015 levels
Healthy Life Expectancy	TBD

Target 05c. Implement policies to promote and monitor healthy diets, physical activity and subjective wellbeing; reduce unhealthy behaviors such as tobacco use by [30%] and harmful use of alcohol by [20%].

INDICATORS & SUB-INDICATORS	Target Range
Percent of population with healthy diets & sufficient physical activity	100%
Percent of malnourished children (stunted, wasted, underweight, and overweight)	<5%
Age-standardized prevalence of malnourishment (stunted, wasted, underweight, and overweight using BMI)	Eradication of stunting and wasting; 30% reduction in obesity
Age-standardized (to world population age distribution) prevalence of diabetes (preferably based on HbA1c), hypertension, cardiovascular disease, and chronic respiratory disease	TBD
Age-standardized mean population intake of salt (sodium chloride) per day in grams in persons aged 18+ years	[X] Grams per day
Prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of fruit and vegetables per day	0%
Share of calories from non-staple foods	Increase [20]% from 2015 baseline
Per capita [red] meat consumption	[X] Grams per day
Share of calories from added sugars and saturated fats	<10%
Intake of refined grains	<[X] Grams per day
Percent of person trips/kilometers travelled by public transportation, cycling, and walking	TBD
Percent of population using harmful substances	[X] Grams per day
Percent of population diagnosed with overconsumption of alcoholic beverages; the Use Disorders Identification Test (AUDIT) is preferred	20% reduction, with a goal of getting to 0[13]
Age-standardized prevalence of current tobacco use	30% reduction, with a goal of getting to 0[14]

[13] This is more ambitious than the WHO'S goal of a 10% reduction.

[14] This is more ambitious than the WHO'S goal of a 20% reduction.

Appendix 2: Glossary

FCTC: The WHO Framework Convention on Tobacco Control is the world's first global public health treaty negotiated under the auspices of the World Health Organization (WHO). It includes several measures for reducing the demand and supply of tobacco products, with the aim of reducing the prevalence of tobacco consumption globally and thereby reducing the harm to health from tobacco exposure. It was adopted in 2003 by the World Health Assembly and came into force in 2005. The treaty has now been ratified by 177 countries.

Harmful tobacco/alcohol use: Excessive use to the point that it causes damage to health and often includes adverse social consequences (WHO). The Alcohol Use Disorders Identification Test (AUDIT) is recommended.

NTDs: Neglected Tropical Diseases (NTDs) Neglected Tropical Diseases (NTDs) are a group of parasitic and bacterial diseases that cause substantial illness for more than one billion of the world's poorest people. NTDs affect physical and cognitive development, in turn reducing productivity in both the long and short terms, and often also carry social stigmatization. Examples include leprosy, rabies, Chagas disease, African sleeping sickness (trypanosomiasis), river blindness (onchocerciasis), schistosomiasis, and Guinea-worm disease (dracunculiasis).

Health equity: Refers to ideals of fairness and social justice. Inequities in health refer to disparities within and between countries, that are judged to be unfair, unjust, avoidable, and unnecessary (neither inevitable nor irremediable) and that systematically burden populations rendered vulnerable by underlying social structures and political, economic, and legal institutions.

Out of Pocket Spending (OOPS): Out of pocket expenditure is any direct outlay by households, including gratuities and in-kind payments, to health practitioners and suppliers of pharmaceuticals, therapeutic appliances, and other goods and services whose primary intent is to contribute to the restoration or enhancement of the health status of individuals or population groups. It is a part of private health expenditure.

Primary Health Care (PHC): Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact for individuals with the national health system, bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process. (Alma Ata Declaration, 1978)

Social Capital: Social capital refers to the institutions, relationships, and norms that shape the quality and quantity of a society's social interactions. Increasing evidence shows that social cohesion is critical for societies to prosper economically and for development to be sustainable.

