Summary Report

Package of Indicators and Measures to Monitor Health Inequities and Guide Policies

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List of Acronyms

AUB:	American University of Beirut
AUC:	American University in Cairo
CSDH:	Commission on Social determinants of Health
DHS:	Demographic and Health Survey
EMR:	Eastern Mediterranean Regional
EMRO:	Eastern Mediterranean Region Office
FHS:	Faculty of Health Sciences
HEAT:	Health Equity Assessment Tool
HEiAP:	Health Equity in All Policies
HIS:	Health Information System
HPV:	Human Papilloma Virus
HSS:	Health Systems Strengthening
IDRC:	International Development Research Centre
IMR:	Infant Mortality rate
MICS:	Multiple Indicator Cluster Survey
ISH:	Information System for Health
MMR:	Maternal Mortality Ratio
NNMR:	Neonatal Mortality Rate
NCDs:	Non-Communicable Diseases
PCV3:	Pneumococcal Conjugate third dose
RHS:	Reproductive Health Surveys
SDGs:	Sustainable Development Goals
SDH:	Social Determinants of Health
SDHI:	Social Determinants of Health Inequity
SRC:	Social Research Center
SRH:	Sexual and Reproductive Health
STIs:	Sexually Transmitted Infections
TB:	Tuberculosis
UN:	United Nations
WHO:	World Health Organization

Introduction

This summary report is prepared as one output of a research project activity supported by a grant from the International Development Research Centre (IDRC) of Canada, and implemented jointly by Faculty of Health Sciences in the American University of Beirut (FHS/AUB), and the Social Research Center of the American University in Cairo (SRC/AUC). This report benefited from comments and deliberations of the project team and advisory group, and will be further modified following an expert group, and a stakeholders meeting planned during March 2022. The details of this project, the list of different researchers engaged/ and or supporting it, the different outputs and background papers are provided in a special page on the Health Information System in the SRC/SDG platform 'ISFH HE.' which will be regularly updated.

The project aims at **strengthening the whole of government commitment in Arab countries to improve health and promote health equity, as well as inform integrated social policies and effective program level implementation**. The project draws on previous research implemented by SRC (Khadr 2009; Shawky, 2018; Rashad, Shawky & Khadr, 2019; Rashad, Shawky, Khadr et al, 2019; Shawky, Rashad, & Khadr, 2019; Khadr, Rashad & Shawky, 2019; Shawky, Rashad, Khadr, et al 2020; Khadr, 2020).

The first phase of this project developed three reports "**Setting the Stage for an Information System for Health**", "**Review of Health Information System in Morocco**" and "**Social Determinants of Health Inclusion in Health Information Systems in Jordan**". The three reports are provided on the project page on the SRC/SDG platform (ISFH HE). These reports gave visibility to the need for a fair information system capable of capturing the social inequalities in health to support informed public demand for just alternatives, monitoring and accountability. They paved the scene for a paradigm shift in thinking health and information for health, they called for redefining the goal and role of the health information system (HIS) to better capture health outcomes and link them through the lengthy pathway to their root structural causes.

As evident from the reports, the collected data in Arab countries mostly display simple national averages, while the program level indicators are usually limited to output measures. The data mainly apply a biomedical model for monitoring health and do not go beyond the individual behavioral factors to guide the health systems' policies and interventions. It is evident that health in the new global era is no more the business of the health system alone (CSDH, 2008; CSDH-EMR; 2021; 3-D Commission, 2021)

but is a shared responsibility of the Whole-of-Nation. There is a need for full-fledged data to inform policies for better health and well-being. Clearly, there is a pressing need to generate, describe, link, synthesize and disseminate data and information on the social determinants of health (SDH) and inequalities in health, as well as the relation between them in both national and program levels. Arab countries need to develop a practical approach and tools that is linked to the global paradigm shift in thinking to be prepared to monitor and assess national success towards improving health and well-being FOR ALL.

The evidence from the reports showed that the knowledge needed for better health and well-being requires a very complex multicomponent information system. The understanding that the conditions in which people live, grow, work and age influence health (Gray 1982; CSDH, 2008; CSDH-EMR; 2021; 3-D Commission, 2021) suggests that comprehensive data are needed to guide policies that better respond to people's needs. Improving people's health requires more than individual behavior changes but rather changes to the social, economic and political context in which people live. The vision of the sustainable development goals (SDGs) and the COVID-19 moment provide an opportunity to make evident the need for comprehensive data in assessing and monitoring health and health inequalities; and embedding these insights in real-time decision-making (Galea, Abdalla, Sturchio, 2020; Maani, Abdalla & Galea, 2021).

Despite that there is a global general consensus on the need for linking health to its multilevel social determinants, there is currently no adequate monitoring framework that can help countries recognize such interlinkages and act on them. Over the years, many monitoring frameworks and indicators have been proposed, however, they focused on specific domains of determinants and did not explicitly capture the pathways of influence. The first focused on identifying indicators for monitoring health and healthcare system outcomes (WHO, 2009; WHO, 2010; WHO, 2012. The second looked for developing health inequality measures as tools for alerting countries to this challenge and the importance of addressing them (WHO, 2013; Hosseinpoor, Bergen & Schlotheuber, 2015). The third, in response for Rio political Declaration (WHO, 2011; WHO, 2016), looked mainly for monitoring national and international progress on SDH and policies to address them (Phillips, Liaw, Crampton, et al. 2016;Valentine, Koller & Hosseinpoor, 2016; Gómez, Kleinman, Pronk, et al., 2021).

Furthermore, there are several existing powerful observatories and tools actively attempting to provide evidence on health inequalities, particularly The WHO Health Equity Monitor (https://www.who.int/data/gho/health-equity) which is part of the Global Health Observatory (https://www.who.int/data/gho) and The World Health Organization (WHO) Health Equity Assessment

Tool (HEAT). However, these efforts are limited in focus to only reproductive, maternal, newborn, child health and adolescent health only as they rely on data from Demographic and Health Survey (DHS), Multiple Indicator Cluster Survey (MICS) and Reproductive Health Surveys (RHS). Additionally, the WHO Health Equity Monitor provides disaggregated indicators by three dimensions of inequality (education, place of residence and wealth) but do not use a summary measure of inequality. HEAT disaggregates the indicators by five dimensions of inequality (economic status, education, place of residence, subnational region and child's sex where applicable) and offers an estimation of fifteen widely used summary measures of inequality. This latter information, although comprehensive of all measures, is huge and may be confusing given the differences in magnitude and level of inequality measures. Most importantly, both efforts do not go beyond health outcomes and interventions and focus on guiding health policies and interventions. They do not allow for explicitly capturing the pathways by which the social determinants influence health or link the health inequalities to the upstream forces.

Objectives:

This report, produced during the second phase of the project, specifically aims at proposing core basket of national level indicators that allows the measurement of the level of health and its inequalities and allows also linking the distribution of health inequalities to the distribution of their determinants across the multilevel pathways of influence, as well as producing measures of the degree of inequality by social structures. These indicators go beyond the disease and behavioral focus to incorporate data on the multilevel SDH and their distribution. Such data is intended to support the application of the equity lens which is not just about measuring inequalities in health but tracing and linking the health inequalities to the fairness of the determinants shaping them.

This summary report presents an approach to integrate and fill in the gaps in the global efforts to support governments monitor health and its social determinants. It is founded on a conceptual framing that spelled out clearly the pathways by which the multilevel social determinants influence health and the interlinkages between them. It suggests domains that facilitate selection and organization of indicators from structural forces to health impact passing by the lengthy multilevel social determinants. It stresses on the role of all systems not only the health system and adds a conceptual framing for monitoring health system that can be applied to other systems. It provides clear emphasis on the need for applying an equity lens in the produced evidence to inform policies. It is linked to action and highlights the importance of comprehensive data to identify the entry points for action.

The approach adopts the move from HIS to ISH that **produces comprehensive data that health and non-health stakeholders can use for making transparent and evidence-based decisions for fair societies**. It proposes summary measures and differentiates **between assessing the health status and its inequalities on one side and assessing health inequities on the other side**. The difference is reflected in making the distinction between two types of measurements. The first is the traditional horizontal measurement of assessing heath status and its determinants using national averages, as well as disaggregating health outcomes by their determinants to identify those most at risk of ill-health. This type of information helps in producing nationwide actions with focus on addressing health priorities and responding to the needs of those most at risk of ill-health. The second is a vertical measurement for assessing the level of inequalities in the distribution of health and for linking it to the distribution of the multilevel social determinants. This complementary information helps in identifying the priority health inequalities and the socially vulnerable, as well as investigating the fairness of the upstream forces shaping such inequalities. It implies the need for Health Equity in All Policies (HEiAP) and intersectoral action for health and well-being.

Thus, this report produces a package of indicators, and measures organized over multilevel domains and distributed by social strata within key social structures. These are intended to provide measures of health and health inequalities and linking them to the social stratification. The indicators enable the assessment of the role of structural forces shaping the distribution of the social stratification, the responsiveness of public services to different needs of different social groups, as well as the manifestation of the social stratification in contextual and individual factors influencing health outcomes.

In particular, the package of indicators and measures serve the following:

1) Measuring health and health inequalities across its many dimensions (mortality, morbidity, disability…);
2) Linking the health outcomes across the lengthy pathway to the root structural causes;
3) Identifying the groups experiencing higher risks of ill-health;
4) Identifying the inequalities in the distribution of ill-health and tracing them to the distribution of vulnerabilities shaped by social position;
5) Assessing the distribution of public services, including the healthcare system, in relation to the distribution of the social structures to investigate their fair responsiveness to different needs;

6) Investigating the fairness of structural policies shaping the distribution of vulnerabilities across social structures.

