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Article

Building a global virtual healthcare system

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Abstract: The recent coronavirus-19 pandemic has highlighted the need for a global digitally enabled healthcare advancement infrastructure to ease e-coverage in the future and reduce human losses, facilitating access to high-quality and cost-effective health solutions. As the concept of a virtual healthcare system is still premature, it would have required noteworthy speculation in technologies and an overhaul of most of the current classical healthcare infrastructure, policies, and systems around the globe. **Aims and objectives:** This study aims to create a viable autonomous virtual universal health care system to modify the comfort of health care through emerging digital and communication innovations to fulfil consumer needs. **Methodology:** This study falls under the fact-finding category, which encompasses an exploratory approach with literature examination, limited field visits with informal interviews with local key authorities, and an initial assessment of current circumstances to examine the possibility of application of virtual health coverage. **Findings:** This study discovered that it is imperative to organize and develop the prospected healthcare system at the country level to be governed by international organizations as speculatively it is functioning in comparative improved healthcare systems across the world, which should be based on special processing of the prospected six types of data with their operationalization to serve multidisciplinary bunches by e-governance and exchanges between distinctive measurements. It requires more dependence on digital infrastructure and learning materials through electronic resources and ordinary techniques. Among other effective components for the development of virtual health coverage, are the applications of digital technology, the middle utility of voice and brief advising framework, complex functionalities, and applications of fifth generations (5Gs) arranged into universal servers attached to GPS-appropriate for sound choice and high-quality measures. **Recommendations:** This study recommends the construction of a virtual healthcare system by utilizing the proposed Electronic domestic medical adviser, virtual clinics, or "e-health incubators" which will allow individuals to relate through the web rather than the face-to-face institutive fragmented structure systems.

Keywords: global health; virtual organizational structure; healthcare infrastructure; healthcare policy; healthcare development; healthcare system

1. Introduction

By discussing the current global and virtual movements of healthcare systems and echoing with authentic wording, various components are presented with enormous potential. Thus, it is of great importance to expedite the address if such a proposed initiative is truly important for developing global health, improve accessibility and efficiency (WHO, 2024).

The rationale behind this article is to examine the virtual business collaboration with advances utilizing success and premising factors from the world experiences. It must encourage the practical usage of the globalized healthcare delivery system suggested by the World Health Organization (WHO), as restricted to an exceedingly

organized individual classical national healthcare system. The potential procedure for establishing the establishment of a system is explored in detail, covering the major components of the current and proposed success-compelled factors.

The world was plagued by COVID-19, and similarly emerging, reemerging of communicable diseases, and neglected tropical diseases, etc. urged a dramatic change in health delivery systems. In the early stages of the disease, most healthcare systems around the globe were stuck individually in certain areas, while others were uncertain about whether they would be able to continue pursuing health services within limited constraints.

The rising need for an advanced comprehensive digitally enabled healthcare system to improve global healthcare coverage in the future to reduce disease burdens and losses in humans, and measures various ways in which virtual programs can generate value based on their objectives (Israa, 2024).

The current predicaments of infectious diseases, coupled with the 'epidemiological transitions' urged global health systems to merge in-person and virtually enabled modes of care provision based on the appropriateness and cost-effectiveness of healthcare services. Digitally enabled care models must be developed across the full range of diseases to facilitate access to high-quality and cost-effective digital health solutions (Borycki and Kushniruk, 2022; Brown, 2003).

2. Aims and objectives

This study aims to create an autonomous virtual universal health care system to adjust the accessibility of health care through emerging digital and communication innovations to satisfy consumer needs.

3. Material and methods

This study falls under the fact-finding category, which embraces an exploratory approach with a literature examination strategy. The secondary types of data, were collected from international peer-reviewed journals and proceedings retrieved through recognized databases. The researcher performed a literature search of several databases, namely Scopus, PubMed, Science Direct, and websites such as the World Health Organization (WHO). Several MeSH (Medical Subject Headings) terms such as e-health, telemedicine, remote medicine, remote telemedicine, virtual clinics, and virtual healthcare were used for the literature search. The literature search was restricted to the English language and studies published in the last ten years, resulting in 50 articles and other information in papers and books. Other data from countries' encounters with e-health, telemedicine, etc. were distinguished in the initial review. Local health specialists from distinctive systems in Jordan (five main providers: two to three representatives from each component, totaled 13 chief executive officers and general managers, in expansion to 11 health care system representatives, master students in health services management programs at Yarmouk University from the gulf constitute the sample size of the study who were deliberately interviewed utilizing unstructured questions and consulted online to discover the feasibility of the application of global virtual healthcare and compare conventional and computerized healthcare systems.

