

From Sickcare to Healthcare, Challenges and Visions

Abdulaziz Saddique^{1*} and
Mohannad J. Al-Kudwah²

Abstract

Healthcare is fundamentally changing around the world; several countries are planning to restructure re-engineer or transform their healthcare system. The main motive for the change is due to two main factors, first, the great advancement in healthcare with new operational technology, new Pharmaceuticals, and new diagnostic procedures. Second, the rapid increase in the cost of healthcare, in most countries healthcare consumes around 7% of the Gross Domestic Product (GDP). India is replacing the traditional healthcare system with a mobile, tech-based one. Singapore is investing in medically oriented digital services and mobile apps. Mexico is launching a national strategy for prevention and control of overweight, obesity, and Diabetes. Saudi Arabia is transforming its entire health system, rethinking where and how care is delivered. These efforts are in response to a global shift in the healthcare landscape, the continuous increase in healthcare costs, and the advancement in technology. The delivery means of healthcare is changing. Patient's demand to get the best care and to be engaged in decision making, the aging community is increasing as well as the prevalence of disease in certain countries is advancing. Global transformational efforts are taking place, in the United States healthcare is re-evaluating the Fee-for-Service system that has been in practice for ages. Value-based Care is being promoted this is besides the heavy reliance on Artificial Intelligence as well as the new pharmaceutical technology.

The main issue is that we are concentrating on the care for sick people, with limited efforts to maintain health. Healthcare is defined by Merriam-Webster Dictionary as efforts made to maintain or restore physical, mental, or emotional well-being especially by trained and licensed professionals. We are fulfilling only part of the definition, i.e., we are restoring (treating the Sick individuals). Maintenance of health is very limited. In most of the countries where primary healthcare centers were utilized, the main function is to limit the visits to the major hospitals, it was not meant to maintain health. In other countries, it was used as a gait to the major healthcare centers to prevent the crowding in the Emergency rooms or specialist clinics. Therefore, we are providing Sickcare, not healthcare. This paper will shed some light on the different healthcare systems applied in several countries, define the content of a good healthcare system, and provide some guidance on the true application of Healthcare, as well as promoting Personalized Preventive Care (PPC).

Keywords: Healthcare; Sickcare; Transformation; Universal health system; Personalized preventive care

¹Corp. Performance Improvement
Department, Mouwasat Medical Services
Co., Alkhobar, Saudi Arabia

²Department of Clinical Care Excellence,
King Fahad Medical City, Riyadh,
Saudi Arabia

***Corresponding author:** Abdulaziz
Saddique, Department of Performance
Improvement and Education, Mouwasat
Medical Services, Al-Khobar, Saudi Arabia,
Tel: + 966505303069; E-mail: azizsaddique@
gmail.com

Citation: Saddique A, Al-Kudwah MJ (2021)
From Sick Care to Healthcare, Challenges
and Visions. J Health Commun Vol.6 No.S5
:30.

Received: October 15, 2021; **Accepted:** October 29, 2021; **Published:** November 05, 2021

Introduction

Healthcare services are the most important issue for all humans on the surface of the earth. Politicians usually try to use the health care promises as bait for getting elected. Some of the fortunate countries in the world provide free healthcare that is fully paid for by the government, as in Saudi Arabia, Emirates, Kuwait, and some of the other world countries. The issue of

health care expenditure came to the forefront of discussion because healthcare spending outpaced the Gross Domestic Product (GDP). However, the alarming expenditure on health care becomes untenable when considering the amount of wasteful spending estimated in these numbers. According to a 2017 report from the Organization of Economic Cooperation and Development (OECD), at least 1/5 of health care spending makes no or minimal contribution to good health outcomes, some of the

sources of this wasteful spending include remediating treatment errors, inappropriate or unnecessary emergency room visit, excessive antibiotic prescription, underuse of generic medicines, an administrative process that had no value as well as fraud and corruption [1].

The increase in health care spending may be attributed to various factors including better health care options in emerging markets, the use of newer and more expensive technologies, a growing elderly population, and an increase in complex chronic conditions. Therefore, several countries are looking for transforming healthcare systems and/or processes. The goals of health reform are to slow the growth in healthcare spending, creating incentives for providers to take broader accountability for patient care, outcomes, and resource use, providing rewards for improved care coordination among providers, and creating an infrastructure to support providers in improving quality and efficiency.