The package of indicators and measures are based on an approach to mainstream an equity lens in the SDH framing of health. Countries can follow this approach as relevant to their context. They can select or add indicators, measures, pathways and determinants as appropriate.

This summary report provides a description of the approach and suggested indicators and measures. The full report is provided in the project page on the SRC/SDG platform (ISFH HE). This summary report is divided into two parts. Part one presents the methodology and the adopted social determinants of health inequity (SDHI) framework, and part two proposes a core list of national level indicators and measures.

A key benefit of the current approach is that it provides the data needed for evidence-based action on health inequity. The third phase of the project will produce detailed indicators and measures for SRH, and will discuss how to move using these indicators and measures to identify challenges towards guiding health equity policies. The discussion will attempt to shift the policy focus from changing risky behaviors and improving socioeconomic living conditions to recognizing the need to address the structural determinants with their pathways of influence on the distribution of social structures and the exposures of vulnerable groups to ill-health.

Additional future activities of the project will target supporting implementations of SRH program in both Jordan and Morocco

Part One: Activities and methodology

The overall aim of the activities of this phase was to draw on the scientific knowledge to adopt a comprehensive monitoring framework that guides the selection and organization of indicators and identifies the measurements that lead to entry points for analysis and action. The first section below provides a summary of the method used to map and draw on the available literature and data sources. The second section explains the adopted framework that portrays the health outcomes and their interlinkages with the multilevel social determinants. The third section provides a summary of the proposed indicators and measures to provide evidence for decision making. The list of indicators will be further provided in Part Two

I.1. Drawing on the scientific knowledge

A thorough search was conducted to capture the conceptual framing and the landscape of all health dimensions and challenges with emphasis on SDH and health equity. The search aimed at identifying the theoretical frameworks for monitoring health, the available indicators, the tools for measuring health and the ways in which data are used to guide policies and actions. The search included the following steps:

Extensive literature search

An extensive literature search was conducted. The search used the PubMed, Google Scholar, and Google search engine. The terms “SDH”, “SDH frameworks”, “health equity”, “health inequity”, “health system”, “health information system”, “health inequality”, “health disparities”, “inequality measures” were used to reach the relevant literature.

The search also included the documents produced by concrete organizations on monitoring health and health inequities (example, United Nations, World Health Organization, United Nations Population Fund, Sustainable Development Goals, World Bank, ….). All reports, studies and literature that included SDH frameworks, health equity frameworks, health system frameworks and health information systems frameworks were analyzed.

The synthesis of the compiled literature allowed for identifying the SDH and health equity related conceptual frameworks, as well as the recommendations for monitoring health and inequalities in health and the ways in which data reporting can guide action. The scientific knowledge allowed for revisiting previous SRC effort (Khadr 2009; Shawky, 2018; Rashad, Shawky & Khadr, 2019; Rashad, Shawky,

Khadr et al, 2019; Shawky, Rashad, & Khadr, 2019; Khadr, Rashad & Shawky, 2019; Shawky, Rashad, Khadr, et al 2020; Khadr, 2020) and producing a more relevant monitoring framework that can better illustrate the interlinkages between health and the multilevel social determinants as explained in the following sections.

Assembling indicators

The search looked for key international data sources where health and health inequality-related indicators are compiled. The full list of international data sources is provided in the full report available in the project page on SRC platform (ISFH_HE). The data sources include internationally defined indicators and reports of population-based surveys conducted on global level, as well as the indicators provided in the observatories, platforms, and dashboards of the international organizations.

The national statistics in Arab countries available on the web were also visited. The full list of international data sources is provided in the full report. The indicators in the various national data sources published and accessible on the internet were compiled.

The indicators were assembled, reviewed, standardized, and their redundancies eliminated. This step has allowed for identifying regional commitment as requested by the SDGs and the World Health Organization – Eastern Mediterranean Regional Office (WHO-EMRO). It has recognized the recommended indicators by WHO to monitor the health systems (WHO, 2010), to monitor inequalities in health (https://www.who.int/data/gho/health-equity) and the SDH (WHO, 2016). It has reached the recommended data disaggregation and inequality measures. The indicators and measures will be further explained in the below sections.

I.2. Operationalizing the social determinants of health inequity framework

The literature search has identified a wealth of guiding frameworks describing the wide variety of social mechanisms affecting health (Dahlgren G. Whitehead, 2019; Diderichsen, Evans & Whitehead M 2001; Ansari, Carson , Ackland, et al, 2003; Oakes & Rossi, 2003; Asada, 2005; CSDH; 2008; WHO, 2009; Solar and Irwin, 2010; Biermann, Mwoka, Ettman, et al, 2021).

A Social Determinants of Health Inequity (SDHI) framework was recently proposed by SRC to support operationalizing the Commission on Social determinants of Health (CSDH) framework for measuring of inequalities in the study of Sexual and Reproductive Health (SRH) in Arab countries (Rashad, Shawky

& Khadr, 2019; Shawky, Rashad, & Khadr, 2019, Shawky, Rashad & Khadr, et al 2020). The SDHI framework is founded on the CSDH framework (CSDH, 2018) and provides a way to illustrate the pathways by which the social determinants affect health outcomes and their distribution. The synthesis of the literature has allowed for revisiting the SDHI framework. The revision aimed at building on existing frameworks to be able to operationalize the SDHI framework for organizing a set of indicators and measures for monitoring health, its determinants and intervening forces, as well as portraying their interlinkages. The focus was on having a clear visual depiction of the pathways by which structural forces (inputs) through the various multilevel pathways (outputs and outcomes) impact health integrating the role of the intervening forces in improving health and promoting health equity. The revision stressed on the social structures that are closely interrelated to policies and interventions for health and health equity. This SDHI framework would provide the evidence needed for guiding policies and actions aiming at addressing inequities in health, irresponsiveness of public services and unfairness of national structural forces

The SDHI framework used in this report (Figure 1), similar to the CSDH, has three levels of determinants impacting health status and distribution. The first level (full set of social conditions in which people are born, grow, live, work and age) is further subdivided into contextual forces and individual factors; respectively and referred to as proximate determinants. The healthcare system and other public services were classified among intervening forces. These forces operate at the three levels of social structures, proximate determinants, as well as health impact measures as explained below.

The second level, referred to as intermediary determinants, stresses the importance of the social hierarchies/structures and links the resulting distribution of the social stratification with the distribution of health differentials in both the impact and proximate factors. Based on the literature (Solar and Irwin, 2010; Tung, Cagney, Peek ME et al, 2017; Fayet, Praud, Fervers, Ray-Coquard et al, 2020) and previous SRC research in Arab countries (Rashad, Shawky & Khadr, 2019; Shawky, Rashad, & Khadr, 2019; Khadr, Rashad, Shawky, 2019; Shawky, Rashad & Khadr, Shawky et al 2020), the SDHI framework assesses the social structures in terms of three key social structures - spatial context, social class and culturally constructed context reflecting power and discrimination.

The SDHI framework defines the spatial context as the geographic areas reflecting the different clusters of health influencing forces (as geographic location, administrative divisions, urban-rural dichotomy, …). The SDHI framework expresses the social class as the command of resources at

individual level influencing health-related behaviors and access to healthcare resources (as income, wealth, education, employment, …). The SDHI framework specifies the culturally constructed contexts that reflect power and discrimination as the social construct (norms, values, prevailing practices) influencing behaviors, access to health resources and opportunities for particular social groups in the society. These constructs are known to be manifested in relation to gender, ethnicity, refugees, disabled, stigmatized groups, …etc.

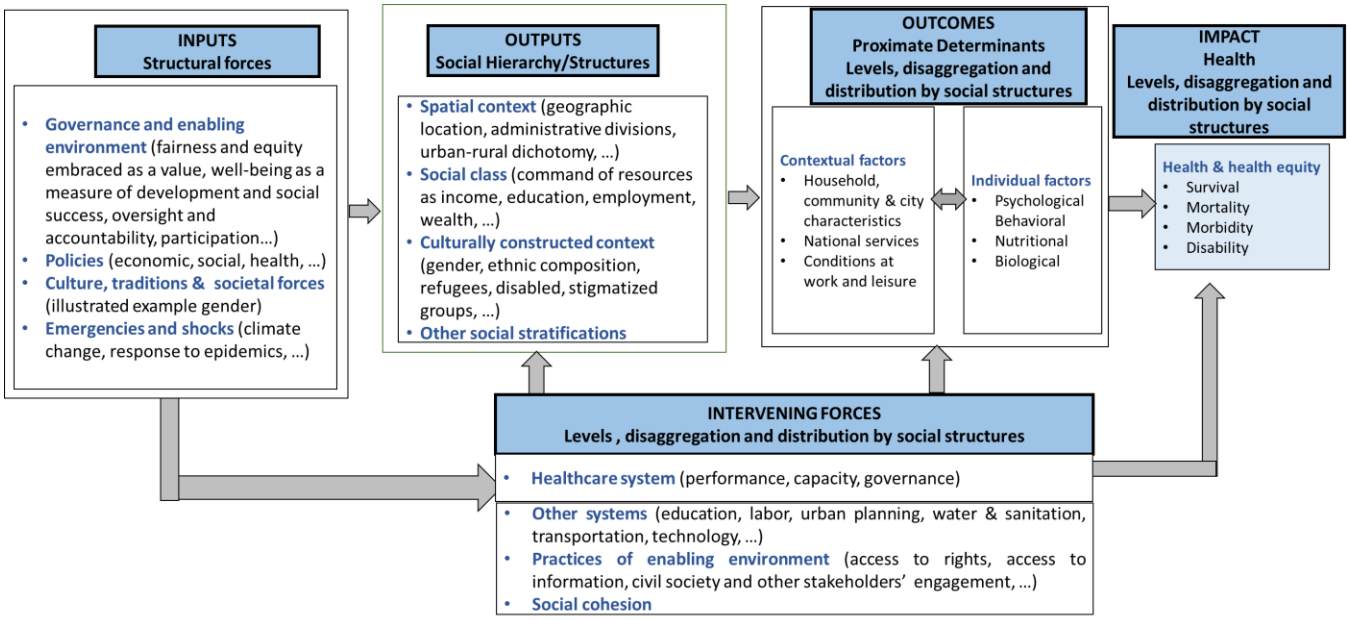
The third level (structural forces) are the same as those in the CSDH frame referred to as the governance, policies, as well as the culture, traditions and other societal forces. The structural forces are the root causes shaping the social structures and the newly introduced block of intervening forces. Those in turn contribute to the inequity in the proximate determinants and health.