Social capital is not just the sum of the institutions that underpin a society – it is the glue that holds them together. (World Bank)

Subjective Wellbeing: Refers to how people evaluate their lives, both at the moment and for longer periods (such as for the past year). This includes emotional reactions to events, moods, and judgments about life satisfaction and fulfillment, as well as satisfaction with domains such as marriage and work. (Diener 2003)

Sustainable Development: Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (Brundtland Commission, 1987)

Universal Health Coverage (UHC): The goal of UHC is to ensure that all people obtain the health services they need without suffering financial hardship when paying for them. For a community or country to achieve universal health coverage, several factors must be in place, including:

1. A strong, efficient, well-run health system that meets priority health needs through people-centered integrated care (including services for HIV/AIDS, tuberculosis, malaria, NTDs, and other communicable diseases, non-communicable diseases, sexual and reproductive health and rights, and maternal and child health) by:
    - Informing and encouraging people to stay healthy and prevent illness;
    - Detecting health conditions and risk factors early;
    - Having the capacity to treat disease; and
    - Helping patients with rehabilitation.
2. Affordability – a system for financing health services so people do not suffer financial hardship when using them. This can be achieved in a variety of ways.
3. Access to essential medicines, commodities, and technologies to diagnose and treat medical problems.
4. A sufficient capacity of well trained, motivated health workers to provide quality services to meet patients' needs based on the best available evidence. (WHO 2012)
5. Recognition of the critical role played by all sectors in assuring human health, including transport, education, agriculture, urban planning etc.

Verbal autopsies: Identification of the medical and social causes of death by interviewing knowledgeable persons about the events leading up to it. (WHO 2004)

Appendix 3: Health Goals Suggested in Global Consultations and Reports (2011-13)

The movement towards the adoption of a new set of development goals in 2015 catalyzed several consultations, involving diverse constituencies, over the past two years. Some of these have been initiated under the auspices of UN agencies while civil society groups led others. The TG carefully studied the reports and recommendations, which emerged from several groups and critically appraised the leading candidates for the Health SDG. The table below synthesizes a list of priorities identified by these groups.

Major Consultations	**Specific Goals**
High Level Consultation convened by WHO and UNICEF (Gaborone, Botswana, March 2013)	Suggested Goals: -Maximize healthy lives -Accelerate progress on health MDGs -Reducing burden of major NCDs and NTDs -Ensuring universal health coverage and access
Report of the High Level Panel of Eminent Persons (UN, May 2013)	Health & Related Goals Goal 4: Ensure healthy lives Goal 5: Ensure food security and good nutrition Goal 6: Achieve universal access to water and sanitation
UN High Level Meeting on Prevention and Control of Non Communicable Diseases (New York, September 2011)	25% reduction in mortality due to NCDs, in the age group of 30-70 years, by 2025
World Health Assembly (Geneva, May 2013) Also endorsed by the NCD Alliance of four major health NGOs (UICC, WHF, IDF & IUATLD)	2025 Goal: Achieve the global target of 25% relative reduction in overall mortality from CVD, cancer, diabetes or chronic respiratory disease, along with 8 other voluntary Global Targets: -Diabetes/obesity 0% increase -Raised BP 25% reduction -Tobacco use 30% reduction -Salt/sodium intake 30% reduction -Physical inactivity 10% reduction -Harmful use of alcohol 20% reduction -Essential NCD medicines and technologies 80% coverage -Drug therapy and counseling 50% coverage Also passed a resolution on NTDs reaffirming commitment to the Roadmap on NTDs with goals for several NTDs to be eradicated by 2020.
Ending Poverty in a Generation: Save the Children's Proposal for a Post-2015 Framework (2012)	Goal 2: By 2030 we will eradicate hunger, halve stunting, and ensure universal access to sustainable food, water and sanitation Goal 3: By 2030, we will end preventable child and maternal mortality and provide basic healthcare for all Goal 5: By 2030 we will ensure all children live a life free from

