



Impact of Public Health and Sustainability of Global Health Action for Achieving SDG 3

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1. Introduction

In current debates—be it on political, societal or economic levels—the term “globalisation” is used quite frequently. However, it tends to be misused and overused, because there is missing clarity about its meaning and its impact on individuals and society. Despite the complexity behind it, globalisation can be summarised as a social transformation, manifesting in spatial (e.g., migration, as well as exchange of information, capital, goods and services across national borders), temporal (e.g., caused by speeded up interaction through modern communication and transportation technologies) (Oke 2009; Lee 2004), and cognitive changes—meaning the way how we see ourselves and the world surrounding us. This leads to changes in creating, exchanging and applying knowledge, ideas, norms, beliefs, values, cultural identities, and other thought processes (Lee 2003, 2004; Bettcher and Lee 2002). Currently, humanity is facing a rapid global change, which differs substantially in its extent from previous episodes of global change (Sachs et al. 2019; National Academies of Sciences, Engineering and Medicine 1992). Due to demographic, epidemiological, environmental, social, political, economic, technological, and cultural driving forces, we have encountered a “transformative change” which is gaining momentum (Sachs et al. 2019). All of these forces are interconnected, leading to the overall complexity associated with changes in the health status of individuals and (sub-)populations. Health impacts of globalisation are positive and negative at the same time. The impact may vary according to geographical location, sex/gender, age, ethnic origin, education level, and socioeconomic status (Lee 2004; Huynen et al. 2005).

For that reason, globalisation causes divergence as it can be seen in several examples such as the global reorganisation of production and the emergence of a global labour market, the incremental mobility of financial capital, the growing importance of binding trade agreements and processes as well as global political agendas focusing on sustainability, and the persistence of debt crises particularly in low- and middle-income countries (Schrecker et al. 2008). All of these examples are

not directly from the health(care) sector, but all of them impact on health. Therefore, reducing global burden of disease and improving health is an effort, which goes much beyond healthcare system and health policies. It needs to include policymakers and stakeholders at community, regional, country, and global level, originating from all disciplines and policy fields. This relates to the “Health in all policies” approach, which determines the impacts of policymaking of all kinds and of all levels on health and the health system. This approach supports policymakers to include health in their decisions at the regional and national levels, but can also be adapted for supranational level decision-making (WHO 2014).

The United Nations declare health and well-being as a specific goal of their overall 17 worldwide Sustainable Development Goals (SDGs) (UN 2015b). In terms of ensuring healthy lives and promoting well-being for all at all ages—as claimed in SDG 3—this approach should be transferred to the global level. The targets and indicators for SDG 3 can be summarised as a call for universal health coverage, including quality essential access to health services, to sexual and reproductive healthcare services, to safe and affordable medicine and vaccines for everyone, the reduction of the global neonatal and maternal mortality, as well as reduction of suffering and deaths caused by communicable and non-communicable diseases, pollution and accidents (UN 2016). For reaching these aims and allowing for a sustainable development, an acknowledgement of sectors others than public health, e.g., food and agriculture industry and education, is crucial (Laaser and Epstein 2010). Furthermore, this emphasises the need to consider the aims of all other SDGs also in the context of their relationship to SDG 3, in terms of direct or indirect effects on health.

Impacting on the health status of the world population as well as allowing sustainability in the context of public health and global health are challenging tasks. Within this contribution, we describe the challenges for public health on the global scale. This is illustrated by four case studies, serving as examples for the relevance of sustainability-focussed global health action for achieving SDG 3. This contribution provides overarching suggestions and policy advice for further improvements to strengthen a global response on today’s challenges and to gain the targets set within the SDGs.

