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Alma Ata Declaration: Journey of Health Promotion on Respiratory Distress Syndrome among Pregnancy and Newborn in Nigeria

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Purpose: In the discussion about landmark achievements of primary healthcare (PHC) in Nigeria, health promotion regarding respiratory distress syndrome (RDS) in maternal child health (MCH) is considered to be limited. The objective is to determine the landmark achievements in Nigeria with a view to identify health promotion needs.
Methods: This followed a critical narrative review approach. The critical literature search method was adopted as a systematic approach failed to yield any article that satisfies selection criteria, after applying all intended inclusion criteria. Search engines included Google and PubMed as well as government and organizational documents. Major evaluation was 10 years landmark achievement of Alma Ata on MCH program in Nigeria.
Results: There has been fluctuation and relatively slowed % rate of reduction in maternal mortality. Infant mortality has remained higher than national death rate, hence it is encouraging that Nigeria

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adopted in 2016 *Every Newborn Tracking Tool of the Global Strategy* progress monitoring. However, no study has focused on RDS in MCH with regards to impact of gas flaring in Delta State.

Conclusion: In the goal of achieving *health for all* emerged the Alma Ata Declaration on primary healthcare (PHC) being endorsed. Although, report is pending with regards to how much of the goals have been unachieved, major finding is dearth of data regarding MCH program in relation to gas flaring or the associated RDS. Studies have yet to focus on government policy regarding mitigation of RDS associated with gas flaring.

Keywords: Delta state Nigeria; gas flaring; health promotion; landmark achievement; maternal and child health; primary healthcare; RDS.

1. INTRODUCTION

1.1 Overview

In the year 1978, two United Nations organizations- the World Health Organization (WHO) and United Nation International Children's Emergency Fund (UNICEF), held a joint conference at Alma Ata in the Soviet Union at which health was described as a human right to which all people were entitled. The goal of achieving "health for all" was a brief document that expresses "the need for urgent action by all governments, all health and development workers, and the world community to protect and promote the health of all the people of the world" [1]. It was the first international declaration stating the importance of primary health care and outlining the world governments' role and responsibilities to the health of the world's citizens.

The relevance of primary healthcare (PHC) to respiratory distress syndrome (RDS) has been a phenomenon of interest, especially because PHC functions includes health promotion hence dovetails to Alma Ata Declaration. It suffices to note that PHC emerged from the conference where Alma Ata was endorsed on the 12th of September 1978, and it has inspired subsequent generations of health activists. It has become a common meeting ground where likeminded public health personnel can compare and discuss strategy and relate their discussion to a common document [1].

Respiratory distress syndrome (RDS) affects about 1 percent of newborn infants and is the leading cause of death in prematurely born babies [2]. It is well noted that health and disease can neither be dissociated from particular physical and social environments nor from human behaviour [3]. Environmental exposures including exposure to chemicals has gross effect on human health [4]. There is potential impact of prenatal exposure to air pollution on birth outcomes. Although the bronchopulmonary tract has multiple protective mechanisms, such as mucosal cilia and air-blood barrier, air pollutants are able to accumulate in or pass through lung tissues dependent on the size and chemical nature of pollutants. Common symptoms of prolonged air pollution from exposure include coughing, wheezing, eye and sinus irritation, advanced respiratory diseases like bronchitis, asthma, and emphysema, decreased lung capacity and shortness of breath, chronic fatigue, damage to lungs and heart, cancer [5].

Maternal exposure to air pollution can directly influence the fetus through the passage of chemicals pollutant through amniotic fluid and placenta [6,7]. Globally in 2016, one in every eight deaths was attributable to the joint effects of ambient air pollution (AAP) and household air pollution (HAP) with a total of 7 million deaths [8]. In Niger Delta region of Nigeria, air pollution is largely blamed on gas flaring by the oil companies, but the prevalence of RDS related to gas flare is yet to be determined. Hence exploratory research of this important public health context.

1.2 Health Promotion Concept

Health promotion was re-articulated in the 1986. It is the process of enabling people to increase control over their own health [9,10]. It covers a wide range of social and environmental interventions that are designed to benefit and protect individual people's health and quality of life by addressing and preventing the root causes of ill health, not just focusing on treatment and cure [11]. The concept emphasizes the positive and active role played by individuals and groups to improve health, and the wide array of influences on health.

