PISSN : 2543-3938 - EISSN : 2602-7771

The Health Situation in Algeria During the Period 1990-2018

Hayat Tahri

University Setif -2 -(Algeria),hayattahri@yahoo.com

Received: 14 /01 / 2022 **Accepted**: 22/05/2022 **Published**: 14 /06 / 2022

Abstract:

This study aims to shed light on the reality of the health system in Algeria, and to highlight the stages that the health sector went through in Algeria after independence, as well as having a look at the most important demographic indicators such as deaths and births that contribute significantly to the future planning of the country. The appropriate descriptive analytical approach was relied on for this study, and one of the most prominent results reached is an improvement in the health level in Algeria during the period 1990-2018 in comparison to what it was after independence, This is thanks to the health policies applied in Algeria which had a positive impact, such as the application of free treatment,which greatly contributed to improving the health situation of the population.

Keywords:*Health; The reality of health; Health indicators; Deaths; infant mortality; maternal mortality.*

ملخص:

تهدف هذه الدراسة الى تسليط الضوء على واقع المنظومة الصحية في الجزائر، وابراز المراحل التي مربها قطاع الصحة في الجزائر بعد الاستقلال، وكذا القاء نظرة على اهم المؤشرات الديموغرافية كالوفيات والمواليد التي تساهم بشكل كبير في التخطيط المستقبلي للبلاد ،تم الاعتماد على المنهج الوصفي التحليلي المناسب لهذه الدراسة، ومن ابرز النتائج المتوصل اليها هي تحسن في المستوى الصحي فيالجزائرخلال الفترة 1990-2018 على مكان عليه بعد الاستقلال، وهذا بفضل السياسات الصحية المطبقة في الجزائر حيث كان لها الاثر الايجابي مثل تطبيق مجانية العلاج الذي ساهم بشكل كبير في تحسن الوضع الصحي للسكان.

الكلمات المفتاحية: الصحة؛ واقع الصحة؛ المؤشرات الصحية ؛ الوفيات ؛وفيات الاطفال ؛وفيات الامهات.

I. INTRODUCTION

Health is one of the topics that have received great attention from researchers and specialists in demography and social sciences, because it is one of the sensitive sectors and is of great importance because of its impact on the population. The health situation in Algeria after independence was deteriorated to a large extent. The health system adopted in the country was suffering from multiple problems and a great shortage, especially in terms of medical equipment and competencies. The existing health system at that time was centered in major cities such as Algiers, Oran, Constantine, and it consisted in particular in general medicine, which is carried out within hospitals and clinics which were supervised by municipalities and provides free medical aids and clinics supervised by municipalities and provide free medical aid, and the centers of psychological school medicine are supervised by the ministry of national education, and on the other hand there is private medicine, which is supervised by about 600 doctors, most of them are foreigners. When Algeria got its political independence, the government took upon itself the responsibility to provide health services to all strata of society, and this matter was embodied in the text of the National Charter, where the state guarantees protection, security and improvement of health for all citizens, as it was confirmed by the Health Law of 1976, which indicates that health services operate in a way that guarantees all citizens have the optimum benefit and meets their needs, as Algeria drew major tracks of health policy, consisting in putting a strategy that would modify the places of imbalance known to the health system at the time. This strategy consisted in the adoption of the following tracks:

• Prevention through vaccination campaigns and hygiene procedures.

• Treatment of diseases. To achieve this, several levels have been set in which the patient receives all the necessary treatments, starting with the basic health centers, and then hospitals in case of difficult treatment.

• The rational distribution of doctors in order to achieve the goals set in the health map, i.e. achieving complete health coverage of the national territory in terms of human resources, structures and necessary equipments.

These reforms and efforts come in order to also improve health indicators such as birth rates, death rates, life expectancy, and HIV, in addition to other indicators, as these indicators are the main pillar for developing future plans in the field of health.

From this standpoint, we can ask the following question: How has the health situation developed in Algeria? What are the most important health indicators on which Algeria depends? To answer this question, the following hypotheses were put forward:

The health situation in Algeria from 1990-2018 witnessed a significant improvement in the structures and medical and paramedical staff.

Algeria relies on many health indicators, the most important of which are maternal mortality and infant mortality to assess the health situation in Algeria.

