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A Gap Analysis of Mother, New-born, and Child Health in West Africa with Reference to the Sustainable Development Goals 2030

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Abstract

The Economic Community of West African States (ECOWAS) comprises 15-member states with an estimated population of 350 million. This account relates the present status of maternal, neonatal, and under-five-mortality to the Sustainable Development Goals (SDG) targets set for 2030. For each SDG indicator, progress observed was compared with that needed to meet the target (assuming linear progression). The time gap was calculated as the difference between the time remaining to the target year (2030) and the estimated time needed to achieve the target. The highest maternal mortality ratio is found in Sierra Leone (1360 in 2015), followed by Nigeria (814) and Liberia (725). Whereas Sierra Leone and Nigeria keep high positions also for the neonatal and under-five mortality rate, Liberia ranks clearly better than the ECOWAS average. Globally skilled health professionals' density is 25 per 10,000 population and in Nigeria close to it with 20.1 whereas Guinea takes the last position with 1.4. The gap analysis shows that ECOWAS countries have a realistic chance to likely reach the SDG targets in 2030 with a delay of less than 4 years regarding maternal, neonatal, and under-five-mortality although their skilled health professionals' density is considerably lower than for the entire African region. *(Afr J Reprod Health 2018; 22[4]: 123-134)*.

Keywords: West Africa, Mother, New-born and Child Health, Sustainable Development Goals, Gap Analysis, Health Worker Density

Résumé

La Communauté économique des États de l'Afrique de l'Ouest (CEDEAO) compte 15 États membres et une population estimée à 350 millions d'habitants. Ce compte relie l'état actuel de la mortalité maternelle, néonatale et des moins de cinq ans aux objectifs de développement durable (ODD) fixés pour 2030. À cette fin, l'analyse du délai qui reste pour atteindre les objectifs des ODD consiste de la méthodologie recommandée précédemment par le Programme des Nations Unies pour le développement pour évaluer les progrès accomplis dans la réalisation des Objectifs du Millénaire pour le Développement (OMD). Pour chaque indicateur, les progrès observés ont été comparés à ceux nécessaires pour atteindre la cible (en supposant une progression linéaire). L'écart de temps pour un indicateur individuel a été calculé comme étant la différence entre le temps qui reste jusqu'à l'année cible (2030) et le temps nécessaire pour atteindre la cible (en supposant la vitesse prévue par le programme national). Le taux de mortalité maternelle le plus élevé se situe en Sierra Leone (1360 en 2015), suivi du Nigéria (814) et du Libéria (725). Alors que la Sierra Leone et le Nigéria conservent des positions élevées également en ce qui concerne le taux de mortalité néonatale et celle des moins de cinq ans, le Libéria se classe nettement mieux que la moyenne de la CEDEAO. Le nombre de professionnels de la santé qualifiés dans le monde est de 25 pour 10 000 habitants. Au Nigéria, il est proche de 20,1 tandis que la Guinée occupe le dernier rang avec 1,4. L'analyse des lacunes montre que les pays de la CEDEAO ont une chance réaliste d'atteindre les objectifs des ODD en 2030 avec un retard de moins de quatre ans en ce qui concerne la mortalité maternelle, néonatale et des moins de cinq ans, bien que la densité de leurs professionnels de la santé qualifiés soit considérablement inférieure à celle de la région africaine entière. *(Afr J Reprod Health 2018; 22[4]:123-134)*.

