Deputy for Public Health
Center for Health Network

Islamic Republic of Iran
National Institute for
Health Research

Islamic Republic of Iran
Ministry of Health and
Medical Education

World Health
Organization

PHC
Measurement
&Improvement

PHCMI Report

Islamic Republic of Iran

October 2021

Partner Organizations

1. WHO Country Office in the I.R. Iran
2. National Institution of Health Research
3. Secretariat of Supreme Council for Health and Food Security
4. Human Resource Department
5. Budget and Monitoring Performance Department
6. Center for Health Network Management
7. Center for Population, Family and School's Health
8. Nutrition office
9. Center for Communicable Disease Management
10. Center for Non-Communicable Disease
11. Mental, Social and Addiction Office
12. Center for Environment and Occupational Health
13. Health Promotion and Education Office
14. Disaster Management Office
15. Oral Health Office

Tabel of Contents

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Executive Summery

Following the participation of the Iranian delegates in the first regional consultation meeting on Primary Health Care for Universal Health Coverage on July 29 to August 1, 2019 and introducing of the Primary Health Care Measurement and Improvement (PHCMI) Initiative, a national meeting was organized with participation representatives form National Institution of Health Research (NIHR) , WHO CO and Center for Health Network Management to discuss about forming a national core team. After designating the core team, the internal meetings were coordinated weekly and the following actions have been taken:

- Reviewing the main Indicator List (MIL) and Translation and customizing of its manual
- Assessment and completion of the values of the indicators that data are exist for them
- Designing a computer program in "InfoPath" format and entering data in the software for accelerating the data collection process
- Communicating with related units of MOHME
- Holding weekly core team meeting to review the indicators and assigning each group of indicators to the responsible person
- Translation of the indicators and sharing the list with the stakeholders
- Sharing the official manual with the stakeholders
- Holding meetings with each technical centers/offices to follow-up the process of receiving indicators' values
- Holding a meeting with experts to finalize the qualitative indicators
- Follow-ups with EMRO for receiving the guidelines for some indicators
- Defining the gaps of data
- Meetings with deputy minister for public health to review collected data and calculated indicators
- Preparation of report for the policy makers at the MOHME
- Preparation of report for the Country Office of WHO in the I.R. Iran
- Preparation of report for EMRO

The Iranian Primary Health Care at a Glance

in 1981, the PHC was designed in Iran based on 3 priorities as follows:

- The precedence of prevention over treatment,
- The precedence of rural areas over urban areas,
- The precedence of outpatient services over inpatient services

The characteristics of PHC system are:

- The services are provided in different levels
- The services are provided in an integrated and comprehensive methods
- The resources are allocated in each unit and each level based on the target population
- The services are predefined and the standards and indicators are being tracked

At the beginning, the main purpose of the Iranian PHC was to provide services for the rural areas. However, since there was a large proportion of migrants from rural to urban areas, providing the PHC has become among the most challenging priorities of Iranian MOHME. In the recent years and following the Health Transformation Plan (HTP), based on the New PHC, service packages have been revised based on the age groups and also NCDs and Mental Health Services were integrated in the PHC.
In this regard, since 2014, HTP have been implemented in Iran by focusing on Family Practice program and in line with the Iranian National 6th Five-year development plan. The following points are considered as characteristics of new PHC implementation especially in urban areas.