	all forms of violence, are protected in conflict and thrive in a safe family environment. Goal 8: By 2030, we will build disaster-resilient societies Goal 9: By 2030, we will ensure a sustainable, healthy and resilient environment for all Specific Health Targets 1. End preventable child and maternal mortality 2. Achieve universal health coverage 3. Tackle the social determinants of health
Report of The United Nations Sustainable Development Solutions Network (June 2013)	Overarching Goal: Achieve Health and Well Being At All Ages Enabling Goals: a) Ensure universal access to primary healthcare that includes sexual and reproductive healthcare, family planning, routine immunizations, and the prevention and treatment of communicable and non-communicable diseases. b) End preventable deaths by reducing child mortality to [20] or fewer deaths per 1--- births, maternal mortality to [40] or fewer deaths per 100,000 live births, and mortality under 70 years of age from non-communicable diseases by at least 30 percent compared with the level in 2015. c) Promote healthy diets and physical activity, discourage unhealthy behaviors such as smoking and excessive alcohol intake, and track subjective wellbeing and social capital.

Appendix 4: Evidence for Universal Health Coverage Indicators

Rationale for financial protection and financial resources for health indicators

A key component of UHC is to ensure that everyone has protection from the risk of incurring costs associated with using health services. Effective financial risk protection in the health systems context particularly involves protecting individuals and families against (further) impoverishment from spending on health.

Building on the globally established body of work and accumulated experience and evaluation in a wide range of countries, we propose the following key indicator:

- Impoverishing expenditure: the percentage of the population pushed below, or further below, the PPP$2 poverty line, as a result of out-of-pocket (OOP) payments to use health services in the past month. It is critical that global efforts to eradicate extreme poverty are not undermined by impoverishing expenditure to use needed health services.

Given the differential geographic access to health services, we propose that this indicator focuses not only on OOP payments to a health care provider or for medicines, but also OOP payments for transport to use services. Both these indicators are easily computable in all countries using household budget surveys, and estimates currently exist for most countries, permitting easy estimation of baseline estimates when monitoring progress toward targets. In terms of the targets that should be set, we propose that the level of impoverishing expenditures be set at zero, recognizing that the concept of UHC requires the complete elimination of all financial hardship when accessing health care.

Although this indicator provides important insights into the extent to which a country is (or is not) providing adequate financial protection for its residents, it is not feasible to move towards UHC through providing such financial protection in the absence of adequate levels of domestic public funding[15], with associated decreases in 'voluntary' payments, accompanied by continued donor funding support in lower-income countries. It is, thus, critical to include specific indicators that encourage changes in financing sources that will promote UHC. We propose three key indicators in this regard.

First, all countries should make progress to *domestic public* funding for health care of 5% of GDP[16]. A small number of countries have made progress to UHC goals with lower levels of funding, but this is the exception and requires extremely high levels of efficiency that are very

[15] Domestic public funding is defined as including all sources of mandatory pre-payment funding, including government revenue and possibly also mandatory health insurance.

[16] At present, the only target relating to government spending on health care that is widely used is the "Abuja target", which calls for at least 15% of total government spending to be devoted to the health sector. We believe it is preferable to express the public sending target as a percentage of GDP for several reasons. Specifying a target in terms of increasing the health sector's ***share*** of government expenditure implies that spending on other sectors should decline, which could undermine spending on other social services and hence adversely affect other social determinants of health. Instead, there is an urgent need to increase public spending on health services as well as other social sectors. Given the large variability in government revenues and expenditure across countries, which is **not** strongly correlated with level of economic development, it is problematic to set a target relative to the government budget, in that it does not exert pressure on governments to ensure "maximum available resources" as committed to in the International Covenant on Economic, Social and Cultural Rights.

difficult to achieve. There is a growing evidence base that a minimum public funding level of 5% of GDP is usually required to make considerable progress to UHC. Recent analyses of the relationship between public spending on health as a % of GDP and key indicators of health status, financial protection and service coverage point to 5% of GDP being an appropriate target (McIntyre & Meheus 2013). This evidence can be summarized as follows:

- To dramatically improve health status (e.g. reduce IMR to 10 per 1,000 live births) generally requires government spending of above 5% of GDP;
- To reduce financial catastrophe and impoverishment to negligible levels requires reducing out-of-pocket payments to 15-20% of total health expenditure (World Health Organization 2010), which in turn requires government spending of more than 5% of GDP (see Figure 5 which shows that public health expenditure of 6% of GDP is generally required to limit OOP payments to a maximum of 20% of total health expenditure);
- To promote access to needed health care (proxied by achieving 90% coverage for immunizations and deliveries by skilled birth attendants, and to achieve the global average of 44 core medical professionals per 10,000 population) requires government spending of 5% of GDP or more.

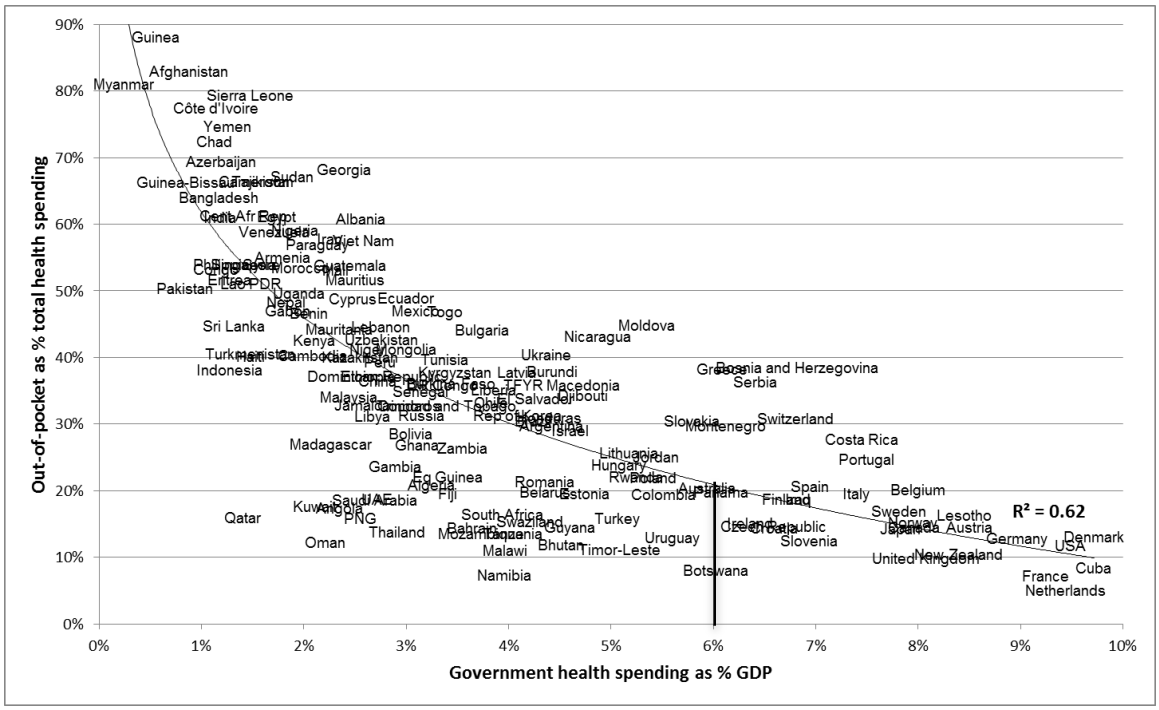

Figure 5: Relationship between government health spending and dependence on out-of-pocket payments (2010)

Source: Updated from McIntyre and Kutzin (2011)

A target of around 5% of GDP is supported by global analyses undertaken for the 2010 World Health Report on financing for UHC. Two observations from that report are particularly pertinent:

- "… Those countries whose entire populations have access to a set of services usually have relatively high levels of [mandatory] pooled funds – in the order of 5–6% of gross domestic product (GDP)" (World Health Organization 2010: xv)

- "General government health spending as a percentage of gross domestic product indicates the capacity and will of government to shield the population from the costs of care. It is difficult to get close to universal coverage at less than 4–5% of GDP, although for many low- and middle-income countries, reaching this goal is aspirational in the short term and something to plan for in the longer run" (World Health Organization 2010: 98)

Finally, using data from the World Health Statistics dataset, the global average of government health care expenditure is 5.1% of GDP.

