



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

Executive Summary

This is the second phase of a collaborative effort between the Faculty of Health Sciences in The American University of Beirut (FSH-AUB) and the Social Research Center of the American University in Cairo (SRC-AUC) supported by the International Development Research Centre (IDRC) of Canada. 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 first phase developed three background papers that gave visibility to the need for a fair information system for health (ISH) capable of capturing the social inequalities in health to support informed public demand for just alternatives, monitoring and accountability.

Information system for health

- Goal:
 - Produce comprehensive data that health and non-health stakeholders can use for making transparent and evidence-based decisions for fair societies
- Role
 - 1) Measuring national averages;
 - 2) Linking the health outcomes through the lengthy pathway to the root structural causes;
 - 3) Assessing the likelihood of being at risk of ill-health;
 - 4) Illustrating the inequalities in ill-health and tracing them to the distribution of the social vulnerability
 - 5) Linking findings to policy and actions

This second phase builds on previous national, regional and global literature and specifically aims at reaching a core basket of national level indicators and inequality measure(s) that go beyond the disease and behavioral focus to incorporate data on the multilevel social determinants of health and inequalities in health. The methodology used in this document builds on an social determinants of health inequity (SDHI) framework to identify a core basket of indicators and inequality measures to monitor health and its inequalities and link them to their multilevel social determinants, as well as identify entry points for action.

The methodology **differentiates between assessing health and healthcare system on one side and assessing health equity and healthcare system equity on the other side**. The difference is reflected in making the distinction between two measurements for health. The first is the traditional horizontal measurement of assessing health priorities using national averages, as well as identifying those most at risk of ill-health through disaggregated data. This piece of information helps in producing nationwide actions with focus on responding to the needs of those

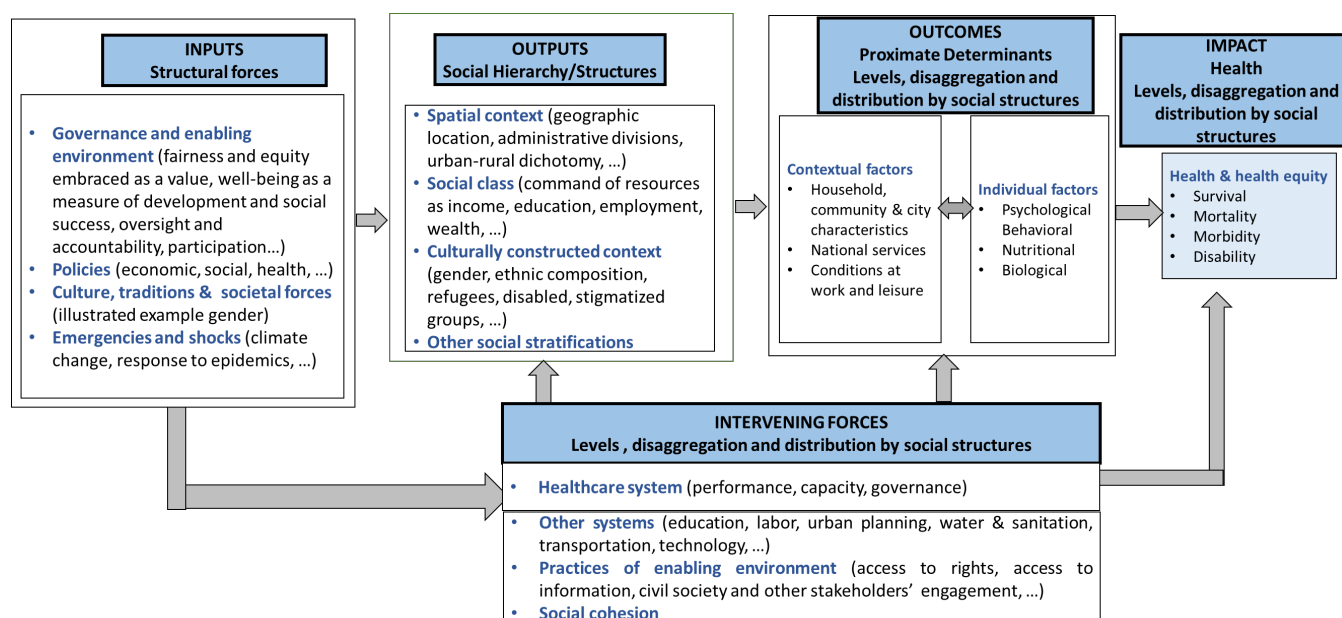
most at risk of ill-health (whether biological, psychological, behavioral or social). The second is a one step further vertical measurement for assessing the social risk through comparing the distribution of health across social stratifications with the distribution of the population across the same social stratifications to identify the priority health inequalities and the socially vulnerable. This complementary information help in linking the inequalities in health to the fairness of the upstream forces. It alerts countries to the need for policies and actions to overcome the discrepancies in life course exposures that reflect the inequalities in health and are influenced by the production of vulnerable social arrangements as an outcome of the national governance and policies.

Social determinants of health inequity framework

Arab countries need to build an ISH. This system will be capable of responding to the regional commitments and encompassing a core list of health and social indicators, paying special attention to data disaggregation and inequality measures.

To build such ISH, an SDHI framework founded on the Commission of the Social Determinants of Health (CSDH) framework is used to build comprehensive data base. The SDHI framework incorporates the World Health Organization Health Systems Strengthening Monitoring (WHO-HSS) framework and the WHO building blocks framework for monitoring. It appreciates the role of all national systems including the healthcare system. The SDHI serves as a seven-block monitoring framework to identify and organize the core package of indicators from health impact to structural root causes and portrait the interlinkages between them, as well as allow for data disaggregation. It also suggests social stratification and inequality measures to assess inequalities in health and move the discourse to assess the fairness of the upstream forms that shape the national context.

Social determinants of health inequities framework



Organizing indicators

The literature and available data sources provide wealth of information on indicators that can be used and organized on the SDHI framework to measure health and its broad social determinants. A core list of indicators organized over the seven blocks of the SDHI were identified to cover the health outcomes and the multilevel social determinants. Many of these indicators are available in Arab countries. However, many others are not available or not considered as national level information in Arab countries for several reasons. First, they may not be relevant to national context and thus are not collected. Second, they are not among the regional commitment and thus are missed from national level data. Third, they are not produced as in the standard recommended calculation, thus are not used. Fourth, they represent composite indices that are difficult to compile or calculate. Fifth, the lack of technical skills may hinder the production of such indicators. Sixth, the indicators may be part of public sector statistics that is not shared. Lastly, many of the indicators on the social determinants are not part of the health-related information.

Proposing summary measures for the indicators

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 as follows:

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. 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.

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. This disaggregation can be classified into three major types. The first type includes the risk factors that expose people to higher risk of ill-health. The second type of determinants includes both the contextual factors and the measures of social stratification. A third type of disaggregation determinants specific for health is related to the healthcare system determinants. 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. 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 social determinants. These associations alert countries to the potential existence of inequalities in health across the various social groups and . 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.

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). 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. Measuring inequalities in the distribution health entails the identification of the appropriate social stratification and inequality measure. The SDHI framework proposes 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. 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. 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. 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.

Organization of this report

The report starts with the introduction followed by the following parts

<p>1. Social Determinants of Health Inequity Framework</p>	<ul style="list-style-type: none">• Provides a visual depiction of the interlinkages between health and the multilevel social determinants• Stresses the importance of all systems not only the healthcare system• Adds a conceptual framing for monitoring the healthcare system that can be applied to other systems.• Facilitates the selection and organization of the kind of data needed to trace health through the breadth of multilevel social determinants• Provides clear emphasis on the need for applying an equity lens in the produced evidence to inform policies• Is linked to action and highlights the importance of comprehensive data to identify the entry points for action
<p>2 Organizing Indicators</p>	<ul style="list-style-type: none">• Assembling indicators available in literature, as well as in national and international data sources• Reviewing and standardizing the assembled indicators• Eliminating redundancies and preparing a full list• Developing themes for organizing the indicators over the full breadth of the social determinants of health inequity framework• Identifying gaps and proposing new indicators
<p>3. Proposing Summary Measures for the Indicators</p>	<ul style="list-style-type: none">• Calculate overall national averages to assess the magnitude of the health-related conditions, monitor public systems including the healthcare system, identify the social vulnerabilities and describe the national governance and policies.• Produce disaggregated data to identify those at higher risk of ill-health and recognize those not covered by the healthcare system• Compute distribution inequality measures to assess the magnitude of inequalities in the distribution of health and its risk factors and identifying the priority inequalities, linking these to the uneven distribution of the health interventions, the contextual factors and other public interventions to the upstream forces shaping them
<p>4. Key Messages</p>	<ul style="list-style-type: none">• The list of indicators 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• Each country should choose the package of indicators and measures relevant to its

Introduction

This is the second phase of a collaborative project between the Faculty of Health Sciences in The American University of Beirut (FSH-AUB), the Social Research Center of The American University in Cairo (SRC-AUC) supported by the International Development Research Centre (IDRC) of Canada. 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 in 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 & Schlottheuber, 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 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 health 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 report provides a description of the approach and suggested indicators and measures. Part One: presents the conceptual thinking, methodology and conceptual framing. Part Two speaks to the first step in the operationalization of the multilevel SDHI conceptual framework. It assigns and organize the indicators to the multilevel SDHI framework . Part Three: speaks to the second step in the operationalization of the SDHI framework to identify the summary measures for the indicators and the Part Four which summarizes the key messages

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: Social determinants of health inequity framework

This part aims at developing a framework that can better guide in identifying the data needed for policy decision making. The first section explains the rationale behind the approach. The section describes the methodology. The third section presents the steps for developing the SDHI conceptual framework, while the last section illustrates its added value.