Traditionally, in the United States, health care has been delivered and paid for based largely on a fee-for-service arrangement with health care providers receiving compensation for services rendered or procedures performed. Yet over the past last decade this system that incentivized providers on the volume and quantity of those services provided has become unsustainable. However, the enormous investment being made is not translated into a fundamental improvement in health care, and we seem to be at a point of diminishing returns. This is borne out in the statistics that showed the greater health care spending does not correlate with improved care or health outcome.

Countries, such as Canada, Europe, and other parts of the world, are using the Universal Health Care System. This health care system is in which all residents of a particular country or region are assured access to health care. It is generally organized around providing either all residents or only those who cannot afford the cost on their own, with either health services or the means to acquire them, with the end goal of improving health outcomes. Universal healthcare does not imply coverage for all cases and all people; it only implies that all people have access to healthcare. Some universal healthcare systems are government-funded, while others are based on a requirement where all citizens purchase private health insurance. Three dimensions determine the universal healthcare system: who is covered, what services are covered, and how much of the cost is covered [2]. It is described by the World Health Organization as a situation where citizens can access health services without incurring financial hardship.

Healthcare cost is increasing constantly, even though there is no change in the basic health indicators: Crude death rate, Life expectancy, Infant mortality rate, maternal mortality rate, and Proportional mortality rate. The United States has the highest cost of healthcare expenditure yet, they have the lowest life expectancy, the highest suicidal rates, the highest chronic disease burden, and an obesity rate that is two times higher than the Organization for Economic Co-operation and Development (OECD) average. Additionally, the United States has one of the highest numbers of hospitalization from preventable causes and

the highest rate of avoidable death [2]. Even though there is no change in the patient health indicator.

In 2006, a book entitled "Redefining Health Care: Creating Value-Based Competition on Results" by Michael Porter addressed this fundamental question vexing the healthcare sector the book addressed a question, why, despite intense competition and high spending, was the US healthcare system failing? [3]. The proposed alternative, instead of billing merely for time and resources related to the excessive non-productive treatment, health care providers were compensated for making sure that the patient's condition was improved, or problems are solved. This is what we call Value-Based Health Care or (VBHC). It means that the goal of healthcare would shift from treating a condition to solving a patient's needs, and payments would be based on positive patient outcomes rather than on the number of procedures performed or the number of patient visits.

Healthcare dilemma

Health care is the most talked about subject since it deals with the most valuable assets of the individual "his health" and it's very costly, and the cost constantly increasing. It is remarkable how people look at the health care cost and expect to receive the best care, especially with the development of technology, medications, and diagnostic means. On the contrary health care cost is increasing but the quality of care "as viewed through statistical means" is declining. In the United States even though, healthcare budget is almost 18% of the Gross Domestic Product (GDP) the indicators demonstrate that healthcare indicators are worsening constantly despite the effort to improve the quality of care provided and the continuous increase in costs.

Developing and implementing a healthcare system that will provide coverage for the entire population is extremely difficult. Several countries implemented the universal healthcare system, which is either subsidized by the government, or through taxation, or insurance companies with government monitoring and premium setting. Either system still has its pros or cons. Patients with chronic diseases poses a major problem, especially for the insurance companies.

The debate will continue, and the dilemma is still there, how to decrease cost and provide care for everyone?

To be able to provide quality care and assure better care outcomes as well as reduce the cost of healthcare, it is very important to apply the concept of Healthcare. Healthcare provision starts with the maintenance of health, this matter, which is not given great attention, is the key to quality care. We must keep in mind that healthcare provision starts with Health outcomes. Health outcomes are influenced by a wide variety of social and economic factors, many of them outside the control of health care systems. Policies and public investments in education, employment, nutrition, housing, transportation, and environmental safety shape the health of the population [4]. Once the health outcomes are in place, we must work on the issue of maintenance. Maintaining health is the key issue for better healthcare provision, better outcomes, and improving the

quality of life as well as decreasing cost.