Mots-clés: Afrique de l'Ouest, santé des mères, des nouveau-nés et des enfants, objectifs de développement durable, analyse des écarts, densité du personnel de santé

Introduction

Maternal, new-born and child health (MNCH) are interconnected, related to all developmental stages (infancy, childhood, and puberty, reproductive and post-reproductive periods) and need strong attention of global, regional and national actors striving towards the achievement of sustainable development[1,2]. Despite envisioned opportunities[3,4], recent scientific evidence points to successes and failures in reaching MNHC targets of Sustainable Development Goals (SDGs)[5]. Transparent MNCH policies, measurable objectives and evidence-based interventions are seen as the main success factors[3]. In addition to unfavorable social-economic determinants[6], failures are particularly evident when the focus is on the continuum of care. Especially in low developed countries MNCH require unrestricted access to care provided by families and communities, by outpatient and outreach services, and by clinical services throughout the lifecycle, including adolescence, pregnancy, childbirth, and the postnatal period. Regrettably, the most important dimensions of Universal Health Coverage (UHC) – availability, accessibility, acceptability and quality are frequently in need for accelerated development in resource limited countries[7]. The UHC2030 agenda relates to one of the most important targets of SDG-3. It is hardly achievable in the ECOWAS to larger degree because weaknesses of the health system and the extreme lack of qualified health workforce. Also, MNCH services in rural areas are much less developed than in the central regions. Therefore, the Agenda for Sustainable Development[8] and the updated "Global Strategy for Women's, Children's and Adolescents' Health" (2016-2030) with the slogan "Leaving no woman and no child behind"[9], are envisioning the strong movement speeding up interventions in all countries recognized for underachievement. These international policies are calling on governmental, multilevel and multi-sectorial initiatives. Drawing on the best available information today, attempts are visible to analyze health policies and actual status of MNCH that will determine the health of future generations at the global level and be a basis for interventions[10]. However, in low resourced settings, such as the Economic Community of West African States (ECOWAS), there is limited evidence about potentials to achieve the targets of SDGs related to MNHC and very often evidence provides lessons reflecting only particular countries[11,12].

ECOWAS was established May 28, 1975 via the treaty of Lagos – comprises 15-member states (8 francophone, 5 Anglophone and 2 Lusophone) and covers a surface of 5,114,162 km^2 with an estimated population of 350 million[13]. ECOWAS Vision 2020, published in 2010, had expressed commitment towards a democratic and prosperous community and prioritized three main areas for the near future: regional resources development under sustainable environment, integration and mobility with access to education and health, and good governance[14]. Despite numerous strategies in this region dedicated to improving MNCH, a recent review has pointed to serious weaknesses in implementation and recognized needs for several improvements: strengthening stakeholder commitment, firming up the availability of resources, capacity building of workforce for health, and knowledge transfer with partnership platforms[11]. Almost all countries of ECOWAS are still struggling with high burden of maternal, neonatal and child morbidity and mortality[5]. Some countries are without development plans for health services in general or MNCH specifically, the latter as part of national health plans or separate. A few countries like Liberia have a well-developed set of objectives and targets for the near future, e.g. the Investment Plan for Building a Resilient Health System 2015 to 2021[15], however with questionable implementation.

The recent experience with Ebola (EVD) crisis in several countries of ECOWAS has also pointed to the fragile status of MNCH. Several countries experienced the devastating consequences of the Ebola epidemic during 2014-2015, which exceeded the capacity of the national health system and consequently slowed down progress in MNCH. The link between EVD outbreaks in the most affected countries (Guinea,

Liberia and Sierra Leone) and health systems' weakness is well documented in international reviews[16]. Such experience points to the lack of necessary attention among stakeholders to MNCH and its strengthening, as well as concern about extreme resource limitations. Today, there is growing recognition of the requirement for stronger health policies - finally due to the EVD crisis - with responsibility to implement better MNCH services and improve the health system as a whole[17,18]. Particularly, international partners are looking at national health policies when they prioritize their global health investments in MNCH[19]. One of the crucial requests is to improve monitoring and evaluation of health policies' implementation. The global indicators' framework adopted by the United Nations General Assembly through the UN Economic and Social Council in March 2017 has given detailed recommendations for setting national targets[20].

Methods

This analysis relies mainly on information collected from websites of the national Ministries of Health and of international organizations, *nota bene* the World Health Organization (WHO) and other United Nations (UN) Agencies as well as published scientific literature. Table 1 provides the websites of the Ministries of Health. As a quantified and comparable targeting of national development goals is not available this account compares the present status of maternal, neonatal, and under-five-mortality in each country with the targets of the Sustainable Development Goals (SDG) for 2030[21], considering this sector a priority and at the same time as a marker for the achievability of the SDGs in general.