The re-articulation expounded the understanding that health is a resource for everyday life, not the objective of living. That is, health is a positive concept emphasizing social and personal resources, as well as physical capacities. To improve health in its biological, psychological and social dimensions it is, however, not enough to focus on people's behaviour, or on users or providers of health services. The health promotion concept is deeply rooted in the more socio-ecological concept of the determinants of health, where the individual adopts health related behaviours and leads a lifestyle, influenced by social and community networks and wider socio-economic aspects, the physical environment (food, water, home, workplace, etc.), and cultural and environmental conditions [12].

Therefore, social services, such as health, education, or water and sanitation are important; but overall, these are all to be seen as pieces in a much wider puzzle of factors that determine a persons' or a group's health. Other prerequisites for health include, among other things, food, income, a stable ecosystem, shelter, and social justice [12]. Therefore, health promotion is not just the responsibility of the health sector but goes beyond healthy lifestyles to well-being. There are 3 key elements of health promotion and it assumes that all are of equal importance.

1.2.1 Good governance for health

Health promotion requires policy makers across all government departments to make health a central line of government policy. This means they must factor health implications into all the decisions they take and prioritize policies that prevent people from becoming ill and protect them from injuries. These policies must be supported by regulations that match private sector incentives with public health goals. For example, by aligning tax policies on unhealthy or harmful products such as alcohol, tobacco, and food products which are high in salt, sugars and fat with measures to boost trade in other areas. And through legislation that supports healthy urbanization by creating walk able cities, reducing air and water pollution, enforcing the wearing of seat belts and helmets [13,14].

Good governance is aimed at achieving sustainable human development, which addresses poverty reduction, job creation and sustainable welfare, environmental regeneration, and the growth and development of women [15]. Unlike Nigeria, Cuba government provided free healthcare to its citizens by the state and there is strong political commitment supporting healthcare. This result to fewer women dying in childbirth, more physicians exist per population, there is better access to improved water and life expectancy is longer [16].

1.2.2 Health literacy

The WHO defined health literacy as 'the cognitive and social skills which determine the motivation and ability of individuals to gain access to understand as well as use information in ways that promote wellbeing'. Thus, people need a behavioural change wheel including the knowledge, information to make healthy choices, for example about the impacts of gas flaring and healthcare services that are available when needed. They need to have opportunities to make those choices. Although, evidence of low health literacy on different conditions exist even in developed countries including England and American as shown in Fig. 1 [17]; the situation is worse in low-mid income countries. While Fig. 1 illustrates that health literacy is not only a problem of the developing or undeveloped countries, the case of RDS in Nigeria constitutes a phenomenon of interest.

1.2.3 Healthy cities

Cities have a key role to play in promoting good health. Strong leadership and commitment at the municipal level is essential to healthy urban planning and to build up preventive measures in communities and primary health care facilities. From healthy cities evolve healthy countries and, ultimately, a healthier world. More than half of the world's population lives in urban areas characterized by traffic fumes, noise, crime, and other stressful factors associated with city living with resultant predisposal to increased blood pressure, obesity, higher cholesterol levels and respiratory distress [18].

1.3 Benefits of Health Promotion to the Community

Building Healthy Public Policy: Health promotion puts health on the agenda of policy makers in all sectors and at all levels of the system, directing them to be aware of the health consequences of their decisions and accepting their responsibilities for health. Health promotion policy combines diverse but complementary approaches including legislation, fiscal measures, taxation and organizational change. It

is coordinated action that leads to health, income and social policies that foster greater equity. It requires the identification and ways of removing obstacles to the adoption of healthy public policies in non-health sectors, the government sectors concerned with agriculture, trade, education, industry, and communications need to take into account health as an essential factor when formulating policy, they are accountable for the health consequences of their policy decisions [19].