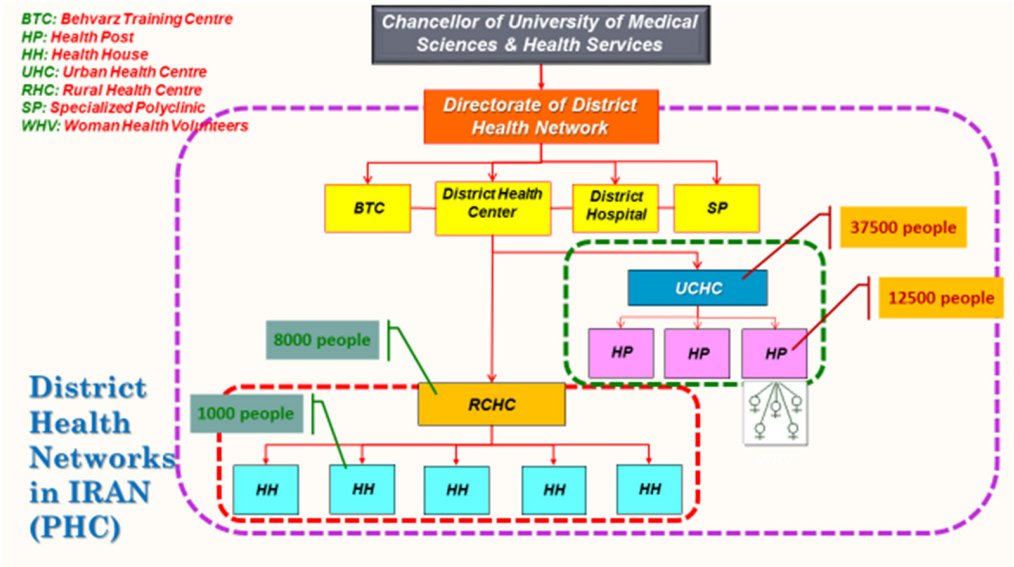
1. Primary Health Care Measurement and Improvement (PHCMI)

- The defined population for each facility and health provider
- Integrated services according to age groups (infants, children, adolescents, youth, middle aged, elderly) in a high quality healthcare network system
- Affordability of the services for people
- Continuity of health Services
- Using the multi-task trained work force
- Planning to allocation of 3 public health oriented Physicians per 10000 population
- Using Public Private Partnership (PPP) strategy
- Compatibility of Services with the health system
- Health management based on the defined geographical areas
- Resource pooling
- Using the clinical guidelines
- Implementation of the Electronic Health Records
- Referral System
- Strategic purchasing for services
- Payment system based on performance
- Implementing quality framework at the PHC level and pilot study for accreditation of Comprehensive Health Centers (in PHC)

Figure 1 shows the structure of service delivery and facilities at the district level of Iran. Currently, we can divide delivery of services in three categories:

- Based on the previous implemented plans, from 2003,it has been decided to set the family practice program in rural areas and cities with less than 20000 population, to improve access of the people who are under health insurance coverages using the referral system. In this plan, the possibility of comprehensive and affordable access to promotive, preventive, therapeutic and rehabilitative services is considered. Now, there are 18031 health houses, 308 health posts and 2855 health centers are available in rural areas and cities under 20,000 population and involving 31936 Behvarz (Health Worker), 6900 Physicians, and 5498 Midwives.
- Moreover, the Family practice program is piloted in two Provinces (Fars and Mazandaran provinces) using 489 physicians and 1103 health workers.
- In other provinces, after HTP implementation, from 2014, the PHC services are being provided by setting up of many new healthcare facilities and strategic purchasing in cooperation with private sector. There are also 20081 health care expert in 5344 Health Posts and 2797 Comprehensive Health Centers for providing PHC at the urban areas.

Figure 1. The structure of service delivery and facilities at the district level of Iran



INDICATORS Tables
INTEGRATED SERVICES/PRIMARY CARE

System/Structure

Yellow fill indicated a Qualitative Indicator
Green fill indicates a Vital Signs Profile Indicator
Orange fill indicates an SDG indicator.The numbers included in brackets these refer to the SDG indicator number. Standard reporting sources or accepted UN estimates should be used.