As all ECOWAS member states accepted the SDGs as a target to be achieved until the year 2030, a gap analysis was conducted. A thorough gap analysis allows policy makers to analyse the situation and resources they have, versus the desirable situation and additional resources they will need from local, national and international agencies for any scenario identified in their plans. They can then work on narrowing the gap between an observed situation and the targeted future, as well as between required resources versus resources available. The gap analysis here follows the indicators relating to SDG-3 targets published in 2017[22]. To do this it was essential to have available valid baseline and observed values for years in between.

For the analysis of the time gap remaining to achieve the SDG targets 2030, the methodology recommended earlier by the United Nations Development Program (UNDP) in order to assess progress towards the Millennium Development Goals (MDG)[23] was used.

For each indicator, progress observed was compared with that needed to meet the targets (assuming linear progression). The time gap for an individual indicator was calculated as the difference between the time remaining to the target year and the time needed to achieve the target (assuming the speed foreseen by the national agenda). Formally, the time gap (G) was determined in the following way:

$$G = T_r - T_n$$

Where, T_r – remaining time is:
$$T_r = t_t - t_c$$

t_t and t_c denote the target year and the year of observation respectively;

T_n – time needed to achieve the target (assuming linear progress) is:

$$T_n = t_t - [t_b + (t_t - t_b) \frac{x_c - x_b}{x_t - x_b}]$$

t_b – baseline year,
x_b – baseline value of the indicator,
x_t – target value of the indicator,
x_c – observed value of the indicator.

Positive values of the time gap reflect over-performance, negative values indicate underperformance (i.e. time lag).

Based on this target-by-target analysis, the report then identified objectives that are "on track", "likely", or "unlikely" to achieve the national target and will obtain input from the

Table 1: Websites and development plans of Ministries of Health in the ECOWAS member states

ECOWAS countries	Websites of the Ministries of Health	Health Services Development Plans
Benin	http://beninmoh.eu5.org/service1.html	-.-
Burkina Faso	http://www.sante.gov.bf/	Plan_strategique_SNIS_2010-2020.pdf
Cape Verde	http://www.minsaude.gov.cv/	Plano nacional de Desenvolvimento sanitario Saúde 2012-2016
Côte d'Ivoire	http://www.sante.gouv.ci/	Various specific health programmes
Gambia	http://moh.gov.gm/	http://moh.gov.gm/sites/default/files/National%20Health%20Strategic%20Plan%202014-2020.pdf
Ghana	http://www.moh.gov.gh/	Ghana National Healthcare Quality Strategy 2017-2021
Guinea	http://www.sante.gov.gn/index.php/fr/	Feuille de Route Nationale Pour Accélérer la Réduction de la Mortalité Maternelle, Néonatale et Infanto-Juvénile - 2012 - 2015
Guinea-Bissau	[http://www.who.int/medical_devices/countries/gnb.pdf]	-.-
Liberia	http://moh.gov.lr/	Investment Plan for Building a Resilient Health System 2015 to 2021
Mali	http://www.sante.gov.ml/	Reforme du système de santé 2017
Niger	http://www.msp.ne/	Plan strategique recerche en sante 2013-2020
Nigeria	http://www.health.gov.ng/	Better Health for All
Senegal	http://www.sante.gouv.sn/	Plan Sénégal Emergent : Plans d'actions Prioritaires 2014 - 2018
Sierra Leone	http://health.gov.sl/	-.-
Togo	http://www.sante.gouv.tg/fr	plan stratégique de gestion des déchets médicaux _2016-2020
ECOWAS	http://www.ecowas.int/ecowas-sectors/health/	ECOWAS Vision 2020

stakeholders to derive recommendations for accelerating action.

