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EXPERT'S OPINION

Health: A critical determinant of national development

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Being the text of the 2019 Faculty Lecture presented at the Faculty of Clinical Sciences, Obafemi Awolowo College of Health Sciences, Olabisi Onabanjo University, Sagamu Campus, Ogun State, Nigeria on the 27th November 2019.

Introduction

In choosing the topic of this lecture, I thought it will be useful for us to change the narrative often touted by political office holders particularly at Local and State Government levels that Health is not an income-generating sector. When it is convenient, politicians often mouth the saying that "Health is Wealth" but they often fail to walk the talk! Perhaps their disposition to investing in the health sector is a function of their understanding of the role of health in development. I believe that it is our responsibility to begin to emphasise and back with evidence, the developmental values of health so that purse holders will begin to see that investing in health is a strategic economic and developmental intervention.

The Walter-Harkness Health Plan, 1946-1956, in Nigeria identified malaria as one of the leading causes of morbidity and mortality in the country. Even though that plan was truncated by the achievement of self-government by some parts of Nigeria in 1951, it is worrisome that some 70 years after, malaria remains a leading cause of morbidity and mortality in all parts of Nigeria.The circumstances of the patients and the factors that make them repeat visits to health facilities for the same conditions over the years have not been put into consideration. If a mother brings a child to the health centre six times in a year for diarrhoeal disease, the approach to the management of both mother and child should be reconsidered else, that child may be lost to some complication of diarrhoeal disease.

Poverty exposes people to agents of diseases and ensures that once they contract the disease, it becomes difficult for them to survive the disease or the complications of the disease. Once a disease sets in, individuals, families, and communities are further impoverished. Conversely, disease exposes individuals, families, and communities to poverty and ensures that they remain poor. It will not be a useful exercise to try to determine which comes first, the chicken or the egg. But it is known that, like any cycle, the chain can be broken, as long as the appropriate tools are applied. We owe it a duty to our generation and those coming behind to begin to seriously apply those strategies that can effectively liberate our nation from the bondage of disease and poverty.

Definition of Poverty

Poverty has often been defined in strictly economic terms to focus on material needs, and in such definitions, to typically include a basic lack of the necessities of daily living, such as food, clothing, shelter, or safe drinking water. Poverty, in this sense, may be understood as a condition in which a person or community lacks the basic needs for a minimum standard of well-being and life, particularly as a result of a persistent lack of income.
However, a more detailed analysis of social aspects of poverty will link the conditions of scarcity to aspects of the distribution of resources and power in a society and brings to the front recognition that poverty may be a function of the diminished "capability" of people to live the kinds of lives they value. The social aspects of poverty may include a lack of access to information, education, health care, or political power.

In recognition of the social context of poverty, the United Nations has defined to imply a denial of choices and opportunities, a violation of human dignity and a lack of basic capacity to participate effectively in the society. Therefore, it would include not having enough to feed and clothe a family, not having a school or clinic to go to, not having the land on which to grow one's food or a job to earn one's living, and not having access to credit. It would imply a state of insecurity, powerlessness, and exclusion of individuals, households, and communities. It would mean susceptibility to violence and it often implies living in marginal or fragile environments.

The 2007 World Bank report "Global Economic Prospects" predicted that by 2030 the number of people living on less than the equivalent of a US dollar a day will fall globally by half, to about 550 million. A warning was raised that much of Africa will have difficulty keeping pace with the rest of the developing world and even if conditions in Africa improve in absolute terms, the report further warned, Africa in 2030 will be home to a larger proportion of the world's poorest people than it was in 2007.

The World Bank data shows that the percentage of the population living in households with consumption or income per person below the poverty line has decreased in each region of the world since 1990, as shown in Table I.

