The Academy of Medical Sciences

Academy of Medical Sciences response to the global thematic consultation on health in the post-2015 development agenda.

Summary

Good health has an intrinsic value. For this reason alone health must figure prominently in the post 2015 development agenda. Health also has a major impact on several other areas being considered and can serve as an indication for progress in these. The current Millennium Development Goals (MDGs) have demonstrated the value of having defined goals and these should be extended until they are met in the great majority of countries. Although the future goals aim to address complex issues, for successful implementation they need to remain succinct and concise. In response to the post-2015 health consultation the Academy's five key messages are:

1. **Health is both a prerequisite for and an outcome of sustainable human and economic development**
   - Health and development are inextricably linked. Governments are keen to maximise economic growth but this alone does not automatically improve health and well-being or indeed bring sustainable development.[1]
   - Current patterns of resource use and consumption are unsustainable, with major implications for human health.[2]
   - Major diseases such as AIDS, TB and malaria continue to pose significant risks to human security, economies and to sustainable development but in many countries non–communicable diseases are becoming the major threat.
   - Ageing, if not appropriately managed, will likely adversely impact many countries whose economies and pension systems are ill prepared to manage the rapid demographic transition.

2. **The unfinished poverty agenda and addressing health inequalities**
   - Despite major achievements many countries still have a long way to go in meeting the original MDGs. With 1.4 billion people still living in extreme poverty, mothers continuing to die needlessly in childbirth and children suffering and dying from preventable diseases, there is continued need to alleviate the disproportionate burden of disease experienced by the world's poorest people.[3,4]
   - Post 2015, health inequalities must be addressed. Health inequalities are persisting and, in many cases widening. To ensure benefits are universal and not just felt by selected groups, both the social determinants of ill-health and universal coverage by health services must be tackled. [5]

[1] Stiglitz J, Sen A and Fitoussi JP (2009). Report by the Commission on the Measurement of Economic Performance and Social Progress http://www.stiglitz-sen-fitoussi.fr/documents/rapport_anglais.pdf

[2] International Resource Panel (2011). Decoupling natural resource use and environmental impacts from economic growth. http://www.unep.org/resourcepanel/decoupling/files/pdf/Decoupling_Report_English.pdf

[3] World bank poverty estimations- http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/EXTPROGRAMS/EXTPOVRES/0,,contentMDK:21882162~menuPK:477905~pagePK:64168182~piPK:64168060~theSitePK:477894,00.html

[4] United Nations (2012). The Millennium Development Goals Report http://mdgs.un.org/unsd/mdg/Resources/Static/Products/Progress2012/English2012.pdf

[5] WHO Commission on Social Determinants of Health (2008). Closing the gap in a generation. http://whglibdoc.who.int/publications/2008/9789241563703_eng.pdf

3. Universal Health Coverage (UHC)

- Universal Health Coverage (UHC) should be a priority for the post-2015 development agenda, with the aim of providing effective, efficient and affordable care to all within nationally determined plans, thus reducing inequalities in health. The concept of UHC should encompass the health system considered broadly including public health and primary health care.
- Individuals should not be disadvantaged by being unable to pay for health services when needed. A system that is free at point of use is necessary and will eventually minimise catastrophic health expenses globally.

4. Potential health indicators and the need for strengthening of vital registration and other data collection systems

- Existing health indicators from the MDGs should be retained because they are relevant to key health goals some of which have not been achieved and they are available over time in a growing number of countries.
- Two main contenders for a cross-cutting indicator are Life Expectancy (LE) and Healthy Life Expectancy (HALE) which are highly correlated.[6] The former is more widely available and more easily understood but suffers from the limitation that it does not include disability. More work is needed on indicators of UHC.
- The provision of reliable vital statistics is fundamental to measuring health and achievement of goals. There is need to strengthen vital registration systems and to use economic, efficient and innovative methods to improve availability and reliability of data.

5. Building research, health and educational capacity in developing countries

- Capacity strengthening is an important element in ensuring the success of the post-2015 development agenda. In addition to scaling up human resources for the achievement of UHC, research and educational capacity also needs developing.
- Progress will be achieved through improved early career pathways for researchers, stronger southern research institutions, engaged local decision makers and funders, better monitoring and evaluation, and increased inter disciplinary working.
- Health research is inextricably linked to education and health service delivery so capacity strengthening in these three areas should be coordinated.