Study Objectives: This research paper aims at:

- Knowing the reality of the health system in Algeria.
- Knowing the stages of development of the health situation in Algeria.
- Analyzing the most important health indicators.
- Research method adopted: Since our study revolves around the health situation in Algeria, and the study of the most important demographic indicators, we have adopted the descriptive analytical approach that fits the nature of this topic, because of the analysis of demographic indicators such as births and deaths.

1. The reality of the health system in Algeria

After reclaiming its political independence, the government took it upon itself to provide health care services for all categories. This decision was characterized through the national charter text that guarantees the state's protection and health improvement for all citizens, which was later on corroborated by the Health Act of 1976 which indicates that health services should proceed in a way that ensures all citizens optimal benefit and meeting their needs (Ali Dahmane, 2017, p. 101).The guardian Ministrysupervises and runs the health sector in Algeria, which consists of two components (the public health sector and the private sector) that are subject to control and conditions of practice imposed by the guardian ministry with reference to the dominance of the public sector over health services in Algeria (Soltan, 2016, p. 114). Thehealth

map restructured according to Executive Decree No. 07-140 of May 19, 2007 is divided into public health structures and institutions in Algeria into the following (Soltan, 2016, p. 146)

- University Hospital Center (UHC).
- Specialized Hospital Establishments (SHE).
- Public Hospital Establishments (PHE).
- Local Public Health Establishments (LPHE).
- Polyclinic

The status to which the health system in Algeria has gone to, reveals a set of contradictions and imbalances that hinder goal achievement characterized in the protection and promotion of citizen's health. The structures and institutions of the mental health organization in Algeria witnesses a type of imbalance and instability in terms of incompatibility of hospital institutions' basic laws, inadequate and inconsistentorganizational structures.On the other hand, discouraged and indifferent users due to inadequate basic laws, working conditions, a deteriorating competency system, continuously increasing health costs and expenses, and a society demanding quality health services. All these problems and data floundering in the health system led the public authorities to the necessity to work to change this situation, by undertaking comprehensive reforms affecting the Algerian health system with all the structures and institutions it contains in order to protect the citizen's health and prevent disease, leading to hospitalization in its final stages**(Bornaz & Bergum, 2018, p. 13)**.

The health sector has known distinct historical and crucial epochs. It has known a collapse in the number of staff, where the number of doctors dropped from 2,500 (285 of whom are Algerian) to 630 doctors, i.e., one doctor for 100.000 Inhabitants in big cities, in addition to nurses of no more than 1,380, and the majority of whom was unqualified and uncertified for practice, on top of all, the management staff was highly unqualified for their role **(Soltan, 2016, p. 113)**. The health situation in Algeria after independence has passed through several phases, the most important of which are:

1.1. The first phase (1962-1974): The small number of medical and paramedical staff in the sector. The departure of French doctors from Algeria left a noticeable void, as their number decreased from 2,500 to 630 doctors. On the other hand, there was a lack of training among Algerian doctors, as before the year 1965, the country had 1,319 doctors, only 285 of them was Algerian, which equates to one doctor for every 8,092 citizens and 264 pharmacists, meaning one pharmacist for every 52,323 people, as for dentists, about 150 dentists, i.e., one dentist for every 70,688 citizens. In terms of paramedical practitioners, their number reached 20,000 paramedical and about 19,000 administrative staff in 1966. As for the basic structures, there was a permanent deficit in the sector, as in 1966 the number of sector structures amounted to around 163 hospitals with a capacity of 39,418 beds and 256 health centers, and what distinguished this category was the relative increase in treatment rooms compared to the year 1962 **(Harouch, 2008, p. 332).**

1.2. The secondphase (1974-1989): The concerned authorities have attempted in this phase to elaborate correctional plans to previous phase health policy , which was by taking care of three main goals as follows:

- Decreeing free treatment in public health structures starting from January 1974 in order to embody the slogan "health for all citizens" no matter their income or social status.
- Fixing the educational system, notably medicine studies, in order to improve organizational quality and support training, therefore creating a large number of medicine practitioners in many fields.
- Establishing the health sector to organize the national health system by unifying all primary treatment units run by "the municipalities or the paramedical sector (Ali Dahmane, 2017, p. 111).

  In parallel to the development of health structures, the number of health users increased considerably. The number of medical corps workers increased from 4,561 doctors in 1979 to25,000 doctors in 1989, as a result of reforms that took place in the field of medical sciences, which amounted to 46,669 nurses and assistants in various fields and branches in 1979, bringing the number to more than 6000 nurses and assistants in 1989.