General health checks for adults 18 to 64 years of age (Genetic Screening) are designed to identify patients at risk of certain diseases. The goal is early detection and prevention of associated adverse outcomes, although with screening there is always the risk of over diagnosis [5]. Meanwhile, routine evaluation and check of the health status of the new-born as well as children can provide early detection of diseases and provide an opportunity to overcome disease complications. Therefore, establishing a system by which personalized preventive care is essential in maintaining good health as well as prevent future complications and hence reducing the cost of care. Theoretically speaking, it is an easy task. Practically, it does require a different setup, starting with the right environment, education, nutrition, housing, and transportation. Once the Health outcome measures are operational, personal preventative care will be achievable.

The primary healthcare centers can provide a valuable service setting up a program for monitoring is the key to PPC. The dilemma should vanish once we apply the first requirement of healthcare which is health maintenance. This is a goal that will be the core of improvement of the services, minimizing cost, and assure full patient satisfaction.

Review of the World's Healthcare Systems

United States of American

Healthcare coverage is provided through a combination of private health insurance and public health coverage (e.g., Medicare, Medicaid). The United States does not have a universal healthcare program, unlike most other developed countries Medicare and Medicaid are providing services in accordance to a system fee-for-service, where physicians are paid based on the number of patients and the number of visits they come to the clinic [6,7].

Private health insurance plays a major role in healthcare in the USA, where special insurers are providing care for the patients through a network of hospitals. The most popular insurers are the Healthcare Management Organization (HMO), Preferred Provider Organization (PPO), High Deductible Health Plan, and Point of Service (POS), in addition to several private insurance companies. Each of these insurers has some pros and cons, though, all seem to operate based on one system. Free setting of premium based on the rules of the state in which the company operates. The National Association of Insurance Commissioners (NAIC) sets the basic standards and establishes best practices for the U.S. insurance industry and provides support to insurance regulators. Insurance in the United States is regulated primarily by the individual states rather than by the federal government. The NAIC develops model rules and regulations for insurance companies and products. The association also offers programs, information, and online tools for insurance consumers.

The United States, despite its continuous efforts to reduce the cost of healthcare, is still the highest worldwide. U.S. health care spending grew 4.6% in 2019, reaching \$3.8 trillion or \$11,582 per

person. As a share of the nation's Gross Domestic Product, health spending accounted for 17.7% [7].

Germany

The country follows the Universal Healthcare system. It is a dual public-private system that dates to the 1880s, making it the oldest in Europe. Today its doctors, specialists, and facilities make it one of the very best healthcare systems in the world.

Healthcare in Germany is funded by statutory contributions, ensuring free healthcare for all. Besides, you can also take out private health insurance (Private Krankenversicherung or PKV) to replace or top-up the state cover (gesetzliche Krankenkasse or GKV) [8]. Germany is one of the biggest spenders on healthcare in Europe. It spends 11.43% of its annual GDP on healthcare expenditure. Only Switzerland and France spend more in terms of GDP percentage. German healthcare spending works out at just over \$6,646 per inhabitant each year.

Canada

Canada has a decentralized, universal, publicly funded health system called Canadian Medicare. Health care is funded and administered primarily by the country's 13 provinces and territories. Each has its insurance plan, and each receives cash assistance from the federal government on a per-capita basis. Benefits and delivery approaches vary. All citizens and permanent residents, however, receive medically necessary hospital and physician services free at the point of use. To pay for excluded services, including outpatient prescription drugs and dental care, provinces and territories provide some coverage for targeted groups. In addition, about two-thirds of Canadians have private insurance Health expenditure in Canada is 11.5% of Canada's Gross Domestic Product (GDP) [9]. It is worked out at \$ 7064 per person [10].

Switzerland

Universal health care system is applied and is highly decentralized, with the cantons, or states, playing a key role in its operation. The system is funded through enrollee premiums, taxes (mostly cantonal), social insurance contributions, and out-of-pocket payments. Residents are required to purchase insurance from private non-profit insurers. Adults also pay yearly deductibles, in addition to coinsurance (with an annual cap) for all services. Coverage includes most physician visits, hospital care, pharmaceuticals, devices, home care, medical services in long-term care, and physiotherapy. Supplemental private insurance can be purchased for services not covered by mandatory health insurance, to secure greater choice of physicians, and to obtain better hospital accommodations [11]. Switzerland has one of the priciest healthcare systems in the world. Healthcare costs amount to about 12% of the Gross Domestic Product (GDP). Of all the 37 Organization for Economic Cooperation and Development (OECD) member countries, only the United States spends more on healthcare: 17% of its GDP. The healthcare system in Switzerland is considered one of the best in the world for the following reasons [12].