Table I: Distribution of the percentages of the population living below the poverty line across the world's regions between 1990 and 2004

Region	*1990*	*2002*	*2004*
East Asia and Pacific	15.40%	12.33%	9.07%
Europe and Central Asia	3.60%	1.28%	0.95%
Latin America and the Caribbean	9.62%	9.08%	8.64%
Middle East and North Africa	2.08%	1.69%	1.47%
South Asia	35.04%	33.44%	30.84%
Sub-Saharan Africa	46.07%	42.63%	41.09%

There is a need for caution in interpreting data and averages. A very simple illustration of the dangers in the use of statistical averages is the story of a small community of fifty people with a total holding of fifty chickens. On average, each person in the community can be assumed to own one chicken. But in reality, one of the community members owned twenty of the chickens and another owned thirteen while three other members owned four chickens each and five other members owned one chicken each. Forty persons in that community-owned no chicken!

From this illustration, five members or 10% of the community owned 45 or 90% of all the chickens in that community! This is perhaps the 10/90 formula that needs to be further researched and hopefully addressed through social re-engineering in many prebendal, non-developing communities. The lack of chickens by a majority of the community members was relative and this will be discussed a little bit further. The averages shown for Sub-Saharan Africa were the highest for all regions and even those averages concealed intra-regional disparities and intra-national inequities. Various data suggest that as much as 60 -70% of Nigerians may be living on less than $1 a day.

Poverty can be absolute or relative. Absolute poverty can only occur when a community or country lacks not only physical resources but also lacks intellectual resources and innovativeness. It is important to note, particularly, the defined condition under which absolute poverty can occur. `

Relative poverty, on the other hand, is socially contextual, and hence, it is a measure of income inequality. Usually, relative poverty is measured as the percentage of the population with income less than some fixed proportion of median income. Another income inequality measure would be the Gini coefficient, which attempts to quantify the proportional distribution of wealth within the community. For Nigeria, it is estimated that about 2% of the population is in control of 51% of the nation's wealth.

While one may be genuinely worried about the inequity in wealth distribution in Nigeria, it is even more worrisome that the country is sloppy in the generation of wealth. Why, for instance, should anybody be going without food in a country in which less than 20% of its land has been cultivated or utilized? Why should able-bodied men be sauntering around by 10 o'clock in the morning and complaining of joblessness in a country where so many roads, drainages, and infrastructure are yet to be constructed?

Poverty is a notorious and aggravating factor for disease and no student should be allowed to graduate from medical school without a clear understanding of this relationship. A failure of this understanding is a prescription for an endless motion without movement in the delivery of health services in the country. I wish to opine that enough is not currently being taught about this subject in Nigerian medical colleges. To worsen the matter, even the little that is being taught is not given much stock by the students and the clinical teachers!

It is imperative to address the social determinants of disease, to meaningfully promote and protect health, to successfully prevent and control disease, and to gainfully rehabilitate and restore health.

Poverty-Related Diseases

"…poverty, though it does not prevent the generation, is extremely unfavourable to the rearing of children. The tender plant is produced, but in so cold a soil, and so severe a climate, soon withers and dies." -Adam Smith

1776 – Philosopher, Economist (in An Inquiry into the Wealth of Nations)

It has been estimated that one-third of deaths – some 18 million people a year or 50,000 per day – are due to poverty-related causes: in total 270 million people, most of them women and children, have died as a result of poverty since 1990. Those living in poverty suffer disproportionately from hunger or even starvation and disease.Those living in poverty suffer lower life expectancy. The World Health Organization has identified hunger and malnutrition as the gravest threats to the world's public health and malnutrition is by far the biggest contributor to child mortality and is visibly present in half of all cases.It is estimated that gastroenteritis with its associated diarrhoea results in about 1.8 million deaths in children yearly, with most of these occurring in the world's poorest nations.