Creating Supportive Environments: The bases for a socioecological approach to health constitute the links between people and their environment. Health promotion generates living and working conditions that are safe, stimulating, satisfying and enjoyable, though changing patterns of life, work and leisure do have a significant impact on health. The changing environment particularly in areas of technology, work, energy production and urbanization needs a systematic assessment which is very essential and must be followed by action to ensure positive benefits to the health of the public [20].

Strengthen Community Actions: Health promotion works through concrete and effective community action in setting priorities, making decisions, planning strategies and implementing them to achieve better health. Enhancing self-help and social support and developing flexible systems for strengthening public participation in health matters and the community development drawn on existing human and material resources in the community. For this to be possible will require full and continuous access to information, learning opportunities, as well as funding support. This was an important concept action at the Ottawa Charter declaration to ensure health is created for and lived by people within the settings of their everyday life; which includes where they learn, work, play and live [21].

Developing Personal Skills: Health promotion supports personal and social development through providing information, education for health, and enhancing life skills. By so doing, people end up exercising more control over their own health and environments, and to make choices conducive to good health and this requires education, a professional, commercial and voluntary body to facilitate it in schools, homes, and work and community settings [22].

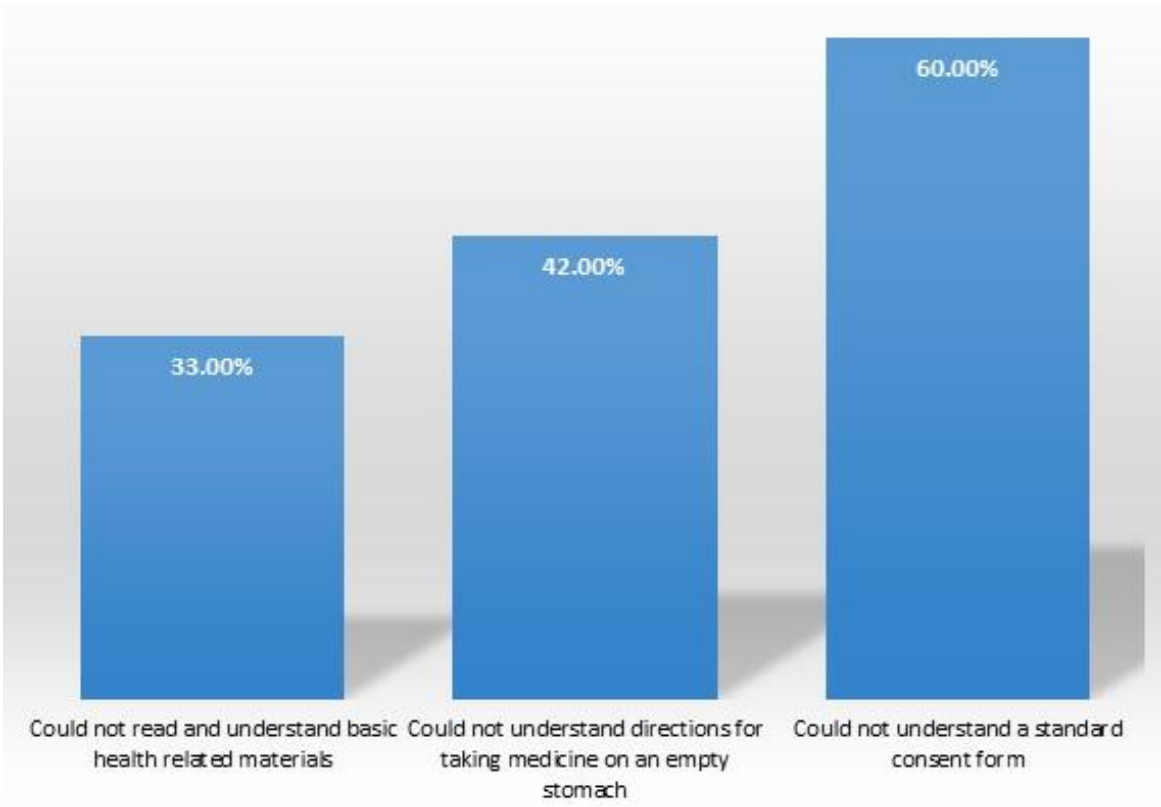

Fig 2. Health literacy level

Re-orient Health Services: The responsibility for health promotion in health services is shared among individuals, community groups, health professionals, health service institutions and governments. They must work together towards a health care system which contributes to the pursuit of good health. The role of the health sector must move increasingly in a health promotion direction, beyond its responsibility for providing clinical and curative services. It needs to embrace an expanded mandate which is sensitive to, and respects cultural needs. This mandate should support the needs of individuals and communities for a healthier life, and open channels between the health sector and broader social, political, economic and physical environmental components. The re-orientation of health services is linked to the health system strengthening efforts [23].