The Academy of Medical Sciences welcomes the opportunity to contribute to the global thematic consultation on health in the post-2015 development agenda. We are the independent body in the UK representing the diversity of medical science. Our elected Fellows – over 1000 – are central to our success, many of whom have contributed to this response and are detailed in annex I. We work closely with them and our sister Academies overseas, often through the InterAcademy Medical Panel (IAMP) and the Federation of European Academies of Medicine (FEAM). Medical science lies at the heart of sustainable development and research is vital to tackling future global challenges.

This response represents a developing viewpoint from the Academy, reflective of the evolving style of the consultation process. We intend to expand on this response as plans for thepost-

[6] Salomon JA *et al*. (2012). Common values in assessing health outcomes from disease and injury: disability weights measurement study for the Global Burden of Disease Study 2010. http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(12)61680-8/fulltext

2015 development agenda. Specific responses to the consultation questions can be found in subsequent sections.

Responses to consultation questions

Introduction

A shifting focus of world power and challenging economic times have coincided to bring about a period of change that must be reflected in the post-2015 development agenda. During this transitional period key issues need to be addressed. Firstly, the poverty agenda remains. Significant progress has been made on several key MDG targets. However, the agenda remains incomplete, particularly in Sub-Saharan Africa. Pursuing these outstanding goals and targets must remain a priority. The post 2015 development agenda will, and should be broader than a focus on specific diseases. However, it is not the case that the MDGs have been met and that the international community can move on to something else. The current economic crisis besetting much of the developed world must not reverse or decelerate progress. Historical data shows that there is no inevitability that development assistance should decline during recessions.[7]

All thematic areas open for consultation are relevant to health and there is a pressing need to integrate policies to improve health with those that aim to promote environmental sustainability and economic development. Governments are keen to optimise economic growth but this alone does not automatically improve health or indeed bring sustainable development.[8] A failure to invest in health is likely to lead to dysfunctional economic growth that can bring more problems than it solves. For example, fear of catastrophic health expenditure often forces families to hoard rather than spend money. This phenomenon is believed to contribute to the very low level of consumer spending and high savings levels in China (38% of household income compared with 2.8% in Japan), contributing to global trade imbalance.[9,10]

Current patterns of resource use and consumption are unsustainable, with major implications for human health.[11] Health is also an essential component of sustainable development that impacts on all thematic consultation areas (see annex II).[12] There are ancillary (health co-) benefits of many policies to enhance environmental sustainability. For example, due to reductions in fine particulate air pollution from policies that reduce greenhouse gas emissions from household air pollution or outdoor air pollution from coal combustion or from motor vehicles. These co-benefits can make policies more attractive to decision makers and help offset their costs. Goals should aim to reflect the impact of policies that both improve health and promote environmental sustainability.

Given the increasing burden of disease and its international financial and health implications, it is in the global interest that pressure to reduce poverty is maintained. Many health burdens

[7] Stuckler D *et al.* (2011). Does recession reduce global health aid? Evidence from 15 high-income countries, 1975-2007. Bulletin of the WHO **89,** 252–257.
[8] Stiglitz J, Sen A and Fitoussi JP (2009). Report by the Commission on the Measurement of Economic Performance and Social Progress.
[9] Richburg KB (2012). Getting Chinese to stop saving and start spending is a hard sell. Washington Post, 5 July.
[10] Fitoussi J-P and Saraceno F (2008). The Intergenerational Content of Social Spending: Health Care and Sustainable Growth in China. Documents de Travail de l'OFCE No 2008-27. Paris, Observatoire Francais des Conjonctures Economiques.
[11] International Resource Panel (2011). Decoupling natural resource use and environmental impacts from economic growth. http://www.unep.org/resourcepanel/decoupling/files/pdf/Decoupling_Report_English.pdf
[12] Haines A *et al.* (2012). From the Earth Summit to Rio +20 : integration of health with sustainable development, The Lancet, **379**, 2189-97.

within developing countries can be substantially reduced by relatively modest investments by donor countries that will have dramatic and far-reaching effects.[13] Some resource poor countries will be unable to finance universal health coverage even at a basic level within their national resources for years to come. They will require continued international aid that is responsive to national priorities and aims to build capacity for health care delivery and improved public health.

Question 1: What are the lessons learnt from the health related MDGs?