Globally, the three primary poverty-related diseases (PRDs) – AIDS, Malaria and Tuberculosis, are ravaging developing countries which in-between themselves, account for 95% of the global AIDS prevalenceand 98% of active tuberculosis infections.It is estimated that 90% of malaria deaths occur in Sub-Saharan Africa. Together, these three diseases account for 10% of global mortality

Treatable childhood diseases such as measles, pertussis, and polio are another set of diseases which have disproportionately higher rates in poor countries despite the availability of cures for decades. Childhood pneumonia, together with earlier mentioned diseases and conditions, are all closely associated with poverty and are often included in broader definitions and discussions of diseases of poverty

Understanding Development

While poverty has been defined as a state of lack and deprivation, wealth is generally defined as the abundance of valuable resources. I concede that there are many other definitions and perhaps no single one of them can capture all the essence of wealth as its meaning may be contextual and influenced by the times. Generally, economists define wealth as "anything of value" which captures both the subjective nature of the idea and the idea that it is not a fixed or static concept. If the definition that says wealth is anything that has value is acceptable, then health ought to enjoy tremendous appreciation on its merit because of its intrinsic value of granting anyone who has it, freedom from pain and misery. In other words, health must have an important value to society firstly from its value of conferment of freedom from pain and the presence of "well-being".

Secondly, health has economic values. A cursory look at the factors of production reminds us of the requirements of materials, labour and land or infrastructure. Man is the main source and manipulator of labour and this main source must be in a state where it can function optimally, otherwise, productivity will be adversely affected. The economic value of man can then be computed from his ability to contribute to economic production. Conversely, a loss of value can be computed if a man is incapacitated by an illness such that he cannot contribute to economic production. It is conceded that how production is organized can also influence productivity but it is clear that under the equally efficient organization of production, the health status of the labour force will be the determinant of the level of production. Therefore, health or being in a good state of health mustbe of immense value and being so must, therefore, be wealth.

Table II: Health expenditure and health outcomes (WHO Statistics 2018)

	THE ($)	%GDP	Life Exp years	MMR/ 100,000 livebirths	%Births attended by Skilled	<5MR/ 1000 livebirths
Austria	4536	10.3	81.9	4	98	3.5
Denmark	5497	10.3	81.2	6	94	4.4
Finland	4005	9.4	81.4	3	100	2.3
Norway	7464	10	82.5	5	99	2.6
Sweden	5600	11	82.4	4	-	2.9
France	4026	11.1	82.9	8	97	3.9
Germany	4592	11.2	81.0	6	99	3.8
Italy	2700	9.0	82.8	4	100	3.3
Netherland	4746	10.7	81.6	7	-	3.8
Switzerland	9818	12.1	83.3	5	-	4.1
Canada	4508	10.4	82.8	7	98	4.9
Ireland	4757	7.8	81.5	8	100	3.6
UK	4356	9.9	81.4	9	-	4.3
USA	9536	16.8	78.5	14	99	6.5
Greece	1505	8.4	81.2	3	-	3.8
Portugal	1722	9.0	81.5	10	99	3.5
Spain	2354	9.2	83.1	5	-	3.3
Ghana	80	5.9	63.4	319	71	58.8
Nigeria	97	3.6	55.2	814	43	104.3
Senegal	36	4	66.8	315	59	47.1

THE – Total Health Expenditure; GDP – Gross Domestic Product; Life Exp Years – Life Expectancy in Years; MMR – Maternal Mortality Rate; <5MR – Under-Five Mortality Rate

Health Status of Nigerians

Given the level of investments in health in the country as will be presented later, the health outcomes reported for the country are rather disappointing. With all the levels of government spending on the aggregate, about 5% of the Federation Account on Health and thus meeting the WHO recommended a minimum of 5%, it is obvious that there is a problem of inefficient use of resources. The key issue under this concern will, therefore, be to see how best more mileage can be extracted from existing levels of expenditure.