Study objective: Given the preceding exposition, the objective is to determine the landmark achievements in Nigeria on health promotion needs. More specifically, the review investigates what has been achieved towards health promotion for the prevention or management of RDS, especially in MCH. The justification hinges on community need assessment i.e. the significance of this review is to identify health promotion needs.

2. METHODS

This was a critical narrative review. An initial attempt on systematic literature search revealed over 153 articles on MCH from PubMed; but none included government policy regarding mitigation of RDS or gas flaring. Therefore, a non-systematic approach was adopted to achieve critical review. Literature search terms included primary health care and health promotion; as well as Alma-Ata declaration, gas flaring, RDSs and Nigeria.

Selection Criteria: The initial search engine for review articles were google scholar and google. Afterwards selection was limited to reputable sources such as peer-reviewed journal articles including from PubMed and World Health Organization as well as governmental materials. A total of 43 articles were finally included/selected for review.

Data: Narrative review included descriptive outline of Nigerian PHC achievement in relation to MCH and before and after Alma Ata declaration. A global picture as well as 'Landmark achievement in the 10-years period between 2007 till 2017' were reviewed. Further critical review was comparison of rates of reduction in maternal and infant deaths relative to the Nigerian population, during the 10 years' review period.

3. FINDINGS

3.1 MCH in Nigeria at the beginning of Alma Ata

Nigeria is one of the signatories to the Alma-Ata declaration of PHC in 1978. However, it is observed that prior to the 1978 Alma-Ata declaration, the country had set the ball rolling with the implementation of the Basic Health Services Scheme (1975-1980), which was Nigeria's first serious attempt at the implementation of PHC [24]. In the 1980s, WHO promoted the training of traditional birth attendants, and this formed a stepping stone to increase the number of births in facilities [25]. In 1988, the National health policy of Nigeria was launched aimed to describes the goals, structure, strategies, and policy direction of the health care delivery system in Nigeria (Table 1). Subsequently, several re-organizations of the Nigeria health structure to align with the new vision were made.

The recent interest in reinvigorating comprehensive primary health care, renewed recognition of the importance of community ownership, including expanded use of mid-level and community health workers [26] and a growing recognition of the social determinants to health and the multisectoral response required, are indicative of the ongoing relevance of Alma-Ata [27]. Shifts in global health in recent years are as revolutionary as those at the time of Alma-Ata. Today's Millennium Development Goals (MDGs), with three explicit health-related goals for child survival [26], maternal health [27], and HIV, tuberculosis, and malaria [28] are garnering a more cohesive commitment. However, *it is noteworthy that the MCH program is not in relation to gas flaring or the associated RDS*.

3.2 Alma Ata on MCH Program – Global Initiatives

Preventive activities that focused on the delivery of discrete items were the most likely to be selected, particularly family planning, immunization, endemic disease control, and nutrition. Jim Grant [29] who became director of

Table 1. PHC involving MHC in Nigeria before and during alma ata declaration

Period	MCH agenda aligned with Alma Ata
1970 – ’90s	Promotion of traditional birth attendants by World Health Organization
1975 – ’78	Basic Health Services Scheme of primary healthcare
1978	Alma Ata declaration
1988	National health policy

UNICEF soon after Alma-Ata (panel 2) championed child survival revolution which became one well-known example of the selective primary health-care approach and it provided many lessons to be learned for today’s global initiatives. Example of such is the child health days, which began as an important campaign outreach approach to reach rural or other marginalized families with polio immunization, which have expanded in many countries to include other immunizations, nutritional interventions such as vitamin A and deworming, and even maternal interventions such as family planning, plus a wider scope of health messages [30,31].