2. Global Health

Global health is defined as “an area for study, research, and practice that places a priority on improving health and achieving equity in health for all people worldwide” (Koplan et al. 2009). Beaglehole and Bonita (2010) emphasise the aspect

of transnationality of research and action. The aim of global health is to overcome the national–international divide and the divide between countries of different income levels through mutual exchange and partnership. This includes joint responsibility, funding, agenda setting, planning, and implementation (Berner-Rodoreda et al. 2019; Gautier et al. 2018; Koplan et al. 2009). This characterisation is at least partly in line with a dialectic approach for defining global health. According to this, “global” can be understood as “worldwide”, as “supraterritorial”, as “transcending national boundaries”, and as “holistic” (Bozorgmehr 2010). Therefore, global health has a definitive political dimension. It corresponds with the aims of the SDGs for providing universal health coverage and leaving no one behind (UN 2015b) and, therefore, aims to reduce health inequities (in terms of unfair, avoidable differences arising from poor governance, corruption or social exclusion) and health inequality (such as the uneven distribution of health or health resources in or between populations) (Reidpath and Allotey 2007).

2.1. Evolution of Global Health

Global health has experienced a major and rapid development in the past years (Martin et al. 2014). In general, global health is based on concepts, aims, and methods of public health. It followed similar foci during its evolution, and has, therefore, been focussing mainly on disease prevention (particularly infectious diseases)—such as “old” public health—by providing access to clean water and more nutritious food, by promoting hygiene (e.g., due to body and hand washing, disinfection, town sewerage systems, quarantine laws), as well as by implementing population-based surveillance and screening mechanisms (Kellehear 2017). The evolution of global health went on to follow the ideas of “new” public health, which takes a holistic and interdisciplinary perspective on aspects related to health and well-being. Modern public health is understood as “the science and art of preventing disease, prolonging life and promoting health through the organised efforts and informed choices of society, organisations, public and private, communities and individuals” (Wanless 2004, p. 3). This definition includes health promotion, prevention, treatment and rehabilitation of disease, and the efforts of all stakeholders. Inter alia, public health genuinely deals with the reduction of health inequalities and includes social determinants of health—not only by prevention on a behavioural, but also on a structural level. Furthermore, public and global health have a focus on health policy and governance (Carlson et al. 2015; Barbazza and Tello 2014). The scope has widened because damage to the environment can also impact on health, as seen in the effects of climate

change, environmental degradation, and biodiversity loss (Roe 2019). For that reason, one can understand health as part of each of the 17 SDGs.

2.2. Health as a Human Right and Global Imperative

In the preamble of the World Health Organization's (WHO) constitution, health was declared as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO 1946). In 1948, the Universal Declaration of Human Rights pointed out that health is part of the right to an adequate standard of living (art. 25) and was reaffirmed a human right in the Declaration of Alma-Ata in 1978 ("Health for All"), which emerged as a central milestone in the field of public health, as it expresses "the need for urgent action by all governments, all health and development workers, and the world community to protect and promote the health of all the people of the world" (WHO 1978). The 40th anniversary of this declaration was used to renew its focus on the role of primary healthcare under the lens of universal health coverage and the SDGs in the Declaration of Astana (Walraven 2019; Tilford 2018; WHO 2018a).

The fact that there has been a legal basis for the right to health for over seventy years, and that the goal of universal health coverage and equality have thus been political issues for such a long period of time, is accompanied by ethical considerations. This was particularly evident during the HIV/AIDS crisis starting in the 1980s, with the following movement against the patent system for HIV/AIDS medication showing how strongly human rights, ethics and health are related. The disparate burden of HIV in low-income countries in conjunction with the AIDS activist movement have led to a consideration of health as a global imperative over the past three decades, and revived a human rights-based approach to healthcare (Keusch et al. 2010). The activities of societies and stakeholders worldwide put enough pressure on the system to decrease costs for HIV/AIDS treatment by up to 99% (Meier et al. 2018). Since this period, an increasing number of countries have started to implement operating systems and policies that centre on health as a human right (Gostin et al. 2018).