It is recognized that public spending on health is far lower than this in other countries (ranging from an average of 3.6% of GDP in upper-middle income countries to 2.2% of GDP in low-income countries). Thus, as noted in the 2010 World Health Report, the target of 5% of GDP in public spending on health is an aspirational goal for low- and middle-income countries, and we recommend that these countries at least make progress towards this goal and reduce by half the gap between 5% of GDP and their current public funding levels.

Public spending on health exceeds the 5% of GDP level in almost all high-income OECD countries, with an overall average of public spending of 6.9% of GDP for all high-income countries. While setting a separate, higher target for high-income countries may be desirable, there has been no published analysis to establish what an appropriate public spending level in these countries would be. High-income countries should at least aspire to exceeding the 5% of GDP public spending level, and avoiding reductions in current public spending unless demonstrated efficiency gains can be achieved (where efficiency is distinct from cost-containment, and can be defined as producing the same outputs with fewer resources while not compromising quality of care).

Second, international experience clearly indicates that countries that have made considerable progress to UHC fund their health services predominantly from domestic public (i.e. mandatory pre-payment) sources (generally comprising 70% or more; see Figure 6 for original OECD countries and some LMICs with considerable progress to UHC). Conversely, as explicitly stated in the 2010 World Health Report, it is not possible to achieve UHC through voluntary payments for health care. On this basis, we recommend an indicator that OOP payments and voluntary health insurance contributions comprise a maximum of 30% of total health care expenditure.

Finally, continued donor funding support is required for low-income countries to provide PHC services and basic referral services. Even if these countries achieved the target of domestic public spending on health of 5% of GDP, they would be spending no more than US$58 per capita on health services (with several spending less that US$20 per capita). This is well below the necessary per capita spending levels for such services, which is estimated to be US$86 in 2012 terms (updated by McIntyre and Meheus (2013) from the calculations of the Commission on Macroeconomics and Health and the High Level Task Force on Innovative International Financing for Health Systems). We recommend that all high-income countries devote 0.1% of their GNI to ODA for health services. Several upper-middle-income countries are beginning to provide ODA funding on a voluntary basis. We recommend that there should be an explicit requirement for any country reaching high-income status to provide ODA for health and other social services, in line with the need for shared responsibility for global human development.