The study utilized countries experience current trends in health information systems/virtual healthcare system. Commentaries were collected, checked, summarized, and merged to facilitate the focus of the study. At that staging, a preparatory plan was issued containing the objectives, and counselled colleagues in the department in the researcher workplace at Yarmouk University to take spiral steps in the stream of the study to assure credibility, transferability, dependability, and confirmability. This writing study began with a review of the concepts of global health coverage, virtual health, virtual organization structure, and computer applications in healthcare.

As the code of conduct varies from profession to profession, there were not ethical dilemmas stemming from the research process.

4. Literature review and researcher's remarks

The term 'virtual health systems' is used to cover a wide expansion of the movements and shapes of technology-supported working subsystems that have been utilized by many investigators. It is noteworthy that arriving at an accredited definition of 'virtual health systems' has demonstrated challenging. However, a few definitions state that virtual health-system frameworks expand over geological, transient, and organizational boundaries; this type of organizational structure is not always taken within the literature writing (Butcher, 2022).

Definitions of virtual health systems.

The process employs innovations to advance communication between stakeholders with interaction done remotely in different forms i.e., video sessions, content messages, phone calls, mail, or any exchange of patient information such as orders, prescriptions, and lab results (Butcher, 2022; Jaydeep, 2023).

Characteristics of successful virtual healthcare models.

The main characteristics of the virtual health care model may incorporate but are not limited to a) adaptability and time-saving in terms of reducing travel time, waiting room time, and the time ought to take off work or discover the needed care; b) Cost-effective that is reducing travel expenses, off-work time, and containing strategic distance from in-person participating; c) improve accessibility to healthcare facilities, that is utilizing persistent entries at any time from anyplace; d) and, patient participation in decision making and appreciate access to their information in their computer-based health records (Butcher, 2022; Linnander et al., 2017; Jaydeep, 2023).

Challenges in implementing virtual healthcare systems.

There are enormous challenges in the implementation of the virtual health care system which may be seen with the legacy of the current information system employed in addition the cost of embracing the maintenance charges may constitute an incredible challenge in terms of who ought to pay for the system. Too, it is not possible that it could crash the older system could not be legitimately reported, or cannot interface with the modern system. Besides, the fear of the old bureaucratic staff may feel insecure in case they are not familiar with modern innovations. Also, the rapid advances in technology may influence the craving of experts. In its entirety, challenges may be due to the integration of IT into the business process, understanding the space to which the application is connected, coaching staff on the developed system,

presenting the system to patients, and maintenance. And resource, location, staff, and costs (Butcher, 2022; Linnander et al., 2017; Jaydeep, 2023).

Virtual health systems propose working systems whose individuals are spread over boundary-less organizational structures but are connected using computer and communication innovations (Linnander et al., 2017).

A boundary-less organization could be a modern organizational structure and design in the health field. It is an organization that is not characterized by, or constrained to, vertical, hierarchical, and simultaneous horizontal coordination through departmentalization, or outside boundaries forced by a predefined structure. A boundaryless organization advocates abandoning vertical, uniform, and outdoor boundaries so that health professionals, directors, patients, and providers can work together, share views, and recognize the finest course for the organization (Jaydeep, 2023).

Virtual health system frameworks are technology-enabled and comprise individuals who can span diverse organizations, time zones, geographic areas, and societies. Virtual extended groups are characterized by brief life expectancy and enrolment, spatial scattering, and utilization of overwhelming computer-mediated infrastructure to support decision-making with international components and implications. The tasks of the proposed subsystems for short- and long-term projects consist of a large number of employees from different cultures and countries working via electronically connected devices in standardized practices (Jaydeep, 2023).

4.1. The global virtual structure: Virtual healthcare in the real world

The current fragmented health systems around the world have lacked of high-quality information, insignificance data assembled, duplication and wastes among parallel health information systems, lacked of timely reporting feedback, and poor information.