Through these numbers, it becomes clear to us the extent of the remarkable improvement in the level of health service coverage by providing one doctor for every 29,600 people in 1979, and one paramedical aid per 386 inhabitants in 1979 (Ali Dahmane, 2017, p. 115)

1.3. **The Third phase (1989-2000):** The Ministry of Health has worked to establish support structures for health system institutions as follows:

- Establishing the National Laboratory for Pharmaceutical Products Control in 1993.
- Establishment of the central pharmacy for hospitals in 1994.
- Establishment of the National Blood Agency in1995
- Creation of the National Health Information Agency
- Establishment of the National Pedagogical Institute for Paramedical Training in 1996.
- Establishment of the National Center for Poisoning in 1998 (R.A.D.P, 1999, p. 8).

This phase has witnessed a notable increase and improvement in the statistical system in Algeria. The census has recorded.(Ali Dahmane, 2017, p. 120)23,047doctors 7,424 dentists and 3,826 pharmacists in 1996. The coverage percentage for every category was a doctor to1,308 citizens, and one dentist per 4,061 citizens and one pharmacist per 7,880 citizens.However, if the regional disparities in the field of medical density have abated with respect to working physicians, pharmacists and dentists, they have nevertheless gone very far with regard to specialist physicians. The three major states in the country, namely: Algiers, Oran, and Constantine, have an estimate of 53% of specialist doctors in the public sector and 34% in the private sector. As for the paramedical personnel, 38,556 aid holders with state certification, 29,991 certified assistants, and 15,530 paramedical assistants were counted in the same year. The population share of these categories of users was estimated with one semi-medical aid holding a certificate for every 1,008 inhabitants and one paramedical assistant for every 1,941 inhabitants.

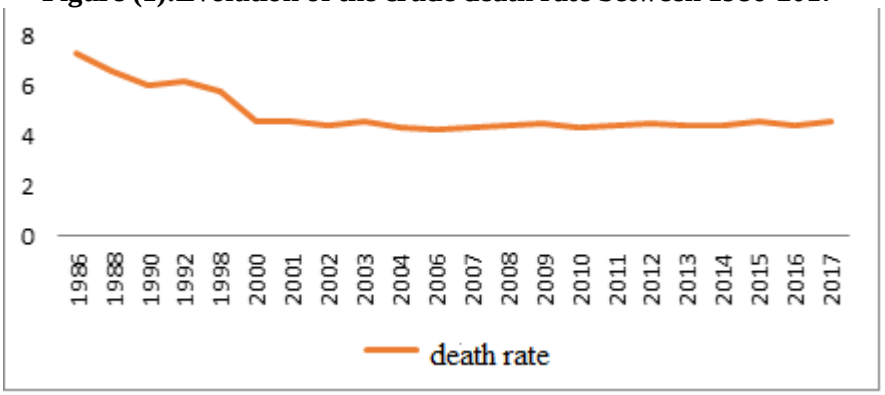
1.4. **The Fourth Phase (2000-2017):** The number of doctors in Algeria has increased between the years 2000 and 2017 by 64.26%, as the number was 66,236 in 2008 compared to 78,838 doctors in 2017, an increase of 30,843 physicians. The framing index witnessed a remarkable improvement, as it decreased from 578 to 327 citizens per doctor. The percentage of increase of dentists during the same period was estimated at 33.94%, and the indicator of the number of citizens per dentist recorded a remarkable improvement from 3,248 to 2,925 citizens per dentist. The number of pharmacists for the same period increased by 4,089 pharmacists, or 51%, at a rate of 3,382 citizens per pharmacist in 2017(ONS, 2017)

2. Evolution of Important Health Indicators in Algeria:

The main purpose behind studying the indicators of public health is determining the main problems that face the health sector, and then determine their priorities, thus noting its available possibilities to face said problems by redirecting health programs (Ali Dahmane, 2017, p. 8). Through this study we will attempt to identify the main health indicators in Algeria.

2.1. **Deaths:** Crude death rate indicates the number of deaths occurring during the year, per 1,000 population estimated at midyear. Subtracting the crude death rate from the crude birth rate provides the rate of natural increase, which is equal to the rate of population change in the absence of migration.