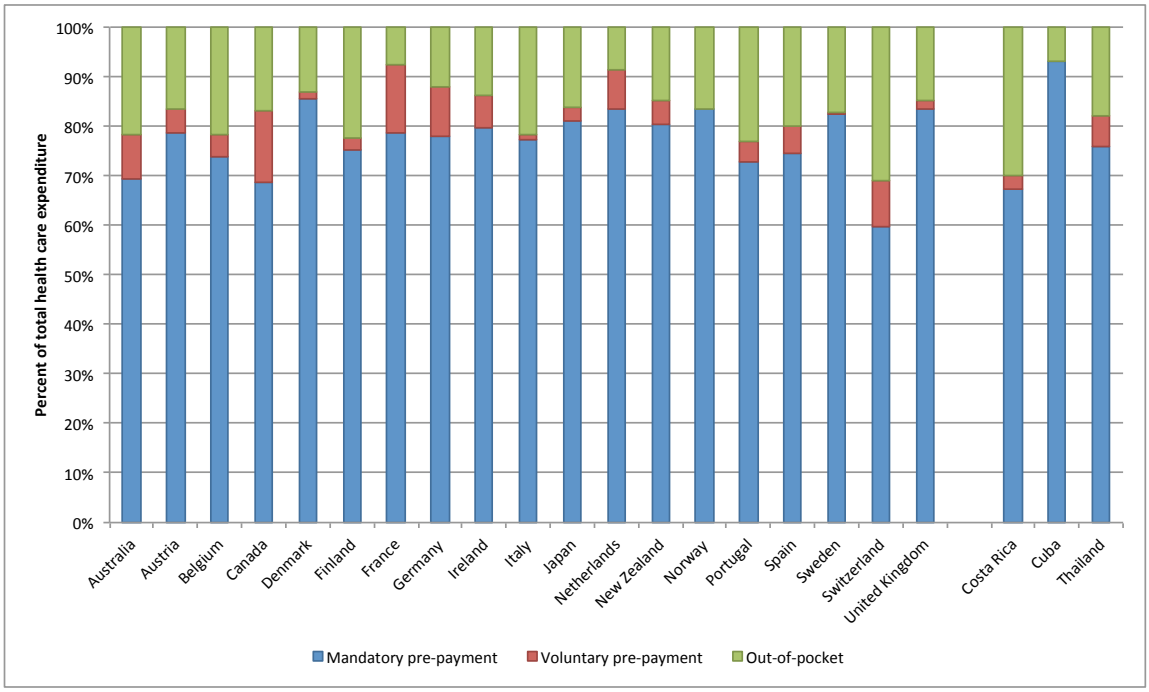

Figure 6: Financing sources for UHC.
Source: Data derived from WHO National Health Accounts dataset

It will be important to take global action to improve low- and middle-income countries' ability to generate domestic public funds for health and other social services, such as to reduce tax avoidance by high-net worth individuals and transnational companies, address tax competition between countries, ensure that government revenue from minerals and other natural resources are maximized and addressing unfair trade practices. However, this will take considerable time to achieve, and hence continued ODA is required in the interim.

In line with the emphasis in this report on the importance of PHC, the limited financial resources available from domestic public and ODA sources in low-income countries should be devoted exclusively to PHC services (which include core referral services). In middle-income countries, comprehensive PHC services should again be the main focus for the use of public financial resources, expanding to a wider range of services over time as GDP (and hence public funding of health services at a level of 5% of GDP) increases. Within high-income countries, it may be necessary to assess whether PHC services are being given sufficient priority, given that there is frequently too heavy an emphasis on tertiary care in these countries.

Rationale for service use indicators

The second core component of UHC is that everyone within a country should be able to access needed, quality health services. The ultimate goal of this element of UHC is that those who need care actually ***use*** services and that these services effectively address health care needs. The ideal in assessing achievement of this aspect of UHC is to evaluate if everyone who has a need for health care actually uses the appropriate service. This requires that one is able to measure both the numerator (use of services) and denominator (need for health care) accurately. It is easiest to do this for individual services, particularly where the denominator can be accurately estimated on the basis of demographic data (such as for immunization coverage of young children or antenatal visits and assisted delivery by a qualified health worker for pregnant

women). Given the ease of measurement, it is unsurprising that measures of maternal and child health services are the most frequently measured and reported indicators. However, there have been criticisms of this narrow focus on maternal and child health services. Indicators have also been put forward for measuring treatment in relation to communicable diseases, particularly TB, HIV and malaria. More recently, efforts have been made to estimate the need for and use of non-communicable diseases (NCDs), particularly hypertension and diabetes. We recommend that indicators of coverage include maternal and child health, communicable and non-communicable disease services, with an additional set of indicators for countries where data are already available.