The SDHI framework introduces a new block termed intervening forces which are a product of the structural forces. This block emphasizes that the healthcare system and other intervening forces (other systems, enabling environment and social cohesion) have three paths of influence on health and health inequity. The first path is through their role in influencing social structures, and the responsiveness to the different needs of the various social stratifications, the second path influences the contextual and the individual factors, while the third path directly affects the health status and distribution.

For the systems included in the intervening forces block, the SDHI made use of the WHO Operational Health System Strengthening (WHO-HSS) Monitoring Framework (WHO, 2009) and the WHO building blocks framework (WHO, 2007; Savigny & Adam, 2009, WHO, 2010) to provide a framework that can be used to monitor the healthcare system and other systems. The SDHI framework assesses these systems in terms of the level and distribution of its performance (outcomes and impact) which relates to health challenges; and in terms of the capacity (inputs, processes, outputs) which relate to of five out of the six building blocks (service delivery, health work force, information, equipment and financing). The SDHI stresses the importance of the healthcare system governance as a separate sub-block to incorporate health equity and social determinants of health, as well as fulfil its stewardship role to advocate for health outside the health sector. The framework makes the distinction between healthcare system governance and the national governance.

Figure 1: Social determinants of health inequities framework

Adapted from CSDH framework (CSDH, 2008, Solar & Irwin, 2010) incorporating the WHO-HSS framework (WHO, 2009) and WHO building blocks framework (WHO, 2007; de Savigny & Adam, 2009)



I.3. Organizing indicators

The literature search has allowed for assembling a list of indicators. The majority of these indicators are required for monitoring the SDGs, and are part of the package of core indicators agreed upon with WHO-EMRO. They also include the indicators that have been collected as part of the national information systems.

These indicators were organized over the full breadth of the SDHI framework. The indicators and their organization were discussed internally at SRC and during a consultation meeting with the project advisory group. They were additionally discussed during the group work activities in the regional workshop "Social Determinants of Health and Health Equity: Paradigm Shifts and Policy Recommendations" which was jointly organized by the Department of Healthier Population of the WHO-EMRO and SRC-AUC in November 21-25, 2021. Generally speaking, the list provided is intended as an aspirational list that captures the importance of covering all the domains of the SDHI framework, the necessity of producing measures of inequality, the importance of representing key social structures, and of relating the upstream and intervening forces to the produced social structures.

The choice of the indicators and measures to be included in the current package is based on their relevance to:

- Assessing the level of health and its determinants. These indicators serve to identify priority health challenges, and highlight the disadvantaged groups in the society,
- Disaggregating the health status to its social determinants across the multilevel pathways of influence (proximate, social structure, public services and interventions,). These point to population groups at higher risk of ill- health,
- Measuring the degree of inequality in health distribution associated with the various measures of social structures. This identifies the dimensions of health that exhibit high levels of inequalities, and the social structures associated with high inequality in health.
- Investigating the linkages between the health inequalities and the distribution of their determinants across the pathways of influence at the two levels of the proximate determinants (outcomes) and social structure (outputs).
- Investigating the role of the upstream forces, public policies and initiatives in shaping and responding to the social structures.
- Studying the fairness and responsiveness of upstream and public services. This allows a judgement on health equity and guide recommendations.

The SDHI framework has five major blocks covering the full breadth of the CSDH framework (Figure 1). These blocks include the health status and distribution (impact); the proximate determinants (outcomes); the social stratification (outputs); and the structural forces (inputs), in addition to the intervening forces. The indicators for these blocks are organized as follows:

Block 1: Health impact:

The indicators in this block represent the different themes for classifying health impact namely survival, mortality, morbidity, and disability (Table 1). Under each theme, sub-themes are used to reflect the different health dimensions (as SRH, mental health, non-communicable diseases, communicable diseases, injuries, ….)

Block 2: Proximate determinants

They refer to the conditions in which people live, grow, work and age, whether on individual level (individual factors) or community level (contextual factors):

- **Sub-block 2.1: Individual factors:** The indicators in this sub-block represent the individual risk factors (Table 2). The sub-block is classified into four main themes, namely psychological,

behavioral, nutritional and biological themes of risk factors that lead to ill-health. Each of these themes were further classified into subthemes as follows

- The psychological theme is sub-classified into subthemes related to gender, adult and child mental health.
- The behavioral theme of risk factors is classified into behaviors related to sexual and reproductive health, child health and adult health
- The biological theme of risk factors is classified into subthemes related to birthweight, Anemia , raised blood pressure and raised blood glucose

- **Sub-block 2.2: Contextual factors:** The indicators in this sub-block (Table 3) represent the conditions in which people live (household, community/city characteristics, national services, conditions at work and leisure).

Block 3: Intervening forces:

The indicators in this block are classified into four main sub-blocks that can intervene to address the vulnerability within the social structures in the country, can respond to the negative impact of the proximate determinants of health as well as directly affect the overall health distribution.

Sub-block 3.1: Heath care system This sub-block focuses on presenting a detailed performance, and capacity indicators of the healthcare system disaggregated using the different strata of the social structure (Table 4). Additionally, this sub-block incorporates a theme on healthcare system governance. This theme covers the preparedness of the health system to embrace health equity and social determinants of health, as well as fulfill their role in the intersectoral action for addressing them.

Sub-block 3.2: Other national system This sub-block presents some illustrative indicators for the other national systems that can play a significant role in addressing the unequal distribution of the health and its multilevel determinants (Table 5). These indicators can be detailed further to reflect the situation of each context.

Sub-block 3.3 Enabling environment: This sub-block includes indicators that capture the enabling environment assessed in terms of the actual practice of rights, coverage with social protection safety net and civil society engagement (Table 5).

Sub-block 3.4: Social Cohesion: This sub-block includes indicators that capture the strength of the social knit within the community (Table 5).

Block 4: Social hierarchy/structures

The indicators in this block represent the different social hierarchy/structures that are the output of the structural forces within a national context (Table 6). They are assessed in terms of the social structures that shape people's exposure to social vulnerabilities and differential exposures. The SDHI framework proposes the assessment of the social hierarchy/structures in terms of three main stratifiers namely spatial context, social class and culturally constructed context reflecting power and discrimination. Additionally, the SDHI framework allows for any country-specific social structures since the literature displays numerous social stratifications that capture each country's various social structures.

For the spatial context, a country's geographic location, notably if related to administrative units, reflects the experience of the entire population within the different geographic areas and captures the areas potential social vulnerabilities and national service coverage. Most importantly, the geographic/administrative location in all countries, is used for planning and distribution of resources and services. It allows policy makers to identify the underprivileged geographic locations and monitor their progress overtime.

The social class reflects command over resources at the individual/household level. These resources are known to impact health behaviors and individuals' ability to access resources for health. However, the literature highlights that while the social class is considered one of the strongest social structures indicators that affect health distribution (Muntar, Lynch and Gates, 1999; Solar & Irwin, 2010; Scambler 2019), social class is the least theorized concept compared to other indicators of social structure. Social class is commonly assessed in terms of simple characteristics/ classifications such as education, income, occupation, work conditions and individual standard of living. In developing countries, major national surveys (such as DHS and MICS) rely on the wealth index as proxy to capture the social class. This wealth index is commonly used to stratify the household by social class. It is based on the household's ownership of selected assets, such as televisions and bicycles; materials used for housing construction; and types of water access and sanitation facilities. The wealth index allows the classification of the households in relative strata and hence the identification of the distribution of the population across this proxy of social class that can guide targeted package of social policies. This wealth index is difficult to obtain as an individual level characteristic in national statistical systems. Obtaining this index require a more developed information base capable of linking different data systems.

Culturally constructed contexts of power and discrimination refer to the non-material contextual forces surrounding different social groups and can affect their access to health opportunities and resources.

These constructs operate at the level of surrounding communities. They define the rights, prestige and power, as well as discriminatory practices, that can in turn affect access to health resources accorded to the different groups. These groups are usually described by characteristics such as gender, ethnic composition, religious beliefs, citizenship status… etc.