I.1 Rationale

Health has always been valued as a right for everyone and a social goal. This has been engrained in the heritages of science and knowledge since ancient times. Since the early 1940s, the value of health was clearly articulated in the WHO constitution and definition of health, as well as the Universal Declaration of Human Rights. The Alma-Ata declaration, in 1978, and the human development concepts, thereafter, have stressed on a holistic vision for health and well-being. Since then, numerous global, regional and national landmarks acknowledged the social factors as root causes of ill health and health inequities. The Millennium Development Goals (MDGs) and the Commission of the Social Determinants of Health report (CSDH, 2008) came as commitment to help the nations achieve better health and well-being. This commitment was clearly articulated in the 2030 agenda to achieve “*The Future We Want*”, “*Leaving No One Behind*” (UN, 2015).

It is evident that health in the new global era is no more the business of the health sector alone (CSDH, 2008). It is a shared responsibility of the government and society. To address ill-health there is a need for full-fledged data to monitor the national success to further guide the national policies and programs. Such data cannot pertain anymore to data collected to serve the current goal of the HIS which is “**the production of quality data that health system stakeholders can use for making transparent and evidence-based health system interventions**” (WHO, 2012). As explained in the background paper “**Setting the Stage for an Information System for Health**” in the first phase of this project, the HIS goal clearly faces two key bottle necks. First, it does not take in account the stewardship role of the health systems and national responsibility to improve health and wellbeing for all citizens. Progress in population health cannot depend on a single sector and requires scientific understanding of the role of the multilevel SDH (CSDH, 2008; Galea , Abdalla, Sturchio, 2020; CSDH-EMR, 2021; 3-D Commission, 2021). Actions to improve health and promote health equity mostly fall outside the health sector. Second, it ignores that for measuring health, it is imperative to consider the two dimensions of health which are 1) the likelihood of being more at risk of ill-health; and 2) the uneven distribution of ill-health among certain social groups.

To move forward there is a need for redefining the goal and role of the information system and moving the discourse from HIS to “ISH” with a more inclusive goal and role for the production of comprehensive data for guiding the full package of policies and actions as in the box below:

<p>Information system for health</p> <ul style="list-style-type: none">• Goal:<ul style="list-style-type: none">• Produce comprehensive data that health and non-health stakeholders can use for making transparent and evidence-based decisions for fair societies• Role<ol style="list-style-type: none">1) Measuring national averages;2) Linking the health outcomes through the lengthy pathway to the root structural causes;3) Assessing the likelihood of being at risk of ill-health;4) Illustrating the inequalities in ill-health and tracing them to the distribution of the social vulnerability5) Linking findings to policy and actions
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Thus, this methodology looked for a conceptual framework that can produce the data to better inform policies and interventions within and outside the health sector. A wealth of guiding frameworks describing the wide variety of social mechanisms affecting health are available in the literature . (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). The SDH framework (CSDH, 2008) is used in this document and similar recent studies (Rashad, Shawky, Khadr, 2019; Shawky, Rashad, Khadr, 2019; Shawky, Rashad, Khadr, 2020; CSDH-EMR, 2021; 2-D Commission, 2021) as the foundation in conceptualizing health and inequity in health

1.2. Methodology for conceptualizing health and its social determinants

This methodology builds on previous SRC work to conceptualize and develop a comprehensive practical methodology to monitor SRH and its multilevel social determinants, as well as apply an equity lens to guide policies and actions (Rashad, Shawky, Khadr, 2019; Shawky, Rashad, Khadr, 2019; Shawky, Rashad, Khadr, 2020). The approach presented in following section aims at expanding the methodology to all health aspects and provide a clear pathway to assign indicators and inequality measures. The methodology followed five steps.

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.

The second step was synthesis of the compiled literature to identify 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.

The third step was building concrete blocks starting from health impact along the full breadth of multilevel SDHI framework to allow for identifying and organizing a core list of indicators.

The fourth step was internal meetings at SRC to discuss the conceptual framing and capture the health-related multilevel social determinants relevant to Arab countries as an initial preparatory step.

The fifth step was the production of a draft report that was discussed during a consultation meeting with the advisory group, as well as during the 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 World Health Organization Eastern Mediterranean Regional Office (WHO-EMRO) and SRC-AUC in November 21-25, 2021.

I.3. Operationalizing the social determinants of health inequity framework

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 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.

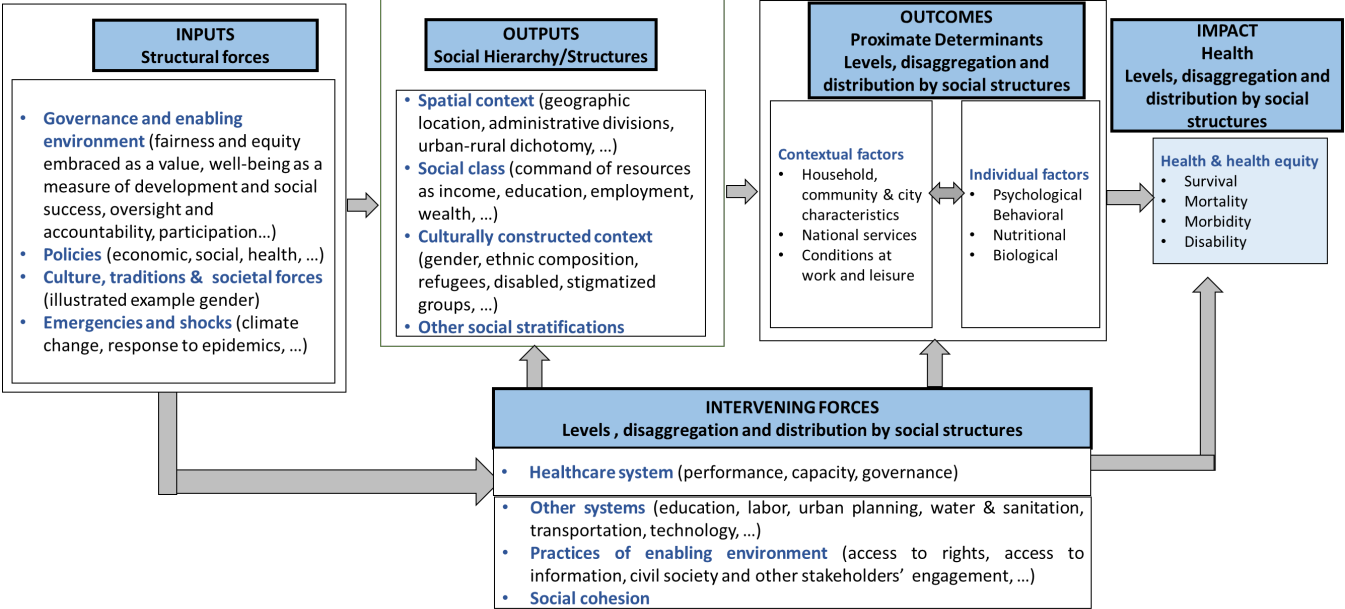
The SDHI framework introduces a new block termed intervening forces which are a product of the structural forces. This block emphasizes that the healthcare system and other intervening forces (other systems, enabling environment and social cohesion) have three paths of influence on health and health 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; WHO, 2010)



I.4. The added value of the adopted social determinants of health inequity framework

The SDHI conceptual framework provides conceptual thinking describing and explaining relationships between health outcomes and their social determinants. It provides a clear visual depiction of the interlinkages between health and the multilevel social determinants. It stresses on the importance of all systems not only the healthcare system. It further adds a conceptual framing for monitoring the healthcare system.