The borderline for "unlikely" had been set at a (negative) time gap Gq being more than one quarter of the remaining time:

$Gq = Gt /Tr <-0.25$

For the predominantly used year of determination of the observed interim value i.e. 2015 the borderline time lag can be calculated as (2030-2015) * -0.25 = <-3.75.

Results

Table 2 shows the most important health indicators of the ECOWAS countries relating to MNCH. The highest maternal mortality is found in Sierra Leone (1,360 per 100.000 live births), followed by Nigeria (819) and Liberia (725). Whereas Sierra Leone and Nigeria keep their high positions also for the under-five mortality rate with 120.4 and 108.8 per 1,000 live births (joined by Mali with 114.7), Liberia surprises with a rate of 69.6 clearly below the ECOWAS average of 83.8 possible due to impaired statistical validity of Liberian data as a sequelae of the long-lasting civil war in combination with the subsequent Ebola crisis in Liberia. The adolescent birth rate is one of the highest worldwide with 123 per 1,000 girls (globally 44.1).

The second group of important indicators for the situation analysis of MNH in relation to SDG-3 is related to health system strengthening.

Table 2: Selected health indicators in ECOWAS member states (based on sources referenced)

Member State of ECOWAS	Total population (000s)[24]	Life expectancy at birth (both sexes)[24,25]	Healthy life expectancy at birth (years)[24,25]	Maternal mortality ratio (per 100,000 live births)[26]	Neonatal mortality rate (per 1000 live births)[27]	Under-five mortality rate (per 1000 live births)[27]	Malaria incidence (per 1000 population at risk)[28]	Road traffic mortality rate (per 100,000 population)[29]	Adolescent birth rate (per 1000 women aged 15-19 years)[30]
	2015	2015	2015	2015	2015	2015	2013	2013	2005–2015
Benin	10 880	60.0	52.5	405	31.8	99.5	303.0	27.7	94.0
Burkina Faso	18 106	59.9	52.6	371	26.7	88.6	418.4	30.0	130.0
Cape Verde	521	73.3	64.4	42	12.2	24.5	0.7	26.1	–
Côte d'Ivoire	22 702	53.3	47.0	645	37.9	92.6	385.2	24.2	125.0
Gambia	1 991	61.1	53.8	706	29.9	68.9	233.1	29.4	88.0
Ghana	27 410	62.4	55.3	319	28.3	61.6	318.5	26.2	65.0
Guinea	12 609	59.0	51.7	679	31.3	93.7	403.4	27.3	146.0
Guinea-Bissau	1 844	58.9	51.5	549	39.7	92.5	112.1	27.5	136.7
Liberia	4 503	61.4	52.7	725	24.1	69.9	368.8	33.7	147.0
Mali	17 600	58.2	51.1	587	37.8	114.7	460.9	25.6	172.0
Niger	19 899	61.8	54.2	553	26.8	95.5	317.1	26.4	206.0
Nigeria	182 202	54.5	47.7	814	34.3	108.8	342.9	20.5	122.0
Senegal	15 129	66.7	58.3	315	20.8	47.2	128.1	27.2	80.0
Sierra Leone	6 453	50.1	44.4	1 360	34.9	120.4	406.0	27.3	125.0
Togo	7 305	59.9	52.8	368	26.7	78.4	378.9	31.1	85.0
ECOWAS	349 154	60.0	52.7	562	29.5	83.8	305.1	27.3	123.0
AFRICAN REGION	989 173	60.0	52.3	542	28.0	81.3	268.6	26.6	100.3
GLOBAL	7 313 015	71.4	63.1	216	19.2	42.5	98.6	17.4	44.1

These indicators are related to health system structure, quality and effectiveness of performance. Table 3 presents a comparison of indicators describing the health workforce in ECOWAS member states, the African region and the world average. Globally skilled health professionals' density is 25 per 10,000 population and in Nigeria close to it with 20.1 whereas Guinea takes the last position with 1.4. This contradicts to some degree the figures in table 1 with life expectancy and healthy life expectancy higher in Guinea than in Nigeria (59.0 and 51.7 vs. 54.5 and 47.7 years).