Table 1. Governance Indicators

Code	Indicator	Quality
1	A comprehensive national health sector policy, strategy or plan with goals and targets that includes all three components of a PHC approach exists and has been updated	YES
2	Presence of UHC legislation inclusive of PHC	YES
3	Participatory governance structures	YES
4	Equity mainstreamed in health policy	YES
5	Existence of regulatory authorities for (HWF, facilities, EMP) for both public and private sectors	YES
6	Presence of quality improvement and assurance processes in the national health plan	YES

Table 2. Finance Indicators

Code	Indicator	Value
7	GDP per capita (PPP current international $)	14536
8	Population living in poverty (Under $1.90 int'l dollars / day)	0.3
9	Government health spending as percentage of GDP	4.2%
10	Total PHC spending per capita (Current international $)	170
11	% PHC expenditure from current health expenditure	38%
12	% PHC expenditure from domestic general Government health expenditure	26%
13	Domestic general government expenditure on PHC as a % of total PHC expenditure	30%
14	Other sources of PHC expenditure (OOP, donor, etc.) as % of total PHC expenditure	70%

Inputs

Table 3. Health Workforce Indicators

Code	Indicator		Value
15	% health workforce in primary care (by occupation)	Physician	59%
		Health care expert	100%
		Community Health Workers (Behvarz)	100%
		Midwives	26%
16	% primary care workforce specialized in family practice (by occupation)	Physician	83%
		Health care expert	14%
		Midwives	84%
		Community Health Workers (Behvarz)	100%
17	Proportion of HWF in PHC have received minimum continuous professional education according to national requirements in the last year		100%
18	Vacancy rate in PHC	Physician	19%
		Health care expert	33%
		Community Health Workers (Behvarz)	23%
		Midwives	0%
19	Density of PHC by occupation (N/10,000 population)	Physician	1.3
		Health care expert	3.4
		Community Health Workers (Behvarz)	15.2
		Midwives	3.2

Table 4. Health Information Systems indicators

Code	Indicator		Value
20	% births registered		98%
21	% deaths registered		89%
22	Explicit adoption of a set of PHC indicators for M&E		Yes
23	Inclusion of section on PHC performance in annual health sector reporting		Yes
24	% private and public sector PHC that reports performance data	public sector	100%
		private sector	No Data
25	Presence and use of unique identifiers at facility		Yes
26	Presence of a comprehensive individual patient/family record		Yes
27	Is there a functioning eHIS in the country?		Yes
28	% PC facilities using eHIS		98%
29	% of patients who get registered by PHC facilities		95%

Table 5. Infrastructure indicators

Code	Indicator		Value
30	% population that would have to travel more than 5 km/1 hour to arrive at PHC facility		0.7%
31	% PHC facilities with adequate WASH	urban	80%
		rural	86%
32	Room with auditory and visual privacy for patient consultations	Comprehensive Health Services Center	75%
		Health House	88%
		Health Post	48%
33	Communication equipment (phone or SW radio)		100%
34	Facility has access to computer with email/internet access		98%
35	Standard precautions for infection prevention		Indicators missing/not present

Table 6. Medicines indicators

Code	Indicator	Value
36	PHC EML list correlated to package of services delivered in PHC	Yes
37	Proportion of facilities in which essential medicines are available (no stock outs in X time frame)	100%

Table 7. Supplies indicators

Code	Indicator	Value
38	% PHC facilities with standard priority diagnostics and equipment available	100%

Processes

Table 8. Model of Care indicators

Code	Indicator		Value
39	% of PHC cases referred to secondary care		8.4%
40	Annual outpatient department utilization rates per capita		4.1
41	% of PHC facilities that can provide mental health services	Screening and education in Health House and Health Post	100%
		physician visit and medication in Comprehensive Health Services Center	100%
		consultation and behavioral therapy by psychologists in urban in Comprehensive Health Services Center	60%
42	Number of consultations per health worker (physician, nurse, etc.) per day	Physician	35
		Midwives	58
		Behvarz	19
		Health Care expert	27
		Mental Health expert	10
		Nutrition expert	15
		Dentist	5