3. Challenges for Global Health Action

Despite the progress that has been made in global health in the past decades, several manifold and complex challenges are hindering the success of developing, implementing and evaluating effective and sustainable action plans to improve the world population's health. For example, Ridde (2016) emphasised the need for more and better implementation science in global health, for bridging the "know-do gap" (Means et al. 2016). A common mantra in implementation science

in public health and global health is that we know what to do, but not how to do it: “Therefore, it is not enough to know if a health intervention is effective; it is also necessary to understand why the intervention works, how, for whom and in which contexts” (Ridde 2016, p. 1). Impact evaluations need to go hand in hand with the evaluation of implementation. We need further evidence to understand implementation processes, causal mechanisms, and contextual factors affecting the outcomes of complex interventions in global health (Ridde et al. 2020). This has to go along with a strong theoretical foundation (Ridde et al. 2020; Van Belle et al. 2017). Until now, implementation research in low- and middle-income countries has mainly focused on evaluating the effects of implementation strategies. Problems of scale-up and sustainability, which are key issues for global health interventions, have not adequately been addressed (Alonge et al. 2019).

In addition to the lack of implementation research, another major challenge is to consider the diversity and heterogeneity in the needs of the many economically, socially, culturally, climatically and demographically different regions and subpopulations (Mason et al. 2017). Furthermore, there is not enough or only fragmentary research and limited data availability and/or quality in many countries, which additionally compounds estimating problems and needs on various levels (Asma et al. 2019). However, several attempts try to provide an overview in terms of problems and successes of global health as well as outline the progress in reaching SDG 3. Reporting on the global burden of disease and its development over time and space and in relation to the SDGs is crucial, as performed by the Global Burden of Disease study (Lozano et al. 2018), the United Nations (UN 2019b) and WHO (WHO 2019b).

3.1. Financing

In the past, global health, especially in industrialised countries, was seen from a perspective of providing development aid. Development projects have frequently been implemented with a vertical structure. However, these top-down approaches used by several funders often had no (long-term) effects. Due to a lack of coordination, inefficient use of funding, and a strong focus on improving individual health within these approaches and programs directed at specific diseases—rather than public health or community approaches—many projects had no sustainable denouement and sometimes even led to adverse effects on the health status of the addressed country or region (Laaser and Epstein 2010; McCoy et al. 2009; Chang et al. 2019).

Despite the overall steadily increasing amounts of money used for global health financing, one major reason for the only modest achievements since the Declaration of

Alma-Ata is, therefore, its ineffective use (Laaser and Epstein 2010). The WHO points out that the global needs are clearly not being met by current funding. Although external funding (aid) represents less than 1% of global health expenditure (WHO 2019b), only 0.3% of all direct grants were received by low-income countries in 2016 (WHO 2018b), with an increasing trend for low-income countries and a declining proportion of health spending in middle-income countries (WHO 2019b). At the same time, the funding situation of the official development assistance (ODA), focussing on the poorest countries worldwide, has increased by 61% in real terms from 2010 to 2019 (UN 2019a). Nevertheless, the rural poor of large middle-income countries are neglected, although they are important target groups. It is important to note that out-of-pocket spending especially affects the poor. In 2010, 11.7% of the global population spent at least 10% of their household budget on healthcare, an estimated 1.4% worldwide were impoverished by financing healthcare the same year (WHO 2018b). This inequality strongly addresses SDG 3, but also SDG 1 (“No poverty”), SDG 2 (“Zero hunger”), and SDG 10 (“Reduced inequalities”). For achieving the goal of universal health coverage and better health and well-being, an efficient and effective financing is fundamental.

Furthermore, the United Nations and WHO state that workforce to provide health services in many countries is not strong enough (WHO 2019b; UN 2019a). Within the last five years, 40% of all countries had fewer than ten medical doctors per 10,000 people (UN 2019a). The education of medical staff is crucial to implementing essential healthcare and to covering the needs of low- and middle-income countries. This problem not only addresses SDG 3, but also SDG 4 (“Adequate education”), SDG 10 (“Reduced inequalities”), SDG 11 (“Sustainable cities and communities”) and SDG 16 (“Peace, justice and strong institutions”).

All these aspects highlight the necessity for re-organising the ODA (Chan 2013), as “at least half of the world’s population does not have full coverage for essential health services” (WHO 2018b). Additionally, a review and modelling of the past, present and future financing of global health, for the years 1995 to 2050, projects a persistent and growing gap in per capita health spending, leading to growing disparities between countries worldwide (Chang et al. 2019).