For the current report, gender culturally constructed context is presented as an illustrative example. This context is operationalized in terms of a composite index developed by SRC. This composite index is based on the collective attitudes and behaviors surrounding the gender norms within each context. The context is specified according to the relevant communities within each country. Hence, this construct/ index operates and manifests itself differently for different context and in turn can affect the distribution of women and men access to health opportunities and resources within their respective communities. The significance of this index is particularly noted in guiding evidence based policy recommendations that specifically address health damaging gender norms. Since this index is developed using areas as the bases of calculation, it can be assigned as an individual level characteristic in national statistical systems

Block 5: Structural forces:

The indicators in this block (Table 7) is based on the classification proposed by Solar & Irwin in 2010. It divides the structural forces into four sub-blocks, namely governance; policies; culture, traditions and societal forces. It adds a sub-block on emergencies and shock to define the epidemiology sub-block in Solar's & Irwin's classification. The indicators included in each of these sub-blocks were extracted from the indicators for monitoring the SDGs, and the WHO-EMRO list. Many of these have appeared in WHO report 2016. Additional indicators were also proposed drawing on the policy recommendation in the region report on SRH (Rashad, Shawky, Khadr, 2019). as well as some proposed measures. The main criteria for inclusion of these indicators are that they are strongly related to shaping the social structure in the society and guiding the intervening forces to address health inequalities.

Sub-block 5.1 Governance: The governance sub-block is divided into four major themes

- Fairness and well-being as measure of development and social success. This theme reflects that the country is embracing fairness, equity and wellbeing in its strategic directions, as well as in its political discourse
- Oversight and accountability: This theme reflects the country's evidence and prerequisites of following up on its equity commitment which can be assessed in terms of availability of information and the independence of its structure, capacities to use the information for monitoring and evaluation

- Participation. This theme is reflecting the engagement of the public and the civil society in the development policies in particular those pertaining to health

Sub-block 5.2 Policies: The policies sub-block reflects policy directions that aim to promote health and health equity, ensure fair social structures, target the socially disadvantaged groups. This sub-block is further sub-classified into

- Economic policies focus on indicators that reflect the economic policy directions adopted by the countries to ensure its commitment to equity, as well as the needed resources for health for all.
- Health Policies focus on adopting an equity lens and recognize the importance of health inequities and their social determinants
- Other social policies focus on ensuring the country's commitment to SDGs, equity and facilitating the adoption of health in all policies and inter sectoral action.

Sub-block 5.3 Cultural traditions and other societal forces. The indicators in this sub-block stress the societal forces that can affect the social structures in the country. Focusing on the gender as an illustration, the indicators in this sub-block covers country's commitment to women's right and addressing the negative gender norms for women and men, traditions and societal values through its legal frameworks, structures, and resource allocations.

Sub-block 5.4. Emergencies and Shocks The indicators in this sub-block highlights the country preparedness to respond to the negative health impact of the emergencies, external health risks, and shocks including climate change and epidemics exemplified by the COVID-19 pandemic.

It should be noted that the detailed list of indicators provided in this summary (February version) may be further reviewed and modified, if needed, based on the discussion of their relevance and practicality. This discussion is planned in a technical meeting to be conducted during March 2022. The list of indicators in provided in Part Two.

1.4 Proposing summary measures for the indicators

The use of indicators aims at alerting countries to the national challenges in health and social determinants to specify priorities. The indicators allow for the identification of population subgroups who

need special attention and guide national interventions. The key contribution of indicators would be to move the discourse from just detecting differences in health-related conditions between the various social stratifications to tangible inequalities in health that can be judged as unfair and unjust. Such information provides the healthcare system with the evidence to strengthen its stewardship role and advocate for health outside the health sector. This information, also is the foundation for steering an intersectoral action for health and well-being. The literature has illustrated two types of measurements, referred to in this report as horizontal and vertical measures, as summary measures for the indicators to provide comprehensive evidence for guiding policies and actions.

Measures to identify priority national challenges

The horizontal measure produces the overall national averages for health and the various determinants. The overall averages enable the assessment of health status, various factors in the proximate, intermediate and structural determinants, as well as the intervening forces. This information allows countries to assess the magnitude of ill-health and related individual risk factors, and identify the priority health-related conditions, and the responsiveness of the healthcare system to these priorities to guide the healthcare system programs. It, also, provides evidence on the magnitude of the contextual determinants and the intervening forces, thus alert countries to the needed sector-wise and community interventions from all systems including the healthcare system.

In addition, the overall national averages allow for assessing the social vulnerabilities within the national context to guide the social policies and interventions. Furthermore, they are used to describe the national structural forces to identify the need for action at the level of governance and policies. Most importantly, the overall averages from the full package of indicators allow countries to correlate ill-health to its different multilevel social determinants to point to the need for interventions to relieve ill-health and the social vulnerabilities.

Measures for assessing differences in health between the population subgroups

Another dimension of the horizontal measure is the disaggregation of the overall averages by various determinants to identify those most at risk of ill-health. The literature presents many disaggregation for the health impact, proximate determinates, and intervening forces. The SDG17.18 (UN, 2017) and the WHO-EMRO list (https://rho.emro.who.int/metadata-Registry) have spelled out clearly the disaggregation (income, sex, age, race, ethnicity, migratory status, disability and geographic location, or other characteristics) that should be used for all indicators. In addition, the SDGs and WHO-EMRO lists have

added an indicator-specific disaggregation (example type for cancer incidence in WHO-EMRO and key populations for SDG3.3.1 on HIV, …).

This disaggregation can be classified into two major types. The first type includes the biological risk factors (as sex, age, race, ethnicity, and other psychological) and the behavioral factors that expose people to higher risk of ill-health (example smoking, obesity, hypertension, …...). The second type of determinants includes both the contextual factors (household, community & city characteristics, public services, conditions at work and leisure) and the measures of social stratification (example income, gender, migratory status, disability status, literacy level, employment status, geographic location, …). A third type of disaggregation determinants specific for health is related to the healthcare system determinants. For example, maternal mortality ratio (MMR) might be disaggregated by place of delivery or the presence of skilled birth attendance, or neonatal mortality rate (NNMR) can be disaggregated by place of delivery.

The process of disaggregation is a step towards assessing the association between ill-health on one hand and proximate determinants and intervening factors on the other hand. The traditional measures of risk or association (relative risk, odds ratio, and attributable risk) are used to summarize the differences observed in the disaggregated indicators. This information is important to identify those at risk and to direct the interventions. The healthcare system is a key player among other systems to respond to the needs of those at higher risk through interventions to promote health, prevent diseases and provide the relevant curative care. High levels of these measures of risk by the social determinants indicate existence of associations between health and its determinants. These associations alert countries to the potential existence of inequalities in health across the various social groups. These information call for more investigation to understand if the inequalities in health are the outcome of individual risk factors that need interventions at this level or they reflect health inequities that result from the unfairness in the national context that requests interventions at the level of structural forces and intersectoral action for health and well-being.

Measures for moving the discourse from inequalities to inequities

The health inequities - the unfair and avoidable differences in the distribution of health-damaging experiences - are different from the mere differences in health status (CSDH, 2008). These differences have to be related to unfair structural forces that create differential social stratification which in turn leads to differential exposure and differential risk factors and eventually differences in health. Detection of health inequities calls for the presence of the relevant evidence for guiding actions at the level of the

structural forces The problem is that inequities in health are not measurable but can be judged from the existence of unfair systematic inequalities in health distribution.

The degree of the inequality in health distribution can be detected by providing evidence on the divergence of the distribution of ill- health or its proximate determinants across a specific social structure from the distribution of the population across the same social structure. The traditionally used summary measures of risk whether relative (relative risk, odds ratio) or absolute (attributable risk),referred to as simple gap measures, have been extensively criticized for their inability to assess the inequalities in health as they do not provide a measure of magnitude for ranking health inequality priorities, they also do not allow for comparisons between countries or overtime to monitor national progress towards promoting health equity (WHO, 2013; Public Health Ontario, 2013). Most importantly, they do not rely on comparing distributions.

Measuring inequalities in the distribution health entails the identification of the appropriate social stratification that captures the difference in the population experience and use of the relevant inequality distribution summary measure. With regard to the identification of the appropriate social stratification, the adopted SDHI framework used in the current report proposed three social structures – spatial context, social class and culturally constructed context. The literature and previous SRC research showed that geographic/administrative location, wealth index and the gendered-context index are relevant proxy measures for these three key social structures to capture health inequalities and inequalities in public service irresponsiveness.

For the choice of the relevant inequality distribution measures, the literature provides distribution measures to assess health inequalities (Wagstaff, Paci, van Doorslaer, 1991; Koolman, van Doorslaer, 2004 ; Asad, 2005; Braveman, 2006; O'Donnell, van Doorslaer, Wagstaff et al, 2008; Pampalon, Hamel, Gamache, 2009; Spinakis, Anastasiou, Panousis, 2011; Spinakis, Anastasiou, Panousis et al 2011; WHO, 2013; Public Health Ontario, 2013; Chee, Pielemeier, Lion et al, 2013; Guerra, Borde, Salgado de Snyder, 2016;Cash-Gibson, Rojas-Gualdrón, Pericàs et al, 2018; Dover and Belon, 2019). However, previous SRC research (Shawky, 2018; Rashad, Shawky, Khadr 2019; Shawky, Rashad, Khadr 2019; Khadr, Rashad, Shawky, 2019) showed that the index of dissimilarity expressed in percentage (ID%) for the non-ordered social stratifiers (such as geographic location) and the concentration index redistribution need expressed in percentage (rCI%) for the ordered stratifiers (such as the wealth and the gendered-context) are most relevant for assessing inequalities. Comparing measure of inequality, Shawky (2019) proved that both the index of dissimilarity (ID%) and concentration index (CI) for ordered stratifiers respect

the population distribution and their values represent the deviation from equality. Additionally, for the ID%, its value expresses the amount of redistribution required to reach an equal distribution in the population, while CI offers graphical presentation through concentration curve and enables the identification of the direction for the inequality and in turn identifying the disadvantaged social groups. Moreover, the CI can be decomposed to show the magnitude of the contribution of the inequalities in the various determinants of ill health to inequality in ill health (decomposition of CI) Furthermore, the values of its redistribution need measure (rCI%), which is the absolute value of the CI multiplied by 0.75, is highly correlated to the values of the ID% and thus both can be used on different types of data (non-ordered and ordered) to assess inequalities in health and identify the socially vulnerable strata. Another advantage is that a cut off point ≥ 10% for both measures can be used to mark the priority health inequalities (Koolman, van Doorslaer, 2004), thus help countries identify priority health inequalities.