Table 9. Management/Quality Improvement indicators

Code	Indicator		Value
43	Evidence-based national guidelines/protocols/standards exist for the management of all priority causes of morbidity and mortality		100%
44	Professionalized management at PC level		Indicators missing/not present No Program
45	Proportion of facilities with up-to-date performance reports in the last 6 months to 1 year		100%
46	% PC facilities with systems to support quality improvement	Tabriz University of Medical Sciences as A pilot Study	5%

Table 10. Quality Processes (Patient Survey) indicators

Code	Indicator	Value
47	% PC facilities that monitor patient experience	100%

Outcomes

Table 11. Effective Coverage/Quality of Care indicators

Code	Indicator		Value
48	Number of adverse events reported (immunization/medication)		data collected / not reported
49	% of PHC prescriptions that include antibiotics in out-patient clinics		70%
50	% of PHC prescriptions that include injectable medicines		27.6%
51	% of registered hypertension patients with BP <140/90 at last 2 follow up visits		82.5%
52	% of registered diabetic patients with fasting blood sugar controlled at last 2 follow up visits/A1C <7%	FBS	44%
		A1C	35%
53	% of registered NCD patients with 10 years cardiovascular risk recorded in past 1 year		19.8%
54	% of women who delivered and received at least once postnatal care within the first 40 days		95.3%
55	% of substance users including tobacco users in receipt of brief intervention		Data collected / Not reported
56	% of under 5 children that had weight and height measured in past 1 year		63%
57	Admissions for ambulatory sensitive conditions		Indicators missing/not present
58	Children under 5 who are stunted, wasted, overweight, obese	Children under 5 who are stunted	4.8%
		Children under 5 who are wasted	4.3%
		Children under 5 who are overweight	2.9%
		Children under 5 who are obese	0.6%
59	Exclusive Breastfeeding 0-5 months (%)		47.4%
60	Cervical cancer screening rates		7.2%
61	Vaccination of Measles2		98%
	Vaccination of DPT3		99%

MULTISECTORAL ACTION

Table 12. System/Structure Indicates

Code	Indicator		Value
62	Adoption of HiAP approach and 2. Existing mechanism for multisectoral governmental coordination		Yes
63	Inclusion of indicators on relevant social, economic, environmental and commercial determinants of health in NHPSP		Yes
96	Existence of community-based health workforce, density per 10000 population	Physician	1.3
		Health care expert	3.4
		Community Health Workers (Behvarz)	15.2
		Midwives	1.1

Table 13. Outcomes Indicators

Code	Indicator		Value
64	% households with adequate WASH [6.1.1/6.2.1]	water	95.3%
		sanitation: Urban	98.2%
		sanitation: Rural	93%
65	% households cooking with clean fuel [7.1.2]		Indicator missing / not present
66	% children under 5 years of age who are developmentally on track [4.2.1]		63%
67	Malaria incidence per 1000 population at risk [3.3.3]		0.73
68	Physical inactivity in adults		56.4%
69	Proportion of population subjected to physical, psychological or sexual violence in the previous 12 months [16.1.3]		Child abuse: 0.1% (Domestic violence):1%

EMPOWERMENT/ENGAGEMENT

Table 14. System/Structure Indicators

Code	Indicator		Value
96	Existence of community-based health workforce, density per 10000 population	Physician	1.3
		Health care expert	3.4
		Community Health Workers (Behvarz)	15.2
		Midwives	1.1

Table 15. Inputs Indicators

Code	Indicator	Value
97	Community/patient participation in facility management meetings	Yes

Table 16. Outcomes Indicators

Code	Indicator	Value
95	% population who believe decision making is inclusive [16.7.2]	Indicators missing/not present