The drive to establish an integrated global healthcare system at the international level under the umbrella of the WHO or an isolated administration (for example, the Global Health Fund) requires a unified health information system at all levels. The reform of health information systems at the country level coincided with the revolution in information and communication technology (Epizitone et al., 2023).

The tools that are required to engage in virtual health may include (but are not limited to) the following: devices for education, training, and prevention of health and wellness; programs or software on a personal computer or smartphone coupled with attached electronic chips to screen the bios of people that which connect the global and local (country-level) health information systems; and straight fulfilled intelligence by e-patients (Jaydeep, 2023).

Virtual e-patients visit the health system from any corner of the globe, which is fundamentally controlled and organized by individual country-level and worldwide health frameworks, to facilitate consultation, diagnosis, treatment, and prevention. In expansion, non-current e-visits over the Internet or any device, and a pre-established standardized database to facilitate knowledge sharing, provide consultations automatically to patients, and enable the exchange of clinical information between users, stakeholders, and decision-makers (Rothlind et al., 2023).

Far-off disease management (diagnosis, treatment, and follow-up): This represents the foremost transformative change in the delivery system and the main concern for monitoring the patient's biometrics online, which may require certain self-tested devices and sensors to track observance, especially in patients with chronic diseases, aiming reducing costs, hospitalizations, and other visits (Demaerschalk et al., 2023).

4.2. The healthcare delivery system

The worldwide health delivery system ought to offer preventive and curative services in terms of electronic modes, that is, teleconsultations that have inaccessible determinations through video conferencing and imaging, disease management, prescription, and/or referral. Usually, it is based on restructuring health information systems and their management via a health informatics model which requires remote and central data entry and output interfaces. To facilitate the management of current idiosyncratic health information systems at the central level (e.g., WHO), every country in the world should work to match the restructuring process of the health information system with the health service system. The essential steps for rebuilding include consolidating the type of information required and its possible indicators and data sources, developing data collection instruments, developing data transmission and processing procedures, ensuring the use of the information, planning for a new health information system, and furnishing rules of governance (Rothlind et al., 2023; Wallace, 2013).

Six conceivable types of data are needed to establish a unified universal health informatics system governed by the WHO and discrete countries across the globe (Ophelia and Chong, 2004). They may be standing with their possible indicators as: a) Demographic data: population size, annual population growth rate, age distribution, sex ratio, geographic distribution of the population, total fertility ratio, crude birth and death rates, life expectancy at birth, percentage of woman using contraceptives, dependency ratio, migration rates, marital status, family size; b) Epidemiological data: Mortality: Infant Mortality Rate (IMR), Child Mortality Rate, Maternal Mortality Rate (MMR), disease-specific mortality rate, proportionate mortality rate, age specific rate; Morbidity: Incidence and prevalence rate of major diseases, seasonal and geographic occurrence of major diseases; Disability: Permeant and temporary; c) Socio-cultural data: political attitudes, attitudes towards health care, traditional health practices, diet and nutrition (i.e., calories consumed/day), education, occupation, water supply, transportation system, and health behaviors as smoking, drinking, exercise, drug abuse; d) Economic and Financial data: Gross National Product (GNP), per capita income, Income distribution, total private sector health expenditures, total government health expenditures, capital expenditures, recurrent expenditures, recurrent costs by health facility, program, unit cost (per inpatient day, outpatient visits, vaccination), total health expenditures, and type of facility or program. e) Health service utilization data: number of visits to a physician, number of hospital beds, number of hospital inpatient days, average length of stay, number and type of vaccinations, and other preventive measures. f) Health resource data facilitates, number of hospitals, clinics, MCH centers by size and location, services, personnel, number of health workers by sector,

type, region, personnel costs, number of training programs, costs, dropout rate, staffing, an estimate of supply and demand, rate of personnel to facilities, hospital beds, programs, and software.

The possible sources of data are census, vital statistics, reports of notifiable diseases, hospital records, prepaid insurance programs, private physician records, disease registers, T.B centers, available morbidity surveys, surveys for specific diseases, maternal and child health, and family planning (Sako et al., 2022).