- Swiss residents are required by law to purchase health insurance (mandatory health insurance, or MHI).
- No one is denied coverage for pre-existing conditions.
- The government subsidizes MHI for people with low income.
- Patients have direct access to all levels of care no referrals necessary.
- MHI allows patients to choose their providers.
- Waiting times are minimal.
- Maternity coverage is excellent: It includes prenatal care, all delivery-related costs, and a week-long post-delivery hospital stay (during which baby-care skills are taught). There are also post-natal house calls by a qualified midwife.

Australia

Australia has a regionally administered, universal public health insurance program (Medicare) that is financed through general tax revenue and a government levy. Enrollment is automatic for citizens, who receive free public hospital care and substantial coverage for physician services, pharmaceuticals, and certain other services. New Zealand citizens, permanent residents, and people from countries with reciprocal benefits are eligible to enroll in Medicare. Approximately half of Australians buy private supplementary insurance to pay for private hospital care, dental services, and other services. The federal government encourages Private Insurance and provides a rebate toward this premium and charges a tax penalty on higher-income households that do not purchase private insurance [13,14]. Total health expenditures in 2015-2016 represented 10.3% of the GDP, an increase of 3.6% from 2014-2015. Two-thirds of these expenditures (67%) were funded by the government per capita health expenditure across Australia reached about \$5,792 [15,16].

Japan

The health care system in Japan provides healthcare services, including screening examinations, prenatal care, and infectious disease control, with the patient accepting responsibility for 30% of these costs while the government pays the remaining 70%. Payment for personal medical services is offered by a universal health care insurance system that provides relative equality of access, with fees set by a government committee. All residents of Japan are required by the law to have health insurance coverage. People without insurance from employers can participate in a national health insurance program, administered by local governments. Patients are free to select physicians or facilities of their choice and cannot be denied coverage. Hospitals, by law, must be run as non-profit and be managed by physicians. Healthcare consumes 11% of the GDP growing at an average annual rate of 2.69%. The health expenditure per capita is \$4,267 [17]. Japan's healthcare system was rated as the best healthcare system. Medical fees are strictly regulated by the government to keep them affordable. Depending on the family's income and the age of the insured, patients are responsible for paying 10%, 20%, or 30% of medical fees, with the government paying the remaining fee [18]. Also, monthly thresholds are set for each

household, again depending on income and age, and medical fees exceeding the threshold are waived or reimbursed by the government.

The best healthcare system briefed

Despite the efforts of the different nations in establishing a perfect healthcare system, still the efforts need to be intensified to achieve this goal. Switzerland, Canada, and Japan are being nominated as the best healthcare systems. However, every system still suffers from some imperfection. Health care needs to be tailored by the country's income, social, and economic factors that reflect the real-life of the nation. Also, it relies on the underlying diseases prevalent in that country as well as the social and eating habits. There is no perfect system that can be applied all over the world. Therefore, we must evaluate all the different systems and try to pick the important points from every system and adapt it. It's obvious that the universal health care system has great popularity all over the world, therefore it should be considered as one of the main components of the health care system. The best health system features are Universal coverage, care delivery, ensuring the quality of care, reducing disparities, integration and coordination, electronic medical record, cost containment, and innovations. Moreover, it should provide the core features of healthcare that are availability, accessibility, acceptability, affordability, and quality.

Healthcare is been practiced for thousands of years concentrating only on one concept, which is "the Sickcare. This practice concentrates on dealing with the current health condition of the patient, providing either temporary relief of symptoms or a cure for the clinical condition. It is, for the time being, what we need is to prevent the occurrence of complications in patients with chronic diseases. We need to be involved from the beginning; we need to provide Healthcare and not Sickcare. Patient's centered care was designed to get the patient involved in determining what course of events should be followed in his/her care. Patients' involvement in decision-making in the process of healing should be discussed thoroughly with the patient (and/or family), and the patient would be at the centre of care. Sick care also is not the solution to our current health care problems. We need to investigate Healthcare rather than Sickcare. Planning should be made to prevent chronic diseases or at least minimize or eliminate the complications secondary to chronic diseases.