The blocks provide seven domains for selecting and organizing the indicators through the breadth of multilevel social determinants, as well as building interlinkages between them. It allows for linking the differences in the socioeconomic groupings with the differences in health conditions in both the impact and outcomes. It also traces these differences to their structural causes shaping the social stratification and influencing the vulnerable exposures

The social arrangements (Block 6) provide a foundation for producing inequality summary measures to complement the evidence produced for better policies. Such measures allow for linking the unequal distribution of the socioeconomic groupings with the unequal distribution of ill-health. It also traces the inequalities to the structural causes shaping the social stratification, influencing the vulnerable exposures and the intervening forces to manifest as inequalities in health.

The SDHI framework helps in moving the discourse from inequalities in health to inequities in health. It shifts the policy focus from changing risky behaviors and improving socioeconomic living conditions to recognizing the need to address the structural determinants with their own pathway of influence on the distribution of vulnerable exposures and health. It is linked to policy actions and portrays the various entry points.

In nutshell, the SDHI framework provides a reasonable portrayal of the broad health framing as reflected in the new global thinking. It allows for identifying the core basket of national level indicators, as well as measuring health inequalities among the different social arrangements whether among or within countries to produce integrated policies and actions.

Part Two: Proposing list of indicators

This part aims at proposing an organized list of social and health indicators throughout the full breadth of the SDHI framework. The first section of this part describes the rationale behind this part. The second section describes the methodology used to propose the list of health and social indicators. The third section speaks to the identification and organization of the full list of indicators to build linkages between health outcomes and multilevel social determinants.

II.1. Rationale

The information system is a very complex multicomponent system. The aim of this section is to determine which national level indicators should be used and the potential knowledge they produce. Building on the understanding that the context in which people live influence health suggests that more comprehensive package of indicators is needed to guide the opportunities for better policies and interventions. Improving people's health requires more than health and individual related indicators but rather more conceptualized list covering the full breadth of the multilevel SDHI framework.

II.2. Methodology for proposing a full list of indicators

The search looked for key international data sources where health and health inequality-related indicators are compiled (Table 1). 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 (Table 2). The indicators in the various national data sources published and accessible on the internet were compiled.

All 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 are explained below and summary measures will be further explained in Part Three.

Table 1: International data sources

Source	Link
Regional commitment	
SDGs List of indicators	https://unstats.un.org/sdgs/indicators/indicators-list/
WHO-EMRO	https://rho.emro.who.int/metadata-Registry
Recommended indicators	
WHO 2010	https://www.who.int/healthinfo/systems/WHO_MBHSS_2010_full_web.pdf
WHO 2016	http://www.who.int/topics/sustainable-development-goals/en
Global indicators	
SHARE - Survey of Health, Ageing and Retirement in Europe	http://www.share-project.org/home0.html
UNAIDS - Global AIDS Monitoring 2020	https://www.unaids.org/sites/default/files/media_asset/global-aids-monitoring_en.pdf
UNGAS Core Indicators for National AIDS program	https://www.unaids.org/sites/default/files/sub_landing/files/JC1768-Additional_Indicators_v2_En.pdf
World Health Organization (WHO), Monitoring the building blocks of health systems: a handbook of indicators and their measurement strategies	https://www.who.int/healthinfo/systems/WHO_MBHSS_2010_full_web.pdf
Urban HEART: Urban Health Equity Assessment and Response Tool: user manual.	https://apps.who.int/iris/bitstream/handle/10665/79061/9789241500784_eng.pdf
Observatories, repositories. dashboards	
Arab development portal	https://data.arabdevelopmentportal.com/
Global Health Data Exchange(GHDx), Global Burden of Disease Study(GBD)	http://ghdx.healthdata.org/
The DHS Program, Demographic and Health Surveys	http://dhsprogram.com/
European statistics (EUROSTAT)	https://ec.europa.eu/eurostat/data/database
MICS, Multiple cluster surveys	https://mics.unicef.org/surveys
The World Bank, Gender Statistics Database	http://data.worldbank.org/
The World Bank, Health Nutrition and Population Statistics	http://datatopics.worldbank.org/hnp/HNPSDG
The World Bank, World Development Indicators	https://databank.worldbank.org/source/world-development-indicators
The World Bank, Sustainable Development Goals database	https://databank.worldbank.org/source/sustainable-development-goals-(sdgs)
United Nations, Population Division, World Population Prospects	https://esa.un.org/unpd/wpp/
United Nations, Department of Economic and Social Affairs, Statistics Division, SDG database	https://unstats.un.org
UNICEF Data, Monitoring the situation of children and women	https://data.unicef.org/indicator-profile/HVA_PREV_KNOW/
WHO and UNICEF Joint Monitoring Programme (JMP) for Water Supply, Sanitation and Hygiene	https://washdata.org/
World Health Organization (WHO), Global Health Observatory	https://www.who.int/gho/en/ (https://apps.who.int/gho/data/node.home)
World Health Organization (WHO), Health Equity Assessment Tool	https://www.who.int/data/gho/health-equity/assessment_toolkit
World Health Organization (WHO), Global Health Observatory: Health Equity Monitor	https://www.who.int/data/gho/health-equity
World Health Organization (WHO), National Health Accounts	https://www.who.int/health-topics/health-accounts#tab=tab_1
World Health Organization (WHO), Global Health Expenditure database	http://apps.who.int/nha/database

