#### Published online 2019 August 19.

#### **Rapid** Communication

# From MDGs to SDGs: New Impetus to Advance Health in Iran

Nastaran Keshavarz Mohammadi<sup>1,\*</sup>, Aliakbar Sayyari<sup>2,\*\*</sup>, Aliasgar Farshad<sup>3</sup>, Nader Jahanmehr<sup>4</sup>, Sameen Siddiqi<sup>5</sup>, Rahim Taghizadeh<sup>6</sup> and Christopher Dye<sup>7</sup>

<sup>1</sup>School of Public Health and Safety, Shahid Beheshti University of Medical Sciences, Tehran, Iran <sup>2</sup>Pediatric Gastroenterology, Hepatology and Nutrition Research Center, Research Institute for Children's Health, Shahid Beheshti University of Medical Sciences, Tehran, Iran

<sup>3</sup>Deputy of Social Affairs, Ministry of Health, Tehran, Iran

<sup>4</sup>School of Public Health and Safty, Shahid Beheshti University of Medical Sciences, Tehran, Iran

<sup>5</sup>Community Health Sciences Department, Aga Khan University Karachi, Karachi, Pakistan

<sup>6</sup>World Health Organization Office, Tehran, Iran

<sup>7</sup>Department of Zoology, University of Oxford, United Kingdom

<sup>\*</sup>Corresponding author: School of Public Health and Safety, Shahid Beheshti University of Medical Sciences, Tehran, Iran. Email: n\_keshavars@yahoo.com

Received 2018 November 15; Revised 2019 April 26; Accepted 2019 May 17.

## Abstract

**Problem:** The sustainable development goals (SDGs) and their associated targets and indicators provide a global framework for advancing health in development, which must be adapted to the needs of each country.

**Approach:** Building on previous experience with millennium development goals (MDGs), the Islamic Republic of Iran is advancing health under the SDGs by targeting non-communicable diseases, which accounted for 70% of deaths in Iran in 2016, giving particular emphasis to the social, economic and environmental determinants of health.

Local Setting: The national population and sub-populations of the Islamic Republic of Iran.

**Relevant Changes:** The interlink ages between the principal health goal (SDG 3) and all other goals are a stimulus to seek benefits for health from multisectoral action, working across the whole of government and within civil society. Iran's sustainable development agenda embraces health in 12 of 17 SDGs, and aims to track progress using 56 of 230 defined indicators. These take account of the health benefits of reducing poverty, hunger and low literacy, and from healthier strategies for agriculture, education, transport, housing and employment. We present baseline statistics for these indicators, covering the period of 1990 - 2015.

Lessons Learnt: Placing health in the context of sustainable development facilitates Iran's goal of improving prevention alongside treatment, tackling the underlying social, economic and environmental determinants of health by working across the whole of government. The way forward is advocating for shared responsibility for health and evidence-informed participatory decision making mechanisms, strengthening and sharing information databases.

Keywords: SDG, MDG, Health

### 1. Introduction

As successors to the millennium development goals (MDGs, 1990 - 2015) (1), the sustainable development goals (SDGs, 2016 - 2030) (2) present a new opportunity to promote health in the broad context of human development (3). However, there are significant challenges in adapting the global SDG framework to a wide variety of national circumstances, considering local health priorities and the options for organizing interventions. Like most countries of the world, the Islamic Republic of Iran is committed to achieving the SDGs. This paper describes Iran's experience and lessons learnt in making the transition from MDGs to SDGs, under the auspices of the Supreme Council of Health and Food Security and the direct management of the Ministry of Health and Medical Education [MOHME]. We sum-

marize the progress to date, and compile statistics for the period of 1990 - 2015, which serve as benchmarks against which to judge future progress.

Iran achieved most of the health-related MDGs reaching, for example, the targets for infant mortality rate and the maternal mortality ratio long before 2015. Iran's commitment to meeting the MDGs contributed to strengthening the national health information system by identifying, for example, the need for better monitoring of health interventions such as immunization, and the treatment of tuberculosis and HIV/AIDS. This contributed to improvements in the coverage and quality of health care, especially in remote areas of the country and for disadvantaged populations. The objective of meeting MDGs had continuous political commitment between 1990 and 2015, de-

Copyright © 2019, Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (http://creativecommons.org/licenses/by-nc/4.0/) which permits copy and redistribute the material just in noncommercial usages, provided the original work is properly cited.

spite changes in government and the imposition of international sanctions on Iran. Among the factors contributing to success were: inclusion of the MDGs in national development plans, which led explicitly to the provision of funding and other resources; improvements in communication and collaboration with international development agencies; and improvements in health governance through the integrated management of health services (4).