New trend in healthcare deliver

Despite the numerous healthcare systems around the world, the U.S. system of Fee-For-Service (FFS) was adopted by many nations [19]. Nonetheless, especially in ambulatory care, FFS has been popular in several OECD countries where most physicians are private. It has been an important payment method in Belgium, Germany, Japan, the Republic of Korea, Switzerland, and the United States of American. The FFS demonstrated that it is a poor system which leads to an increase in the budget of health care without actual benefit to the patient. In 2006, Michael Porter promoted the idea of Value-Based Care (VBC), a system that looks at the outcome of care, rather than the number of visits. Value-based healthcare represents a fundamental shift in

how healthcare is delivered. It is a movement away from asking a patient what is the matter with you, to what matters to you? Rather, it is a patient-centered approach to the delivery of care and focuses on improving the health outcome that matters. Value-based care is about focusing on and improving patient health outcomes through the entire patient's journey. VBC model would not only benefit the patient but also help optimize the cost of health care, improving patient health outcomes, and help reduce the compounding complexity and disease progression that drive the need for more care.

The introduction of Artificial Intelligence (AI) in healthcare is playing a significant role in facilitating the monitoring of the patient and provided means to communicate with their health care professionals virtually. Artificial intelligence is a key factor in health care development and care optimization.

Saudi Arabia's initiative to privatize healthcare is one of the main components of Vision 2030. Healthcare expenditures are increasing constantly. The Ministry of Health budget consumes 7% of the GDP. It has almost doubled since the year 2000. The main objective of the Saudi Government in restructuring healthcare is to provide better services to the citizens and expatriates, improving the quality of care, optimizing the system for care delivery, developing a monitoring system to follow the quality of care, and attempt to reduce the cost of healthcare. Saudi Arabia is adopting the VBC model, the model that shall evaluate the quality of care based on the outcome measures. The outcome of care was never been officially measured and recognized before, neither at the Governments hospitals nor at private healthcare facilities.

A value-based care system shall provide the means of payment to the service provider. The main issue in adopting value-based care is to improve the services provided, improve patient satisfaction, and monitor the outcome of the care provided. There should be a system by which the health care system will operate based on global insurance for all individuals. As the setup of the system has varied significantly from one country to another, Saudi officials are mandated to adopt the best practices and mold it in a form that is accepted nationally, meets the patients' needs, and is financially logical.

Following the beginning of the privatization of health care in Saudi Arabia, the involvement of the private sector in the provision of care and the announcement of the Saudi Council of Cooperative Health Insurance (SCCHI) the intention to use the philosophy of VBC, and the use of a coding system for diseases classification, interventions, and investigation as pricing tools, and the establishment of a platform to follow the performance of all healthcare providers. All hospitals of the private sector started preparation for the coming development in healthcare and the requirements of the VBC.

Private Sector Hospitals have invested a great deal in preparation for the application of VBC. Meanwhile, they have updated the infrastructure of IT, utilized artificial intelligence, collaboration, and partnership with a reputable international organization. Acquired HIMSS 7 for their EMR, they have established TeleICU,

Tele-Histopathology, and integrated their Radiology services as tele-radiology, as well as integrated their Medical Records. Meanwhile, the private sector established Clinical Practice Guidelines (CPG), following the world's best Medical Services, and integrated the services through their HIS. The CPG and Order sets are the cornerstone of Quality Medical Services. Also, it is considered one of the major factors that can contribute to reducing the cost of healthcare.

The National Transformation Program (NTP) addressed the following objectives:

- To expand the role of the private sector from 25% to 35% by 2020.
- To increase the number of licensed medical facilities from 40 to 100.
- To increase the number of internationally accredited hospitals.
- To double the number of primary care centers visits per capita from two to four.
- To decrease the percentage of smoking and obesity by establishing a strategy focused on preventive medicine and advocate for a healthy lifestyle and wellness.
- To focus on digital health.