3.2. Responsibility

In 2019, the WHO designated leadership and engaging partnership on health-matters, the setting of standards and monitoring their implementation, shaping the research agenda, assessing health trends and articulating policy options as its core-functions (WHO 2019a). Although many countries support the WHO and its

goals, the financing of the WHO is a problem that needs to be addressed. WHO continues to experience immense financial stress, as it is currently visible in public debates after the United States of America called to suspend their funds (Nature 2020). This leads to questions about the future of WHO in global health governance (Reddy et al. 2018). The WHO is funded by mandatory and voluntary member state contributions and other non-state organisations (Clift and Røttingen 2018). Clift and Røttingen (2018) have stated that a shift to tied voluntary donations can be observed within the last few years. This means that the WHO is not in power of controlling how 80% of its budget is spent. Bennett et al. (2018) also claim that 80% of the funding of the WHO is earmarked for specific purposes. They emphasise that many countries resist non-earmarked funding, because funders want to know where the money goes and need to justify their donations. However, a focus on global priorities (i.e., non-communicable diseases and universal health coverage), which currently cannot be given enough attention due to funding, requires a more transparent, flexible, and predictable fund allocation for the WHO (Bennett et al. 2018; Reddy et al. 2018).

Progress has been achieved in terms of responsibility, when the Millennium Development Goals (UN 2015a) were expanded by the amendment of sustainability in 2015. To accelerate this progress, 193 countries adopted the SDG Agenda 2030 at the Sustainable Development Summit in New York, in September 2019. Additionally, countries and stakeholders can voluntarily undertake acceleration actions that “contribute to a speeded up implementation of the 2030 Agenda” (UN 2019b). The rationale for international cooperation is most compelling in the field of global health, since global interdependence is most acute. Coherence across all areas of public policy is needed to realise health equity and well-being for all. Governance mechanisms and intersectoral initiatives are needed and should be based on the SDGs, which provide a framework for strengthening policy coherence for achieving health equity (WHO Europe 2019).

During the coronavirus pandemic the crucial need for scientific collaborations in both the public and private sectors at the global scale became visible to develop diagnostics, vaccines and treatments in order to tackle health emergencies. However, this was also the time when we have seen various national responses, with a lack of globally coordinated approaches and missing responsibility for global action. Furthermore, the collateral effects of the COVID-19 pandemic caused by global economic downturn, social isolation and movement restrictions, are unequally distributed and mainly affecting those in the lowest power strata of societies (Shadmi et al. 2020).

3.3. *Changing Patterns of Morbidity, Mortality, and Population Dynamics*

Global health actions need to encounter the demographic (Kirk 1996) and epidemiological transition (Omran 1971). The demographic transition describes a population's shift from high mortality and high fertility to low mortality and low fertility. However, this pattern in population dynamics does not happen uniformly across countries and regions worldwide. Therefore, some countries experience demographic ageing and population decline (particularly industrialised countries), whereas others are characterised by a robust population growth (Blue and Espenshade 2011). Recent conceptual adjustments incorporated the nonlinear changes towards very low fertility and a diversity of union and family types (Zaidi and Morgan 2017). Despite these considerations, one needs to recognise that the demographic patterns affect population's health. The epidemiological transition describes the shift from infectious diseases to non-communicable disease entities. However, this shift takes place at different pace and from different starting points (Jamison et al. 2013).