Iran is gradually shifting from its dominant medical approach to health to a social approach to health by paying greater attention to the underlying social, economic and environmental determinants of health- the three pillars of sustainable development. This transition began in the era of the MDGs, and the SDGs present a new opportunity to further that cause (5). In addition, the SDGs explicitly include targets and indicators for the control of non-communicable diseases and injuries (NCDS)-the dominant cause of illness and death in Iran today- which were missing from the MDGs.

In Iran, multisectoral policy-making is led by the Supreme Council of Health and Food Security, chaired by the President of the country (Figure 1). Within the MOHME, the Department of Social Affairs is headed by a Deputy Minister, which among other multisectoral activities oversees the monitoring of progress, including health and equity. The Department also organizes a national festival of social responsibility and accountability for health with the participation of non-governmental organizations (NGOs) and civil society.

Iran's commitment in 2012 to the Rio+ 20 declaration and its "21 agenda" (6), a precursor to the SDGs, led to the establishment of a National Committee for Sustainable Development (NCSD) that was chaired by a Deputy President and comprised high-level managers from more than 10 ministries and two national bodies, the National Organization of Environment and the National Organization of Planning and Budget (7). Following the launch of the SDGs, the NSCD was designated as the body responsible for preparing the United Nations Voluntary National Reports [VNR] to document progress on SDGs. In addition, the MOHME was given responsibility for overseeing progress towards SDG3, and also was appointed as a partner for SDG1 (poverty), SDG2 (hunger), and SDG6 (water and sanitation).

Between 2015 and 2018 the MOHME has ensured that health was placed in the 6th National Development Plan, established a department of SDGs and health along with a national steering committee for health, raised awareness about health-related SDGs within government and across the country, and carried out a benchmarking and trend analysis of health-related SDGs (8).

## 2. Methods

To benchmark health in the SDGs, a mapping exercise was conducted to identify all health-related targets and indicators of SDG3 and other SDGs, guided by WHO reports (1, 9, 10) and extensive consultation, for example with all concerned departments of the MOHME and with the Council of Health Deputy Directors of the ministry. The final list included 34 targets and 56 indicators running across 12 of the 17 SDGs. Of these, 21 targets and 29 indicators were derived from goals other than SDG3 (Table 1)

The ensuing task was to map these indicators on to Iran's existing monitoring and evaluation framework in the national health information system, so as to ensure efficient planning and implementation (15). The MOHME categorized the indicators into 8 "thematic domains", and each domain was assigned to one department within MOHME (Figure 1). This arrangement for monitoring and evaluation has clarified responsibility and ownership by each department allowing better integration into the current structure and function of MOHME and has reduced the burden of data collection.

#### 3. Results and Discussions

The benchmarking exercise presented a series of lessons for tracking progress towards the SDGs. First, some governmental departments were concerned about possible unforeseen consequences of providing access to official data through international publications. Given the sensitivity around certain kinds of data such as suicide, HIV/AIDS, alcohol use, some indicators may in future be monitored but with results reported only within government departments. Second, the expanded set of SDG indicators requires some data from outside the ministry of health, for example those related to drug abuse or water quality, which has meant establishing new collaborations among ministries and with NGOs. Third, some SDG indicators are new to Iran's health information system, such as those related to early child development, and therefore require new sources of data. Where data are not yet available, we used existing national indicators that were closest to those required by the SDG framework (Table 1). Fourth, some SDG indicators were imprecisely defined (with little clarification given by metadata) such as the indicator related to social protection (1.3.1). Finally, some national data were inconsistent with international estimates. In general, we have preferred to use national data, and only when these were unavailable or inaccessible did we use information from secondary sources such as the WHO and other UN agencies. All in all, some data were not yet available at

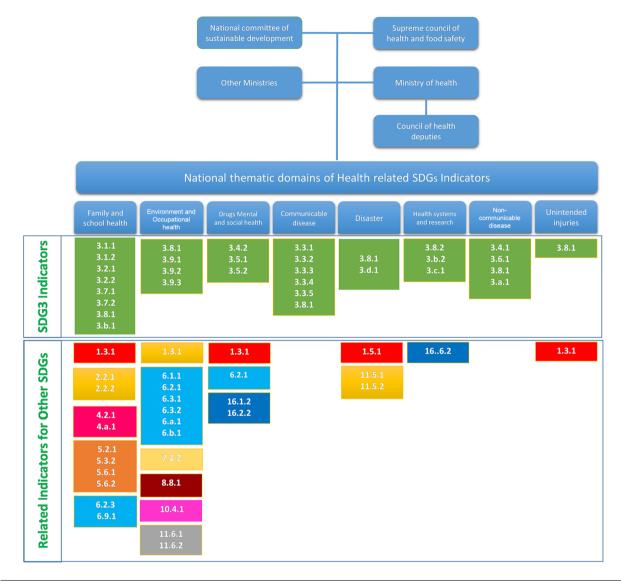


Figure 1. Thematic domains of health-related SDGs and its place in whole government response to SDGs

all for the benchmarking exercise: 3 indicators from SDG3 and 13 indicators from other SDGs (Table 1).