For much of the 1980s the focus of MCH was on selective interventions for the child. In 1988, following an influential call for action [32], the Safe Motherhood movement was launched in Nairobi, Kenya. Given the lack of attention to the mother, the advocates for safe motherhood had a justifiable cause to fight for, but unfortunately in the ensuing conflict with child health advocates, newborn survival was neglected. Huge numbers of deaths were due to competition between maternal and child health [33,34]. However, there has been a recent shift towards a lifecycle approach with the integration of MCH [34-36]. Adolescent health, which links child to maternal health, has also been neglected and is brought into the package through a lifecycle approach to planning.

3.3 Alma Ata on MCH Program in Nigeria – 10 Years Landmark Review

Several PHC programs such as NHIS, and free MCH have been initiated and some deemed to have achieved their targets [37], reduction in national MMR from 800/100,000 in 2005 to 545/100,000, according to the recent Nigeria Demographic and Health Survey (NDHS) in 2008 [38], is an achievement to build upon. The SURE-P MCH was launched in 2012 [39]. Table 2 shows 10 years (2007-2017) achievement in healthcare in Nigeria.

Further pertinent note is that while over 153 articles on MCH from Nigeria exist, there is none that has focused on government policy regarding mitigation of RDS associated with gas flaring. Therefore, health promotion is still required in this space of PHC. Nevertheless, review of mortality rates show that while maternal mortality rate has fluctuated and being below the Nigerian death rate, infant mortality has persistently remained higher than national death rate (Fig 2).

4. DISCUSSION

The three key elements that makes up health promotion concept implies that policy makers all across the government departments must enact policies that prevents the citizens from injuries and becoming ill. These policies must support the regulations that matches both the private and public sectors health goals, which are aimed at achieving sustainable human development, addressing poverty reduction, job creation and sustainable welfare, environmental regeneration, and the growth and development of women [13,14].

Results presented on Table 2 shows 10 years (2007 - 2017) timeline achievements in healthcare in Nigeria i.e. with regards to in pregnancy and the newborn. The problem of RDS associated with gas flaring has yet to be integrated and it is imperative to evaluate the success level, especially with regards to the phenomenon of RDS associated with gas flaring host communities. This is particularly given that Nigeria launched PHC reforms that included health service delivery and Social Determinants of Health amongst others in 2008 [42]. The concept is driven by the concern for equity in health and calls for true participation of individuals, families and communities as key actors in improving a population’s health.

However, but RDS with regards to gas flaring has yet to be integrated. There is no gain saying that any proposed solutions should be adapted to the local needs. Unfortunately, the observation being reported here is that the local need of MCH among the people exposed to gas flaring and at risk of RDS have yet to be addressed by healthcare professionals and researchers let alone the government policy makers. Thus, there is obvious oversight by all stakeholders.

Table 2. 10 years (2007-2017) achievements on primary healthcare in Nigeria

Achievements	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
NIMNCH Strategy adopted [40]											
RRINN expanded to include MNCH [41]											
RRINN established in four northern states [41]											
Primary healthcare reforms – re: Universal Health Care*											
Fluctuating† slowed reduction in national MMR [38]											
NHIS' free maternal and child health program [37]											
National DTP3 coverage rates reached a high of 69%											
SURE-P MCH project launched [39]											
Nigeria launches pentavalent vaccine											

*Keys: *Also included health service delivery, leadership and public policy reforms [42]*
†See figure 3 (below) – based on data from World Bank
MCH: Maternal and Child Health
MMR: Maternal Mortality Rate
MNCH: Maternal, Newborn and Child Health
NHIS: National Health Insurance Scheme
NIMNCH: National Integrated Maternal, Newborn and Child Health
RRINN: Reviving Routine Immunization in Northern Nigeria
SURE-P: Subsidy Reinvestment and Empowerment Programme