Impact

Table 17. Health Status indicators

Code	Indicator	Value
70	Adult mortality rate 15-60 years per 1000 persons	1.6
71	Adolescent mortality rate per 100000	52.9
72	U5 Mortality Rate per 1000 live births	15
73	Infant Mortality Rate per 1000 live births	12
76	Neonatal mortality rate per 1000 live births	9
75	Total fertility rate*	2.1 (2016)
76	Met need for family planning[3.7.1]	data collected / not reported
102	DPT3 Dropout rate	<1%
104	TB treatment success	86.2%
108	Antenatal care quality score based on WHO guidelines	Indicators missing/not present (WHO guidelines)
109	Antenatal care coverage (4+ visits)	82.8%
110	Family planning quality score based on WHO guidelines	Indicators missing/not present (WHO guidelines)
111	Demand for family planning satisfied with modern methods	Indicators missing/not present
112	Sick child quality score based on IMCI guidelines	Indicators missing/not present (WHO guidelines)
118	People living with HIV receiving anti-retroviral treatment	91.7%
119	Use of insecticide-treated nets (ITN) for malaria prevention**	
120	Children under 5 with diarrhea receiving ORS	61.38%
121	Prevalence of raised blood pressure (age-standardized estimate)	19.8

* Based on GBD study the TFR for Iran was 1.7 in 2017/According to estimations by the Statistics Center of Iran, , the "total fertility rate" for the total population (including Iranians and non-Iranians residing in the country) were 2.1, 2 and 1.8 children per woman , for 2017, 2018 and 2019 respectively using direct method . As well, this indicator for the Iranian population were 2.1, 2 and 1.7 children per woman in 2017, 2018 and 2019 respectively.

** Alternative indicator: Coverage of indoor residual spraying in targeted areas (areas with local malaria transmission value: 75% of targeted areas)

Table 18. Mortality by Cause indicators

Code	Indicator		Value	
76	Met need for family planning[3.7.1]		data collected / not reported	
77	Maternal mortality ratio per 100000 live births[3.1.1]		17.7	
78	Life Expectancy at Birth (years)		76	
79	Premature NCD mortality % probability [3.4.1]		15	
80	Causes of Death		per 100000 population	%
		No communicable	420.9	82
		injuries	44.57	10
		Communicable & other conditions	37	8
81	Suicide rate[3.4.2]		data collected / not reported	

Table 19. Equity Indicators

Code	Indicator		Value
82	Coverage of RMNCH by mothers' education		Indicators missing/not present (WHO guidelines)
83	U5 mortality by residence per 1000 live births	Urban	14
		rural	20
84	Average availability of 5 Tracer RMNCH Services		Indicators missing/not present (WHO guidelines)
98	Perceived access Barriers due to treatment costs		4%
99	Perceived access Barriers due to distance		1%
101	Average availability of services for 3 Tracer Communicable Diseases (STI, TB, HIV)		100%
103	Coverage of DPT3 Immunizations		99%
117	Care seeking for suspected child pneumonia		75.9%

Table 20. Efficiency Indicators

Code	Indicator		Value
105	Proportion of caregivers who were told the sick child diagnosis		Indicators missing/not present
106	Proportion of Family planning, ANC, and sick child visits over 10 minutes		Indicators missing/not present
107	Provider absence rate	rural :doctors	0.01%
		rural :midwives	0.01%
113	Adherence to clinical guidelines		Indicators missing/not present (WHO guidelines)
114	Diagnostic accuracy		Indicators missing/not present
115	Adequate waste disposal	urban	80%
		rural	86%
116	Proportion of rooms with all infection control items		Indicators missing/not present

Table 21. Financial Protection Indicators

Code	Indicator	Value
85	% population with impoverishing health expenditure [3.8.2]	0.53%

Table 22. Resilience Indicators

Code	Indicator	Value
86	IHR Core Capacity Index / JEE	85.2
87	Disaster related death rate [1.5.1]	1.3

Table 23. Risk Factor/Chronic Disease Prevalence Indicators

Code	Indicator		Value
88	Obesity prevalence		crude:22.75 age standard:21.3
89	Diabetes Mellitus prevalence		10.1%
90	Hypertension prevalence		26.4%
91	Tobacco use[3.A.1]		14.1
100	Average availability of diagnosis and management of 3 tracer NCDs (diabetes, CRD, CVD)	for diabetes and CVD	100%
		for CRD only asthma in 7 university	1.3%