The combination of relevant social structure measures and the inequality summary measures can help in moving the discourse from just inequalities in the distribution of health to the judgment of the fairness/unfairness of these inequalities and of the structural forces shaping them. In the current report, the three proposed social structures succeed in relating health related inequality to the important the upstream forces. Inequalities by the spatial context allows the judgement of the country's success/failure in fairly distributing its resources and services across its different locations. Inequalities by social class enables the judgements of fairness/unfairness of the package of social policies. Cultured context inequalities illustrates the country's success/failure to confront the risk related to negative culture norms and beliefs. Furthermore, inequality in intervening forces in particular the national systems including the healthcare system by the social structures allows for identifying the level of responsiveness of the systems to the different needs and still expresses the root upstream forces. This information can assist in promoting and strengthening the stewardship role of the healthcare system in advocating for health outside the health sector and the needed intersectoral policies and action to achieve health and health equity.

Part Two: List of indicators and measures

The following tables (Tables 1-7) are intended to provide the package of indicators organized over the indicator domains of the SDHI framework.

The indicators provided in the following tables (excluding Table 7) are requested to be disaggregated and distributed by relevant characteristics and measures of social stratification in the country.

The key message guiding a country choice of the package of indicators, to support monitoring health inequities, is that countries need to adhere to the following guidelines to:

1- Choose representative indicators within each of the multi-level domains specified in the framework to allow the investigation of health and health inequalities and their determinants, as well as the identification of entry points for action.

2- Add any missing indicators that are particularly relevant for the health challenges, and multilevel social pathways of influence including key interventions and policies.

3- Include in the measurement of indicators, the contextually relevant disaggregation – whether risk factors or social factors that allow for capturing those most at risk of ill-health.

4- Add to the list of indicators a summary measure of inequality (ID% and/or rCI%) that adequality captures the degree of health inequality linked to the social structure assessed by spatial, class and power stratifications.

5- Include within the domain of the structural forces, the indicators that capture the upstream drivers responsible for shaping the social structures, as well as allow the investigation of the fairness of services and interventions in catering for the differentiated health needs of different groups within the social structure.

IMPORTANT NOTE:

ALL THE INDICATORS TO BE DISAGGREGATED BY ALL RELEVANT DETERMINANTS AS WELL AS CLASSIFIED BY KEY SOCIAL STRUCTURES. RECOMMENDED INEQUALITY SUMMARY MEASURES: INDEX OF DISSIMILARITY (ID%) FOR GEOGRAPHIC LOCATION AND CONCENTRATION INDEX REDISTRIBUTION NEED (rCI%) FOR WEALTH AND GENDER INDICES.

Table 1: Indicators of health impact

	Indicator	Commitment	
		Source	Disaggregation
	Survival		
	Life expectancy		
1.	Life expectancy at birth	EMRO	Sex
2.	Life expectancy at age 60		
	Healthy life expectancy		
3.	Healthy life expectancy at birth		
4.	Healthy life expectancy at age 60		
	Mortality		
	Adult mortality		
5.	Adult mortality rate between 15-60 years	EMRO	
	Reproductive and child health-related mortality		
6.	Maternal mortality ratio	SDG3.1.1, EMRO	
7.	Perinatal mortality rate		
8.	Neonatal mortality rate	SDG3.2.2, EMRO	
9.	Infant mortality rate	EMRO	
10.	Under Five mortality rate	SDG3.2.1, EMRO	
	NCDs		
11.	Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease between 30-70 years of age	SDG3.4.1, EMRO	
	Mental health		
12.	Suicide mortality rate	SDG3.4.2	
	Communicable diseases		
13.	COVID-19 deaths per 100 detected cases in same time period		
14.	COVID-19 deaths per 1M population		
	Injuries		
15.	Death rate due to road traffic injuries	SDG3.6.1	
16.	Mortality rate attributed to unintentional poisoning	SDG3.9.3	
17.	Number of victims of intentional homicide per 100,000 population	SDG16.1.1	Sex, age
18.	Frequency rates of fatal and non-fatal occupational injuries	SDG8.8.1	Sex, migrant status
19.	Number of deaths, missing persons and directly affected persons attributed to disasters per 100 000 population	SDG1.5.1, SDG11.5.1, SDG13.1.1	
20.	Conflict-related deaths per 100,000 population	SDG16.1.2	Sex, age and cause

21.	Number of people who died or disappeared in the process of migration towards an international destination	SDG10.7.3	
	Environmental factors		
22.	Mortality rate attributed to household and ambient air pollution	SDG3.9.1, EMRO	
23.	Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (WASH) services	SDG3.9.2, EMRO	
	Morbidity		
	Sexual and reproductive health		
24.	Percent of women in reproductive age (15-49) at risk of pregnancy who report trying for a pregnancy for two years or more		
25.	Hepatitis B incidence per 100,000	SDG3.3.4, EMRO	
26.	Hepatitis B prevalence per 100,000		
27.	STIs prevalence (%)		
28.	Percent of men aged (15-49) interviewed in a community survey reporting episodes of urethritis in the last 12 months		
29.	Estimated number of new HIV infections	EMRO	
30.	Number of newly reported HIV cases	EMRO	
31.	Number of new HIV infections per 1,000 uninfected population	SDG3.3.1	Sex, age, key populations
32.	Prevalence of HIV, percent of population		
33.	Percent of COVID-19 cases in pregnant women		
	NCDs		
34.	Cancer incidence per 100,000 population	EMRO	type of cancer
35.	Cancer prevalence		
	Communicable diseases		
36.	Tuberculosis incidence per 100,000	SDG3.3.2	
37.	Tuberculosis notification rate	EMRO	
38.	Malaria incidence rate per 1,000	SDG3.3.3, EMRO	
39.	Hepatitis C prevalence per 100,000		
40.	Incidence of measles cases	EMRO	
41.	Number of COVID-19 infections		
42.	Annual incidence of COVID-19		
43.	Percentage of bloodstream infections due to selected antimicrobial-resistant organisms	SDG3.d.2	
	Disability		
44.	Disabled, percentage of total population		
45.	Frequency rates of non-fatal occupational injuries	SDG8.8.1	Sex and migrant status

Table 2: Individual related risk factors and/or proxies for ill health

	Indicator	Commitment	
		Source	Disaggregation
	Psychological		
	Violence/sexual factors		
1.	Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months	SDG5.2.	Form of violence, age
2.	Proportion of women and girls aged 15 years and older subjected to sexual violence by persons other than an intimate partner in the previous 12 months	SDG5.2.2	Age, place of occurrence
3.	Proportion of population subjected to physical, psychological or sexual violence in the previous 12 months	SDG16.1.3, SDG11.7.2	sex, age, disability status, place of occurrence
4.	Proportion of young women and men aged 18-29 years who experienced sexual violence by age 18	SDG16.2.3	
5.	Number of victims of human trafficking per 100,000 population	SDG16.2.2	Sex, age and form of exploitation)
6.	Proportion of children 1-17 years who experienced any physical punishment and/or psychological aggression by caregivers in the past month	SDG16.2.1	
	Behavioral		
	Sexual and reproductive health-related		
7.	Proportion of consanguineous marriage among married women		
8.	Proportion of multiparity (5+ children per ever married women)		
9.	Adolescent birth rate per 1,000 women in that age group	SDG3.7.2, EMRO	Aged 10-14 years; aged 15-19 years
10.	Proportion of women aged 20-24 years who were married or in a union before the age of 18	SDG5.3.1 (before age 15 and before age 18)	Before age 15 and before age 18
11.	Proportion of girls and women aged 15-49 years who have undergone female genital mutilation/cutting	SDG5.3.2	Age
	Others		
12.	Exclusive breastfeeding, rate 0-5 months of age	EMRO	
13.	Insufficient physical activity (13-18years)	EMRO	
14.	Prevalence of insufficient physical activity (18+years)	EMRO	
15.	Tobacco use among persons 13-15 years	EMRO	
16.	Tobacco use among persons 15+ years	EMRO	
17.	Age-standardized prevalence of current tobacco use among persons aged 15years and older	SDG3.a.1	
18.	Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol	SDG3.5.2	
	Nutritional		
19.	Prevalence of undernourishment in infants	SDG2.1.1	
20.	Prevalence of stunting (height for age <-2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age	SDG2.2.1, EMRO	
21.	Prevalence of malnutrition (weight for height >+2 or <-2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age	SDG2.2.2, EMRO	Type wasting, overweight
22.	Overweight and obesity in adolescents (13-18years)	EMRO	
23.	Prevalence of undernourishment	SDG2.1.1	
24.	Overweight and obesity in adults (18+ years)	EMRO	
	Biological		
25.	Low birthweight among newborns		
26.	Premature birth		
27.	Proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial well-being	SDG4.2.1	Sex
28.	Prevalence of anaemia in women aged 15 to 49 years (percentage)	SDG2.2.3, EMRO	Pregnancy status