Figure (1):Evolution of the crude death rate between 1986-2017

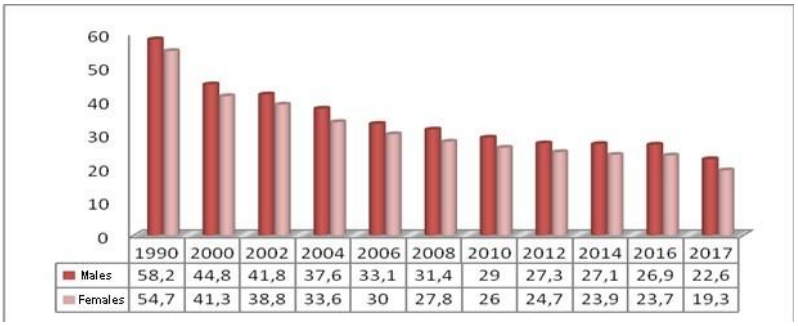


The source : Personal treatment of National Office of Statistics data 2017.

From the figure, we notice that death rates have decreased, as the rate was estimated to be **7.34 ‰** during 1986, and 6.03‰ in 1990. The reason behind this is due to an improvement in health conditions, that witnessed a relative increase in this rate in the years 1992-1995, when it was estimated at (6.16-6.43 ‰), because of the security crisis Algeria was undergoing. It continued decreasing and reached 4.55‰ in 2017 due to the improvement of the health situation and the return of security and stability to the country.

2.2. **Children and infants death rate:** Children and infants death rates are among the best demographic indicators that express the extent of health development in the country.The infant mortality rate in Algeria has significantly decreased compared to what it was after independence. As "it decreased from 174‰ in 1966 to 32.5‰ in 2003 and then to 22.00‰ in 2014(Djaouida, 2017, p. 112), despite a relatively slight decrease in the volume of live births, but the infant mortality rate has almost stabilized, moving from 20.9‰ to 21.0‰ between 2016 and 2017, as for sex, it was 22.6‰ for males and 19.3‰ for females (ONS, 2017, p. 25)As is demonstrated in the following graphic:

Figure (2):The development of infant mortality rate in Algeria during the period 1990-2017



	1990	2000	2002	2004	2006	2008	2010	2012	2014	2016	2017
Males	58,2	44,8	41,8	37,6	33,1	31,4	29	27,3	27,1	26,9	22,6
Females	54,7	41,3	38,8	33,6	30	27,8	26	24,7	23,9	23,7	19,3

The source : Personal treatment of National Office of Statistics data 2017.

We note from Figure 02 a continuous decrease in the infant mortality rate during the period 1990-2017 for both sexes, as it was estimated at 58.2‰ for males, and 54.7‰ for females in 1990, to continue to decline at a significant pace, as it decreased by 13 points over 10 years (44.8‰ for males, 41.3‰ for females) in the year 2000, reaching 22.6‰ males 19.3‰ females.According to the Multiple Indicator Cluster Survey MICS4 "2012-2013" (MSPRH, 2012, p. 176)**,** most deaths occur in the first year of a child's life, at 86% where infant and child death rates change according to the mother's educational level, where the higher the mother's educational level is, the lower the infants and children's death rate, under 5 years of age. The infant death rate was estimated at 26 deaths per 1,000 live births for mothers who do not have any

educational level, while it was estimated at 19 deaths per 1,000 live births for mothers with a secondary educational level and above. As for children who live in poor environments , the death probability is twice as high, up to 31‰ compared to those who live in more affluent places 18‰ Public authorities concentrate special attention to children's health in prevention fields by monitoring health status, fighting poverty and problems arising from malnutrition and their effects on the health status of the population in general and children in particular. Nearly nine out of ten children (ages 12 to 23 months) (88%) receive all mandatory vaccinations according to WHO standards i.e., one dose of BCG, three doses against whooping cough diphtheria - tetanus -, three doses against polio and one dose against measles, while the percentage of children who were properly vaccinated before the age of 12 months is 81.7%.As for breastfeeding, various investigations in Algeria indicate that breastfeeding was widespread and started from the first hours of the child's birth, where the average period of breastfeeding in 1970 was 13.4 months - 11.3 months in urban areas. 14.4 months in rural areas, while in 1986 it was 11.6-14.6 months in urban areas and 15.7 months in rural areas. In the 2006 MICS3, eight out of ten (08 out of 10) children (80.4%) were breastfed within the first 24 hours of birth, while less than one in two children (49.5%) were breastfed in less than an hour. This result is most important because the percentage of children who were exclusively breastfed during the first three months (03) is only 10.4%. As time went by, this percentage decreased to 15.9% in 2000. The breastfeeding program will benefit from being strengthened to reverse this trend in the coming years. (MICS3, 2006, p. 178)