The organization of the information system could involve determining what information is needed, who needs the information, in what form and frequency the information is needed, and how to store, update, and communicate the information and obtain feedback.

It is vital to organize the virtual health information system to serve multidisciplinary bunches by which the role of individual country information officers or Chief Information Officers (CIO) shift from focusing on operations, networking, infrastructure, mobile-intensive data repositories, and information technology support to participating in health policy formulation, furnishing rules and regulations, and decision-making concerning metadata analysis, information examination, cyber computing, cloud computing, e-health, telehealth, telemedicine, m-health e-communications, and transactions between different dimensions of the system, such as electronic medical records, e-physician, e-pharmacy, provoke a reaction to uncertain contingencies, among other areas (Mellott et al., 2013).

4.2.1. Health care service provision

The provision of health services refers to preventive and curative services as well as medical and non-medical professionals. As the focus ought to be over preventive care, since most of the diseases are preventable, the key factors that have to be examined are: do individual countries' health care system optimize cost-effectiveness and productive utilization of resources. Are there satisfactory assets (8Ms: manpower, materials, money, management, methods, means, manufactures, and milieu) for the masses, as conventionally and impartially conceivable? What are the disease patterns and risk factors and how should resources be distributed to address them? How can health issues be prioritized–that is, political in nature, cost-effectiveness, burden of disease, and equity? And, at long, what inspirational powers and structures are input to alter the course of action while addressing healthcare system issues (OECD/World Health Organization/Eurostat, 2011).

4.2.2. Resource generation

A compelling approach and orchestration of healthy human assets must be established for the productive utilization of a virtual worldwide framework. The types of required human resources, coupled with their depictions and determinations, must also be established. Coaching and preparing programs are significant for creating aptitudes and competencies, particularly at undergraduate and postgraduate levels in academic institutions. It would be more accommodating if the academic institutions included or offered a program on health informatics and the related request for the foundation of the virtual health system in their educational program plan, particularly at the health-related specialization, and it would be more viable on the off chance that it has ended up on the fundamental prerequisites of university levels. These courses

have a particularly long-term vision or objective relating to virtual healthcare and governance with proficient certification or accreditation of universally licensed offices and are recognized by the WHO (WHO, 2022; Babaei et al., 2023).

One of the unmistakable strong devices currently connected is telecommunications in certain discussions on eHealth and m-Health services, in addition to teleconsultations in certain clinical activities through web and mobile innovations. Within the global virtual healthcare system, all populations should have access to currently applicable services and the proposed ones, particularly to phones, videos, mobile apps, text-based messaging, and other communication platforms, remote monitoring tools, sensors, wearable innovations, and remote communication as a base for the successful execution of the globalized system (Hanson et al., 2022). The populace experienced the current pandemic COVID-19 from certain technologies, particularly in their adoption of consumer-facing health technology, which made a difference in the movement of the patient to consumer (consumerization) of health care. Subsequently, they expressed their choice in deciding where to go for high-quality medication. It is anticipated within twenty years long time that the lines between further treatment and in-facility treatment will be so vague that any disparity will become futile (Rothlind et al., 2023).

4.2.3. Financing

Financing a worldwide virtual healthcare framework to respond to current health challenges and those inside the unsurprising future will be to a great extent met by facilitating buyers' installments, community insurance, social insurance, general revenues, and private insurance. In addition, there will be great support from donors either directly or through management agencies. The overwhelming burden of expenditures that will be financed in the initial stages of running the global health system will be placed beyond the shoulders of individual countries' governments and the national health budget. However, overall total expenditures are hard to identify at the individual country and global levels. In any case, there will be a need to reinforce the association with the private health sector, that is, private for-profit institutions, particularly health facilities and insurance companies (Hanson et al., 2022).

4.2.4. Stewardship

The concept of stewardship ensures that all viewpoints of service provision, resource generation, financing, and general responsiveness of the system are being measured, and the rules and definitions of a successful virtual healthcare system are being built and kept up. In addition, there are strategies to improve the adequacy of the advanced health system and the overall health status of the population. The concept of stewardship groups up the visions, mission, and objectives of the health care system, rules, and regulations, and collects, analyzes, and interprets information to ease the decision-making process to improve performance, appropriate utilization of resources, and issues and maintain the health account of individual countries. The common targets are to improve health, increase responsiveness to health needs with impartial convenience of budgetary burdens, and decrease inequalities (Ramanayake et al., 2022; Brinkerhoff et al., 2019).