29.	Raised blood pressure among adults (18+ years)	EMRO	
30.	Prevalence of hypertension among pregnant women		
31.	Raised blood glucose among adults (18+ years)	EMRO	
32.	Raised blood glucose among pregnant women		

Table 3: Indicators for the contextual risk factors

	Indicator	Commitment	
		Source	Disaggregation
	Household, Community and City Characteristics		
	Household and community characteristics		
1.	Percentage of population using an improved drinking water source	SDG6.1.1, EMRO	
2.	Proportion of population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water	SDG6.2.1, EMRO	
3.	Proportion of population living in households with access to basic services	SDG1.4.1	
4.	Proportion of population with access to electricity	SDG7.1.1	
5.	Proportion of population with primary reliance on clean fuels and technology	SDG7.1.2	
6.	Proportion of individuals who own a mobile telephone	SDG5.b.1 (sex)	
7.	Proportion of individuals using the Internet	SDG17.8.1	
8.	Proportion of urban population living in slums, informal settlements or inadequate housing	SDG11.1.1	
9.	Proportion of population living in inadequate housing	Proposed	
10.	Average share of the built-up area of cities that is open space for public use for all	SDG11.7.1 (	Sex, age, persons with disabilities
11.	CO2 emission per unit of value added	SDG9.4.1	
12.	Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)	SDG11.6.2	
	Public services		
13.	Proportion of youth (aged 15-24 years) not in education, employment or training	SDG8.6.1	
14.	Proportion of population that has convenient access to public transport	SDG11.2.1	Sex, age, persons with disabilities
15.	Proportion of the population that feel safe walking alone around the area they live	SDG16.1.4	
16.	Proportion of the population covered by a mobile network	SDG9.c.1	Technology
	Conditions at work and leisure		
	Work conditions		
17.	Proportion of the working age population seeking work and not employed		
18.	Proportion of the population who have more than one job		
19.	Proportion of the population who are under constant time pressure due to a heavy workload		
20.	Proportion of the population who have poor job promotion or prospects for job advancement		
21.	Proportion of working people in the informal sector	Proposed	
	Leisure		
22.	Proportion of the population who have participated in any cultural or sport activities in the last 12 months		

Table 4: Healthcare system's indicators

	Indicator	Commitment	
		Source	Disaggregation
	Performance		
	Health care		
1.	Coverage of essential health services	SDG3.8.1, EMRO	
2.	Proportion of population unable to obtain needed healthcare	Proposed	Reason
3.	Proportion of population experiencing low quality services or medical malpractice	Proposed	
	Immunization		
4.	DTP3/Pentavalent immunization coverage rate, percent of one-year-old children	EMRO	
5.	Measles vaccination coverage rate (MCV1)	EMRO	
6.	Proportion of girls aged 12 years covered by HPV		
7.	Proportion of target population covered by COVID-19 vaccine		
8.	Proportion of the target population covered by all vaccines included in their national programme	SDG3.b.1, SDG3.8.1	
	Child health care		
9.	Children under 5 with diarrhea receiving oral rehydration therapy	EMRO	
10.	Percent distribution of last birth in the 2 years preceding the survey who did not receive postnatal checkup in the first 2 days after birth		
	Sexual and reproductive health		
11.	Total fertility rate	EMRO	
12.	Proportion of women in reproductive age (aged 15-49 years) who have their need of family planning satisfied with modern methods	SDG3.7.1	
13.	Proportion of women aged 15-49 years who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care	SDG5.6.1	
14.	Contraceptive prevalence, percentage of women age group 15-49		
15.	Demand for family planning satisfied by modern methods	EMRO	
16.	Antenatal care coverage (1+, 4+)	EMRO	
17.	Proportion of births attended by skilled health personnel, percent of total	SDG3.1.2, EMRO	
18.	Proportion of cesarean section deliveries from all deliveries		
19.	Proportion of infants born by cesarean section from all newborns		
20.	Proportion of multiple births (by number of newborns) from all born infants		
21.	Women aged 15-49years in 2 years preceding the survey with no postnatal checkup till 40 days after giving birth		
22.	Comprehensive knowledge of HIV/AIDs		
23.	Antiretrovitral therapy (ART) coverage	EMRO	
24.	Percentage of key populations at who have received an HiV test in the past 12 months and know their results		
	Mental healthcare		
25.	Coverage of service for severe mental health disorders	EMRO	
26.	Coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders	SDG3.5.1	Type of :interventions: (pharmacological, psychosocial and rehabilitation and aftercare services
	Communicable disease		
27.	Tuberculosis treatment success rate	EMRO	
28.	Tuberculosis notification rate	EMRO	
29.	Percentage of suspected malaria cases that have had a diagnostic test	EMRO	
30.	Percentage of population sleeping under insecticide-treated bed nets (ITN)	EMRO	
31.	Percentage of bloodstream infections due to selected antimicrobial-resistant organisms	SDG3.d.2	

	Surgical healthcare		
32.	Surgical wound infection rate	EMRO	
	Tropical disease		
33.	Number of people requiring interventions against neglected tropical diseases	SDG3.3.5, EMRO	
	Capacity		
	Service delivery		
34.	Hospital bed density	EMRO	
35.	Density of primary healthcare facilities (public and private sectors)	EMRO	
36.	Annual number of outpatient department visits per capita	EMRO	
	Health workforce		
37.	Health worker density and distribution	SDG3.c.1, EMRO	
38.	Density of recent graduates or registered health profession educational institutions	EMRO	
	Health information		
39.	Proportion of children under 5 years of age whose births have been registered with a civil authority	SDG16.9.1, EMRO	Age
40.	Death registration coverage	EMRO	Age, sex
	Medical products vaccines and technologies		
41.	Proportion of health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis	SDG3.b.3, EMRO	
42.	Availability of six selected medical devices	EMRO	
	Financing		
43.	Current health expenditure per capita (current US$)	EMRO	
44.	Current health expenditure per capita, PPP (current international $)		
45.	Out-of-pocket expenditure as % of total health expenditure	EMRO	
46.	Population with catastrophic health expenditure	EMRO	
47.	Proportion of population with large household expenditures on health as a share of total household expenditure or income	SDG3.8.2, EMRO	
	Governance		
48.	Structured resources and capacity to monitor health and health equity	Proposed	
49.	Existence of an up-to-date evidence-based national health strategies linked to priority health and health inequality challenges (SRH, NCDs, Communicable diseases, mental health, ….)	Proposed	
50.	Structure, strategies and plans for intersectoral action	Proposed	
51.	Engagement in intersectoral actions influencing health and well-being led by other partners	Proposed	
52.	Total net official development assistance to medical research and basic health sectors	SDG3.b.2	
53.	International Health Regulations (IHR) core capacity and health emergency preparedness	SDG3.d.1, EMRO	
54.	Existence and year of last update of a published national medicines policy		
55.	Existence of policies on medicines procurement that specify the most cost-effective medicines in the right quantities; open, competitive bidding of suppliers of quality products		
56.	Existence of key health sector documents that are disseminated regularly (such as budget documents, annual performance reviews and health indicators)		
57.	Existence of mechanisms, such as surveys, for obtaining opportune client input on appropriate, timely and effective access to health services		

Table 5: Indicators for the intervening forces other than the healthcare system

	Indicator	Commitment	
		Source	Disaggregation
	National systems other than the health systems		
	Education		
1.	Proportion of children and young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics	SDG4.1.1	Sex
2.	Net primary school enrolment	EMRO	
3.	Participation rate in organized learning (one year before the official primary entry age)	SDG4.2.2	Sex
4.	Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months	SDG4.3.1	Sex
5.	Proportion of youth (aged 15–24 years) not in education, employment or training	SDG8.6.1, EMRO	
6.	Proportion of schools offering basic services	SDG4.a.1	Type of service
7.	Proportion of teachers with the minimum required qualifications	SDG4.c.1 (educational level)	Educational level
	Labor		
8.	Average hourly earnings of female and male employees	SDG8.5.1	Sex, age, occupation, and persons with disabilities
9.	Proportion of informal employment in total employment	SDG8.3.1	Sector, sex
	Urban planning		
10.	Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal waste generated	SDG11.6.1	Cities
11.	Hazardous waste generated per capita and proportion of hazardous waste treated	SDG12.4.2	Type of treatment
	Transportation		
12.	Proportion of the rural population who live within 2 km of an all-season road	SDG9.1.1	
13.	Passenger and freight volumes	SDG9.1.2	Mode of transport
	Water and sanitation		
14.	Proportion of domestic and industrial wastewater flows safely treated	SDG6.3.1	
15.	Proportion of bodies of water with good ambient water quality	SDG6.3.2	
	Technology		
16.	Proportion of youth and adults with information and communications technology (ICT)	SDG4.4.1	Type of skills
	Enabling environment		
	Rights		
17.	Level of national compliance with labour rights (freedom of association and collective bargaining) based on International Labour Organization (ILO) textual sources and national legislation	SDG8.8.2	Sex and migrant status
18.	Proportion and number of children aged 5-17 years engaged in child labour	SDG8.7.1	Sex, age
	Social protection		
19.	Proportion of population covered by social protection floors/systems	SDG1.3.1	Sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims and the poor and the vulnerable
	Civil society engagement		
20.	Proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management	SDG6.b.1	
21.	Proportion of cities with a direct participation structure of civil society in urban planning and management that operate regularly and democratically	SDG11.3.2	
	Culture		