The current MDGs have highlighted the importance of collectively agreed goals and have helped to focus political efforts worldwide on making the provisions necessary to achieve these goals. The available evidence suggests that the health MDGs have been effective in accelerating progress on target indicators and stimulating global political support in the creation of significant global institutions dedicated to helping countries achieve the MDGs.[14]

One concern is that the MDGs became too selective, omitting several important disease topics. For example, pneumonia and diarrhoea are not covered by the current MDGs despite presenting a significant burden of disease.[15,16] A further concern is that there was limited accountability for rich nations including for example greenhouse gas emissions and other drivers of unsustainable patterns of development. The MDGs have been effective in stimulating research and debate on systemic approaches to improving health outcomes; importantly progress towards the MDGs remains incomplete.

Question 2: What is the priority health agenda for the 15 years after 2015?

UHC is an important means to achieving improved health. The goal is therefore to increase effective UHC, by improving services and their coverage. The concept of UHC should encompass the health system considered broadly, including public health and primary care. Importantly, individuals should not be disadvantaged by being unable to pay for health services upfront. A system that is free at point of use will need to be introduced and will ultimately serve to minimise catastrophic health expense globally. This not only serves to improve health coverage but also limits the economic implications from having populations who are insecure in health terms and subsequently withdraw resources from an 'active economy' to save for potential health expenditure. New health care financing, governance, organisation and delivery strategies for universal health care coverage should be evaluated to ensure that they have the desired effect.

Health inequalities are persisting and widening both between and within some nations. Some countries are able to meet the MDG goals whilst the poorest and most marginalised groups within the same country make little progress. The issue of health inequalities was considered in the World Health Organization report '*Closing the gap in a generation: Health equity through action on the social determinants of health*.'[17] To ensure benefits are universal and not just felt by individual groups, the whole spectrum of social determinants and health services must be considered.

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[13] Wiseman V *et* al. (2003) The cost-effectiveness of permethrin-treated bed nets in an area of intense malaria transmission in western Kenya. American Journal of Tropical Medical Hygiene. 68(4 Suppl), 161-7.
[14] Schweitzer J *et al.* (2012) Post-2015 Health MDGs. http://www.odi.org.uk/sites/odi.org.uk/files/odiassets/publications-opinion-files/7736.pd f
[15] WHO (2012). Pneumonia. http://www.who.int/mediacentre/factsheets/fs331/en/
[16] WHO (2012). Diarrhoeal disease. http://www.who.int/mediacentre/factsheets/fs330/en/index.html
[17] WHO Commission on Social Determinants of Health (2008). Closing the gap in a generation. http://whqlibdoc.who.int/publications/2008/9789241563703_eng.pdf

The period since the start of the MDGs has seen a gradual shift from a focus on a single disease or health topic, to a broader understanding of health determinants and health systems. Limiting attention on specific diseases avoids neglecting major disease areas and encourages focus on broader health systems. Emerging and neglected issues that will need to be addressed include:

- Mental health, detailed in annex II.
- Other non-communicable diseases, such as heart disease, stroke, cancer, chronic pulmonary diseases, epilepsy and diabetes that present an increasing development challenge. These diseases already account for around 43% of disease burden worldwide and their incidence in low and middle-income countries is growing.[18] Nevertheless, it is important infectious disease does not get marginalised as this still represents the greatest cause of mortality in many low income populations.
- Action on social determinants of health. For example, prevention of the obesity epidemic lies within sectors other than health e.g. food/agriculture and transport.
- The need to highlight sexual and reproductive health and rights persists across several thematic areas.
- There should be an appropriate balance of investment in health promotion, prevention, treatment, rehabilitation and palliation, taking into account the evidence of cost effectiveness of different interventions.
- Occupational health; musculoskeletal conditions and other occupational health related conditions are responsible for a considerable burden of morbidity internationally. Development of effective occupational health programmes can help to support economic growth.

Question 3: How does health fit in the post-2015 development agenda?

Increasingly a systemic approach to health recognises that successful health outcomes depend on a variety of health (and non-health) inputs that have to be integrated at the global, national and local levels. As such, health is a cross cutting topic that is affected by and affects other thematic areas. One concern is that these compound issues may be ignored as they have no specific 'ownership' by the defined thematic groups. Importantly, lack of sustainable development negatively affects all areas. Mental health is a clear example of such a cross cutting issue as outlined in annex II.