Of special interest may be the last column in table 3 referring to the implementation of the 13 international health regulations. Under the International Health Regulations (IHR-2005)[31] all States Parties are required to have or to develop minimum core public health capacities to implement the IHR-2005 effectively. The IHR monitoring process involves assessing, - through a self-assessment questionnaire sent to States Parties - the implementation status of 13 core capacities. They include the following areas: legislation, coordination, surveillance, respond, preparedness, risk communication, human resources, laboratory diagnostic, points of entry, zoonosis (detection and response), food safety, chemical events (detection and response), and radio-nuclear capacity (emergency detection and response).

Table 3: Selected health services indicators in ECOWAS member states (based on sources referenced)

Member State of ECOWAS	Skilled health professionals density (per 10 000 population)[32]	Proportion of births attended by skilled health personnel (%)[33]	Infants receiving three doses of hepatitis B vaccine (%)[34]	Reported number of people requiring interventions against NTDs[35]	Proportion of married or in-union women of reproductive age who have their need for family planning satisfied with modern methods (%)[36]	Average of 13 International Health Regulations core capacity scores[37]
	2015	2006–2014	2014	2014	2005–2015	2010-2015
Benin	8.3	77	70	4 358 651	24.5	44
Burkina Faso	6.1	66	91	14 961 395	37.1	50
Cape Verde	8.6	92	95	135 100	73.2	58
Côte d'Ivoire	6.3	56	67	18 131 745	30.9	87
Gambia	9.7	57	96	1 200 503	23.9	33
Ghana	10.2	71	98	18 697 745	44.6	69
Guinea	1.4	45	51	8 842 314	15.7	57
Guinea-Bissau	6.6	45	80	1 884 916	37.6	50
Liberia	2.9	61	50	3 892 705	37.2	26
Mali	5.1	57	77	19 462 713	27.3	55
Niger	1.6	29	68	14 885 196	40.8	79
Nigeria	20.1	35	66	140 381 164	28.8	67
Senegal	4.8	59	89	11 792 254	46.3	30
Sierra Leone	1.9	60	83	7 564 272	37.5	64
Togo	3.3	45	87	4 613 894	32.2	74
ECOWAS	6.4	57	78	270 804 567	35.8	56
AFRICAN REGION	12.7	54	77	610 719 989	45.5	57
GLOBAL	25.0	73	82	1 728 493 416	76	73

Data from 2015 show that States Parties are making good progress on a number of core capacities, notably in the areas of surveillance, zoonotic diseases, response, coordination, laboratory, legislation policy, and risk communication.

Table 4 presents the regional comparison of maternal mortality ratios (MMR) and gaps/failures in ECOWAS countries to achieve in 2030 the SDG target of 70 maternal deaths due to complications of pregnancy, delivery and postpartum per 100,000 live-births. Out of 15 countries in the ECOWAS region Cape Verde already has achieved the SDG target for 2030. Assuming linear trends, only Ghana is on track in the reduction of maternal mortality, while all others will likely succeed in their efforts with a maximum delay of four years except for Guinea

Bissau with more than 4 years being late in achieving the global target.

Looking at gaps in the ECOWAS region related to Neonatal Mortality Rates (NMR), again Cape Verde is the only country with achievement of SDG's set target already in 2015 whereas Senegal is on track. All other countries in the region are in the position to likely achieve the target of 12 neonatal deaths per 1,000 live-births (occurring within 28 days after birth) with a delay of less than 4 years, given that the available data are sufficiently valid.

A comparison of under-5 Mortality Rates (<5MR) in the ECOWAS region and gaps in achieving SDG's target of less than 25 deaths of children under-5 per 1,000 live-births, points also to acceptable and good results.