4.3. Factors of creating an effective global virtual organization

Currently, face-to-face discussions between doctors and health specialists are not risky or maybe basic for global health facilities, owing to the development of electronic communication and digital technologies. Therefore, physicians are no longer restricted to using direct observations to treat their patients; numerous of them in conformity instep work within a virtual team that transcends topographical areas, organizational boundaries, and thus time zones to do so (Bright et al., 2019).

Stereotypically, there is a need for the plentiful time to create virtual health entities as the case required the development of huge projects such as electronic domestic medical advisors (can be a mechanical autonomy office), virtual patient bank, virtual clinics or "e-health incubators/business, e-pharmacy, e-physicians, e-medical records, etc., health groups that excel organizational boundaries; radiating other commerce that regularly works over internal boundaries, with specialized capacities to operationalize genuine virtual health care delivery system (Rothlind et al., 2023).

Global virtual health systems at the individual country level will utilize a virtual health team (groups of health professionals) from distinctive societies and countries to work together to communicate trustful health services over borders online using shared communication systems. A few factors prevent virtual healthcare organizations from building certainty in creating and maintaining success in virtual organizations worldwide, which may incorporate secure health services, cross-cultural communication, and sophisticated technologies (hardware and software). Secure health services are crucial in all local, regional, and global theater organizations. Most global virtual services lack social control and topographical burden. An ethical communication mode could be an essential behavior for routine groups and principals to direct security by making a distinction clarifying potential threats to master security inside the open discourse to improve work practices and proficient problem-solving. Computer innovations and the net are integral parts of a great virtual organization to back the health delivery system and provide collaboration (Babaei et al., 2023).

4.4. Changes affecting healthcare

The deviations that are being put within the world at the social, financial, mechanical, and coherent levels have made new challenges to all citizens of the world and have constrained unused resources for international organizations, requiring them to react in an amazingly fast manner (Hanson et al., 2022).

The world is witnessing a rapid change in medical sciences and health innovations, requiring us to obtain a stronger approach to problem-solving and creativity. The major changes that we see in our social order and perhaps the world incorporate, even though the larger part of the world's social order is youthful bunches, due to low mortality and morbidity rates, which result from good health services at their levels, without any change in the older generations. This prolongs the lives of young people and shifts them into older societies (Mahara et al., 2023).

Just like the old-fashioned age of time, epidemiological transition and disease patients are changing in a shorter period. A few claimed infections have been eradicated (TB), whereas others are emerging and reemerging. In a few nations, communicable illnesses are still displayed and pertain, whereas, in most nations, non-

communicable diseases are the most important prosperous issues. These infections will proceed to the press because of the prevalence of cardiovascular maladies, diabetes, and cancer. This move requires patients to know what ought to be done for them instead of what health services should do. The emphasis here is on behavior, which is based on well-informed choices (Rothlind et al., 2023).

The rising need for automated data, as required by the prospected worldwide health information system in conjunction with globalization, is based on the accessibility of the foundation and administration to information and communication technology. Active participation is required for all stakeholders, particularly patients.

As individuals become more trained, patient awareness (engorgement) increases global access to data by utilizing the information and communication facilities within the global healthcare system.

Patients know more about their illness; in this manner, they will have more access to health and restorative data and capacitated with their doctors, which could be a challenge for healthcare providers. This requires greater control of end-users, clients, citizens, and patients. Clever health experts will move from the manual to a computerized workforce that depends entirely on data and communication innovation (Rothlind et al., 2023).

The rising concept of e-government has incorporated the health sector for e-health within e-governance. There will be no excuse to exclude health workers from this move, which will require them to procure digital skills and resources. This will require greater reliance on ICT components for work-related and instructional exercises (Pedawi and Alzubi, 2022).

4.5. The impact of information and communication on the changing health sector

More reliance on data for management functions and a counting decision-support framework is essential to ensure that the execution of objectives conquers the expected results. The application of ICT within a healthcare delivery system is necessary because healthcare will dynamically be an information-driven benefit. The center of therapeutic practice is compelling information and data administration. The generation and utilization of these six types of data will form the nervous system of the global health system. health services will be based on the administration of data through the collection of demonstrative information regarding treatment and medicine (Babaei et al., 2023); World Health Organization, 2004).