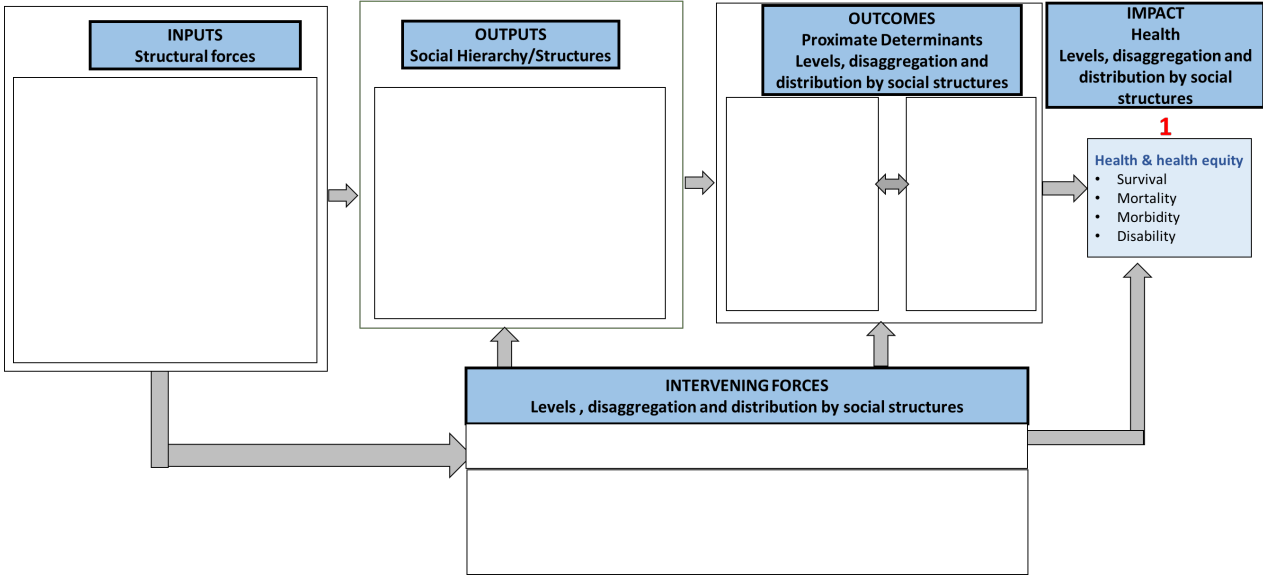
Table 2: National data sources

Country	Data source	Link
Algeria	National Statistical Office (ONS), Algeria	http://www.ons.dz/-Population-et-Demographie-.html
Algeria	Institut National de la Sante Publique; Ministere de la Sante, de la Population et de la reforme hospitaliere	http://www.sante.gov.dz/index.php/indicateurs
Bahrain	Ministry of Health, Bahrain	http://www.data.gov.bh/
Bahrain	Information and eGovernment Authority, Bahrain Open Data Portal	http://www.data.gov.bh/en
Egypt	Central Agency for Public Mobilization and Statistics (CAPMAS), Egypt	www.capmas.gov.eg
Iraq	Central Statistical Organization (CSO), Iraq	http://cosit.gov.iq
Jordan	Department of Statistics (DOS), Jordan	http://web.dos.gov.jo/
Jordan	Ministry of Health, Jordan	www.moh.gov.jo
Kuwait	Central Statistical Bureau (CSB), Kuwait	www.csb.gov.kw
Lebanon	Central Administration of Statistics (CAS), Lebanon	www.cas.gov.lb
Lebanon	Ministry of Public Health, Lebanon	www.moph.gov.lb
Libya	Bureau of Statistics and Census (BSC), Libya	www.bsc.ly
Morocco	Haut Commissariat au Plan (HCP), Morocco	www.hcp.ma
Oman	National Centre for Statistics and Information (NCSI), Oman	www.ncsi.gov.om
Palestinian	Palestinian Central Bureau of Statistics (PCBS)	www.pcbs.gov.ps
Qatar	Planning and Statistics Authority, Qatar	https://www.psa.gov.qa/en
Saudi Arabia	General Authority for Statistics, Saudi Arabia	www.cdsi.gov.sa
Saudi Arabia	Ministry of Health, Saudi Arabia	https://www.stats.gov.sa/en
Sudan	Federal Ministry of Health, Republic of Sudan	www.fmoh.gov.sd
Sudan	Central Bureau of Statistics (CBS), Sudan	http://www.cbs.gov.sd/
Syria	Central Bureau of Statistics (CBS), Syria	http://www.cbssyr.sy/people%20statistics/Final_Report_Syria_ARB.pdf
Tunisia	National Institute of Statistics (INS), Tunisia	www.ins.tn
Tunisia	Ministry of Health, Tunisia	www.santetunisie.rns.tn
United Arab Emirates	Federal Competitiveness and Statistics Authority (FCSA), United Arab Emirates	www.fcsa.gov.ae
Yemen	Central Statistical Organisation (CSO), Yemen	www.cso-yemen.org
Yemen	Ministry of Public Health and Population, Yemen	http://www.moh.gov.ye/arabic/report_2004.html

II.3. Situating the health indicators and their determinants within the social determinants of health inequity framework

This section aims at presenting the assembled full package of indicators organized over the seven indicator domain blocks of the SDHI framework. The main objective of this effort is to portrait the indicators for assessing health and its multilevel social determinants in a results-based framework.

.II.3.1. Block 1: Indicators of health impact



This block reflects the overall impact of the “Whole of Nation” achievement. The impact indicators measure the long-term success of the structural forces and their influence on the social arrangements and intervening forces which in turn affect the proximate determinants and end in health consequences. Fort-five health impact indicators (Table 3) were identified. Most of them were requested by SDGs and WHO-EMRO. The other indicators are either available in the international or national data sources

The health impact indicators include four indicator subdomains as follows:

Survival

Four survival indicators, disaggregated by sex, are used to measure life expectancy and healthy life expectancy at birth and at age 60 by sex. However, only the life expectancy at birth – requested in WHO-EMRO core list but not in the SDGs- is available for almost all countries, while the others are not reported in many countries of the region. The life expectancy at age 60 provide a useful measure of longevity and

the national efforts to promote life and avoid premature death. The health life expectancy at birth and at age 60 provides an indication of the quality of life lived in the absence of diseases and disability. These measures if available are complimentary pieces of information that reflect the national success in promoting the quantity and quality of life.

Mortality

Nineteen indicators are defined to measure mortality related to various health conditions and in the various age group.

Adult mortality

The first set include one WHO-EMRO indicator measuring the adult mortality. This indicator is not available for all countries. The indicator defined as probability of dying between 15 and 60 years of age per 1000 population is missing due to the lack of technical skills to calculate the probability of death.

Reproductive and child health related mortalities

The second set presents five reproductive and child health related mortalities. The maternal mortality ratio (MMR) and the neonatal mortality rate (NNMR) are requested in the SDGs and WHO-EMRO core lists. In Arab countries, the MMR is outdated and is based on estimates. The NNMR is available in all countries and provides important information to monitor reproductive health and neonatal health, as well as the healthcare services offered during this period. The perinatal mortality rate, though an important measure of the perinatal healthcare services, is not routinely reported in Arab countries given the under-reporting in fetal death. The infant mortality and under-five mortality rates are requested in the SDGs and WHO-EMRO core lists. They are available for all countries and are important for monitoring under 5 years health and healthcare services. However, there is no global or national indicator to measure child mortality between the age of 5 and 18 years and mortality related to this life period and its related services remain unmeasured in the region.

Mortality related to non-communicable diseases

The third set is a composite mortality indicator for non-communicable diseases (NCDs) requested in the SDGs and WHO-EMRO lists. It provides information on the probability of dying between the age of 30 and 70 from cardiovascular diseases (CVDs), cancer, diabetes and chronic respiratory diseases. This indicator has three limitations. This indicator is not Available in Arab countries because the cause of death is not reported or the international classification of diseases (ICD) is not used for coding the cause of death. The fact that this is a composite index for a package of four NCDs does not show the

seriousness of each disease on its own, as each disease has specific set of determinants and requires different interventions. The fact that it has a lower age bound of 30 years, ignores all types of cancers occurring at younger age, notably leukemia in young age that may be unperceived in the region. Moreover, the reporting of such indicator is not standardized in the region as many countries do not apply the SDGs and WHO-EMRO definition for calculating the life tables influenced by the four NCDs applying the cause-specific death rate to each 5-year age range, but rather provide an overall cause-specific rate. Furthermore, this indicator misses the mortality burden of many other NCDs related to several systems of the body. Example gastrointestinal illnesses, urinary and renal diseases, neurological disorders, metabolic diseases are hardly traced and their magnitude and services are not measured.

Mortality related to mental health

The fourth set of indicators assess mental health through measuring the suicide mortality rate. This indicator is not available in Arab countries may be because the ICDs is not used for reporting the cause of death or suicide is under-reported as a cause of death. As this is an SDG indicator, Arab countries may work on adding such information to the list of national indicators.

COVID-19 mortality

The fifth set refers to two COVID-19 mortality indicators. Number of COVID-19 deaths per 100 detect cases and per 1M of the population. Under-reporting may differ from one country to the other and COVID-19 fatality ratio is not provided in several countries of the region

Injury-related mortality

The sixth set includes seven injury-related mortality indicators. Though all of them are requested in the SDGs list, only one of them “death rate due to road traffic injuries” is available for several countries of the region.

Environment-related mortality

The seventh set refers to two environment-related mortality indicators. They are requested in the SDGs and the WHO-EMRO lists. These indicators provide an important piece of information on mortality rates attributed to unsafe water, unsafe hygiene and lack of hygiene services (WASH) and household and ambient air pollution. These indicators are not always available in the region.

Morbidity

Nineteen indicators measure morbidity related to four sets of causes - SRH, NCDs and communicable diseases.

Sexual and reproductive health

The first set of morbidity indicators refers to ten SRH-related morbidity indicators. Infertility rate - though important notably with the increasing number of invitro fertilization (IVF), prevalence of urethritis in men and the prevalence of sexually transmitted infections are available in the population-based surveys in very few countries, but do not appear in the national and international statistics. The incidence of hepatitis B and HIV/AIDS are not available for all countries. Only a proxy indicator of hepatitis B prevalence is available in the Egypt Health Issues Survey in 2015. A proxy indicator on HIV prevalence in the population and high-risk groups found in international statistics is not reported in the region.

Non-communicable diseases

The second set of indicators refers to NCDs. Two indicators measure the incidence and prevalence of cancer. But such indicators are hardly available in population-based statistics.

Communicable diseases

The third set of indicators refers to communicable diseases. Malaria and tuberculosis indicators are hardly reported by Arab countries. Hepatitis C prevalence appeared only in Egypt Demographic and Health Survey 2010 and Egypt Health Issues Survey 2015. The percent of COVID-19 infection in pregnant women has appeared recently in the international statistics but is not reported in the Arab countries.

Still the morbidity indicators lack information on the burden of many diseases related to several systems of the body. Example mental health, gastrointestinal illnesses, urinary and renal diseases, neurological disorders, metabolic diseases, gynecological diseases.....

Disability

The last subdomain includes two indicators used to measure disability in the population and the non-fatal occupation injuries as proxy to the resulting disabilities. These indicators are missing in almost all Arab countries.

Arab countries still do not measure the incidence/prevalence of congenital anomalies though consanguinity is frequent in the region and is coupled by the environmental disasters, conflict, and air pollution and result in major disabilities.