A recognized threat to the health of the population is the increasing incidence of poverty and worsening social conditions in the presence

of a rapidly growing population. The fall in living standards and the relative scarcity of resources have negatively impacted on the delivery of and access to health services by the people. Using an index, the Disability Adjusted Life Expectancy (DALE), the WHO ranked Nigeria in the 163rd position out of 191 countries. The DALE index attempts to capture population health in a broad way that takes account of the probability of survival as well as the quality of the survival. (World Health Report 2000: Improving Health Systems Performance WHO, Geneva).

National Investments in Health

Available data show that while Africa accounts for 10 percent of the world's population, it accounts for 25 percent of the global disease burden and 60 percent of the people living with HIV/AIDS, as well as the highest disease burden for tuberculosis and malaria in the world. Despite the above, Africa accounts for less than 1 percent of global health spending and contains only 2 percent of the global health workforce.

Most low-income African countries are spending very small amounts on health, whether this is in terms of overall per capita spending, the share of GDP devoted to health, percentage of public spending allocated to health or government spending on health per capita. On the other hand, private spending, and especially out of pocket (OOP) spending, is extremely high in many of these countries (OOP spending constitutes up to 80% of all private spending and 50% of overall spending), a major factor further impoverishing vulnerable households. Perhaps, it is a matter of life and death to increase public spending on health in many African countries to reduce high levels of impoverishing OOP expenditure, and above all, if these countries are to meet the international targets for achieving various health sector goals.

While the Abuja Declaration of 2001 set a target of 15% of public spending for health for all African countries, available evidence shows that many countries in the region are still far short of this goal (two-thirds of countries are spending below 10%).The Total Health Expenditure (THE) for Nigeria was estimated as ₦661.662 billion in 2003. It grew nominally by 18% to ₦788.72 billion in 2004 and by 24% to ₦976.69 billion in 2005. THE as a proportion of GDP, was estimated at 12.25% in 2003;it declined sharply to 7.96% in 2004 and rose to 8.56% in 2005. (NHA 2003-2005)

The Commission on Macroeconomics and Health (CMH) has, on the other hand, estimated that about $34 per capita spending will be required to buy an essential package of health services and it is obvious that many African countries may not even be able to achieve reasonable levels of attainment in health outcomes.

It is important to note that the Abuja Declaration is linked to the levels of expenditure while the CMH estimate moves beyond expenditures to expenditures on identified health packages. The Millennium Development Goals (MDG) targets are even more linked to health outcomes. If African countries are to make progress on health outcomes, more attention will need to be concentrated on the CMH and the MDG targets.

The analysis of WHO data on the evolution of spending per capita in US dollars in 52 African countries between 1998 and 2002 shows that the majority of countries are spending less than $34 on health. Nineteen of the 52 countries are spending at least $34 per capita, while 33 countries are spending less. When the Sub-Saharan countries alone are considered, only 12 of them are spending above this recommended threshold (Figure 1). Interestingly, Nigeria is not one of the 12 countries!

The regional data on total government spending per capita in dollars (weighted) (Table III) show

that East and West African Governments are spending between $8 and $9 per head, Central African Governments are spending about $20 per head; while the corresponding amount for North African Governments is over $40 and Southern African Governments over $140.