Table 4: Regional comparison of gaps in ECOWAS countries: Achievability of SDG targets 2030

Country	MMR 2010	MMR 2015	MMR Gap (yrs)	NMR 2010	NMR 2015	NMR Gap (yrs)	<5MR 2000/ 2010	<5MR 2015	<5MR Gap (yrs) baseline 2000	<5MR Gap (yrs) baseline 2010
Benin	446	405	-2.8	33.5	31.8	-3.4	145/112	100	-3.7	-2.2
Burkina Faso	417	371	-2.3	30.4	26.7	-1.0	186/114	89	+3.1	+0.6
Cape Verde	51	42	>+	13.9	12.2	+12.9	36/28	25	+15.0	+15.0
Cote d'Ivoire	717	645	-2.6	41.8	37.9	-2.4	146/109	93	-1.9	-1.2
Gambia	753	706	-3.6	33.2	29.9	-1.9	119/81	69	+1.0	-0.7
Ghana	325	219	+3.3	31.9	28.3	-1.4	101/75	62	+0.4	+0.2
Guinea	720	679	-3.7	34.6	31.3	-2.1	170/112	94	+0.7	-0.9
Guinea Bissau	570	549	-4.2	45.5	39.7	-1.5	178/116	93	+1.7	+0.1
Liberia	811	725	-2.7	27.6	24.1	-0.5	182/89	70	+6.4	+1.0
Mali	630	587	-3.5	42.1	37.8	-2.1	220/137	115	+1.2	-1.1
Niger	657	553	-1.5	30.8	26.8	-0.3	227/124	96	+4.5	+0.7
Nigeria	867	814	-3.7	38.2	34.3	-2.0	187/130	109	-0.6	-1.0
Senegal	375	315	-1.1	25.5	20.8	+2.0	135/65	47	+9.0	+4.0
Sierra Leone	1,630	1,360	-1.5	40.7	34.9	-1.0	236/160	120	+1.5	+0.9
Togo	393	368	-3.5	29.2	26.7	-2.1	121/91	78	-1.4	-1.1

Source of data: http://www.who.int/reproductivehealth/publications/monitoring/maternal-mortality-2015/en
https://data.unicef.org/topic/child-survival/neonatal-mortality
Source of data for baseline value in 2010: http://apps.who.int/gho/data/node.main.525?lang=en
Source of data for baseline value in 2000: https://data.unicef.org/wp-content/uploads/2015/12/IGME-report-2015-child-mortality-final_236.pdf
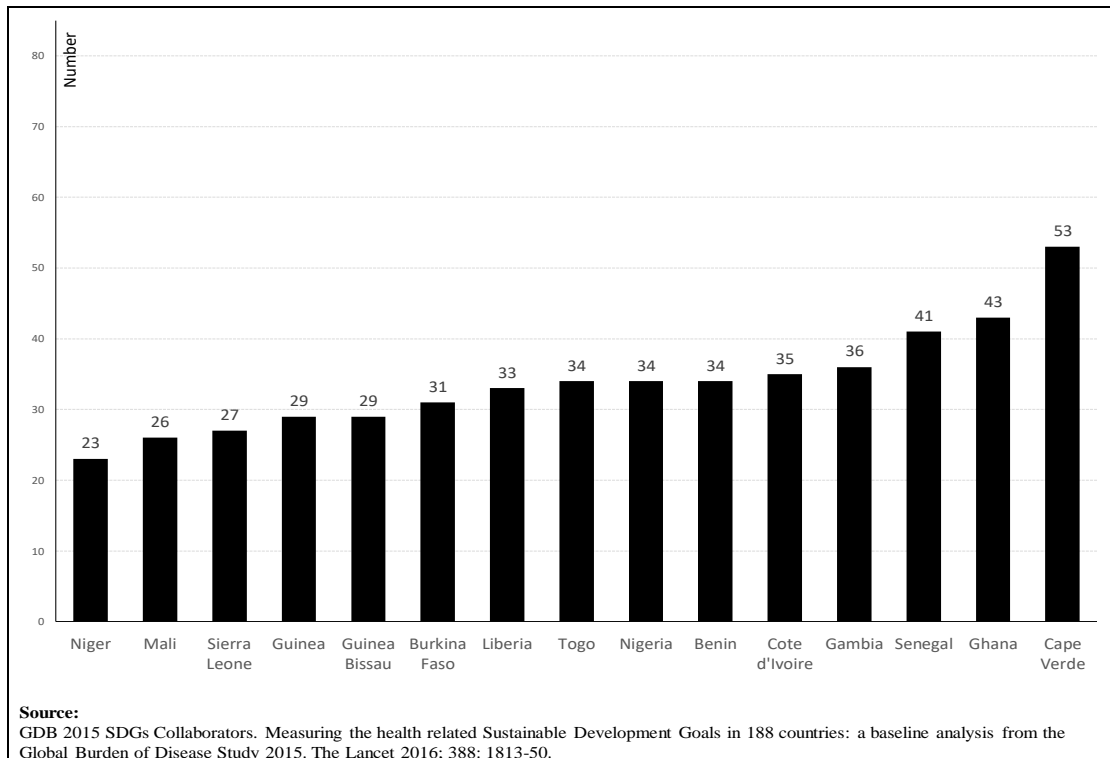
The only country close to risk of failure – not to achieve this SDG target, is Benin. However, looking at a different baseline value – that one from 2000 – the situation would be even better – most ECOWAS countries would faster achieve progress.