These objectives were a great stimulus to the private sector to improve services, create patient's centered care, and develop Key Performance Indicators (KPI) to monitor the performance, getting more international accreditation, and invested in Clinical Practice Guidelines development. These changes created better healthcare delivery means, improved patient satisfaction, and stimulated the race between the private sector providers to improve the care provided and invest in technology and Assured Quality Services. Press Ganey was the system that the government adopted to monitor patients' satisfaction. Monthly reports are generated and sent to the Ministry of Health. Patients are requested and encouraged to fill the assessment form for the services they received [20].

Healthcare beyond 2050

The new era of health care delivery will be significantly different from the current one. It is estimated that patient satisfaction or patient-centered care will take predominance in the delivery of care. The race for better quality services and monitoring of the patient's outcome shall improve significantly and the use of digital monitoring devices will increase, as well as virtual consultations.

It is obvious that soon the treatment of diseases will be limited only to very few cases especially post accidents or other limited numbers of diseases, and more concentration will be put on Healthcare rather than Sickcare. The general assumption is that if we prevent diseases from occurring then definitely, we will be able to have a better healthy society that will be able to participate effectively in the development of the nation. The realization of preventive medicine is an umbrella term which subsumes personalized preventive medicine and participatory and predictive aspects of notions of the four Ps in medicine

personalized, predictive, preventive, and, participative.

Before we investigate what the future holds, we must have a system by which the services delivery will be monitored, and the care provider will be optimized, development of a universal health care system for all, where all people will be insured through a system that provides quality care and equity. Mandatory insurance is essential for the success of the universal healthcare system. However, the system of mandatory health insurance has different forms which make it more complicated to choose from. It is very difficult to import a system from any country and get it implemented and another one, Health care services need to be tailored following the country's social, culture, and health condition of the population. By reviewing all the different health care systems worldwide, we have concluded that to have a universal health care system that matches our society and our culture it must be custom made for our country. In Saudi Arabia, healthcare delivery is provided by multiple sectors, e.g., Ministry of Health, Ministry of Education (the University hospitals for staff and students), Ministry of Defense, Ministry of Interior, and Ministry of National Guard. Having multiple healthcare providers within the kingdom will facilitate the care, where every ministry shall be responsible for their personnel and their dependents, care can be provided during their employment and following their retirements since the authority is providing healthcare services. Other government agencies that do not provide nor own hospitals, Private Health Insurance companies will be contracted to provide that service. The government will set the premium for private health insurance. Finally, the private sector is responsible for their employees and their dependents during the period of employment, usually from age 24-60 years old, and this will be through an insurance policy. Considering the ease of transfer of provider from one sector to another as situation demands it.

The setting may vary from one organization to another. Some organizations may require staff participation in health insurance with a certain percentage and others may not. Irrespective of the application process, all employed staff shall be covered by their employer. Once they retire, the Social Insurance will take over, since all staff is paying their Social Insurance bills all their working life. Any unemployed individual or dropped legally from any sector shall be funded by the government for their health insurance.

Setting a unified premium for all individuals irrespective of their age pre-existing conditions may not be the optimal clients that the insurance company would be looking for. Where pre-existing conditions (e.g., Diabetes, Coronary Artery disease, etc.) management can be very costly. The Universal Healthcare System is implemented in more than 70 countries around the world. There are minor differences within each system, but the optimal goal is to provide care for all with equity and quality. Some may argue that the system of Universal Health is suffering from some drawbacks, it is very well appreciated and understood that continuous improvement of any system is a necessity and eventually the Healthcare outcome of many of these countries is the best e.g., Japan, Switzerland, Netherlands, and many others. Government involvement in setting the Insurance system

is essential to assure unification of the premium irrespective of the pre-existing conditions and to create a monitoring platform for care outcome and the patient's satisfaction. Moreover, the government needs to set a committee to oversee the performance of the insurance companies, as well as apply Risk Equalization between the insurers. The purpose of risk equalization is to support the community rating principle. Insurers are not allowed to risk rate premiums and risk equalization partially compensates insurers with a riskier demographic profile by redistributing money from those insurers paying less than average benefits to those paying higher than average benefits. The Risk Equalization is managed by a Government committee, where every insurer should provide a calculation for the age-based pool that shared the claims for all their policyholders. The calculation for the high-cost claimant's pool provides risk-sharing for the most expensive policyholders. Market share they should calculate their customer base and the terms of Single Equivalent Unit (SEU) single policies account as one of the SEU and couple or family policies that count for two SEU [21]. Based on these quarterly reports, the Government committee will transfer funds from insurers with lower-than-average claim costs to those with higher-than-average claim costs. This supports community rating but does not directly make personal health insurance more affordable overall. If only people in worse than average health were insured premiums would be unaffordable regardless of how the costs were shared between insurers.