For example, neonatal, infant, and child mortality is still an important (global) public health challenge in low- and in some middle-income countries (Burstein et al. 2019). The same applies to infectious disease. Infectious diseases are a major risk in low- and middle-income countries due to poverty, insufficient healthcare, unawareness or unavailability of preventive measures (Dye 2014), and the impact of climate change additionally facilitate outbreaks (Liang and Gong 2017). Vaccination is known as one of the most cost-effective and successful public health interventions with enormous contributions to global health (Greenwood 2014). A significant proportion of childhood mortality in low-income countries has been reduced due to vaccination programs which promote herd immunity, eradicate diseases in the long-term and by doing so ensure health and well-being (Glatman-Freedman and Nichols 2012). For example, vaccination coverage for the prevention of diphtheria, tetanus and pertussis increased from 72% in 2000 to 85% in 2015 (UN 2019a) as a result of the Global Vaccine Action Plan (WHO 2013) and the Global Alliance for Vaccines and Immunisation (GAVI), a public-private partnership committed to saving children's lives and protecting people's health by increasing access to vaccinations (GAVI 2019).

In terms of global health—oriented toward the concepts of “old” public health—the Ebola (Honigsbaum 2017) and Zika (McNeil and Shetty 2017) outbreaks were obvious signals highlighting the need for pandemic preparedness for avoiding public health emergencies of international concern. Experiences gained during the global health crisis triggered by Ebola led to improvements in early response systems, in the development of interdisciplinary and intersectoral responses, and, most

importantly, in close cooperation between civil society and communities (Raguin and Girard 2018). The perspective of “new” public health also takes social determinants into account: for example, cholera is a strong indicator of inequality and lack of social and economic development, because it disproportionately affects the world’s poorest and most vulnerable populations. Most of the time, cholera outbreaks occur as a result of conflicts, natural disasters, famines, unsafe drinking water and deficient sanitation facilities (WHO 2018b). Cholera treatment requires early detection and immediate healthcare and medication. For cholera outbreaks, the WHO recommends the establishment of surveillance systems and rapid response teams and calls for supply readiness and higher laboratory capacities (WHO 2018b). SDG 3 is not the only goal pertinent to the issue of preventing or eliminating infectious diseases: reducing inequalities (SDG 10); ensuring the availability and sustainable management of water and sanitation (SDG 6); protecting, restoring and promoting sustainable use of ecosystems, and halting biodiversity loss (SDG 15); taking action to combat climate change and its impact (SDG 13); promoting peaceful and inclusive societies for sustainable development; providing access to justice for all and building effective, accountable and inclusive institutions at all levels (SDG 16) also relate to this issue.

Furthermore, the global burden of non-communicable diseases is no longer just a phenomenon of high-income countries. Several non-communicable diseases are socially patterned and related to behavioural risk factors such as tobacco smoking, alcohol consumption, low levels of physical activity, and unhealthy eating habits, which are getting much more common also in low- and middle-income countries (Marmot and Bell 2019; Stringhini and Bovet 2017). These countries are prone to suffer from a double burden of disease due to a high proportion of infectious diseases and non-communicable diseases (Boutayeb 2006). For example, in 2016 almost 340 million (18.4%) children and adolescents (5–19 years) were overweight or obese globally and, thus, at a high risk for suffering from non-communicable diseases later in life. The rate of obese children is higher in high-income countries, but the number of obese children and adolescents in low- and middle-income countries is increasing faster (WHO 2018b).

4. Case Studies: Global Health and Sustainability

Sustainability has become a central criterion in evaluating public health programmes. In global health, a major shift took place from development to sustainability as well (The Lancet 2012). However, there are discussions about the conceptualisation and measurement of sustainability criteria. Overall, health is an investment that is itself sustaining and sustainable (Yang et al. 2010).

Global health action requires a mind shift towards a new political and social movement for health (Kickbusch 2014) which addresses the social, cultural, physical, environmental, commercial and political determinants of health. These approaches need to ensure a balance between domestic and global action while recognising the commitment to common goals such as the SDGs (Kickbusch 2016). Politicians and scientists representing a wide range of disciplines, businesses, civil society, and local communities, need to be new agents of change (Moallemi et al. 2019). A global and holistic perspective is needed for understanding (transnational) health issues and its determinants. This perspective needs to be applied at the local level to improve health and to gain sustainability (Rowthorn 2015). For highlighting the complexity of gaining impact and sustainability in global health and for showing the need of participatory, inter- and transdisciplinary approaches, some examples in form of case studies are delineated.