Taking these limitations into account, the data so far assembled for the period of 1990 - 2015, show that significant improvements have been made in health status in terms of decreased MMR, IMR, U5MR as shown in Table 1. Iran has made progress towards the achievement of universal health coverage as reflected for example in increase of reproductive health services, and reduction of stunning. Iran is also on course to achieve several targets within SDG3 well before 2030, and for some has already achieved the target for 2030 such as MMR which is below 70 per 100000 live births, NMR which is below 12 per 1000 live births, and U5MR which is also less than 25 per 1000 live births, safe delivery at birth, and tuberculosis. The main exceptions to progress, seen in national averages, are for unmet family planning needs, HIV incidence and road traffic accidents. Behind the national averages, some indicators reveal a lack of progress within socially and economically disadvantaged provinces as in Sistan-Balochestan (16). There are likely to be more such examples, but not all data are presently in a (disaggregated) form that allows the measurement of inequalities that have consequences for health.

Goal/Health Related SDG Indicators	1990	1995	2000	2005	2010	2015	Source
5DG 3							
3.1.1: Maternal mortality ratio (maternal deaths among women aged 15 - 49 years per 100,000 live births)	123	80	51	34	27	25	UN-2017 (6)
3.1.2: Proportion of births attended by skilled health personnel (doctors, nurses, midwives, or country-specific medical staff [e.g., clinical officers])			89/6	97/3	98/1	99	Iran MDG report 2014 (4)
3.2.1: Under-5 mortality rate (probability of dying before the age of 5 years per 1,000 live births)	57.5	45.3	34/7	25 7	19/2	15/5	WHO, 2019 (9) fo years 1990, 1995 and UN, 2017 (6) fo years 2000 and later
3.2.2: Neonatal mortality rate	26/5	22/6	19/2	15/3	11/7	9/5	UNSDSN, 2017 ( <mark>11</mark>
3.6.1: Death rate due to road traffic injuries			33/5	40/8	33/9		UNSDSN, 2017 ( <mark>11</mark>
3.7.1: Proportion of women of reproductive age (aged15 - 49 years) who have their need for family planning satisfied with modern methods			92/50	94/10	94/30	92.1 (EMRO 2016)	Iran MDG Report 2014 (4)
3.7.2: Adolescent birth rate (aged 10 - 14 years; aged15 - 19 years) per 1,000 women in that age group			34/70	32/60	33.7 (2011)	33.68 (2013)	UNSDSN, 2017 (11
3.a.1 Age-standardized prevalence of current tobacco use among persons aged 15 years and older							
• Prevalence of smoking any tobacco product among persons aged > 18 male			30/2	26/8	23/8	21/5	WHO, 2016 (11, 12
• Prevalence of smoking any tobacco product among persons aged > 18 female			5/8	2/9	1/5	0/7	WHO, 2016 (12)
ealth-related indicators for other SDGs							
2.2.1: 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	27 5	22/9	14/1	7 9	6/9	6/8	WHO/EMRO, 201 (11, 13)
2.2.2: 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, by type (wasting and overweight) Maternal mortality ratio							
Proportion of wasted children (weight for height below minus two standard deviations from the median) under the age of 5 years	8/9	7/8	5/4	4/4	4/4	4/4	UNICEF-WHO-Th World Bank-2010 (11, 14)
6.1.1: Proportion of population using safely managed drinking water services							
Proportion of population using improved drinking water sources (Total)	89/60				97/88	98.13 (2014)	Iran MDG Repor 2014 (4)
6.2.1: Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water							
Proportion of population using improved sanitation facilities	64/30				92/51		Iran MDG Repor 2014 (4)

In conclusion, the graduation from MDGs to SDGs has helped Iran to focus on the top priorities for health (especially non-communicable diseases and injuries), and to implement programs that have adopted a socio-economic and environmental approach to health. There are clearly challenges in organization, implementation and evaluation, some of which are made evident by the benchmarking exercise described here. There is, however, strong political and social commitment to achieving the SDGs in Iran, from the Supreme Council of Health and Food Security to civil society. This study recommends following the key recommended framework of actions for policy makers in this filed in Iran: (1) Equity, shared responsibility and evidenceinformed and oriented approach; (2) Strengthening, integrating and linking information systems across sectors; (3) Aligning, adjusting and integration of SDGs; (4) Strengthening stakeholder partnership and participation and effective multisectoral collaboration; (5) Awareness raising, advocacy and capacity building.