Table 24. Cause-Specific Mortality Indicators

Code	Indicator		Value
92	Household and ambient air pollution [3.9.1]	Percentage of the number of the days per year that the weather is clean or relatively clean	74.5 %
		Percentage of air pollution related deaths and is calculated via 1.3+ AirQ+ software	8.89%
		Percentage of households using liquid and solid fuels	4%
		WHO report	35 per 10000 population
93	Road traffic mortality per 100000 population[3.6.1]		19.9
94	Homicide [16.1.1]		data collected / not reported

Table 25. Responsiveness Indicators

Code	Indicator	Value
95	% population who believe decision making is inclusive [6.7.2]	Indicator missing / not present

Table 26. Indicators with Missing data

Code	Indicator		Value
82	Coverage of RMNCH by mothers' education	WHO guidelines	Indicators missing/ not present
84	Average availability of 5 Tracer RMNCH Services		
108	Antenatal care quality score based on WHO guidelines		
110	Family planning quality score based on WHO guidelines		
112	Sick child quality score based on IMCI guidelines		
113	Adherence to clinical guidelines		
35	Standard precautions for infection prevention	Indicators missing	
57	Admissions for ambulatory sensitive conditions		
95	% population who believe decision making is inclusive		
105	Proportion of caregivers who were told the sick child diagnosis		
106	Proportion of Family planning, ANC, and sick child visits over 10 minutes		
111	Demand for family planning satisfied with modern methods		
114	Diagnostic accuracy		
116	Proportion of rooms with all infection control items- MAYBE REPEAT OF #32		
65	% households cooking with clean fuel	No Program	
44	Professionalized management at PC level		
119	Use of insecticide-treated nets (ITN) for malaria prevention	Sanctions	
48	Number of adverse events reported (immunization/ medication)	data collected / not reported	
55	% of substance users including tobacco users in receipt of brief intervention		
76	Met need for family planning		
81	Suicide rate		
94	Homicide		

Strength Points:

- Having a strong support from Deputy Minister for public health
- PHCMI focal person of Iran has also a managerial role at Iran MOHME
- Inter and Intra sector collaboration for data mapping
- The PHC structure in the country that makes it possible collect the data
- The existence of electronic health records at PHC level
- There are available data for 82% of the indicators
- Having the NIHR partnership
- Having a strong support from WHO CO

Weakness Points:

- various request for information and indicators based on different national plans
- For sensitive indicators like addiction or violence, there is problem of under reporting in routine health information system.
- Due to lack of information from the private sector, some indicator values may not be representative for the whole country.
- In the urban areas and especially in metropolitan areas the electronic records may not enough coverage since there are few number of referrals to public sector.

Gaps:

1- There are 22 indicators that the data of them either does not exist at all or does not report at national level. Therefore, the surveys and routine data collections system are needed.

2- Some indicators are not classified based on sex, age group, district, etc. However, the PHC packages in Iran are designed based on age groups.

Recommendations:

1- Capacity building for PHCMI implementation at national and university levels and estimation of indicators for University, District and National levels.

2- Preparing a dashboard for monitoring the indicators in a 10 years trend.

3- Reporting the indicator based of age groups (for some indicators).

4- Including some indicators by focusing on elderlies.

5- Including several indicators by focusing on occupational health.

6- Considering some indicators for assessment and readiness of service delivery units and households for disaster /emergency responses.

7- Considering some indicators by focusing on health promotion and health education.

8- To organize meetings for final decisions regarding indicators which need to conduct surveys for them.

9- Data validation for the indicators that are extracted from routine health information system.

10- Planning for designing surveys for indicators that are not exist in routine health information system , such as underestimated of sensitive indicators and those indicators that there are no data collection for them in routine system.