The role of health in the other eight thematic areas is discussed in detail in annex III, briefly they include:

Thematic Area	Links with Health
Conflict and fragility	• Restoring and maintaining health gains post conflict and in fragile states.
Environmental sustainability	• Health co-benefits of policies to promote environmental sustainability. • Direct and indirect environmental impacts on health.
Economic growth and employment	• Health as a driver of economic growth. • Increased productivity and participation.
Education	• Better health is equal to and reliant on greater investment in education. • The role of health education.

[18] WHO (Unknown) WHO NCD surveillance strategy http://www.who.int/ncd_surveillance/strategy/en/index.html

Food security and nutrition	• Hunger and obesity. • Production and provision of food.
Governance	• Governments being held to account for health by civil society as a means of strengthening democracy and governance.
Population	• Provision of family planning services. • Population expansion impacts on health.
Inequalities	• Poor quality health services increase inequalities between and within countries. Conversely, inequalities affect provision and quality of health services

Question 4: What are the best indicators and targets for health?

Clear definitions are necessary to be effective and as such, parameters must be meaningful to politicians, policymakers and laypeople alike. There are a number of options for indicators relevant to health that have both attractions and limitations. Attractions to a single cross-cutting indicator include the ability to integrate the effects of policies to address both the social, economic and environmental determinants of health and UHC. Limitations include inability to indicate the specific disease challenges that need to be addressed. The two main contenders for a cross-cutting indicator are Life Expectancy (LE) and Healthy Life Expectancy (HALE), which are highly intercorrelated.[19] The former is more widely available and more easily understood but suffers from the limitation that it does not include disability.

Alongside health status indicators, such as (healthy) life expectancy or under five mortality, tracer and process indicators can be of value to provide more rapid assessment of interventions. It is noteworthy that some appropriate indicators are likely to vary between countries and communities. They need to be flexible enough to take into account differences in particular situations and will be agreed and monitored at the national level. There is also a need to develop indicators that link health to sustainable development. e.g. urban journeys by active travel that can help reduce the risk of health outcomes related to sedentary lifestyles as well as reducing greenhouse gas emissions.

Existing health indicators from the MDGs should be retained because they are relevant to key health goals many of which have not been achieved, particularly in many sub-Saharan African countries (e.g. those on under five mortality, maternal mortality, HIV/AIDS, TB and Malaria) and are available over time in a growing number of countries.

Further development of indicators to reflect UHC is needed; these could include catastrophic health expenditures that can drive families into poverty and indicators of the quality of care. Countries should be supported and encouraged to present data on inequalities in health and coverage for example by quintile of socioeconomic distribution. Currently, for many countries, health indicators are subject to substantial uncertainty, and over time a sustained investment in vital registration and other data collection will be needed.

Provision of reliable vital statistics is fundamental to measuring health and achievement of goals. Responsibility for developing this falls upon individual countries and national statistics

[19] Salomon JA *et al*. (2012). Common values in assessing health outcomes from disease and injury: disability weights measurement study for the Global Burden of Disease Study 2010. http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(12)61680-8/fulltext

offices, although donor countries should recognise the importance of assisting countries in developing these institutions. Data must be readily available and transparent in its disclosure to ensure reliability. This may require assistance in the development of capacity to analyse data and also to support the democratic mechanisms for reviewing data. The availability of data enables civil society to hold governments to account for their actions and can thus be seen as a means of strengthening democracy and governance. Accountability will need to be highlighted in the post-2015 development agenda to measure effectiveness of both donor and recipient alike.

Question 5: How can country ownership, commitment, capacity and accountability for the goals, targets and indicators be enhanced?

As responsibility moves away from traditional donors, there is an increasing need to mobilise domestic finances. Goals should now be centred on what countries can achieve in their own unique social settings and with the resources available to them intrinsically, rather than solely through a flow of external aid, reflecting the move towards individual country ownership and sustainability. The accountability of the donor should not, however, be forgotten in these circumstances. Some countries will not be able to mobilise enough domestic resources in the foreseeable future. Furthermore, the Doha negotiations reflected the acknowledgment that the high emitting nations have responsibility for climate change impacts in low income countries.[20] During this transitional period it is important that donor responsibility does not diminish, rather more efforts should go towards supporting countries to work out their own health priorities. Donors need to harmonise and improve their monitoring of aid effectiveness in a way that does not impose vertical data collection systems on countries but builds national capacity to collect and analyse to improve their own health systems.