Discussion

Evaluation is the last step in each policy cycle[38], while monitoring is starting from the very beginning and continuing throughout the policy implementation. The results of health policy evaluation could bring different outcomes: continuation of the process, implementation, revision of objectives and targets, as well as termination of the policy. The main health policy documents should be developed thinking about the

evaluation of outputs and short-term/long-term impacts, following the logic of SDGs.

The Gap Analysis presented here supports the relative positioning of the ECOWAS member states despite the linear progress assumed between baseline, observed intermediate and target value. Overall this analysis shows that the community of ECOWAS countries has a realistic chance to reach the SDG targets in 2030 about Maternal, Neonatal, and <5MR, straight continuation of progress assumed (except Guinea Bissau with a time lag of 4.2 years for the reduction of maternal mortality). Also compared with the average values for the entire African Region, the ECOWAS group is at the same level except for malaria incidence, the adolescent birth rate (table 2), and satisfied needs for family planning. However, skilled health professionals' density is considerably lower

Source:
GDB 2015 SDGs Collaborators. Measuring the health related Sustainable Development Goals in 188 countries: a baseline analysis from the Global Burden of Disease Study 2015. The Lancet 2016; 388: 1813-50.

Figure 1: Health related SDG index in ECOWAS member states – 2015 (based on source indicated)

by 50% (table 3: 6.4 per 10,000 population vs. 12.7). This calls into question a quantitative relationship between the number of health workers and people's health.

In addition to SDG-3, for monitoring achievements in health, WHO also selected 6 indicators of relevance for health under additional 5 goals, the indicators[39] are:

− SDG-6: Ensure availability and sustainable management of water and sanitation for all,

− SDG-7: Ensure access to affordable, reliable, sustainable and modern energy for all,

− SDG-11: Make cities and human settlements inclusive, safe, resilient and sustainable,

− SDG-13: Take urgent action to combat climate change and its impacts,

− SDG-16: Promote peaceful and inclusive societies for sustainable development, and: provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

In 2016, SDGs Collaborators listed 10 SDGs, in addition to SDG-3, whose achievement will lead to health improvement, in addition:

− SDG-1: End poverty in all its forms everywhere,

− SDG-2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture,

− SDG-5: Achieve gender equality and empower all women and girls, and

− SDG-8: Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.

