

Healthcare labor markets: Recent trend and expected growth

In most countries of the world the value of healthcare services as proportion of the GDP has been increasing for the last 30 years and the employment in the sector has also been in the rising. In the USA, employment in the healthcare sector has been steadily growing on YoY basis for decades.

The numbers

Even on years in which employment in the economy suffered reductions, like during the 2007-2009 recession, Bureau of Labor Statistics (BLS) data shows that employment in healthcare services increased. It is likely that this trend will continue in coming years. The size of the workforce in this sector is significant, reaching almost 16 million of workers in 2013, while the total non-farm workforce was almost 140 million in the same year, i.e., about 11.3%.

Healthcare and related employment in the U.S., 2013

Industry sector	Employment	Percent
Hospitals, private, federal, state, and local	6,110,000	39%
Offices of health practitioners	4,057,000	26
Nursing and residential care facilities	3,228,000	20
Home health care services	1,238,000	8
Outpatient, laboratory, and other ambulatory care services	1,194,000	8

Source: Bureau of Labor Statistics, Occupational Outlook Quarterly • Spring 2014

Similar picture in terms of the size of the healthcare sector as proportion of the total workforce can be found in most industrialized nations. The OECD figures show that in 2015, 30.5 million people worked in healthcare related jobs, 10% of the total workforce.

In emerging economies, data show a comparable picture, especially in terms of the sustained increase observed in recent years.

The reasons for such a trend of increasing number of jobs in the healthcare sector have a common explanation. The first factor on this behavior is the demographic reality that shows a trend of increasing the life expectancy of populations in almost all regions of the world. More people alive and more people with better access to health services require more doctors, nurses, administrators of health facilities, etc. At the same time, the demographic group of people older than 65 years old, represent a larger share of the total due also in part to reductions in the proportions of very young

people. And older people use more healthcare services. The prevalence of conditions derived from socioeconomic and cultural behaviors (child obesity, diabetes) requires new forms of treatment and work on extended populations. In addition, the increasing complexity of healthcare services and solutions has created a large number of new jobs that usually demand more specialized training and skills. In summary, there are many well-known reasons that explain why in most countries of the world we can see a similar phenomenon. Also, it is found that the workforce of hospitals represents the largest individual group in most countries: 40 % of the total is often mentioned.

The situation is quite similar and even more dramatic in the rest of the world. Reports prepared by the World Health Organization, a UN agency, indicated in 2013 that the workforce deficit as defined against the recommended minimum international standards was 7.2 million, while the same concept, if not attended, would be 12.9 million in 2035. This situation will have serious implications for the world's health.

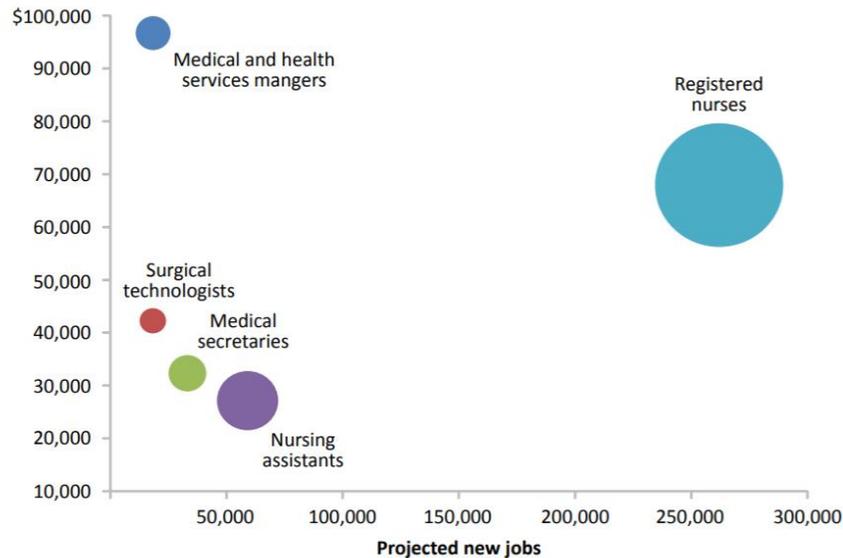
The foreseeable future

Projections made by statistical groups, in the public and private sectors all over the world, show that in the near future, the demand for workers in the healthcare sector will expand. The U.S. BLS projections indicate that healthcare occupations and industries are expected to have the fastest employment growth among sectors in the economy and to add the most jobs between 2014 and 2024. The predicted GDP annual growth of 2.2% is consistent with increases in total employment, 9.8 million new jobs between 2014 and 2024 according to the same BLS projections. More important for this analysis, the projections show that medical services will continue to grow as share of personal consumption expenditures, up to a level of 18% of consumption in 2024, from a current level of 16.7%. As a result, 3.8 million new jobs will be created in the healthcare and social assistance sector in the U.S.