Clearly it is essential to scale up well trained human resources for health to achieve UHC. In addition, countries need to develop excellence in essential national health research and in education of the health workforce. The Academy has previously highlighted the importance of capacity strengthening for health care and research in developing countries in the 2012 report *'Building institutions through equitable partnerships in global health*.[21] Capacity building will be key to the development of country ownership and responsibility for the MDGs. Priority areas for action in research include:

- Nurturing post doctoral and postgraduate students where there is a particular weakness in the career and training pathway.
- Strengthening southern institutions so researchers have well-defined career pathways and opportunities.
- Engaging decision makers and funders in the importance of research capacity strengthening.
- Developing new evaluation and evaluation techniques for efforts to build research capacity.
- Involving new disciplines and new topics in research capacity strengthening.

There is currently a lack of funding into tertiary education. Medical research is inextricably linked to education and health service delivery so capacity strengthening in these three areas should be coordinated. Much would be gained from an increased focus on higher education that has previously received limited attention, providing research bases which will allow countries to independently generate evidence based policy. Furthermore, such institutions are crucial for

[20] WTO-UNEP (2009) Trade and climate change http://www.wto.org/english/res_e/booksp_e/trade_climate_change_e.pdf

[21] Academy of Medical Sciences (2012). Building institutions through equitable partnerships in global health http://acmedsci.ac.uk/p47prid114.html

training teachers and health researchers, professionals and educators, who can in turn strengthen local health and public services, help drive economic growth, and can advise national governments and decision-makers on appropriate policy.

This response was prepared by Eve Simcox (Policy Intern) and informed by the Academy's Fellows. We are grateful to the Fellows of the Academy of Medical Sciences and experts for contributing to this response, which was approved by Professor Robert Souhami FMedSci on behalf of the Academy of Medical Sciences' Council.

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The Academy of Medical Sciences

The Academy of Medical Sciences promotes advances in medical science and campaigns to ensure these are converted into healthcare benefits for society. Our Fellows are the UK's leading medical scientists from hospitals and general practice, academia, industry and the public service.

The Academy seeks to play a pivotal role in determining the future of medical science in the UK, and the benefits that society will enjoy in years to come. We champion the UK's strengths in medical science, promote careers and capacity building, encourage the implementation of new ideas and solutions – often through novel partnerships – and help to remove barriers to progress.

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Annex II: How does health fit in the other post 2015 development agenda themes?

Conflict and fragility

The health challenge in post-conflict and in fragile states is restoring/maintaining what gains had previously been made in universal health care, including prevention activities, and in the long-term moving these gains towards the final national universal health care goal.

There are ethical considerations if immediate and short-term support for restoring access is provided by external groups such as non government organisations (NGOs) and development agencies. They must ensure that when access has been restored, those interventions that were externally supported can be maintained in the long-term once their support is withdrawn. Of special importance in some instances is prioritising, and rapidly advancing sustainable mental health support as part of the restoration of access to universal coverage.

Environmental sustainability

There is a growing body of evidence that humanity is breaching environmental limits within which populations can safely flourish, one such example is climate change.[22,23] It has become imperative to move decisively towards an economy based on technologies, policies and lifestyles that greatly reduce greenhouse gas emissions to reduce the risks of dangerous climate change. Potential health outcomes affected include vector-borne diseases, water-related diseases, heat and cold related deaths, allergies (as a result of increased pollen counts), air pollution-related illness and deaths and malnutrition. The projected increases in extreme climate events such as floods and droughts could have wide ranging direct and indirect effects on health. These adverse effects are likely to be experienced particularly by poor populations whose capacity to adapt is weakest.

There is a growing body of evidence about the potential range of policies that could both address climate change goals and improve health. Non-communicable diseases are becoming increasingly dominant causes of premature death and disability even in low income countries and many of the risk factors for these diseases are inextricably linked to the drivers of current patterns of development which are eroding environmental sustainability. Major risk factors for ill-health include exposure to air pollution (indoor and outdoor), consumption of high saturated fat and energy dense foodstuffs and sedentary lifestyles.

