



Detailed mapping of the 100 global reference list of core health indicators on the 3 reference WHO classifications

5-11 October 2019

Banff, Canada

Andrea Martinuzzi, Soraya Maart, Luisa Whitelaw, Warrick Sive, Lucilla Frattura, Coen Van Gool
 WHO-FIC CC Italy, South Africa, The Netherlands

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Abstract Sustainable development Goal (SDG) 3 (Better Health for all at all ages) is a central pillar among the UN SDGs. A reasonable representation of SDG3 includes Universal Health Coverage (UHC), one of the main targets of SDG3. The global reference list of 100 Core Health Indicators published by WHO and recently revised (WHO 2018) should function as a normative guide for the selection of standard indicators and their definition that "stakeholders and countries can use for monitoring in accordance with their respective health priorities and capacity". Among the 100 Core Health Indicators many, especially those grouped under the "Health Status" headline already incorporate the appropriate method of measurement chosen from the WHO-FIC codes (e.g. NCD mortality: ICD codes 100-199, C00-C97, E10-E14, J30-J98). Others however, especially those grouped among under Risk Factors, Health Coverage and Health Systems, lack such specific indication. Both ICF and ICHI can provide categories and items useful to capture and summarize indicators within those groups. A group of FDC members ran an experiment of manually mapping items from the WHO-FIC to Core Health Indicators.

Introduction

The UN Sustainable Development Goals (SDGs) is the framework within which global efforts to ensure healthy lives operate. The Global Action Plan for Healthy Lives and Well Being for All (WHO 19/19/2018) lists the priorities in the area of health that should be pursued actively in the set timeframe. Universal Health Coverage (UHC), that includes financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all, is a central element in the plan. The ability to monitor the progress towards the achievement of set goals is a fundamental requirement for any effective plan and action. The identification of efficient indicators useful to monitor the path towards UHC may start from the recently updated "list of core health indicators" (LoCHI). The Global Reference List of 100 Core Health Indicators relevant for health are well represented in the reference WHO Family of International Classifications. These could be used to monitor each of the selected indicators

Methods & Materials

A manual search was run through the 100 core health indicators to initially identify those for which a specific category from one of the WHO classifications existed.

For all the remaining items the best fitting category was searched for within the WHO FIC.

A test of the process was run on blocks of the LoCHI as a proof of principle exercise.

Results

Indicators were matched using key words within the descriptors. Attempts were made to map to ICD-10, ICD-11, ICF and ICHI.

ICD was best to capture the indicators linked to **Health Status and Risk Factors**. However, there was an overlap in ICD codes for mortality e.g. adolescent, adult, under five and infant mortality and neonatal codes.

The indicator of **Nutrition** could be mapped across all 3 classifications. However limitations could not be addressed using the classifications e.g. The codes all speak to initiatives for promoting breastfeeding, or possible feeding problems but none are absolute indicators that an infant was exclusively breastfed up till 5 months; possibly the ICF code could be used as a status code for tracking at postnatal/neonatal check ups (with consideration of the 6th character impairment codes if relevant). The ICF and/or ICHI codes may be more appropriate for **Environmental Risk Factors** as ICD codes speak more to issues potentially related to water quality issues - rather than an affirmation that the population are using safely managed drinking water as required in the indicator.

ICD was best used for tracking **Health Systems**.

	INDICATOR	ICD-10	ICD-11	ICF	ICHI
Mortality by age and sex	Life expectancy at birth	R96-R99, I46.1	BC64, BC65.1, MC82, MH10, MH12-MH16	e2150	
	Adolescent mortality rate	R96-R99, I46.1	BC64, BC65.1, MC82, MH10, MH12-MH16	e2150	
	Adult mortality rate between 15 and 60 years of age	R96-R99, I46.1	BC64, BC65.1, MC82, MH10, MH12-MH16	e2150	
	Under-five mortality rate	R95-R99	BC64, BC65.1, MC82, MH10-MH16	e2150	
	Infant mortality rate	R95-R99	BC64, BC65.1, MC82, MH10-MH16	e2150	
	Neonatal mortality rate	R95-R99	BC64, BC65.1, MC82, MH10-MH16	e2150	
	Stillbirth rate	Z371/3/4/7, P95, O36.4	QA46.1/3/4/6/7/9/A/C/D/F/G/J/K, KD3B.0/1/Z, JA86.3, JA81.3		NME.JE.AA
Mortality by cause	Maternal mortality ratio	O95-O97, P01.6	JB60, JB61, JB62, KA01.6		
	TB mortality rate	A15-A19	1B10-1B14, 1B1Y, 1B1Z		
	AIDS-related mortality rate	B20-B24	1C60-1C62		
	Malaria mortality rate	B50-B54, P37.3/4	1F40-1F4Z, 1C61, KA64.1, MG55.0		
	Premature noncommunicable disease (NCD) mortality	I00-I99, C00-C97, E10-E14, J30-J98			
	Mortality from household and ambient air pollution	Z58.1/7	QD70.1/5/Z	e2600	
	Mortality from unsafe water, unsafe sanitation and lack of hygiene	A00-01, A03, A04, A06-9, B76-77-79, E40-46		e5300-9	
	Mortality from unintentional poisoning	X40-X49	NE6Z		
	Suicide rate	X60-X84	PB80-PD3Z, XE97V		