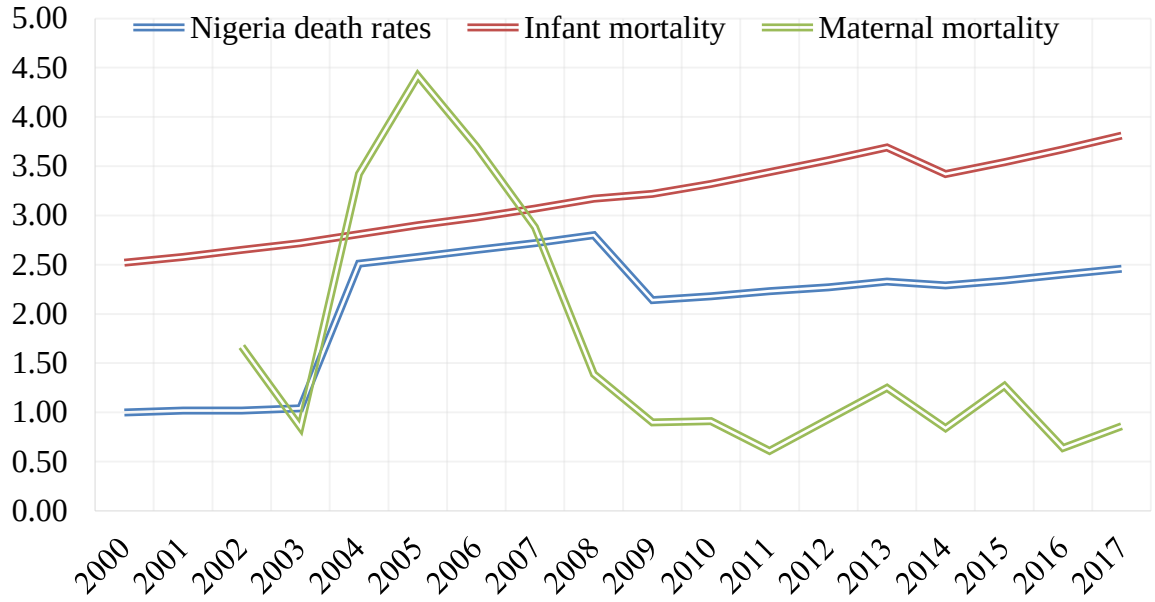

Fig. 2. Fluctuation and relatively slowed % rate of reduction in maternal mortality

It is important to acknowledge biochar remediation being ongoing and research but on the areas of food and land [43,44]. Perhaps, what needs appreciation is the applicability of biochar remediation to RDS [45]. The health promotion concept is deeply rooted in the more socio-ecological concept of the determinants of health, where the individual (with the individual determinants of environmental factors, sex and age) adopts health related behaviours and leads a lifestyle, influenced by social and community networks and wider socio-economic aspects, the physical environment (food, water, home, workplace, etc.), and cultural and environmental conditions. Social services, such as health, education, or water and sanitation, are important, but overall, to be seen as pieces in a much wider puzzle of factors that determine a persons' or a group's health. Other prerequisites for health include, among other things, food, income, a stable ecosystem, shelter, and social justice. The HP concept encompasses all these dimensions when acting on behalf of the health of people and populations.

5. CONCLUSION

Perhaps the greatest contribution of the consensus that emerged from Alma Ata was the impetus and opportunity to explore health in a holistic approach focusing on equity, participation and the social determinants. Seeing medical interventions as necessary but not sufficient for better, for populations and individuals, PHC broadened the framework of understanding of health beyond doctors and health facilities. PHC has gained credibility as a means to improve health status and health care for large populations particularly those who have been on the periphery of these advances in the past. *PHC has also been shown to reduce total health care costs and increase efficiency by improving access to preventive and promotive services, providing early diagnosis and treatment for myriad conditions, and people-centred care that focuses on the needs of the whole person, and reducing avoidable hospital admissions and readmissions.* For the future understanding, how this approach is best developed and used is critical both for its implementation and for resources to support expansion. When comprehensive primary health is implemented fully, the security or safety and hope it brings will see a growth in solidarity and willingness of people to continue the struggle for health for all.

CONSENT

Consent was implied by respondents returning their completed questionnaire.

ETHICAL APPROVAL

Not required at time this review, but has been given for data collection – re: Public & Community Health department, Novena University Nigeria.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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