22.	Proportions of positions in national and local institutions, including (a) the legislatures; (b) the public service; and (c) the judiciary, compared to national distributions	SDG16.7.1	Sex, age, persons with disabilities and population groups
23.	Proportion of victims of violence in the previous 12 months who reported their victimization to competent authorities or other officially recognized conflict resolution mechanisms	SDG16.3.1	
	Social cohesion		
24.	Proportion of the population who live alone in a household		
25.	Proportion of population who receive any kind of help from a spouse/partner in the household or any family member (from outside the household) or any friend or neighbor		
26.	Proportion of population who rarely or never spend time with friends, colleagues or others		
27.	Proportion of the population engaged in volunteering work		

Table 6: Indicators of vulnerabilities within the social structures (spatial, class, cultural constructed context)

	Indicators of social vulnerabilities	Commitment	
		Source	Disaggregation (disaggregation)
	Spatial by wealth and gendered context		
1.	Proportion of population living in rural areas		
	Social class by geographic location and gendered context		
	Poverty		
2.	Proportion of population below the international poverty line	SDG1.1.1, EMRO	Sex, age, employment status and urban/rural
3.	Proportion of population living below the national poverty line	SDG1.2.1	Sex, age
4.	Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	SDG1.2.2	
5.	Proportion of people living below 50 per cent of median income	SDG10.2.1	Sex, age, persons with disabilities
	Education		
6.	Percentage of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills	SDG4.6.1	Sex
7.	Proportion of those who finished at least secondary education		
	Employment		
8.	Unemployment rate	SDG8.5.2	Sex, age, persons with disabilities
	Culturally constructed context by geographic location and wealth		
	Gendered context indicators		

Table 7: Indicators for the structural forces

	Indicator	Commitment Source
	Governance	
	Fairness and well-being as a measure of development and social success	
1.	Existence of national strategies and policies that adopt equity and the concept of wellbeing	Proposed
2.	Whether or not legal frameworks are in place to promote, enforce and monitor equality and non-discrimination on the basis of sex	SDG5.1.1
3.	Adoption of legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits	SDG15.6.1
4.	Proportion of government recurrent and capital spending to sectors that disproportionately benefit women, the poor and vulnerable groups	SDG1.b.1
5.	Proportion of population reporting having personally felt discriminated against or harassed in the previous 12 months on the basis of a ground of discrimination prohibited under international human rights law	SDG10.3.1
	Oversight and accountability	
6.	The country that have national statistical legislation that complies with the Fundamental Principles of Official Statistics	SDG17.18.2
7.	The country has a national statistical plan that is fully funded and under implementation, by source of funding	SDG17.18.3
8.	The country (a) has conducted at least one population and housing census in the last 10 years; and (b) has achieved 100 per cent birth registration and 80 per cent death registration	SDG17.19.2
9.	Proportion of sustainable development indicators produced at the national level with full disaggregation when relevant to the target, in accordance with the Fundamental Principles of Official Statistics	SDG17.18.1
10.	Research and development expenditure as a proportion of GDP	SDG9.5.1
11.	Researchers (in full-time equivalent) per million inhabitants	SDG9.5.2
12.	Country has dedicated monitoring system for health inequalities	
	Participation	
13.	Whether country has adopted and implemented constitutional, statutory and/or policy guarantees for public access to information	SDG16.10.2
14.	Whether the country has accountability mechanisms that support civil society engagement in health impact decisions	
15.	Whether mechanisms exist to engage communities and civil society in the policy development process across all sectors	
	Policies	
	Economic policies	
16.	GDP per capita	
17.	Proportion of resources allocated by the government directly to poverty reduction programmes	SDG1.a.1
18.	Total health expenditure as percentage of GDP	SDG1.a.2
19.	General government health expenditure (% of current health expenditure)	EMRO
20.	Domestic general government health expenditure (GGHE-D) as percentage of general government expenditure (GGE) (%)	EMRO
21.	Labour share of GDP, comprising wages and social protection transfers	SDG10.4.1
22.	Proportion of total government spending on essential services (education, health and social protection)	
23.	Total government spending in social protection and employment programmes as a proportion of the national budgets and GDP	SDG8.b.1
24.	Growth rates of household expenditure or income per capita among the bottom 40 per cent of the population and the total population	SDG10.1.1
	Health policies	
25.	Integration of social determinants of health in health strategy or policy	Proposed

26.	Integration of health equity in health strategy or policy	Proposed
27.	Existence of high level multisectoral health policy body	Proposed
28.	Adoption of universal health coverage	
	Social policies	
29.	Existence of a country's national commitment strategy and mechanism to achieve the SDGs	Proposed
30.	Existence of a health equity impact assessment for all policies	Proposed
31.	Existence of national commitment plan to integrate equity lens in policies	
32.	Existence of a mechanism to facilitate the health in all policies approach across sectors	Proposed
33.	Existence of structures and resources for intersectoral action	Proposed
34.	Existence of a system and mechanism for monitoring intersectoral action	Proposed
35.	Existence of a developed and operationalized national strategy for youth employment, as a distinct strategy or as part of a national employment strategy	SDG8.b.1
36.	Existence of national urban policies or regional development plans that (a) respond to population dynamics; (b) ensure balanced territorial development; and (c) increase local fiscal space	SDG11.a.1
37.	Existence of migration policies that facilitate orderly, safe, regular and responsible migration and mobility of people	SDG10.7.2
	Culture, traditions and societal forces (illustrated example gender)	
38.	Country's commitment to Convention on the Elimination of All Forms of Discrimination (CEDAW)	Proposed
39.	Proportion of seats held by women in (a) national parliaments and (b) local governments	SDG5.5.1
40.	Existence of laws and regulations that guarantee women aged 15-49 years access to sexual and reproductive health care, information and education	SDG5.6.2
41.	Existence of the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control	SDG5.a.2, EMRO
42.	Existence of laws and regulations that guarantee full and equal access to women and men aged 15 years and older to sexual and reproductive health care, information and education	SDG5.6.2, EMRO
43.	Existence of laws and regulations that forbids early age at marriage for both sexes	
44.	Existence of laws and regulations that forbids female genital cutting and mutilation	
45.	Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment	SDG4.7.1, SDG13.3.1
	Emergencies and shocks	
	Climate change	
46.	The country has communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)	SDG13.2.1
47.	Extent to which (i) global citizenship education and (ii) education for sustainable development (including climate change education) are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment (climate change)	SDG12.8.1
	Response to epidemics	
48.	Existence of an intersectoral strategy and plan for containment and mitigation of epidemics	Proposed

References

Ansari Z, Carson NJ, Ackland MJ, Vaughan L, Serraglio A (2003). A public health model of the social determinants of health. Soz Praventivmed. 2003;48(4): 242–51. Available from:. https://doi.org/10.1007/s00038-003-2052-4.

Asada Y. A framework for measuring health inequity (2005). J Epidemiol Community Health. 2005;59:700–705.

Braveman P (2006). Health disparities and health equity: concepts and measurement. Annu Rev Public Health. 2006;27: 167–194.

Cash-Gibson L, Rojas-Gualdrón DF, Pericàs JM, Benach J (2018). Inequalities in global health inequalities research: a 50-year bibliometric analysis (1966–2015). PLoS One. 2018;13:e0191901. https://doi.org/10.1371/journal.pone. 0191901.

Chee G, Pielemeier N, Lion A, Connor C (2013). Why differentiating between health system support and health system strengthening is needed. Int J Health Plann Mgmt. 2013;28: 85–94.

CSDH (2008). Closing the gap in a generation: health equity through action on the social determinants of health. Final Report of the Commission on Social Determinants of Health, Geneva, World Health Organization. Available at https://apps.who.int/iris/bitstream/handle/10665/43943/9789241563703_eng.pdf.

CSDH-EMR (2021). Build back fairer: achieving health equity in the Eastern Mediterranean Region. Report of the Commission on the Social Determinants of Health in the Eastern Mediterranean Region.

Dahlgren G. Whitehead M (1991). Policies and Strategies to Promote Social Equit in Health. Stockholm, Sweden: Institute for Futures Studies; 1991.

Diderichsen F, Evans T, Whitehead M. The social basis of disparities in health (2001). In: Evans T, editor. Challenging inequities in health: from ethics to action. New York: Oxford University Press; 2001. p. 12–23.

Dover DC and Belon AP (2019). The health equity measurement framework: a comprehensive model to measure social inequities in health. International Journal for Equity in Health 2019: 18:36. Available at https://doi.org/10.1186/s12939-019-0935-0

Fayet Y, Praud D, Fervers B, Ray-Coquard I, Bla JYy, Ducimetiere F, Fagherazzi G & Faure E (2020). Beyond the map: evidencing the spatial dimension of health inequalities.nInt J Health Geogr **19,** 46. https://doi.org/10.1186/s12942-020-00242-0

Galea S, Abdalla SM, Sturchio JL (2020). Social determinants of health, data science, and decision-making: Forging a transdisciplinary synthesis. PLOS Med. 2020;17(6):e1003174. doi:10.1371/journal.pmed.1003174.