While these indicators provide very valuable insights into how the health system is performing in relation to specific services, they only do so for a very small sample of the hundreds of different health services provided. An alternative approach is to focus on measuring total use of outpatient and inpatient services, i.e. average number of outpatient visits per person per year and average number of admissions per 1,000 people per year. This would provide a more comprehensive indication of the use of the full range of health services. Although it is difficult to determine what level of outpatient service utilization is *needed* within a particular country, as this is influenced by its demographic and epidemiological profile, we recommend basic minimum utilization rates that all countries should achieve. We propose relatively conservative thresholds for assessing whether a country has achieved UHC. These thresholds lie at the lower end of the ranges of levels observed in countries that are generally recognized as having made considerable progress to UHC. For outpatient services, the threshold rate required would be 4 visits per capita per year. This compares with average rates of 6.5 in OECD countries, and rates of 4-6 in developing countries with UHC. For inpatient services, we propose a rate of 70 per 1,000 people per year. This is at the lower end of the range observed in both developed and developing countries with UHC today (the OECD average is 158 per 1,000). WHO has proposed similar but higher levels in its SARA tool.

We recognize that these measures of utilization provide no indication of the appropriateness or quality of care delivered. Nevertheless, utilization levels below these targets will at least provide an indication of the extent of unmet need [17]. We recommend that each country supplement these utilization indicators with a critical analysis of the appropriateness of service use and quality of care delivered.

[17] This draws on detailed assessments of minimum utilisation rates of appropriate services to address needed care within individual countries, such as the "Need Norms" project in South Africa (Rispel et al., 1996), estimate utilisation rates for different categories of outpatient (particularly PHC) services where there are minimal barriers to health services. These estimates include preventive and promotive services (e.g. number of visits to ensure full immunisation of children and antenatal care for pregnant women) and curative care for acute and chronic conditions, drawing on the demographic and epidemiological profile within that country.

Appendix 5: Universal Health Care as being built on the foundation of human rights and equity[16]

Whilst the health MDGs rightly encouraged overall improvements in population health outcomes, concerns regarding equity within societies remained largely unaddressed. Large or growing health disparities have remained major barriers for realization of human capabilities, and in the ability of people to live a life with dignity. In essence, this contradicts the shared fundamental value of equality that is espoused in the Millennium Declaration.

The Universal Declaration of Human Rights in 1948 recognized the right of everyone to "*a standard of living adequate for the health and wellbeing of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness.*" Similarly, the UN International Covenant on Economic, Social and Cultural Rights of 1966 has guaranteed the "*right of everyone to the enjoyment of the highest attainable standard of health."* Both of these declarations have called for "*the creation of conditions which could assure to all medical service and medical attention in the event of sickness.*" The SDGs offer another such opportunity. However, this would require a shared commitment to a global health development agenda that facilitates and promotes the development of health systems and policies, guaranteeing all individuals accessible and affordable health, including health prevention and promotion dimensions, healthcare services and financial protection when needed. These fundamental rights were recently re-affirmed in a UN General Assembly resolution on UHC passed unanimously in December 2012. This resolution also explicitly recognized that inadequate coverage levels at present were compromising the attainment of these rights:

*"**Noting with particular concern** that for millions of people the right to the enjoyment of the highest attainable standard of physical and mental health, including access to medicines, remains a distant goal, that especially for children and those living in poverty, the likelihood of achieving this goal is becoming increasingly remote, that millions of people are driven below the poverty line each year because of catastrophic out-of-pocket payments for health care and that excessive out of pocket payments can discourage the impoverished from seeking or continuing care".*

To redress this situation, the recent UN General Assembly Resolution emphasizes the importance of achieving universal **population** coverage. Specifically it acknowledges that *"universal health coverage implies that all people have access, without discrimination, to nationally determined sets of the needed promotive, preventive, curative and rehabilitative basic health services and essential, safe, affordable, effective and quality medicines, while ensuring that the use of these services does not expose the users to financial hardship, with a special emphasis on the poor, vulnerable and marginalized segments of the population.*

Universal means that any strategy leaving any person (especially people with greater needs or with fewer financial resources) uncovered is unacceptable. Fulfilling this commitment does not imply using the same financing sources or same providers. If economically advantaged sections of society choose to purchase health services using out-of-pocket financing or private insurance schemes then they should be free to do so. However, selective health strategies catering to the

preferences of privileged groups and ignoring the needs of the poor are fundamentally inequitable and contravene rights based approaches.