Therefore, out of 17 SDGs, 11 are related to health, with 28 targets and 47 indicators (out of 230 proposed)[40]. To integrate these variant concepts SDG Collaborators have proposed an overall health-related SDG index, predominantly using the Global Burden of Disease Study performed in 2015, by using similar methods as applied to construct the well-known

Human Development Index[41]. The main purpose is to secure tracking general progress at the country level. The index, which represents the function of 33 health related indicators, is calculated for 188 countries and its values go from 85 (the best) to 20 (the worst), Figure 1. It appears that the SDG Index allows for a more plausible ranking of ECOWAS countries. However, the relation between the lowest Niger and the highest Cape Verde is more than 1:2. The main recommendation derived from international documents is that each country localizes/tailors SDGs, targets and indicators towards its national/local environment, however to provide a core or minimal indicator set for the national and international situation analysis and monitoring of progress towards 2030 as proposed by the UN Council in March 2030[20]. The national situation analysis in any case should serve to formulate realistic goals and objectives based on critically evaluated data.

The way of formulation of goals and objectives is essential for the success in implementation and monitoring/evaluation of any health policy. A basic understanding, however, of the key terminology is essential. In this avail a goal is a generalized statement of the result or achievement to which the effort is directed, while formulation of the objectives and targets is more complex and requests formulation of the specific health problem and its determinants (direct causes and risk factors that, based on scientific evidence or theory, are thought directly to influence the level of a specific health problem). Policy makers must make sure that the selected determinants directly affect the health problem, because lack to address appropriate determinants during the intervention may lead to failure in addressing health problems and achieving stated objectives. An objective is the estimate of the level to which a health problem is expected to be reduced within a specified time and must be long-term, realistic, and measurable. The process of building objectives follows SMART principles (Specific, Measurable, Achievable, Realistic, and Timely). During setting objectives, of importance is the process of priority setting at first decisions about which problems one country will or can address

and what the health sector will do to make a difference. Consensus is the core of participatory planning, resulting from a collaborative decision-making process that honors partnership, participation, involvement of appropriate leadership (official and unofficial), and builds a fundament of trust within an atmosphere of flexibility. Both, the SDG framework and the Global Strategy for Women's, Children's and Adolescents' Health (2016-2030)[9] put special attention to the formulation of national health policies. For this purpose, UN Country Teams (UNCTs) have developed a Reference Guide to support countries in tailoring SDGs[42]. In addition, the African Union adopted a Health Strategy, based on SDGs to lead the region from 2016-2030[43].

Conclusions and Recommendations

Though, some emergency situations cannot be planned, such as the devastating consequences of the Ebola epidemic, governments must take the necessary steps to carefully monitor health services and the health of their populations and eventually advance it with incremental changes as more promising for the final achievements than declare major change without precise planning based on the SMART principles. An important element is the horizontal interlinkage within and between maternal–perinatal and other health-care services to address the diversity of the burden of poor maternal health.

Strengthening of health workforce for MNH, as one of the most important investment areas, requires careful adjustment to the SDGs index. The existing workforce cannot deliver quality health services without a massive effort to upgrade their skills. Health workers will remain in short supply until production of workers with the right skills mix and effective motivation and remuneration prevail. A higher education accreditation and investment programme must be established to strengthen the capacity of pre-service training institutions and improve the effectiveness of workforce production. Postgraduate training schemes such as Master of

Public Health programs and their accreditation must be established in different areas, here especially for midwifery. The same is mandatory for Continued Professional Development (CPD) which should be linked to licensing.

Frustration and therefore fluctuation of health staff is a serious problem too as it determines the quality of work. Therefore, retention schemes should have priority including further extension of payroll positions and opportunity for CPD. Governments have to decide for larger and reliable allocation of financial means to the health sector which might be facilitated by intensified efforts to reach the Abuja target of 15% of the national budget. To guaranty sustainability these resources should come from national governments and not from development partners except through budget support.

Efficient implementation of progress in the health system is in particular need of improvement of other health determinants outside of health sector: 1) extensive improvement of the road system especially in hard to reach areas to accelerate emergency transport, 2) development of electricity network with solar energy installation as a standard, and 3) full coverage of mobile networks to allow for professional counseling in the periphery (including the provision of mobile office phones or VHF equipment to health facilities).

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Conflict of Interest

None declared.

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