4.1. Antimicrobial Resistance

The rapid and ongoing spread of antimicrobial resistance poses a serious threat to global health (Watkins and Bonomo 2016; Hay et al. 2018). The indiscriminate use of antibiotics in human medicine and agriculture are a main driver contributing to resistance (Laxminarayan et al. 2013), leading to health crises arising from infections that were once easy to treat (Hay et al. 2018). In high-income countries, patients with resistant infections frequently have the opportunity to turn to newer-generation antibiotics, which are more expensive. In low-income countries, where infectious diseases are leading to a high disease burden, patients might be unable to obtain or to afford second-line treatments (Laxminarayan et al. 2013). Infections resistant to antimicrobial treatment frequently result in longer hospital stays, higher healthcare expenses, and increased mortality (Hay et al. 2018).

To combat antimicrobial resistance, comprehensive national and international plans, like the Antibiotic Stewardship programme in the European Union (Allerberger et al. 2009), are needed to allow for rationale antibiotic use in hospitals (Laxminarayan et al. 2013). Furthermore, due to the connection between antimicrobial resistances and the agricultural sector, the One Health approach comes into play. The One Health approach supports global health security by improving coordination, collaboration and communication at the human-animal-environment interface. For doing so, multiple disciplines working locally, nationally, and globally are included, to address shared health threats such as zoonotic diseases, antimicrobial resistance, food safety and others (American Veterinary Medical Association 2008; Sinclair 2019).

4.2. Climate Change

The 2019 report of The Lancet Countdown on health and climate change emphasised that the health of a child born today will be affected by climate change over its whole lifespan (Watts et al. 2019). Therefore, climate change is an emerging threat to global health, as it has myriad implications for the health of humans and the ecosystems (Machalaba et al. 2015; Patz et al. 2014). The effects of climate change are closely linked to social and ecological determinants of disease mitigating or exacerbating forecasted adverse health outcomes (Machalaba et al. 2015). Climate change is also highly inequitable, as the greatest risks are to the poorest populations, who have contributed least to greenhouse gas emissions (Campbell-Lendrum and Corvalán 2007). There is a substantial overlap between underlying determinants of health inequity and environmental change. Friel et al. (2008) claimed that they “are signs of an economic system predicated on asymmetric growth and competition, shaped by market forces that mostly disregard health and environmental consequences rather than by values of fairness and support”. For that reason, multidisciplinary collaboration and a shift in priorities in economic development towards healthy forms of urbanisation and infrastructure, more efficient and renewable energy sources, and a sustainable and fairer food system is needed (Friel et al. 2008). Without immediate actions, climate change will impact on the health of current and future generations, will pose challenges to already overwhelmed health systems, and will undermine the progress towards achieving the SDGs and universal health coverage (Watts et al. 2019).

4.3. Migration

Globalisation is characterised by increases in population movement. International migration is a complex phenomenon affecting a multiplicity of economic, social and security aspects. However, with about 250 million international migrants in 2015, and a projection of more than 400 million in 2050 (IOM 2018), and significantly more people moving within their country of birth, there is an urgent need to engage with the topic of migration in global health (Wickramage et al. 2018). Therefore, the UCL-Lancet Commission on Migration and Health called on “nation states, multilateral agencies, non-governmental organisations, and civil society to positively and effectively address the health of migrants by improving leadership and accountability” (Abubakar et al. 2018). Despite the human right to health, national sovereignty concerns frequently overshadow legal norms, as attention to migration focuses largely on security concerns (Abubakar et al. 2018). This has been highly visible at the so-called “refugee crisis” impacting Europe in 2015/2016,

which was much more a “crisis of solidarity” (Bozorgmehr and Wahedi 2017). In this regard, fundamental human rights have been restricted to asylum seekers in many recipient countries, because access to adequate healthcare was denied (Bozorgmehr and Razum 2016).

In the context of global health, it is mandatory to consider the “Health in all policies” approach, because the steady increase in international migration has led to hostile migration policies worldwide, such as expanded border controls in the European Union and attempts to rescind legal protection granted to undocumented migrants in the United States. All these policies have not been designed to negatively affect migrant’s health, but their role as social or political determinants of health is undisputable (Juárez et al. 2019).