	INDICATOR	ICD10	ICD 11	ICF	ICHI
Nutrition	Exclusive breastfeeding rate 0-5 months of age	O92, P05.2/9, P92	KD32.3, MG43.30	d560	Target: VEH
	Early initiation of breastfeeding	O92, P05.2/9, P92	KD32.3, MG43.30	d560	Target: VEH
	Incidence of low birth weight among newborns	P05-P07	KA20-KA21	b530	Target; KTN, PZA.AB.ZZ
	Children under 5 years who are stunted	E45	5B53&XSSW/XSOT/XS25	b530	Target; KTN, PZA.AB.ZZ
	Children under 5 years who are wasted	E41	5B51&XSSW/XSOT/XS25	b530	Target; KTN, PZA.AB.ZZ
	Children aged under 5 years who are overweight	E66	5B80-5B81, 5C1Y/Z, QA10	b530	Target; KTN, PZA.AB.ZZ
	Anaemia prevalence in children	Range D50-D64	Range 3A00-3A9Z		
	Anaemia prevalence in women of reproductive age (Also: severe anaemia)	Range D50-D64	Range 3A00-3A9Z		

	INDICATOR	ICD 10	ICD11	ICF	ICHI	
Health Systems Indicators	Quality and safety of care	Perioperative mortality rate	Y88.3	PL2Y/Z	VC1.VC.ZZ, UE1.AA.ZZ, UBC.VC.ZZ	
		Obstetric and gynaecological admissions owing to abortion	O00-O08	JA00-JA0Z	VC1.VC.ZZ, UE1.AA.ZZ, UBC.VC.ZZ	
		Institutional maternal mortality ratio	O95, O96, O97	JB60-JB6Z	VC1.VC.ZZ, UE1.AA.ZZ, UBC.VC.ZZ	
		Maternal death reviews	O95, O96, O97	JB60-JB6Z	VC1.VC.ZZ, UE1.AA.ZZ, UBC.VC.ZZ	
		ART retention rate	B20-B24, Z71.7, Z21, O98.7, Z11.4	1C60-1C6Z, QC49	VC1.VC.ZZ, UE1.AA.ZZ, UBC.VC.ZZ	
		TB treatment success rate	A15-A19	1B10-1B14, 1B1Y, 1B1Z	VC1.VC.ZZ, UE1.AA.ZZ, UBC.VC.ZZ	
	Utilization and Access	Service-specific availability and readiness		QB11, QB14, QB15	UE1.TK.ZZ	
		Outpatient service utilization (Also: inpatient admissions and surgical volume)		XE8DZ	E5800	VD1.VC.ZZ
	Health workforce	Health facility density and distribution (Also: access to emergency surgery)		QB14, QB15, QB1Y	E5801	VD1.VC.ZZ
		Hospital bed density		QB14	E1101	VD1.VC.ZZ
Health information	Access to a core set of relevant essential medicines		QB14	E1101	VD1.VC.ZZ	
	Health worker density and distribution			E355	UB1.AA.ZZ	
Health information	Output training institutions				UEQ.AA.ZZ	
	Birth registration	Z37, Z38		QA46, QA47	VC1.VC.ZZ	
	Death registration				VC1.VC.ZZ	

Conclusion

The WHO-FIC can be used to plot the achievement of UHC. The ICF should be aligned to be used to monitor the achievement of functioning across populations.

Acknowledgements

THE FDC Working Group on UHC .