The term 'health co-benefits' is becoming widely used to describe the ancillary or collateral benefits to health arising from technologies, policies and lifestyles to reduce greenhouse gas emissions in a number of sectors.[24] These benefits are additional to those which would result from a reduction in projected climate change with its wide spectrum of adverse consequences for humanity and for ecosystems. They could offset part, and some cases all, of the increased

[22] Anthony Costello: making climate change part of global health. http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(09)60929-6/fulltext

[23] Rockstrom J, Steffen W, , Noone K, Persson A, Chapin FS *et al.* (2009). A safe operating space for humanity Nature **461**, 472-475.

[24] Haines A *et al.* (2009). Public health benefits of strategies to reduce greenhouse-gas emissions: overview and implications for policy makers. The Lancet, **374,** 2104-2114

costs of action and make political decisions in favour of low carbon policies more palatable, particularly in a time of economic difficulty.

It is crucial to develop and implement better ways to adapt to environmental threats such as climate change and to put in place policies that both contribute to sustainability and improve health. Potential indicators of progress that integrate health and sustainability could include fine particulate air pollution, access to clean sources of household energy and active travel in urban areas.

Economic growth and employment

The case for investing in health as a means to promote economic growth was established by the Commission on Macroeconomics and Health.[25] Since then, the evidence that health is a driver of economic growth has increased substantially.[26] Better health acts through four main pathways: increased productivity; increased labour force participation; increased investment in education, given the expectation of a longer life; and higher savings that can be invested in growth promoting activities.

Education

Improved health and increased life expectancy lead to greater investment in education. Conversely, data shows that better educated people have lower mortality and morbidity rates from the most common acute and chronic diseases.[27] Health education serves to help individuals and communities improve their health, by increasing their knowledge or influencing their attitudes.

Food Security and nutrition

Too little or too much food has serious health implications. There are an estimated 925 million hungry people in the world and approximately 1.4 billion people who live on less than US$1.25 a day who are particularly vulnerable to food price fluctuations. Progress on under nutrition has stalled but at the same time worldwide obesity has more than doubled since 1980. According to WHO in 2008, more than 1.4 billion adults, 20 years of age and older, were overweight or obese. 44% of the diabetes burden, 23% of the ischaemic heart disease burden and between 7% and 41% of certain cancer burdens are attributable to overweight and obesity.[28]

To meet the needs of the world population, which is expected to reach ~9.2 billion by 2050, food production will need to nearly double in developing countries.[29] However, about 40 per cent of the world's arable land is degraded to some degree and will be further affected by climate change. At a time when so many are hungry, around 40% of the world's grain is being

[25] Sachs JD (chair) (2012). Macroeconomics and health: investing in health for economic development.WHO, Geneva.
[26] Figueras J and McKee M (2011). Health systems, health and wealth: Assessing the case for investing in health systems. Open University Press, Buckingham.
[27] National Poverty Centre (2007). Policy brief, Education and Health http://www.npc.umich.edu/publications/policy_briefs/brief9/policy_brief9.pdf
[28] WHO (2012). Obesity and overweight http://www.who.int/mediacentre/factsheets/fs311/en/
[29] UN population (2009). World population to exceed 9 billion by 2050. http://www.un.org/esa/population/publications/wpp2008/pressrelease.pdf

fed to animals. It takes around 8 kg of grain to produce 1 kg of beef. 80% of greenhouse gas (GHG) emissions from agriculture arise from livestock production.[30]

There are about half a billion small farms in the world, supporting around two billion people and over 60% of small farmers are women. Moreover, economic growth generated by agriculture is up to four times more effective in reducing poverty than growth generated by other sectors.[31] Declining public investment in developing country agriculture has been partly responsible for increasing food insecurity and private sector mechanisms to encourage agricultural investment have been slow to emerge. The global food price spikes since 2006 probably represent an underlying long-term trend of higher and more volatile food prices, driven by increasing demand for animal products in emerging economies, the growth of crops for biofuels that compete with crop production, and increased energy prices, exacerbated by increasing extreme weather events.

Potential policy solutions include increased investment in agricultural research and the implementation of effective policies to improve productivity particularly in low income countries.[32] Policies to reduce consumption of high saturated fat and sugar foodstuffs in high consuming populations are also needed and will contribute to reducing greenhouse gas emissions. There is strong argument for limiting biofuel production to those sources that do not compete with crop production.[33] Indicators of progress relevant to health include the prevalence of stunting in children and of overweight/obesity in children and adults (together with diabetes in adults).