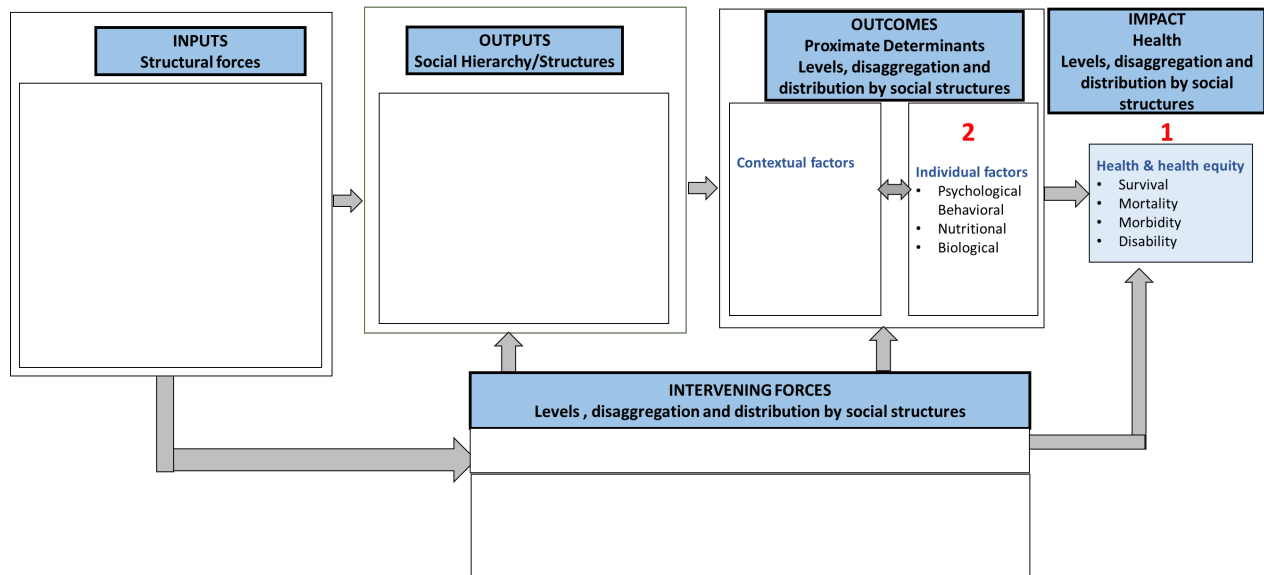
In conclusion: Arab countries should introduce indicators on morbidities and disabilities in population-based-data sources. They should build capacities on using the international classification of diseases to code health conditions (morbidity and disability) and causes of mortality in vital registration (in both the birth and death certificates). Arab countries should also ensure reporting of age and sex in data to allow for producing the different age and sex related measures

Table 3: 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

II.3.2. Block 2: Indicators related to individual risk factors



Thirty-two indicators portray the health-related individual risk factors (Table 4). These indicators reflect the individual level outcomes of the national structural forces and their influence on the social arrangements, the contextual factors and intervening forces which in turn are translated into health impact. They are mostly SDGs and WHO-EMRO indicators and include:

Psychological

There are 6 indicators measuring the psychological factors influencing ill-health. They focus on gender and sexual factors. Though they are all SDGs indicators, only one of them **“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, by form of violence and by age”** (SDG5.2.1) is available in population-based surveys in some Arab countries.

The SDG16.2.1 on psychological impact of child punishment and aggression. This indicator is available in population-based surveys in several Arab countries but not reported in national statistics.

Behavioral

There are twelve indicators assessing behaviors and can be classified into two sets:

Sexual and reproductive health related behaviors

The first set include five indicators on SRH related behaviors. Three of them are SDGs indicators measuring early age at marriage, adolescent childbearing and female genital mutilation/cutting (FGM/C). These indicators are available for most Arab countries.

Furthermore, two important context specific indicators “proportion of consanguineous marriages among married women” and “proportion of multiparity (5+children)” are available in population-based surveys in many Arab countries, yet are not reported in national or international statistics. This highlights the fact that context specific indicators should be considered to understand the regional context.

Others

The second set includes seven indicators on child health-related behaviors. Five of them are WHO-EMRO indicators and two are SDGs indicators. The WHOEMRO indicators on exclusive breast feeding, tobacco use and insufficient physical activity are not always available or regularly reported in Arab countries. The SDGs indicators on age-standardized prevalence of tobacco use and alcohol consumption are not available in Arab countries.

Nutritional:

There are six indicators assessing the nutritional status. There are 3 SDGs indicators measuring undernourishment in infants, as well as stunting, wasting and overweight in under-5 children. These indicators are available for most Arab countries. There are other 3 indicators requested in the WHO-EMRO list specific to cover overweight/obesity, though available in population-based surveys are not always reported in national statistics.

Biological

There are 8 indicators covering the biological factors. Low birthweight is requested by the WHO-EMRO. This indicator is important in monitoring reproductive and neonatal health but is not always reported in Arab countries. Gestational age is an important indicator of premature birth and the reproductive health care services. Gestational age is available in data of developing countries, notably in the vital registration data (births certificates) which is a rich source of research in these countries (WHO, 2012) (WHO, 2013). This indicator is not available for all Arab countries. The SSG indicator on “proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial well-being” is not available in Arab countries

There is one indicator on anemia in reproductive age, whether pregnant or not. This indicator is available in population-based statistics in many Arab countries. There are 2 indicators on raised blood pressure among adults and in pregnant women. These indicators are available in few Arab countries but are not always reported in national or international statistics. There are also two indicators measuring raised blood glucose in adults and in pregnant women. These indicators are hardly available for Arab countries

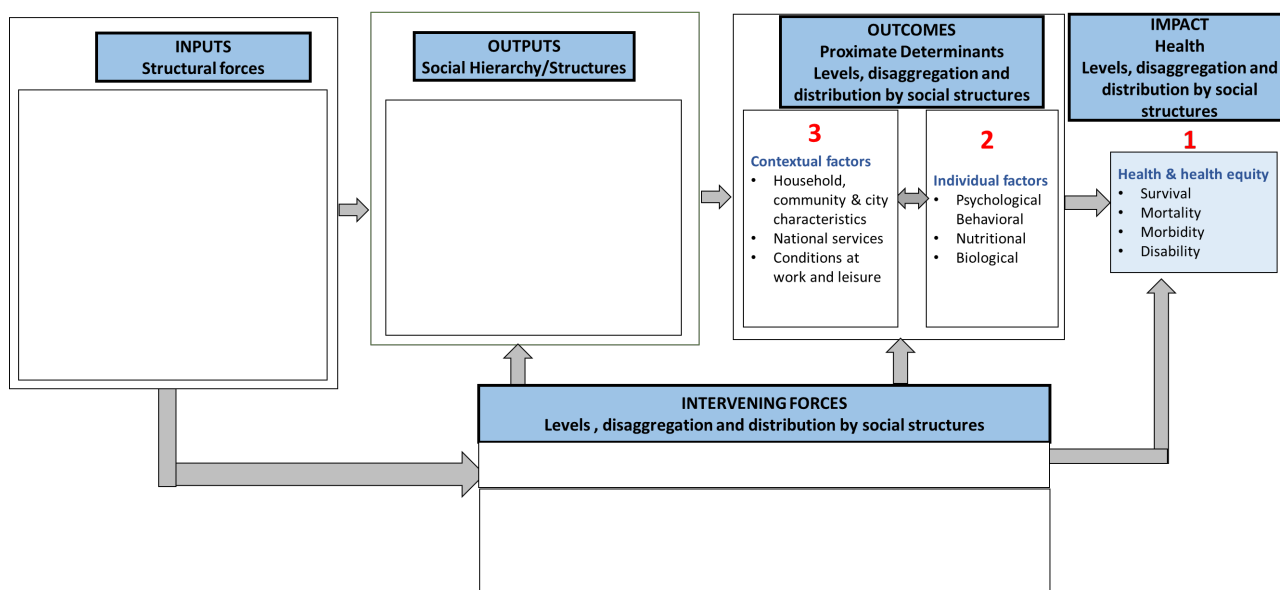
In conclusion, Arab countries should build capacities on adding indicators related to health risk factors in population-based surveys, as well as build the countries vital registration system to be used in research for health and well-being.

Table 4: Indicators related to individual risk factors

	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	SDG5.2.1 (form of violence, age)	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		

II.3.3: Block 3: The indicators of the contextual risk factors



The indicators for the contextual risk factors cover the conditions in which people live, grow, work and age (Table 5). Twenty-two indicators are assigned to this block. From them 14 indicators are on the SDGs list and two indicators in both the SDGs and the WHO-EMRO lists. Two indicators are also proposed to assess though living in inadequate housing and the proportion of people working in informal sector. These indicators include

Household, community and city characteristics

There are 12 indicators in this domain

Seven indicators are related to the availability of water, sanitation, electricity, clean fuel, mobile, basic services and internet services. Only the indicators related to water and sanitation are available in several Arab countries. Other indicators are not available despite that they provide an important piece of information. Arab countries need to find means and build skills or reporting such information notably those on the SDGs list. One indicator to assess the household condition “proportion of population living in inadequate housing” is proposed.

Five indicators are used to assess the type of settlement, open space area and air pollution. Despite that they are all SDGs indicators, they are not available in Arab countries. Still Arab countries need to report on these indicators.