2.3. **Maternal mortality:**Every year, more than half a million cases of women deaths occur due to pregnancy and birth related reasons as well as pregnancy and birth complications, which are the most important causes of death and disability of childbearing in most developing countries. Developing countries account for about 99% of all maternal deaths, most of which can be avoided in rich countries. Trained health staff, as well as emergency delivery providers ,save the vast majority of women - except for very few complications of pregnancy and childbirth. The 2002 Arab Human Development Report confirmed that maternal mortality is one of the most crucial health challenges and stressed that mortality rates are higher in the region than in Latin America and the Caribbean or Eastern Asia. (Farzana Rudi, 2008, p. 5) For Algeria, maternal mortality remains difficult to measure in the absence of a reliable system of all deaths disaggregated by cause. Maternal mortality rates during pregnancy, childbirth and 40 days after birth are relatively high at 300 per 10,000 births in 2005. A survey conducted in 1999 revealed that maternal mortality stood at 117.4 per 10,000 births,(ONS, 2007) and through table 1 we review the most important maternal mortality statistics.

Table (1) :The development of maternal mortality in Algeria

Year	1999*	2005*	2008**	2010***	2012***	2014***	2016***
Rate	114.4	110	86	76.9	70.3	63.6	57.7

The source : * United Nations Report on: The Millennium Development Goals, New York, June 2013, p. 31.

**Algerian government. Millenium Objectives for development ; national report 2000-2015. June 2016.

***Ministry of Foreign Affairs ;Interministerial committee responsible for monitoring the implementation of OODs Algeria 2019 voluntary national report: progress in theimplementation of the SDGs. June 2019.

Through the table, we note that maternal mortality is witnessing a significant decrease, similar to the rest of the deaths, as it has known a decrease of 56.7 points during 17 years. We recorded 114.4‰ in 1999 to continue the decline to 70.3‰ in 2012 and

57.7‰ in 2016 Algeria improved the rate of maternal mortality from year to year, However, Algeria is still far from the rates registered in the Arab world, with some Arab countries recording rates of less than 1,000 deaths per 100,000 births. Algeria has adopted the National Perinatal Program for the Reduction of Maternal Mortality, in 2005, which is based on:

a. Strengthening surveillance to eliminate and combat diseases prevalent during pregnancy, especially diabetes and blood pressure.
b. Strengthening surveillance to reduce deaths related to bleeding complications. Improving childbirth conditions by setting up maternity rooms in accordance with the established criteria.
c. Launching a broad plan for the implementation of basic maternal and child health structures, distributed across all regions of the country or specialized hospital institutions, with 32 institutions; for reference, 24 of the latter institutions are currently in service (Voluntary national report, 2019)**,** and other measures have been adopted to speed up the process of reducing maternal deaths, as follows:
   - The adoption of a mandatory declaration of maternal mortality in 2013
   - Investigating maternal deaths by looking into the factors and mechanisms that led to said deaths, and searching for actual causes, and improving the quality of medical services provided, in 2014.

   Moreover, starting in 2015, the National Accelerated Program to Reduce Maternal Mortality for the period 2015-2019 has been approved, which is part of an African initiative called: Campaign for the Accelerated Reduction of Maternal Mortality in Africa (CARMMA)**.**(Algerian Government, 2016)

2.4. **Life expectancy at birth:** This indicator has notably evolved among Algerians over time, moving from about 30 years in 1920 to 40 years in 1955, then about 50 years in 1970 (Bedrouni, 2007, p. 66) "Life expectancy at birth / life expectancy has increased in Algeria with the improvement of health conditions and the application of free treatment since 1974. During this period, life expectancy at birth increased from 47 years in 1962 to 65.4 years in 1987, then to 70.5 years in 2000, and in 2014 it was estimated at 76.6 years for men and 77.8 years for women(Djaouida, 2017, p. 110). Ali Kouaoci and SaadiRabah pointed out in their article, that