The post-2015 development agenda must ensure that countries reach UHC equitably, with health service benefits distributed according to need and pre-paid financial contributions determined by one's ability to pay. Only then will health systems and policies be compatible with the core global values of freedom, solidarity, equality and human security, which motivated the MDG process.

Embedding progress towards attainment of UHC as a common global priority and development goal in the post-MDG framework addresses the longstanding failure of the global development agenda to incorporate the internationally accepted right to health. This right must guarantee effective and equitable access to healthcare services as well as security against financial risks from illness as basic elements of human wellbeing.

Appendix 6: Examples of policies that can result in health benefits and reductions in greenhouse pollutant emissions, with potential indicators[18]

Strategy to reduce greenhouse pollutant emissions	Main greenhouse pollutants involved	Mechanism linking reduced GHP emissions to health benefits	Health outcomes affected	Factors influencing magnitude of health effect	Potential indicators
Reduced fossil fuel combustion (particularly coal) to generate electricity	Carbon dioxide (plus methane and black carbon)	Reduction in fine particulate air pollution	Mortality and morbidity due to cardiorespiratory diseases	Influenced by existing pollution control measures and fuel mix; likely to be higher in low and middle income countries where background levels of air pollution are higher	a) Ambient fine particulate air pollution b) Burden of disease estimates generated by WHO, from air quality data and scientific evidence from population exposure-response relationships
Improved efficiency cook stoves in households burning biomass or coal in open fires on inefficient stoves. Benefits could also be achieved by switching to biogas	Black Carbon, ozone, carbon monoxide	Reduction in fine particulate air pollution and other pollutants. Reduced risk of fires. Reduced costs of fuel and risks of collecting fuel	Acute Respiratory Infections in childhood, Chronic Obstructive Airways Disease, Ischaemic Heart Disease, Burns	Current stove design and fuel type.	A) Proportion of households using modern fuels/technologies, as defined by WHO guidelines (forthcoming), for all cooking, heating and lighting activities B) Mortality and morbidity attributed to indoor air pollution

[18] Adapted from Haines et al (2012).

Increased active travel in urban areas	Carbon dioxide, black carbon (and ozone)	Increased physical activity as a result of increased walking or cycling	Ischaemic Heart Disease, Cerebrovascular Disease, diabetes, Cancers of the Colon and Breast, Alzheimer's Disease, depression; possible negative impact on road injuries	Pre-existing levels of physical activity, epidemiological profile of disease, extent of behavior change; policies to reduce road injuries and future projections of motor vehicle use.	Proportion of urban journeys by public transport and walking/cycling; possibly injury rates per km travelled by transport mode
Low emission vehicles	Carbon dioxide	Reduced fine particulate air pollution and ozone	Cardiorespiratory mortality and morbidity	Baseline emission standards and future projections.	Ambient fine particulate as above and ozone air pollution
Reduced consumption of animal products in high consuming populations, increased consumption of fruit and vegetables	Methane (particularly from ruminants), Nitrous oxide	Reduced saturated fat intake and replacement with unsaturates from plant sources; reduced red and processed meat consumption Increased consumption of fruit and vegetables	Cardiovascular disease, colorectal cancer	Baseline disease burden from relevant conditions and risk factor profile of population	Proportion of total energy intake from saturated fatty acids (mostly from animal sources) and consumption of fruit and vegetables
Access to modern family planning and reproductive health interventions according to need	Carbon dioxide, methane and others related to population size	Increased birth spacing	Likely to result in reduced infant and maternal mortality	Baseline child and maternal mortality rates, Greenhouse gas emissions per capita and future trends	Access to family planning

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