The professions needed

Those new jobs will demand not only traditional knowledge but they will require also new skills, mostly associated with the increasing use of digital and bio technologies in the health sector. Some of those new abilities are not yet defined and some future jobs don't even exist. However, a broad definition of job categories as used by the BLS shows useful results. Not surprisingly, the most required job in hospitals will be registered nurses and nurse assistants. The following chart shows the relative size of expected new requirements of labor for different categories, in the form of circles of various diameters and ordered according to median annual wage. Similar patterns are expected for the future demand of healthcare jobs in other industrialized countries and some of the emerging economies.

**Occupations with the most new jobs in U.S. hospitals, projected 2012-2022
(employment and median annual wage; May 2013)**



Source: U.S. Bureau of Labor Statistics, Employment Projections program (projected new jobs, 2012-22) and Occupational Employment Statistics survey (employment and median annual wages, May 2013).

On a global scenario, the World Health Organization organized in 2013 in Recife, Brazil, the Third Global Forum on Human Resources and suggested a number of recommendations to address the workforce shortages as a result of the common aspiration of universal health coverage. Those recommendations defined political and technical commitments for member countries according their possibilities. The process started in Brazil will continue during the Fourth Global Forum on Human Resources for Health to be held in November 2017 in Ireland. During that event the Global Strategy on Human Resources for Health Workforce 2030 will be presented for discussion and approval. It will represent a common guide for planners, policy-makers and sector stakeholders, including from WHO member countries. The Strategy is primarily aimed at at planners and policy-makers of WHO Member States, but its contents are of value to all relevant stakeholders in the health workforce area, including public and private sector employers, professional associations, education and training institutions, labor unions, bilateral and multilateral development partners, international organizations, and civil society.

Challenges ahead

In addition to the complexities of the healthcare sector in most countries of the modern world and the need to address economic, technical, logistical and cultural conditions which are very different from one

society to the other, the scientific and technological map is in constant adjustment. Recent advances in biotechnology, genetics, pharmacology, computer science, robotics, artificial intelligence and communications are contributing to create a totally renovated landscape on the conditions of healthcare services provision. Not only old paradigms are put to test, but more importantly the human factor and the economic and financial effects on the services organizations are subject to intense, sometimes passionate and contested controversies. A few examples will illustrate some of the challenges.

Artificial intelligence: The dictionary definition provides some of the elements that are included in this concept: theory and development of computer systems able to perform tasks that normally require human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages. In the case of healthcare services, the AI is having a presence more and more evident in everyday life. It is employed, for example, in the area of clinical diagnosis, in particular taking advantage of the machines' capacity to analyze and compare thousands or hundreds of thousands of cases with similar symptoms, or X-ray images, or lab tests results and using those comparisons to predict the most likely diagnosis within a certain statistical very small margin of error. Of course, medical doctors are those who define the clinical validity of those diagnoses. But since every day there are millions of new cases to analyze and to use as the basis for new predictions, these are becoming more used, particularly as second medical opinions.

Robotics: The use of robots to perform many repetitive tasks with great precision and time efficiency helped to develop many areas of health care. This is perhaps the best known field of new technologies used in health services. In particular the Da Vinci system is widely used in many countries for minimally invasive surgical procedures in cardiology, urology, gynecology and many other branches of medicines. Surgeons work making fewer and smaller incisions than with other methods, while using a magnified 3-D vision system of high-definition and mechanical instruments with much varied possibilities of rotation than the human hand. Surgeons are required to be trained in the use of the system, but the needed skills will be almost a must in a few years' time for the profession.

Telemedicine: According to the most common interpretation of this word, telemedicine is the use of telecommunication and information technology to provide clinical health care at a distance. It is used to overcome distance barriers and to improve access to medical services that would often not be consistently available in distant rural communities. In modern times this technology gained great relevance. It allows that critical services, both preventive and emergency, be provided to isolated rural communities and on situations of catastrophes or natural disasters. Further, the continuous advances in telecommunications and the expansion of more sophisticated digital networks all over the world only can anticipate that services like real time attention, distant diagnosis or tele-nursing will become common practices very soon.

Conclusion

The scientific and technological improvements to healthcare services will require a substantial modification in the training of new human resources as well as the retraining and updating of skills for existing personnel. Each country in the world will have access to these advancements, although not every country will incorporate changes at the same speed. But undoubtedly, some of the improvements will be available sooner than later and the rate of adoption will be faster than that of other developments occurred in the past. On the other hand, some existing problems and limitations of healthcare policies, institutions and systems will remain unresolved, and will require a longer period to adapt. But in order to tackle both, new and for old labor requirements, the institutions in charge of building the human resources should start providing solutions immediately. Consequently, public and private healthcare authorities as well as education institutions should adapt their training methods, curricula and instructors training procedures to maximize the effectiveness in the preparation of our future healthcare labor force.

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