> Life expectancy at birth increased nationally between 1993 and 2007, as there are some exceptions. Five (05) states showed a general decline in life expectancy, namely Adrar, Tamanrasset in the south, Boumerdes, Blida in the center, and AinTimouchent in the west. The reason for this decrease in the southern states is due to immigration from African countries and the possibility that these immigrants may not be in good health, which contributes to a decrease in life expectancy, as life expectancy decreased from 65 years to 63 years. As for Boumerdes and AinTimouchent, the reason may be due to a problem in the quality of data, as life expectancy levels in these states are unrealistic (more than 80 and 100 years). The average life expectancy in Blida decreased from 77 years in 1993 to 72 years in the year 2007 for men and 80 years to 76 years for women in the same period. The reason is that this state is one of the states most affected by the security crisis that resulted in violence. In addition to the immigration that this state has known.(Kouaouci & Saadi, 2013, p. 127)

We note from the table below that the average life expectancy at birth is in a continuous increase, as it recorded an increase of 6 months to reach 77.6 years for the year 2016 compared to the previous year, and it should be noted that this indicator for the first time exceeded 77 years for males (77.1 years) and 78 years for females (78.2 years) which indicates an improvement in social conditions the health of the citizens overall.

Table (2): Evolution of the probability of survival at birth (years)

Year	1990*	2000*	2010**	2012**	2014**	2016**	2018***
Males	66.3	71.5	75.6	75.8	76.6	77.1	77.1
Females	67.3	73.4	77.0	77.1	77.8	78.2	78.2
Total							

The source :* National Office of Statistics Algerian Demography 2016 in Statistical Data p. 7

* *National Office of Statistics Algerian Demography 2017 in Statistical Data p. 25

***National Office of Statistics Algerian Demography 2018.N: 853.

2.5. Human immunodeficiency virus (AIDS/ VIH): The global epidemic of AIDS has become one of the most pressing public health emergencies of this century. Initial reports of AIDS date back to 1981. However, current data suggest that AIDS has existed for at least several decades. While both forms of the human immunodeficiency virus (HIV), type 1 and type 2, are retroviruses capable of causing fatal AIDS, infection with the latter generally results in a longer incubation period and a more indolent course of disease. Maternal-fetal transmission of HIV-2 is limited, and infection with HIV-2 seems to provide natural protection, estimated at approximately 70%, against infection with HIV-1 in certain high-risk groups (50). HIV-2, initially endemic to west Africa, also is spreading worldwide. (SCHWARTZ & MADHAVAN P. N, 1999).AIDS, once infected with the virus, a person becomes a lifelong carrier of the virus, and an infected person can live with the virus for many years, up to about a decade or more before becoming ill and dying as a result of the infection. Without cure, the virus weakens the immunity system over time and leads to different AIDS symptoms, the most common of which arepulmonary tuberculosis and HIV that is transmitted through blood, semen, vaginal secretions, breast milk and the exchange of contaminated syringes. The most common causes of transmission are unprotected / unprotected sex with a person infected with the virus. Moreover, the virus can be transmitted from mother to child during childbirth or through breastfeeding, however cannot be transmitted through normal mixing or through sneezing and coughing, nor through mosquitoes or other insects. (Farzana Rudi, 2008, p. 7)This rapid turnover of HIV and its enormous diversity underlie the difficulty in producing antiretroviral drugs with long-term efficacy, and is one of many problems facing the development of an effective vaccine against HIV.

The spread of the human immunodeficiency virus (VIH / SIDA) is scarce in Algeria.Among the risk factors for this epidemic is the non-use of condoms, addictions, as well as the phenomenon of cross-border migration, especially in sub-Saharan Africa with African countries. According to the data of the National AIDS Reference Laboratory, the goal of limiting the number of new infections diagnosed to less than 1,000 cases per year has been achieved. (Voluntary national report, 2019).

Table (3) : The evolution of the number of AIDS cases (AIDS/ HIV positive) in Algeria

Year	AIDS Cases	Case Numbers HIV positive
2008	60	585
2009	131	684
2010	142	411
2011	102	658
2012	93	619
2013	95	654
2014	101	744
2015	90	650
2016	119	650
2017	82	818

The source : National Institute of Public Health. Monthly epidemiological record. Available on the website 2017, 2016, 2014, 2013, 2012, 2011, 2009, 2010, 2008 http://www.ands.dz/insp/insp-publicat.html2021/1/12

We note from the table that the total number of HIV cases did not exceed the specified target, which is 1,000 infections per year. Also, the number of AIDS cases recorded a kind of stability and did not exceed 142 cases registered in 2010, for the duration of the period 2008 to 2017.Therefore, Algeria has adopted a plan to fight against AIDS to focus on preventing infection of the mother /child during childbirth, as well as protecting young people in the framework of youth health and adolescent health programs and preventions in school and university settings. In this context, 61 free monitoring centers have been opened in all states, as well as the establishment of the National Blood Agency, which guarantees the security of blood injection and compulsory monitoring of the blood donation processes throughout the entire country, in addition to 10 reference centers that take care of VIH / SIDA infection for free.(Algerian Government, 2016).