Table 27. Summary of the availability of indicators

NO	Indicators	Number of indicators with available values	No Data		Total number of indicators
			Indicators missing/not present	data collected / not reported	
1	Vital Sign indicators	27	12		39
2	Other quantitative indicators	58	5	5	68
3	Qualitative indicators	14			14
4	total	99	22 *		121

* In total, there are 22 indicators that the values are not available

- 6 indicators that there are no WHO guideline available for them
- 1 indicator that cannot be implemented in Iran due to sanctions
- 5 indicators that data are gathered but not reported
- 10 indicators that no data is available. For one of them, there is no plan for the indicator.

Appendix 1

Timetable

	Stage I - Plan		Responsible entity	Supporting entity
Task	Finalizing teams	Meeting with WHO country office and National Institution Health Research focal points and finalizing the team members (19th of August)	Mrs Sirous	
	Brifing meeting and issuing the team members' assignments (1st of September)		Dr Raeissi (Deputy minister for Health - Dr Tabrizi	
	Reviewing indicator list		Project team	
	Translating the draft manual of PHCMI based on Iran health system context.		Dr Khosravi - Dr Bonyani	
	Routine meeting among the natioanl team to discusse PHCMI	Evrey other week	Project team	
	Defining assessment parameters		Project team	
	Drafting work plan		Project team	
	Brifing meeting with the responsible persons and finalizing the manual (25th of September)		Dr Khosravi	
	Translation of the indicators and sharing them with the stakeholders		Dr Azimi and Dr Khosravi	
	Sharing the translated manual with the stakeholders.		Dr Azimi	
	Data mapping	Meeting with team members.	Dr Tabrizi	
	Finalizing/disseminating work plan		Project team	
	Send formal letter of collab		Dr Tabrizi	
	Holding meeting with collab	Meeting with focal person and receiving their feedbacks	Dr Khosravi	
	Stage II - Assess		Responsible entity	Supporting entity
Task	Complete quantitative data mining and document review	Providing the indicators that the data related to them were available.	collab / PHC network management center	
	Preparing a software for entering the data		Dr Vasegh	
	Identify resourses needed and Conduct qualitative data collection	Organizing interviews and data gathering for qualitative data (3rd of October to 22nd of October)	Project team and Dr Azimi	
	Entering the quantitative data into the software (1-2 October)		Dr Vasegh / PHC network management center	
	Review data gaps and finalize plans for qualitative data collection	Receiving feedbacks from stakeholders and finalizing the data gathering process for qualitative indicators. (25th of September to 2nd of October)	Project team / PHC network management center	WHOCO / EMRO
	Stage III - Verify		Responsible entity	Supporting entity
Task	Internal review	Data verification by WHO Country Office in Iran (27th of October)	Mrs Sirous and Dr Bonyani / PHC network management center	EMRO
	External review?	Data verification by WHO EMRO (6th of November)	EMRO	WHO/CO/DPRF/Consultant
	Receiving the feedbacks from EMRO (21st of November)		EMRO	
	Resolve any discrepancies	Last week of Novwmber	EMRO	WHO/CO/DPRF/Consultant
	Finalize content of VSP, and PHC Country Profile	End of November	Consultant	WHO/CO/DPRF/DHSA
	Identification of priorities		MOH	Consultant
	Preparing the official report (7th of December)		Consultant / PHC network management center	
	Sign-off by minister	The health minister sign-off of the report (first week of December)	MOH/DPRF	DPRF/WHOCO
	Stage IV - Disseminate		Responsible entity	Supporting entity
Task	REGIONAL WORKSHOP - Planning			
	REGIONAL WORKSHOP - Conducting			
	REGIONAL WORKSHOP - Debriefing			
	Report of findings			
	Stage V - Improvement Action Plan		Responsible entity	Supporting entity
Task	Development of an action plan of improvement			
	Multi-stakeholder dialogue to identify areas of collaboration			
	Discussion of action plan at plannig committee