Personalized preventive maintenance

Health care is moving towards the notion of personalized preventive care and away from an exclusive focus on the cure of disease. This area of personalized preventive care can be distinguished as a form of medicine that uses information about an individual's genome, current biophysical measures, and environment to prevent, diagnose, and treat diseases [22]. The objective of preventive medicine is also relevant as it is a much-used term with a different meaning, for example, the current medical practitioner preventive medicine may typically mean reducing hospital re-admit rates for already diagnosed and treated patients, since this is where a large portion of the medical costs is, a more general objective of preventive medicine as that is more broadly applicable is to extend healthy life span and reduced disability. The general objective is to create a working definition that discusses one aspect that can be applied most readily now by the layperson and medical practitioners, the idea of keeping the population healthy and preventing conditions from arising and the first place especially now that data are starting to be available to identify managers with clear definition ahead of time. Therefore, the objective of the PPC is to look at the different dimensions of a condition's life cycle before it becomes clinical, and finally to propose how preventive medicine may be realized through participatory health initiatives, the era of big health data, and philosophical shift in mind set.

Several studies have demonstrated the value of personalized preventive care and its impact on healthcare expenditures [23-25]. Several studied demonstrated improvements in healthcare outcomes, decreased cost, and minimized Emergency room

visits. The concept of PPC is not just to provide preventive measures, but the participant becomes the nexus of action-taking and empowerment means that the individual now through quantified self-tracking and other low-cost newly available tools, can understand his or her patterns and baseline measures and obtain early warning as to when there is variance and what to do about it. Economics is one of the most important components in forcing the shift to preventive care. Personalized health care tries to address disease before it occurs. It engages you in your health care decision-making. Each person has their health risks, lifestyle choices, and goals for their health. Therefore, personalizing care to the individual is important, and it has the following benefits:

- Preventive care is addressing conditions during 80% of their life cycle before they become clinical. This is resulting in taking proactive measures to prevent its progression and complications.
- Most preventive care at no cost to you as part of your health coverage.
- Early detection of medical problems, illnesses, and diseases helps your doctor provide proactive care and treatment.
- Routine care can help you stay focused on your own health goals.

PPC can be achieved through the Primary Healthcare Centers they can provide the maintenance of care following the best available measures. However, it does require some arrangement plus a lot of policies and strategies to formulate the role of Primary Healthcare as a center for PPC.

Discussion and Conclusion

It's extremely difficult to visualize how fundamentally the health care landscape may need to be changed to accommodate for health 2050. Preventive medicine, numerous scientific achievements, information technology, mindset, and institutional changes are needed. Digital technology can help transform unsustainable healthcare systems into sustainable ones, equalize the relationship between medical professionals and patients provide a cheaper faster, and more effective solution for diseases. Artificial intelligence has a great potential to redesign healthcare completely artificial intelligence algorithms can mine medical records, design treatment plans, or create drugs much faster than any current practitioner. Virtual reality and augmented reality will play a significant role in the process of shaping health care education and practice as well as health care trackers, wearable and sensors. Since the main objective is the empowerment of patients as well as individuals taking care of their health through technologies therefore there are great devices to get to know more about ourselves and retake control over our own lives. Nanotechnology is also another dimension that will have a great impact on health care we are living at the dawn of the nanomedicine age and I believe that nanoparticles and nano devices will soon operate as precise drug delivery system cancer treatment tools or tiny surgeons. All these great development and healthcare it does require a system to operate and to manage therefore developing a universal health care system where all people are insured, and they have equal opportunity to care as

well as to the quality of care is very essential for the new era of health care. I do believe that implementing a system of health care where care is accessible to all and intensifying our efforts in personalized preventive care, will have a great impact on health care outcomes. Several countries including the United States are redesigning medical schools and shifting from health services to population health management [26]. Population Health Management is the foundation of PHC service delivery and, when done effectively, can contribute to an array of downstream effects. Meanwhile, European countries are building stronger and more efficient Primary care that will revolutionize healthcare in Europe [27]. Saudi Arabia is also following the same path and more support is being given to primary healthcare services [28]. The utilization of the new technologies will eventually revolutionize our practice of the medical profession as well as it will enhance the individual's knowledge about own-health and it will provide a means for him to understand better control of their lifestyle, therefore, I do believe it is time that we must move from sick care to health care.