Public services

There are four SDG indicators that can assess the main public services. These indicators reflect the availability of education and employment, as well as the safety measure and internet coverage. These indicators are not available for almost all Arab countries. Arab countries need to build capacities on data collection and production of such information

Conditions at work and leisure

The conditions of work and leisure portrays the quality of people’s life. This part has two indicator subdomains as below:

Work conditions

There are three available indicators in Survey of Health, Ageing and Retirement in Europe (SHARE) and Europe Statistics (EUROSTAT) that can be added to the national package of indicators to assess the work conditions. An indicator on “proportion of working people in the informal sector” is proposed to be added as it highlights those who work in the informal sector These indicators are not among the international or national statistics. Arab countries can benefit from adding such indicators to the national package of indicators to monitor progress on improving the working conditions

Leisure

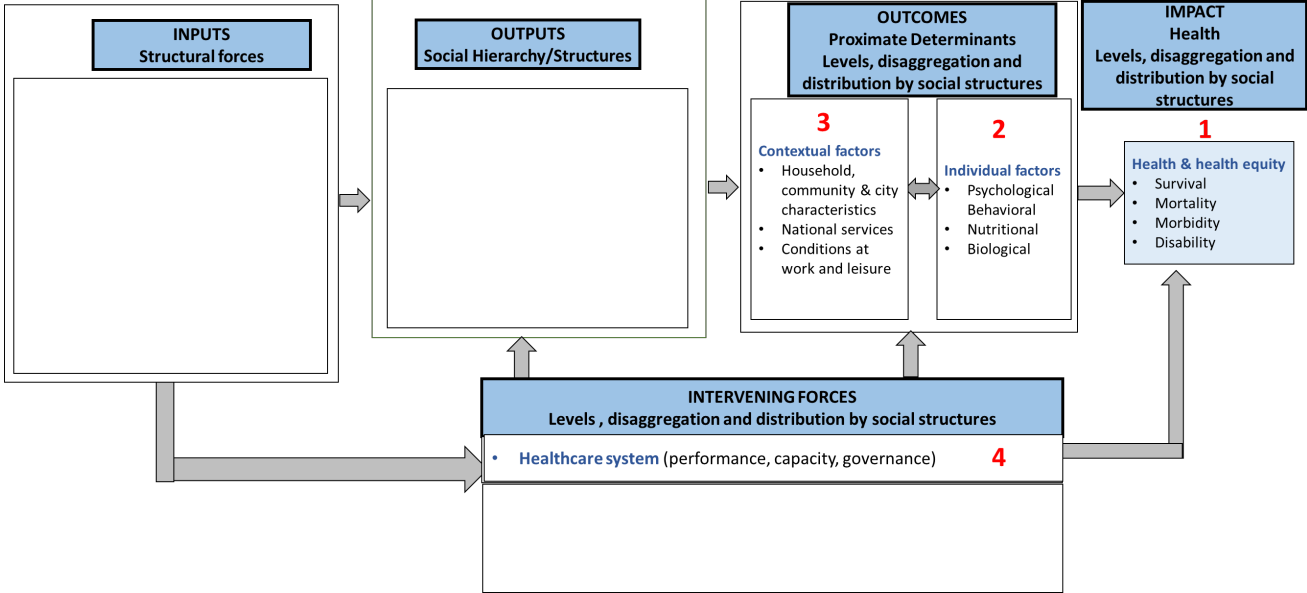
There is one indicator in EUROSTAT that can be added to the national package of indicators to assess leisure. Arab countries should work on adding this indicator in population-based data to monitor quality of people's life.

In conclusion, there are very few indicators in Arab countries that can monitor the conditions in which people live. Arab countries should build capacities on data collection and production on contextual factors, making use of the SDG indicators, the WHO-EMRO indicators, as well as the available indicators in well known regional population-based surveys

Table 5: 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		

II.3.4. Block 4: Indicators for monitoring the healthcare system



The healthcare system is a key social determinant intervening force that influences health and is influenced by the structural root causes. There are fifty seven indicators that can be used to monitor the healthcare system performance, capacity and governance (Table 6). From them 5 are SDGs indicators, 21 indicators are in the WHO-EMRO core list and 8 indicators are in both lists. In addition to six proposed indicators.

Healthcare system performance indicators

The healthcare system performance is assessed by the healthcare system outcomes, while the impact is assessed in Block 1. There are thirty-three indicators reflecting the healthcare system performance as below:

Health care

The indicator “coverage of essential health services is defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population”. list. It is the geometric mean of 14 tracer indicators. This indicator is present in both the SDGs and WHO-EMRO and represents an overall coverage indicator to

assess progress towards universal health coverage (UHC). This indicator is not available in Arab countries. Countries should build capacities on collection and production of such information.

Two indicators are proposed to assess the inability to obtain the needed healthcare and the medical malpractice as they provide an important information to guide healthcare policies and interventions.

Immunization programs

There are 5 indicators to assess the achievement of the immunization program. Two EMRO indicators are defined to assess single vaccine coverage (DPT3 and measles vaccine coverage) and complex index of all vaccine coverage in the national program. It is an SDG indicator (SDG3.b.1) and is part of the SDG3.8.1 as immunization coverage of infants is part of essential health care coverage. Almost all Arab countries have indicators on the immunization coverage of the country's mandatory list of vaccines but should ensure reporting this indicator.

Reporting of the other single vaccines can be an optional context specific piece of information to guide the national vaccination programs and prevent spread of communicable diseases - example, hepatitis B vaccination coverage in countries where the disease is still persistent, human papilloma virus (HPV) in countries where cervical cancer is high or on rise. Furthermore, COVID-19 immunization coverage, though important, is not always available or shared as it is not part of the national vaccination program.

Child healthcare

These includes two indicators. The first is a WHO-EMRO indicator on oral rehydration therapy in under 5 children. This indicator is not available in national statistics and may be more relevant to program level assessment rather than national level. The second is an indicator on the proportion of postnatal care to newborns, this indicator is available in population-based data sources in many of Arab countries but is not among the national reported statistics, though it is important for monitoring neonatal care.

Sexual and reproductive healthcare

There are 14 indicators to monitor three SRH program – family planning, reproductive health and HIV/AIDS. Some of them are part of the SDG3.8.1 and some are either SDG or WHO-EMRO indicators.

Five indicators measure the family planning programs. These indicators are available in population-based surveys in almost all Arab countries. They are important to be measured and reported on national level in our region to avoid the unnecessary population growth notably in populated countries.

Six indicators monitor the progress of the reproductive healthcare services. Proportion of skilled birth attendance and antenatal care coverage are reported on national level. Yet the cesarean section delivery rate, though is available in population-based surveys and is high and on incessant rise in our region is not among the monitoring indicators. Similarly multiple births indicator is available in population-based statistics but is not among the national level indicators in Arab countries though the evident increase in IVF. Similarly, the postnatal care for women though available in population-based surveys of several countries and important is not among the national level statistics.

Three indicators are available for monitor HIV programs. The indicator on HIV/AIDS knowledge is available in several countries in population-based surveys, yet the other 2 indicators, thought requested by UNAIDS, are hardly available in Arab countries, as very few countries have conducted population-based or high-risk population-based surveys. It is optional that countries report nationally on these indicators according to their epidemic status. However, these indicators are important to be reported on program level.

Mental healthcare programs

Two indicators are available for assessing mental healthcare services. Both indicators are not reported in Arab countries though important and is among the regional reporting commitments.

Communicable disease programs

Five indicators are available for monitoring tuberculosis (TB), malaria and antimicrobial resistance. They represent important pieces of information but are not available in national level statistics. It is optional that countries report nationally on the indicators related to TB and malaria according to their status. But countries should ensure reporting on antimicrobial resistance as this is an SDGs commitment to halt this global challenge.

Surgical healthcare programs

There is one WHO-EMRO indicator to measure “surgical wound infection rate”. This indicator is not Available in Arab countries. As it is a regional commitment and important measure of healthcare, countries should build capacities on the collection and production of such information.

Tropical disease programs

One SDG (SDG3.3.5) and WHO-EMRO indicator is requested for assessing the interventions for tropical diseases. This information is not collected in Arab countries. Countries should work on making this information available to fulfil their commitments.

The healthcare system capacity indicators

The healthcare system capacity represents the inputs, processes and outputs. This report expresses the capacity in terms of the healthcare system five building blocks (service delivery, workforce, information, equipment, financing) while the government block is assessed separately given its importance for addressing health inequities. There are 14 indicators to monitor the healthcare system capacity (Table 6) as follows:

Service delivery

Three indicators are on the WHO-EMRO list on service delivery. They are usually present in the health sector statistics that is hardly shared. Arab countries should work on making this information available on national level as it is an important measure of the service delivery capacity.

Health workforce

Two indicators are used to monitor health workforce. One of them is an SDGs indicator “health worker density and distribution” (SDG3.c.1) and the other is a WHO-EMRO indicator “density of recent graduates or registered healthcare professionals”. Both indicators are usually available in the health sector statistics that is hardly shared. Arab countries should ensure production of such data to fulfil their regional commitments.