## Acknowledgments

The authors would like to acknowledge the generous contributions of Pediatric Gastroenterology, Hepatology and Nutrition Research Center, Research Institute for Children's Health, Shahid Beheshti University of Medical Sciences, Tehran, Iran

## Footnotes

**Conflict of Interests:** Authors declare that they have no financial potential conflict of interest regarding the content of the paper. We declare that we are not involved in any financial relationship or sponsorship, related to any products and services if even mentioned in the paper.

**Funding/Support:** This publication was supported by funds from WHO office in Tehran and Deputy for Health and Deputy for Social Affairs of Iran Ministry of Health.

#### References

- Boerma JT; World Health Organization. Health in 2015: From MDGS, millennium development goals, to SDGS, sustainable development goals. World Health Organization; 2015.
- United Nations. Sustainable development goals: 17 targets to transform our world. 2015. Available from: http://www.un.org/ sustainabledevelopment/.
- Keshavarz Moahmmadi N. Social determinants of health, health promotion, and sustainable development goals: Rising opportunities in Iran to address SDH and achieve SDGs. Soc Behav Res Health. 2017;1(1):1– 2.

- Ministry of Health and Medical Education. National MDG report. Islamic Republic of Iran; 2016.
- Keshavarz N. Health promotion thinking, interpretation and implementation in Iran: Capacities, and the way forward. *Health Scope*. 2013;2(1):1-3. doi: 10.17795/jhealthscope-10642.
- United Nations. United Nations Conference on Sustainable Development, Rio+20. 2012. 2017. Available from: https://sustainabledevelopment. un.org/rio20.
- 7. [No Author Listed]. Department of Environment, Government of Iran National Committee of Sustainable Development (NCSD). www.doe.ir/portal/file/?158929/155-2017. Available from: 62-\begingroup\let\relax\relax\endgroup[Pleaseinsert\ PrerenderUnicode  $\{ \emptyset^a \}$  into preamble  $\begin{pink} begin{pink} begin{pink$ endgroup[Pleaseinsert\PrerenderUnicode{ $\emptyset$ } intopreamble] \begingroup\let\relax\relax\endgroup[Pleaseinsert\ PrerenderUnicode{Ø3}intopreamble]\begingroup\let\relax\relax\ endgroup[Pleaseinsert\PrerenderUnicode{U,,}intopreamble] \begingroup\let\relax\relax\endgroup[Pleaseinsert\ PrerenderUnicode  $\{ \emptyset_{\neg} \}$  into preamble \\beging roup \\let \relax \\relax \\ endgroup[Pleaseinsert\PrerenderUnicode{ $\emptyset^{a}$ }intopreamble] \begingroup\let\relax\relax\endgroup[Pleaseinsert\ PrerenderUnicode{ر}intopreamble]\begingroup\let\relax\relax\ endgroup[Pleaseinsert\PrerenderUnicode{U^}intopreamble] \begingroup\let\relax\endgroup[Pleaseinsert\ PrerenderUnicode{ $\emptyset\mu$ }intopreamble].pdf.
- 8. MOH Iran; WHO/Iran. Benchmarking and trend analysis of health related sustainable development goals in Iran. 2017.
- 9. World Health Organization. Monitoring the health goal indicators of overall progress in world health statistics. 2016.
- 10. World Health Organization. *World Health Statistics 2016: Monitoring health for the SDGs.* Health and health related targets in World; 2016.
- [No Author Listed]. The UN sustainable development solutions network. SDG index and dashboards report: Global responsibility. Bertelsmann stiftung and sustainable development solutions network. 2017. Available from: http://sdgindex.org/assets/files/2017/2017-SDG-Index-and-Dashboards-Report--regions.pdf.
- WHO. World Health Statistics data visualizations dashboard: Monitoring health for the SDG. 2016. Available from: http://apps.who.int/gho/data/ node.sdg.tp-1?lang=en.
- WHO/EMRO. Islamic Republic of Iran health profile. WHO-EM/HST/235/E. 2015.
- UNICEF-WHO-The World Bank. Joint child malnutrition estimates. 2016. Available from: https://www.who.int/nutgrowthdb/estimates2015/ en/.
- WHO/SEARO. Background paper for the regional technical consultation on Monitoring the Health-Related Sustainable Development Goals (SDGs). New Delhi, India; 2017.
- Babaie MH. Inequities in health and health care between provinces of Iran: Promoting equitable health care resource allocation [dissertation]. University of Salford; 2012.