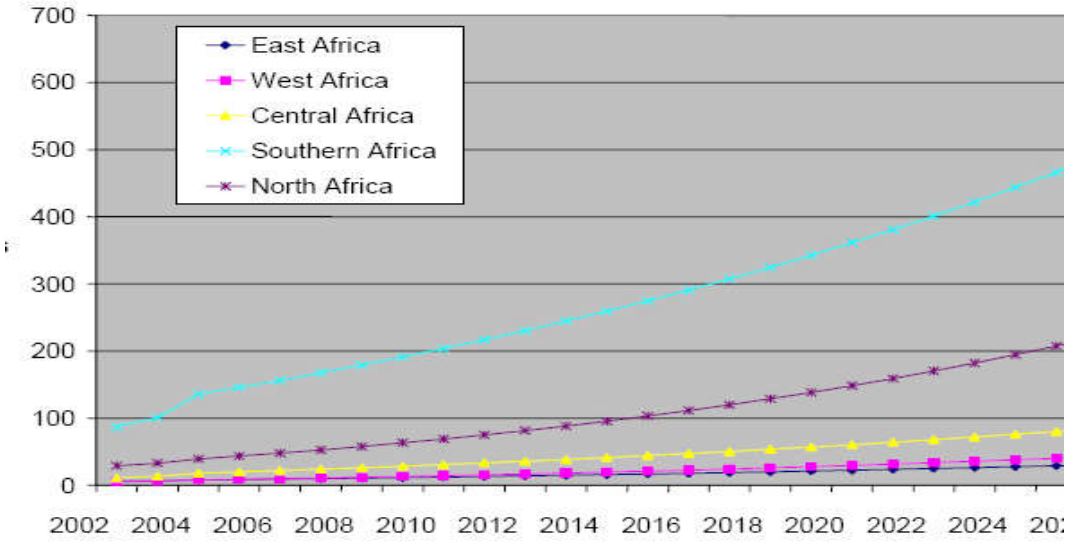

Figure 1: Projected Per Capita Public Expenditure on Health by Region(weighted average)

Assumptions: 4-6% annual increase in per capita income, modest increases in the share of public spending/GDP and share of public spending to health, no increase in aid dependency.(WHO)

Table III: Total Government spending per capita in dollars (weighted)

Sub-Regions	*2002*	*2003*	*2004*	*2005*
East Africa	5.79	6.44	7.71	8.35
West Africa	4.85	6.23	7.92	8.84
Central Africa	10.78	13.12	17.93	19.83
Southern Africa	86.73	100.62	135.51	145.67
North Africa	28.97	33.05	39.07	43.30

Source: WHO

Public expenditure per capita on health has been projected for the above regions until 2030. All regions show an increasing amount devoted to health by governments, but even so, the rate of growth appears very slow for West and East African regions.Indeed, different estimates and projections based on 2002 data, have suggested that even if they met the Abuja target, more than half of all African Union (AU) members would not have made much progress towards attaining the CMH and MDG targets.Nigeria took a bold step in developing and costing a Health

Strategic Development Plan (HSDP). If this plan is funded, then there is indeed a great hope that even more significant strides in achieving desired health outcomes including the MDG targets will be made.Another advantage that the country may have is the availability of health

facilities widely spread throughout the country although highly hampered by poor maintenance culture. These facilities constitute a huge investment that can still be tapped and deployed for further health advancement.

Analytic estimates of what will be required to attain the CMH and MDG targets show huge financing gaps between currently available funds from all sources and no single scenario shows many of the countries being able to mobilize the resources. The estimates of what is needed range from US$20 billion to US$70 billion per annum until 2015 (against $10 billion total health aid in 2003). Official development assistance increased by nearly fourfold between 1990 and 2003, and that is the main source of external finance in Sub-Saharan Africa, accounting for more than 55 percent of total external flows in 2003. Much of this increase is due to the entry of Global Health Partnerships (GHPs) and new private foundations onto the international funding scene. These new global institutions have also helped greatly to raise awareness of the issues around HIV/AIDS, TB and malaria.In the case of Nigeria, it is expected that all future AID/assistance will be channelled towards the procurement of goods and services identified in the HSDP through a national coordinating mechanism. This, when coupled with prudent public expenditure management, is the only way to strengthen the national health system and sustainably grow the health sector.

What returns can be expected from investments in health?

Often health Workers make the mistake of always requesting more and more investments in health without spending some time to explain to economists and policymakers the volumes of Returns on Investment (ROI). Any investor, in any sector, will naturally be interested in knowing what will be the ROI.

Health indeed deserves every attention because, without it, development is almost impossible and meaningless. Principle 1 of the Rio Declaration (UN 1993) clearly states that "Human beings are at the center of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature". This principle remains valid almost three decades after its first public adoption by the United Nations.