4.4. Digitalisation

Digitalisation, one of the megatrends of our time, is of particular relevance for global health. First of all, it affects our lives like nearly no other societal, technological or economic development. Second, digitalisation is global itself. In developed and developing countries alike, modern communications technology is no longer a convenience—it is a necessity. Due to its importance, the increase in access to information and communication technologies is addressed in SDG target 9c. Digital strategies have been recognised as a critical strategy for health systems strengthening to help meet the SDGs and universal health coverage targets (Labrique et al. 2018). Digitalisation is crucial for precision global health, which is describes as an approach similar to precision medicine. Through innovation and technology, it facilitates better targeting—or even tailoring—of public health interventions on a global scale (Flahault et al. 2017). For that reason, digitalisation brings new potential for global health, but further reflections on its ethical implications and social impacts are needed (Dockweiler and Fischer 2019).

5. Conclusions

Never before has global change happened so quickly. The societal, epidemiological and demographic changes we face require new and particularly global strategies to gain the common goal of universal health coverage. Global health is closely linked to sustainable actions. Indeed, global health actions need to be sustainable to improve the world population’s health in the long term and to reduce health inequities.

All global health actions should be based on the best available scientific evidence. Therefore, Rudan and Sridhar (2016) summarised the “basic needs” of the global health research system that emerged from the past:

- coordination of funding;
- prioritisation of the plentiful research ideas;
- recognition of results of successful research;
- broad and rapid dissemination of results and their accessibility;
- evaluation of return on investments.

Best practice examples could serve as prototypes for a better coordination and organisation for the common goal of a higher standard in public and global health without causing substantial or additional costs for research, development and design (Rudan and Sridhar 2016).

Until the recent past, the European Union for example defined global health mainly in terms of strengthening “global and third countries’ national capacities of early prediction, detection and response to global health threats” (European Commission 2010) rather than focusing on cross-border health threats. Germany used its presidencies of the G7 and G20 summits in 2015 and 2017 to give more prominence to global health in supranational political discussion (Berner-Rodoreda et al. 2019). However, the focus has been relatively narrow. Therefore, McBride et al. (2019) recommended expanding the focus to neglected SDG3 health targets to place greater emphasis on upstream determinants of health, provide stronger commitment to equity and leaving no-one behind, adopt explicit commitment to rights-based approaches, and make commitments that are of higher quality and which include time-bound quantitative targets and clear accountability mechanisms.

Reaching SDG 3 targets is undeniably an enormous challenge that comes along with structural and financial demands, which are compounded by additional hazards, such as political conflicts, natural disasters and famines, but also new global problems, for example antibiotic resistances and the adverse health effects caused by climate change. Therefore, sustainable development needs to be at the core of the global agenda (Kickbusch 2014), allowing for a long-term implementation of public health infrastructure, is needed to accomplish SDG 3. Action on the social determinants of health—based on a “Health in all policies” approach—is required to reduce inequities in health (Donkin et al. 2018). Accountability, vested interests, ethics and democratic legitimacy are conditional for future sustainability of population health (Byskov et al. 2019).

The overall changes in the past years, in terms of the increasingly globalised nature of economy, society and culture, combined with, e.g., the effects of climate

change and environmental degradation as well as the evolution of antibiotic resistance, have led to shift the boundaries. These factors expose both new and forgotten similarities between populations. Furthermore, they highlight the need for global cooperative responses to health threats. Therefore, the grand challenges can serve as “a catalyst for global solidarity, which justifies, and provides motivation for, the establishment of solidaristic, cooperative global health infrastructures” (West-Oram and Buyx 2017, p. 212).

Reaching the goal of a better health and universal health coverage also implies changes in other areas than health and, thus, addresses more SDGs than just SDG 3. Therefore, integration of global health concerns into the law and governance of other, related disciplines should be given high priority. This emphasises the need for developing and implementing a “global health” policy, and not only a global “health policy”.

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