Information

Two indicators are used to assess the health information. They are used to monitor the completeness of the birth and death registration. These indicators are available in the health sector statistics and are available in the national level data in few Arab countries. But they are mostly built on estimates rather than actual counts. This confirms the need for the use of vital registration as a source for information for health statistics.

Medical products, vaccines and technologies

Two indicators are used to monitor the medical products, vaccines and technologies. These indicators are not available for almost all countries of the region. Arab countries should report on at least the

indicator “Proportion of health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis” as it is a regional commitment in the SDGs (SDG3.b.3) and by the WHO-EMRO.

Financing

Five indicators are used to monitor the health financing. The first two are the “per capita total expenditure on health” which expresses the public and private expenditure on health in expressed in US\$ per person and in PPP (current international \$).

The other three indicators on the out-of-pocket expenditure on health represent one indicator with overall indicator and three different thresholds - an overall out-of-pocket expenditure on health, SDG3.8.2 has greater than 10%; and greater than 25% to represent large household expenditures on health of total household expenditure or income and WHO-EMRO catastrophic payment greater than 40%.

These indicators are not regularly reported in the region. Arab countries should work on making such information available as it provides very important piece of information to assess affordability of healthcare services.

Governance

Healthcare system governance involve ensuring that strategic policy frameworks exist and are combined with effective oversight, coalition-building, regulation, attention to system design and accountability. Governance in healthcare is a cross-cutting theme and is an integral part of the other health system building blocks. This report identifies governance as a separate indicator domain given its importance. There are ten indicators that can monitor health system governance.

There are two SDGs indicator and/or WHO-EMRO indicators (SDG3.b.2, SDG3.d.1) to monitor health system governance. Both indicators may be available at the health sector level but are not a shared information in almost all Arab countries.

This report proposes four indicators to monitor the healthcare system governance in addition to four indicators that are available in few national statistics. It will be beneficial if countries can provide such information to assess the governance in the health sector.

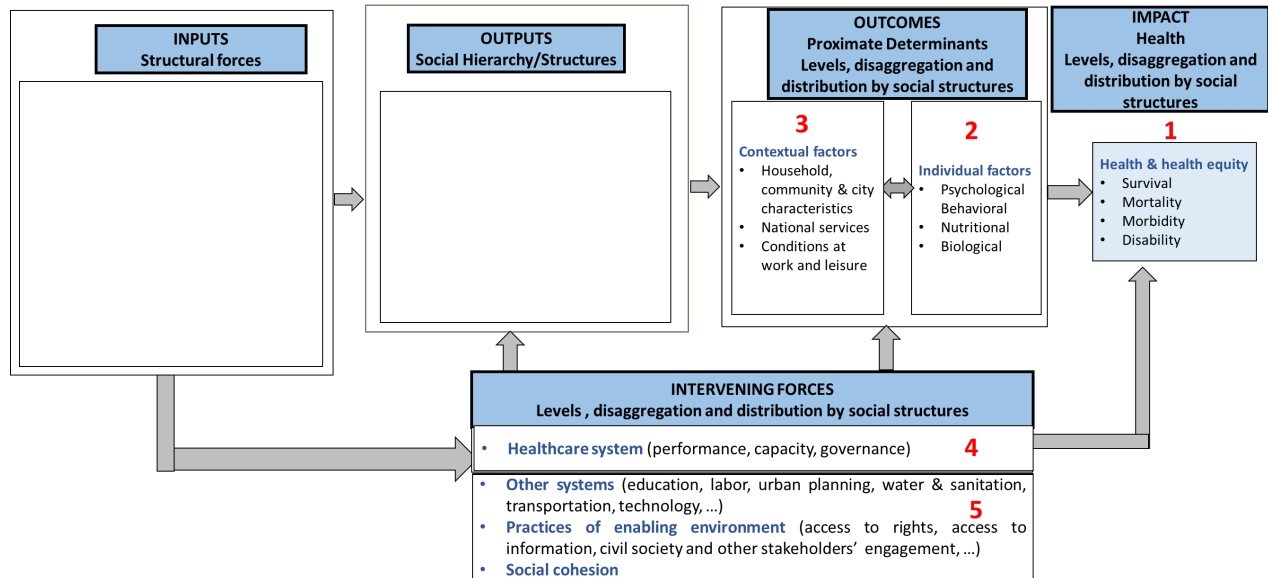
In conclusion: Many of the healthcare system indicators are not regularly available in Arab countries. The countries in region should build capacities to ensure the production of the core indicators using the standard definitions of the SDGs and WHO-EMRO.

Table 6: 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.	Antiretroviral 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		

II.3.3. Block 5: Indicators for monitoring the intervening forces other than the healthcare system



The intervening forces represent the outputs and outcomes of the structural forces and influence the proximate determinants and health. As shown in Table 7, there are twenty-seven indicators for the intervening forces to improve the conditions in which people live, grow, work and age. They are mostly SDG and/or WHO-EMRO indicators. They are grouped into three indicator domains as follows:

Systems other than the healthcare system

These indicators provide potential knowledge on the non-health sectors' performance to improve the conditions in which people live. There are 19 indicators that include six indicator subdomains

Education

There are seven indicators that can be used to monitor the progress of the education system for health and well-being. They are mostly SDG indicators and two of them are WHO-EMRO indicators. These indicators reflect the education system coverage and the ability of the education system to retain students. These indicators may be available in the education system records but they are hardly shared or available in Arab countries.

Labor

There are two SDG indicators which can reflect the ability of the labor system to improve earning and halt the informal employment. This indicator is hardly available for Arab countries, as it is not always possible to identify and count those working in the informal sector.

Urban planning

There are two indicators that can be used to assess to the urban planning performance. Though they are SDG indicators, they are hardly available in Arab countries

Transportation

Two SDG indicators that can reflect the transportation system available for individuals' mobility. These indicators may be available in the information system's records, yet they are hardly reported in national statistics in Arab countries

Water and sanitation

Two indicators are available in the SDG list and can be used to assess the performance of the water and sanitation services. These indicators may be available in the water and sanitation systems, yet they are not available in the national health statistics in Arab countries.

Technology

One SDG indicator (SDG4.4.1) is available to measure the information and communications technology (ICT) system. This indicator may be available in the ICT records, yet they are not always available in national statistics for health.

Enabling environment

The enabling environment is the term used to describe “**the broader system within which individuals and organizations function and one that facilitates or hampers their existence and performance**” (UNDP, 2008). Eleven indicators can be used to monitor the enabling environment and can be classified into six indicator subdomains as below:

Rights

Two SDG indicators can be used to assess the access to rights in a country. These indicators are not always available in national health statistics in Arab countries Arab countries

Social protection

One SDG indicator (SDG1.3.1) represent the social protection coverage. Arab countries should work on integrating such information in the ISH.

Civil society engagement

Two SDG indicators can be used to assess the ability of countries to engage the civil society to make cities sustainable and resilient. These indicators are not available in the region and countries should build capacities on pooling such information.

Culture

Two SDG indicators can be used to assess the outcome of the culture and traditions. These indicators are not available in the region and countries should build capacities on pooling such information.

Social cohesion

Social cohesion refers to **“the strength of relationships and the sense of solidarity among members of a community”** (Gómez CA, 2021). There are no indicators in the SGD and WHO-EMRO lists than can help monitoring social cohesion. However, four indicators available in SHARE and EUROSTAT can be used to assess social cohesion. Countries should work on adding such indicators to ISH.

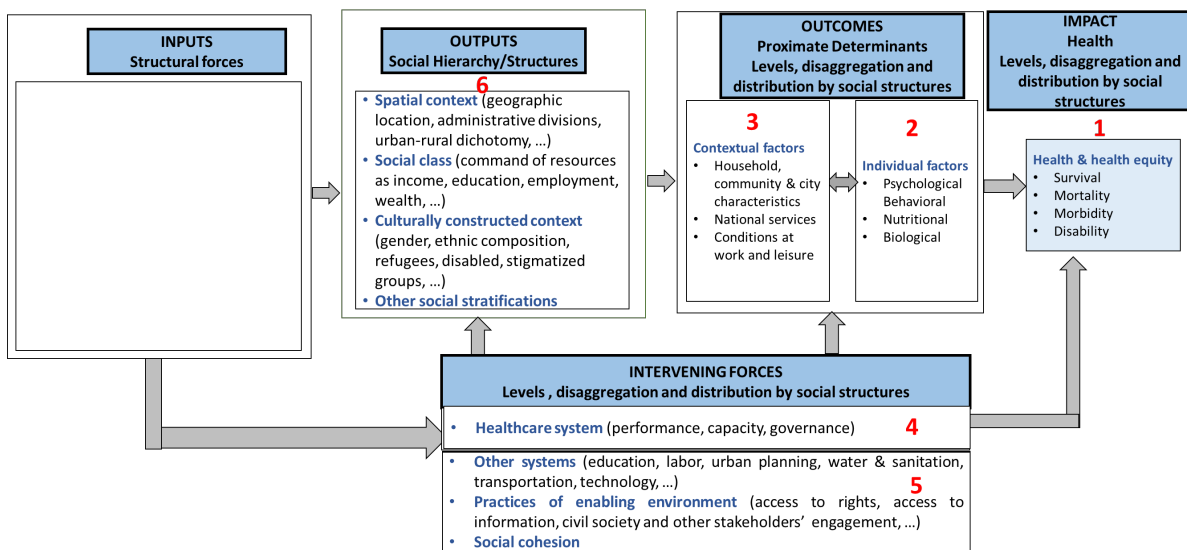
In conclusion: The indicators on the intervening factors other than the health systems indicators are hardly available in the region, though are mostly SDG indicators. Arab countries need to ensure collection and integration of these indicators in the ISH.