Gómez CA, Kleinman DV, Pronk N, Wrenn Gordon GL, Ochiai E, Blakey C, Johnson A, Brewer KH (2021). Addressing Health Equity and Social Determinants of Health Through Healthy People 2030. J Public Health Manag Pract vol 27 (6): S249-S257, 2021. DOI 10.1097/PHH.0000000000001297

Gray AM. Inequalities in health (1982). The Black Report: a summary and comment. *Int J Health Serv Plan Adm Eval*. 1982;12(3):349-380. doi:10.2190/XXMM-JMQU-2A7Y-HX1E.

Guerra G, Borde E, Salgado de Snyder VN (2016). Measuring health inequities in low and middle income countries for the development of observatories on inequities and social determinants of health. Int J Equity Health 2016 Jan 19;15(1):9. Available from: https://doi.org/10.1186/s12939-016-0297-9.

Hosseinpoor AR, Bergen N and Schlotheuber A (2015). Promoting health equity: WHO health inequality monitoring at global and national levels. Glob Health Action 2015: 29034 . Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4576419/pdf/GHA-8-29034.pdf

The 3-D Commission (2021). The 3-D report: Data, social determinants, and better decision-making for health: The report of the 3-D Commission. Boston: 3-D Commission; 2021.

Khadr Z (2009). Monitoring socioeconomic inequity in maternal health indicators in Egypt: 1995-2005. Int J Equity Health. 2009 Nov 8;8:38. doi: 10.1186/1475-9276-8-38. PMID: 19895706; PMCID: PMC2781806.

Khadr, Z., Rashad, H., & Shawky. S (2019). Health Inequalities in Jordan and their Social Determinants: Evidence and Policy Implications." The Social Research Center of the American University in Cairo and the World Health Organization/ Jordan (2019). https://documents.aucegypt.edu/Docs/src/Jordan-health-equity.pdf

Khadr, Z. (2020). 3+ parity in Egypt: a multilevel decomposition of wealth-based inequality. BMC Public Health 20, 659 (2020). https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-020-08793-4

Koolman X, van Doorslaer E (2004). On the interpretation of a concentration index of inequality. Health Econ. 2004;13: 649–656.

Maani N, Abdalla SM, Galea S (2021). Avoiding a legacy of unequal non-communicable disease burden after the COVID-19 pandemic. Lancet Diabetes Endocrinol. 2021;9(3):133-135. doi:10.1016/S2213-8587(21)00026-7

Muntaner C, Lynch J, Oates G. The Social class determinants of income inequality and social cohesion. International Journal of Health Services, 1999, 20(4):699-732.

Oakes JM, Rossi PH (2003). The measurement of SES in health research: current practice and steps toward a new approach. Soc Sci Med. 2003;56(4):769–84.

O'Donnell O, van Doorslaer E, Wagstaff A, Lindelow M (2008). Analyzing Health Equity Using Household Survey Data: A Guide to Techniques and Their Implementation. Washington, DC: World Bank, 2008.

Olivia Biermann, Meggie Mwoka, Catherine K Ettman, Salma M Abdalla, Sherine Shawky, Jane Ambuko, Mark Pearson, Zahra Zeinali, Sandro Galea, Blessing Mberu, Laura Magaña Valladares (2021). Data, Social Determinants, and Better Decision-making for Health: the 3-D Commission. J Urban Health. 2021 Aug;98(Suppl 1):4-14. doi: 10.1007/s11524-021-00556-9. Epub 2021 Aug 19. PMID: 34414512 PMCID: PMC8376119 DOI: 10.1007/s11524-021-00556-9

Public Health Ontario (2013). Summary measures of socioeconomic inequalities in health. Ontario Agency for Health Protection and Promotion, Toronto, ON: Queen's Printer for Ontario; 2013. Available at https://www.publichealthontario.ca/-/media/documents/S/2013/socioeconomic-inequality-measures.pdf

Pampalon R, Hamel D, Gamache P (2009). A comparison of individual and area-based socio-economic data for monitoring social inequalities in health. Health Rep. 2009;20(4):85–94.

Phillips RL, Liaw W, Crampton P, Exeter DJ, Bazemore A, Vickery KD, Petterson S, and Carrozza M (2016). How Other Countries Use Deprivation Indices—And Why The United States Desperately Needs One. Health Affairs vol. 35, NO. 11: 1991–1998. doi: 10.1377/hlthaff.2016.0709 Available at https://www.healthaffairs.org/doi/pdf/10.1377/hlthaff.2016.0709.

Rashad H., Shawky S., Khadr Z., Sahbani S., Afifi M. (2019) Achieving Sexual and Reproductive Health Equity in the Arab Region: A New Role for the Health Sector. In: Laher I. (eds) Handbook of Healthcare in the Arab World. Springer, Cham. https://doi.org/10.1007/978-3-319-74365-3_156-1

Rashad, H., Shawky S., and Khadr Z. (2019) "Reproductive Health Equity in the Arab Region: Fairness and Social Success" Regional Study; The Social Research Center, The American University in Cairo, UNFPA/ASRO. https://documents.aucegypt.edu/Docs/src/Reproductive-Health-%20Equity-in-the-Arab-Region.pdf

Savigny, D., & Adam, T. (Eds.) (2009). Systems thinking for health systems strengthening. Alliance for health policy and systems research. Geneva, Switzerland: World Health Organization.

Scambler G. (2019). Sociology, Social Class, Health Inequalities, and the Avoidance of "Classism". Frontiers in sociology, 4, 56. https://doi.org/10.3389/fsoc.2019.00056

Shawky S (2018). Measuring Geographic and Wealth Inequalities in Health Distribution as Tools for Identifying Priority Health Inequalities and the Underprivileged Populations. Global Advances in Health and Medicine 2018: Volume 7: 1–10. Available at https://journals.sagepub.com/doi/pdf/10.1177/2164956118791955.

Shawky S, Rashad H, Khadr Z (2019). Reproductive Health Inequalities in Egypt: Evidence for Guiding Policies; The Social Research Center/The American University in Cairo, the United Nations Population Fund / Arab States Regional Office; 2019. https://documents.aucegypt.edu/Docs/src/Reproductive%20Health%20Inequalities%20in%20Egypt.pdf

Shawky S, Rashad HM, Khadr ZA, Sahbani S, Afifi MA (2020). A methodology for investigating and addressing sexual and reproductive health inequities in the sustainable development agenda. SDH. 2020;e25. DOI: http://dx.doi.org/10.22037/sdh.v6i1.33678

Solar O, Irwin A (2010). A Conceptual Framework for Action on the Social Determinants of Health: Social Determinants of Health Discussion Paper 2. Debates, Policy & Practice, Case Studies. Geneva: World Health Organization; 2010.

Spinakis A, Anastasiou G, Panousis V, Spiliopoulos K, Palaiologou S, Yfantopoulos J. (2011). Expert Review and Proposals for Measurement of Health Inequalities in the European Union—Summary Report. Luxembourg: European Commission Directorate General for Health and Consumers; 2011. ISBN 978-92-79-18529-8.

Tung EL, Cagney KA, Peek ME and Chin MH (2017). Spatial Context and Health Inequity: Reconfiguring Race, Place, and Poverty. J Urban Health. Dec; 94(6): 757–763. Published online 2017 Nov 13. doi: 10.1007/s11524-017-0210-x

The 3-D Commission (2021). The 3-D report: Data, social determinants, and better decision-making for health: The report of the 3-D Commission. Boston: 3-D Commission; 2021

UN (2017). Global indicator framework for the Sustainable Development Goals, Available at https://unstats.un.org/sdgs/indicators/Global%20Indicator%20Framework%20after%202021%20refinement_Eng.pdf

Valentine NB, Koller TS & Hosseinpoor AR (2016). Monitoring health determinants with an equity focus: a key role in addressing social determinants, universal health coverage, and advancing the 2030 sustainable development agenda. Global Health Action, 9:1, DOI: 10.3402/gha.v9.34247. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5165053/pdf/GHA-9-34247.pdf

Wagstaff A, Paci P, van Doorslaer E (1991). On the measurement of inequalities in health. Soc Sci Med. 1991;33(5):545–557.

WHO (2007). Everybody business : strengthening health systems to improve health outcomes : WHO's framework. Available at https://www.who.int/healthsystems/strategy/everybodys_business.pdf.

WHO (2009). Monitoring and evaluation of health systems strengthening An operational framework. Paper prepared by WHO (Ties Boerma and Carla Abou-Zahr), World Bank (Ed Bos), GAVI (Peter Hansen) and Global Fund (Eddie Addai and Daniel Low-Beer) as part of the joint work on health systems strengthening and IHP+ common evaluation framework

WHO (2010). Monitoring the building blocks of health systems: a handbook of indicators and their measurement strategies. Available at https://www.who.int/healthinfo/systems/WHO_MBHSS_2010_full_web.pdf

WHO (2011). Rio political declarations on social determinants of health. World Conference on Social Determinates of Health, Rio de Janeiro, Brazil, 19-21 October 2011

WHO (2012). Framework and standards for country health information systems, second edition. WHO and Health metrics network (HMN) second edition printed 2008 and reprinted 2012.

WHO (2013). Handbook on Health Inequality Monitoring with a special focus on low- and middle-income countries. World Health Organization 2013.poor

WHO (2016). Implementing Rio: Monitoring Action On The Social Determinants Of Health, Background Paper. Technical Meeting For Measuring And Monitoring Action On The Social Determinants Of Health, Ottawa, Canada: 20–22 June 2016.