References

1. Limb M (2017) A fifth of healthcare spending is wasted. OECD report.
2. World Health Organization (2010) World Health Report: Health system financing: The path to universal coverage. World health Organization, Geneva.
3. Porter ME, Teisberg EO (2006) Redefining health care: Creating value-based competition on results. Harvard Business Press.
4. Davis K, Stremikis K, Squires D, Schoen C (2014) Mirror, mirror on the wall: How the performance of the U.S. health care system compares internationally. Common Wealth Fund, New York.
5. Smith DK, Schmidt HS, Saint CM (2019) General health checks in adults for reducing disease-related morbidity and mortality. *American Family Physician* 100:676-677.
6. M. Fisher (2012) Here's a map of the countries that provide universal health care (America's still not on it). *The Atlantic*.
7. (2016) The U.S. health care system: An international perspective. Department for Professional Employees.
8. (2021) The German healthcare system: a guide to healthcare in Germany. Expatica Communications.
9. Tikkanen R, Osborn R, Mossialos E, Djordjevic A, Wharton GA (2020) International Health Care System Profiles: Canada.
10. (2019) Health spending. Canadian Institute for Health Information.
11. Tikkanen R, Osborn R, Mossialos E, Djordjevic A, Wharton GA (2020) International health care system profiles: Switzerland.
12. De Pietro C, Camenzind P, Sturny I, Crivelli L, Edwards-Garavoglia S, et al. (2015) Switzerland: Health System Review. *Health Syst Transit*.
13. (2018) Australia's health 2018. Australian Institute of Health and Welfare.
14. (2014) Reform of the Federation WHITE PAPER. Australian Government.
15. (2015-16) Health expenditure Australia. Australian Institute of Health and Welfare.

16. Tikkanen R, Osborn R, Mossialos E, Djordjevic A, Wharton GA (2020) International Health Care System Profiles: Australia.
17. Tikkanen R, Osborn R, Mossialos E, Djordjevic A, Wharton GA (2020) International Health Care System Profiles: Japan.
18. Sakamoto H, Rahman M, Nomura S, Okamoto E, Koike S, et al. (2018) Japan health system review: 2018. *Health Systems in Transition*.
19. Park M, Braun T, Carrin G, Evans DB (2007) Technical briefs for policy-makers: Provider payments and cost containment, lessons learned from OECD countries.
20. (2016) Healthcare Resource Guide: Saudi Arabia. export.gov.
21. M. C. Jamie Reid, "Risk Equalisation, time to think differently?" Finity Consulting Pty Limited, 2017.
22. Swan M (2012) Health 2050: The rationalization of personalized medicine through crowdsourcing, the quantified self and the participatory biocitizen. *J Pers Med* 2 93-118.
23. Musich S, Klemes A, Kubica MA, Wang S, Hawkins K (2014) Personalized preventive care reduces healthcare expenditures among medicare advantage beneficiaries. *Am J Manag Care* 20: 613-620.
24. Riley M, Morrison L, McEvoy A (2019) Health Maintenance in School-Aged Children: Part I History, Physical Examination, Screening, and Immunizations. *Am Family Phys* 100:213-218.
25. Locke AB, Stoesser K, Pippitt K (2019) Health maintenance in school-aged children: part II. Counseling recommendations. *Am Family Phys* 100:219-226.
26. Jacko JA, Sainfort F, Messa IV CA, Page TF, Vieweg J (2021) Redesign of US Medical Schools: A Shift from Health Service to Population Health Management. *Popul Health Manag* 45-52.
27. World Health Organization (2017) Building primary care in a changing Europe 2015.
28. Al Asmri M, Almalki MJ, Fitzgerald G, Clark M (2020) The public health care system and primary care services in Saudi Arabia: A system in transition. *East Mediterr Health J* 26:468-476.