Governance

The government has a central role in establishing the institutional framework within which health systems operate and as such, influence health services and provision. Transparency and accountability are vital to developing effective health systems that provide the services and care necessary within individual nations. Access to health care can be considered a human right that should be incorporated into human rights treaties and into national constitutions, making individual governments accountable for health. Governments being held to account for health by civil society can be seen as a means of strengthening democracy and governance.

Population

The global population is projected to increase from 7 to 10 billion by 2100.[34] Most of this increase will be in low and middle-income countries. Population is a critical issue in whether we can achieve sustainable development goals. High population growth and large family size, has major health and economic implications, particularly for women and their children. 222 million

[30] University of Manchester Business School and DEFRA (2006) Environmental Impacts of food production and consumption http://www.ifr.ac.uk/waste/Reports/DEFRA-Environmental%20Impacts%20of%20Food%20Production%20%20Consumption.pdf

[31] FAO (Unknown) Women and sustainable food security http://www.fao.org/sd/fsdirect/fbdirect/FSP001.htm

[32] Gregory PJ (2011). Foresight project on global food and farming futures http://www.bis.gov.uk/assets/foresight/docs/food-and-farming/science/11-584-sr46-funding-agricultural-and-food-security-research.pdf

[33] European Commission (2012) New Commission proposal to minimise the climate impacts of biofuel production, European Union http://europa.eu/rapid/press-release_IP-12-1112_en.htm

[34] UN Population Division (2011). World population prospects: The 2010 Revision. UN, New York

women in developing countries have an unmet need for contraception.[35] Worldwide women need, and want, access to family planning services and reproductive health services. This is a key element of sexual and reproductive health and rights.

Lack of access to health information and services exacerbate poor health. Increasing contraceptive use has been shown to substantially reduce maternal death and improve child survival by increasing interpregnancy intervals.[36] When family planning access improves and women can control their own fertility, they can experience improved economic position, and social and health outcomes for their children. Reduced fertility thus enhances economic growth, improves women's lives, increases women's ability to participate in education and paid work and can empower their full participation in society.[37]

Inequalities

Inequalities are present throughout many areas of health care and social life, indeed too many to comprehensively cover in this document. Continuing with the example of mental health, inequalities are to the detriment of people with mental illness, for example in:

- access to physical health care and in diagnostic inaccuracies.[38]
- treatments and outcomes of physical disorders (e.g. myocardial infarction).[39]
- very low rates of treatment of mental disorders worldwide, ranging from 30% treated in USA to 2% treated in Nigeria).[40,41,42]
- the use of coercion in the treatment of mental disorders, for example by ethnic group [43]
- the use of disability discrimination laws to provide remedies for human rights violations.[44]
- access to the labour market and economic security.[45] People with untreated mental disorders contribute to economic loss because they increase school and work absenteeism and dropout rates, healthcare expenditure, and unemployment.[46]

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Annex III: Mental health as a cross-cutting issue

Mental health status is associated in multiple ways with each of the thematic areas for the emerging post MDG priorities, and can therefore be considered as a fully cross-cutting issue.[47] For example:

1. Conflict and fragility

- Poorer mental health is a precursor for poorer resilience to conflict.[48]
- Conflict is itself a risk factor for adverse mental health consequences.[49]

2. Environmental sustainability

- Environmental disasters may substantially increase (e.g. double) the prevalence of depression and anxiety in populations.[50]

3. Economic growth and employment

- People with mental illness have far lower rates of employment than those of the whole population.[51]
- Periods of economic recession are related to worse mental health in the population, especially among men.[52]

4. Education

- Educational stressors are risk factors for suicidality among college students.[53]

5. Food security and nutrition

- Poor nutrition is a risk factor for depression, e.g. among women of child-bearing age.[54]
- Poor diet among people with severe mental illness is a contributory factor to their worse physical health.[55]

6. Governance

- Structural discrimination has been a term used to describe the systematically lower investment in mental than physical health services worldwide.[56]

7. Health

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- Life expectancy among people with mental illness is up to 20 years lower among men and 15 years lower among women than for their non mentally ill counterparts.[57]
- Depression is associated with poorer treatment adherence e.g. among people living with HIV/AIDS.[58]

8. Inequalities

- Discrimination against people with mental illness has been reported across the world in most domains of everyday life.[59]
- Abuses of the human rights of people with mental illness have been reported across the world.[60]

9. Population

- Adverse events in pregnancy, such as miscarriage, are associated with worse mental health.[61]

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