Ill-health contributes to increasing levels of poverty not only by reducing productivity and income but also by causing a significant diversion of family wealth into the care and treatment of sick members. Available evidence shows that in Africa, up to 45% of household income is spent on health care even when the quality of such care is not ascertained. A lot of resources are being spent by individuals and families to procure remedies of doubtful value in motor parks and street corners leading to more and more loss of family wealth. Some of the touted street remedies may be causing even more health problems.There is now an abundance of literature confirming that a healthy population or workforce is a more economically productive one. An Indonesian study showed that men with anaemia were 20% less productive than men without anaemia.

A joint Pan-American Health Organization/Inter-American Development Bank study showed that high life expectancy had an economic impact 0-5 years later. The results further suggested that for any additional year of life expectancy, there would be an additional 1% increase in GDP 15 years later.
Economic historians have suggested that as much as 30% of the per capita growth rate in Britain between 1780 and 1979 was as a result of improvement in health and nutritional status (WHO, 1999). More recent evidence from South East Asia has shown that declines in childhood

mortality prompting a decline in fertility and contributing to demographic changes resulted in a large working-age population and a reduced dependency ratio after a time lag. These demographic changes have been held accountable for 30-50% of the economic "miracle" in the region between 1965 and 1990 (Asian Development Bank, 1997).

The globally adopted paradigms of development have also shifted from mere economic indices into looking at the conditions of human existence and we now talk about the Human Development Index, which takes into consideration the education, and living situation of man. This shift has seen to more partnership efforts between the WHO and the World Bank in promoting investments in health for communal and national prosperity.

Health is wealth! It is only a healthy population that can create and multiply wealth.Malaria has slowed economic growth in African countries by 1.3% per year. Over 35 years, the GDP for African countries is now 32% lower than it would have been in the absence of malaria (Jeffery Sachs, Harvard University).Africa has, thus, lost about $100 Billion to malaria in that period. Malaria-free countries average three times higher GDP per person than malarious countries even after controlling for other factors which impact on economic well being. (Jeffery Sachs, Harvard University).Health as a factor in the National Wealth Equation becomes meaningful when due consideration is given to all the public and private expenditure that is being deployed into the provision of health goods and services. Furthermore, as has been shown, health is capable of promoting wealth generation.

I have developed a simple equation that can be used to estimate the cost of illness or alternatively estimate the savings from the aversion of illness and my postgraduate students have labelled this the Osibogun Equation –

Cost of illness= Cost of treatment + Cost of treatment-seeking activities + Cost of opportunities foregone + Hidden social and personal costs + "Cost" of misery and pain
This equation demonstrates that the cost of illness is far more than the cost of treatment. It consists of tangible and intangible costs.

Indeed, such a simple equation can be a powerful tool in the efforts to convince hard-nosed economists and policymakers and to enable them to understand better why investments in health are desirable in themselves and also because of the huge returns on investments.

Apart from the above equation, which I am eager to promote if only for its simple complexity, I will now try to summarise the ingredients of the medicine for poverty. I hope I have demonstrated the importance of health as one of the ingredients and must emphasise that health is a required but insufficient ingredient.

Conclusion

Can we pass the moral test? To pass the moral test as a nation, we must demonstrate that we care and that the poor and disadvantaged among us have access to institutional safety nets. Unless that is done, the health indices for the country will remain embarrassing. As earlier highlighted, the bulk of the contributions to the appalling health indices have been by the poor and the underprivileged.

The cycle of poverty and disease needs to be broken and we must be correct in our prescription. I dare say that it is indeed not rocket science and we do not need to re-invent the wheel. The more a country invests in health,

the more developed it is. The more out-of-pocket expenditure plays a dominant role in a country's health financing mechanism, the poorer its health outcomes. Countries with poor health outcomes are also countries that are underdeveloped.