Table 7: Indicators for the intervening forces other than the health systems

	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		

II.3.6. Block 6: Indicators for the social structures



This block refers to the different social structures reflecting the various population subgroups. Indicator domains in this block point to the magnitude of the various forms of social vulnerabilities (rural residence, poverty, education, employment, gender and other social context specific vulnerabilities). These social vulnerabilities are the result of the structural forces and the inability of the intervening forces to cope with their needs. They in turn are responsible for the differentials in vulnerable exposures ending in ill-health and inequities in health outcomes/impact. Components of this block will be used to provide the base for data aggregation in Section II.4 and unequal distribution in health and its determinants in Part III.

There are eight indicators for monitoring this block while more indicators will be added to assess the gendered-cultured context (Table 8). They are all, except two available in the SDGs indicator lists. The indicators assess the social vulnerabilities resulting from the upstream forces and in turn are responsible for the differentials in vulnerable exposures ending in inequities in health outcomes/impact .

Spatial context

One indicator can be used to measure the magnitude of rural residents. This indicator is available in Arab countries but is not part of health information system.

Social class

Four SDG indicators can be used to measure the magnitude of poverty on national level. These indicators are available in economic systems' but are hardly available in health information systems in Arab countries.

Three indicators are available to measure educational vulnerabilities. These indicators are available in education information system and in population-based data in Arab countries. Arab countries need to pool this information in ISH.

One indicator is available to measure the magnitude of unemployment. This indicator is available in labor information system and in population-based data in Arab countries. Arab countries need to add this information in ISH.

Culturally constructed context

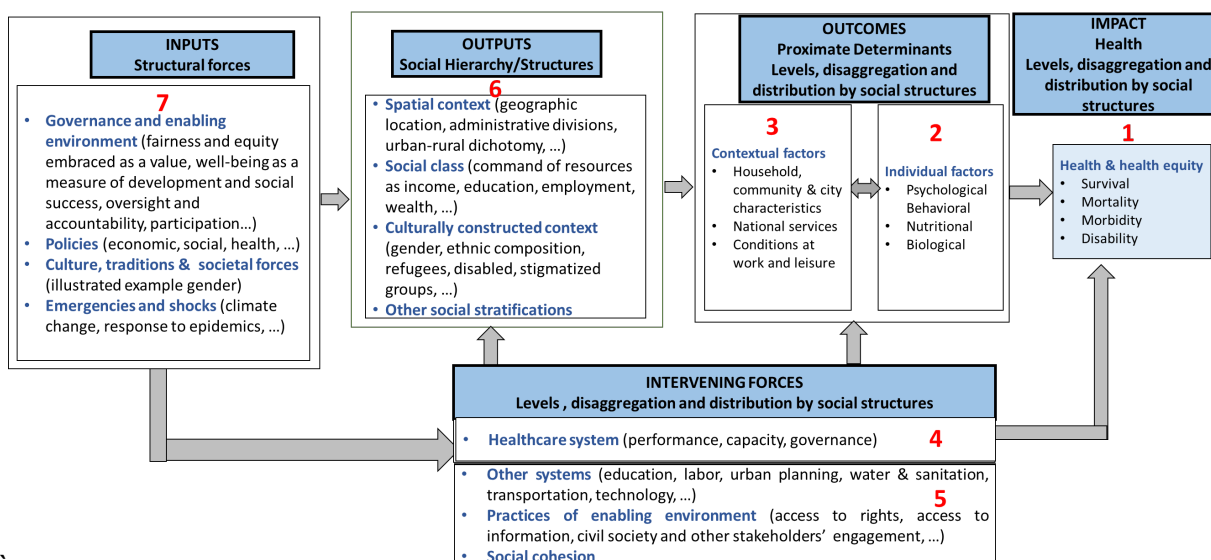
Indicators will be added to assess the gendered context as an illustrative example of this social structure.

Inconclusion: Arab countries should work on adding the indicators to assess the social structures and the social vulnerabilities to the list of national level indicators for health as they provide important piece for information for health and well-being

Table 8: Indicators for the social arrangements

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			

II.3.7. Block 7: Socio-economic political context:



This block has four major components – governance; policies; Culture, traditions and societal forces; as well as emergencies and shocks. Forty-eight indicators are available to monitor the upstream structural forces. These indicators represent the root causes designing the main national characteristics which influence the production of social vulnerabilities, the national context and end in health and well-being (Table 9).

Governance

There are fifteen governance indicators that refer to fairness, oversight and accountability and partnership. They are mostly SDGs indicators representing 6 governance indicator subdomains. They are mostly SDGs and or WHO-EMRO indicators. These indicators are not part of the tradition HIS.

Policies

There are twenty-two indicators that assess the main economic, health and social policies that affect health. Of them eight are SDG indicators and 2 indicators are requested by WHO-EMRO. This report proposes nine indicators related to this domain. Many of these indicators are available in Arab countries but are not always part of the health information system

Culture, traditions and societal forces

Eight SDG indicators can help in assessing gender as an illustrative example in this domain. Five indicators are SDGs and/WHO-EMRO indicators. This report further proposes one indicator. These indicators, though easy to document are not part of the health information system.

Emergencies and shocks

Two SDG indicators exist to assess climate change. This report proposes the addition of an indicator to assess the national response to epidemics

In conclusion: Arab countries should work on adding indicators to assess the upstream structural forces in the list of national level indicators for health and well-being as they provide important piece for information for monitoring national context which is the root cause of vulnerabilities, vulnerable exposures and inequities in health.

Table 9: 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

Part Three: Proposing summary measures for the indicators

This part stresses on the importance of the national averages and disaggregation to identify the priorities and the factors that increase the risk of ill-health. It also suggests the addition of summary distribution measures of inequality in the ISH to move the discourse from health inequalities to health inequities. The first section provides the rationale behind this idea. The second section presents the methodology, and the third section describes the different summary measures.

III.1. Rational

It is evident that health is no more the business of the healthcare system alone, it is a shared “Whole-of-Nation” responsibility. The call for an ISH that **produces comprehensive data that health and non-health stakeholders can use for making transparent and evidence-based decisions for fair societies**, necessities the production of summary measures that make visible the roles and responsibilities of different partners for guiding policies for health and well-being.

There is a global consensus for need of evidence on health and health inequalities, and most importantly on linking these health inequalities to the fairness/unfairness of the structural root forces. This implies differentiating **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 health 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. 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 investigating the fairness of the upstream forces shaping such inequalities.

Till present the HIS all over the world are not designed to generate such information. However, an ISH should provide complete information to guide policies and actions for health and well-being.

III.2. Methodology

For all indicators available in all previously cited resources, the metadata were analyzed to identify the summary measures and their disaggregation. The search also identified the recommended disaggregation in SDGs and the WHO-EMRO indicators.

Furthermore a thorough literature search was conducted to understand the health inequality measures and identify the social structures that better reflect the vulnerable groups (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).

The search used the PubMed, Google Scholar, and Google search engine with the terms “health inequality”, “health disparities”, “social groups”, “vulnerable groups”, “social stratification” “stratifiers”, “inequality measures”, “simple inequality measures”, “gap measures”, “complex inequality measures”, and “distribution inequality measures”.

III.3. Summary measures

III.3.1. Summary measures for identifying 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.

III.3.2. Summary 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.

III.3.3. 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 $\geq 10\%$ 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.

In conclusion, this report suggests adding in front of the above cited indicators in ISH a column presenting the summary inequality measure. This piece of complementary information will allow countries assess the magnitude of the inequalities in health and identify the priorities. It will also help in assessing the uneven distribution in the risk behaviors, contextual factors and national systems' programs. Most importantly, it will allow countries postulate the relation between the unequal distribution in health and the unequal distribution in the individual factors, the contextual determinants and the national systems that are the outcome of the upstream structural forces.

Part Four: Key Messages

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.

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.

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 adequately 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.

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