II. Conclusion:

The general health situation in Algeria is still defined by disturbances whether in terms of the spread of diseases or the situation of hospitals, which does not live up to the internationally approved standards, and the level of health care, especially in the southern provinces, as well as remote villages, but we can say that we have seen an improvement in relation to its state in previous decades, Algeria has witnessed great achievements in health structures and human potentials in the health field, especially with the contribution of the private sector and its investment in this field, in addition to the health policies applied in Algeria as the application of free treatment, which contributed significantly to the improvement of the health situation of the population, and the development of the most important health indicators.

The most prominent results obtained in this study are:

- An increase in life expectancy, as it was estimated at 77 years in 2018, compared to 1990, when 66 years were recorded. It is considered one of the indicators of improving health and receding epidemics.
- The noticeable and gradual improvement in the health of infants and the decrease in infant mortality rates, as the rate decreased from 25.5% in 2008 to 24.2% and this is a result of vaccination coverage. However, this indicator remains below the levels achieved at the global level.
- The maternal mortality index in Algeria has decreased, especially in recent years. The rate has decreased from 84.2 to 57.7 %, but despite this decrease, it is still high compared to European countries and even some Arab countries.

- Despite the plans and programs established at the national level, the repercussions of this indicator have become a health problem par excellence which afflict the Algerian health system.

references:

1. Djaouida, A. (2017). population statistic in Algeria. Algeria: House of the world of Ideas.
2. Harouch, N. (2008). Public Hospitals Administration . Algeria: Kutama Book House.
3. Bedrouni, M. (2007). THE REGIONAL DEMOGRAPHY IN ALGERIA: COMPARATIVE ANALYSIS Doctoral thesis. University of Blida, Faculty of Humanities and Social Sciences, Algeria.
4. Ali Dahmane, M. (2017). Evaluation of the Effectiveness of Public Expenditure on the Level of the Health Sector in Algeria Doctoral thesis. University of Tlemcen, Faculty of Economic Sciences, Algeria.
5. Soltan, w. (2016). Assessing the level of health services in Algeria and the mechanisms for improving them Doctoral L.M.D thesis. Algeria, University of Batna.
6. SCHWARTZ , S., & MADHAVAN P. N, N. (1999). Current Concepts in Human Immunodeficiency Virus. The State University of New York at Buffalo, Buffalo General Hospital, Buffalo, New York 14203, Vol 06(No 03), p.p295–305.
7. Kouaouci, A., & Saadi, R. (2013). Reconstruction of local demographic dynamics in Algeria over the past 20 years using indirect estimation techniques (1987-2008). Quebec Demography Notebooks, Vol. 42(No 1)pp127.
8. MICS3. (2006). National survey with multiple indicators monitoring of the situation of children and women . ALGERIA.
9. MSPRH. (2012). National survey with multiple indicators monitoring of the situation of children and women MICS4. Algeria.
10. ONS. (2007). Statistical, Algerian Demography in. Retrieved from http://www.ons.dz
11. Algerian Government, r. (2016). Millenium Objectives for development national report 2000-2015. Algeria.
12. Bornaz , H., & Bergum, H. (2018). Health and the improvement of health services in Algeria between management problems and funding stakes, "Hospitals as a model"First National Forum. Retrieved from http://dspace.univ-guelma.dz:8080/xmlui/bitstream/handle12/5/2020
13. Farzana Rudi, F. (2008). Lori Ashford: Reproductive and Sexual Health in the Middle East and North Africa. Retrieved from www.prb.org15/6/2020
14. ONS. (2017). Statistical, Algerian Demography in. Retrieved from http://www.ons.dz/spip.php?rubrique17/5/2020
15. R.A.D.P. (1999). Minister of Health,Directorate of planning,Health Statistics. Algiers.
16. Voluntary national report. (2019). progress in the implementation of the SDGs. Retrieved from https://amb-algerie.fr/wp-content/uploads/5/9/2020