4.6. The impact of changes on medical education and its conveyance

Health education in schools and health facilities will be grounded in problems and community orientation regarding disease prevention and treatment. Therefore, the health system will require a blend of data collection on health status indicators as well as instructive help learning materials through electronic resources, videoconferencing, and different extraordinary techniques (Demaerschalk et al., 2023).

4.7. Emergency medical response systems EMRS vs. home medical adviser HMA

Unlike some developed nations, composing shows that countries that have experienced disasters have come to recognize the importance of implementing electronic medical response systems which require exceedingly sophisticated technologies. The major disaster that assaulted the world globe nowadays is the infectious pathogen of COVID-19, which is comparable to the wave that struck attacked the globe in the late 1430s, began in China, and moved to Europe and the rest of the globe, killing approximately a quarter of the globe. During the COVID-19 pandemic, the world witnessed chaos, with aimless exhibitions in terms of prevention and treatment. m-Health is an arbitrary facility that helps certain segments of the global population. The emergence of a genuine strategy for m-health today and in the years to come is fertile. However, exceptionally small, major majestically, and generally pertinent frameworks for preventive and curative care are uncommon. Exorbitant utilization of phones' core utility of voice and brief informing system, complex functionalities, and applications in the fifth generation (5Gs), global situating system, and Bluetooth technology are not reasonable for the common mass, even in the developed world (Cohn et al., 2021; Patel and Shortliffe, 2023).

4.8. Global Positioning System (GPS)

The utilization of GPS would oppress most organizations to bear with, particularly health services. On the health level side, there is no one best way to do the work that appears globally, saving the comprehensive quality affirmation criteria for certain segments. The proposed global healthcare framework requires the unique and standardized collection, storage, upgrading, and recapturing of six types of data and their conceivable indicators to expand their analysis, interpretation, and recommendations. All conceptual frameworks of the specified information are also expected to be operationalized in terms of changes in the indicators. In this way, for each required data, there needs to be a unified performance to be filled by conceivable information sources, which can normally change as recorded rates, proportions, and ratios and arranged into GPS suitable for sound decision-making and end users in high-quality measures (Joel and IGI, 2010; Kerr et al., 2011).

5. Discussion

Globalization forces the marketing healthcare worldview to enable patients to make claim choices in acquiring health services. This vital change witnessed from countries experiences has led to the diversity of health services worldwide, progressing health care, and efficient and effective healthcare systems. In expansion, track, as it was observed in covid19 the high-risk patients only executed helpful mediations (Demaerschalk et al., 2023).

The centrality of building trust in healthcare frameworks and therapeutic experts' interior virtual organizations has been affirmed by various smart developments. In addition, it makes a difference in reducing clashes and is maintained by a generative plan of development, where tall levels of development will compare with complete authorized measures. In extension, a global virtual health care system requires

different factors to form a stronger base advantageous organization, which are the components of building acknowledgment in health and cross-cultural communication, other than computer-mediated communication. Thus, individuals will associate through the Internet instead of face-to-face interactions (Jaydeep, 2023).

Virtual healthcare systems can be, in a general sense, a parcel of an episodic care package, such as a heart failure package, that requires residential checking and improved care coordination after surgery, reducing the costs of visits and readmissions. In such circumstances, the virtual healthcare system should be prioritized by chance stratification of the population, with a center on conditions that can take advantage of virtual care apparatuses for better cost, utilization, and care management (Lee et al., 2023).

Managing the global virtual health care system

The classical managerial roles of: interpersonal: figurehead, liaison; influencer; motivating people; Informational: Mintor, disseminator, spokesman; and, decision making role: change agent, disturbance handler, resources allocator, and negotiator and modern managerial role of: Trinity role: strategist, designer and leader, as well as leadership styles of transactional transformational, and servant leader), have a critical effect on the type of management structures put to deal with virtual health systems. That is to say in terms of orchestrate the transform of the organization of the individual health systems with agreement to the modern developments so as to constantly monitor progressing health subsystems across the globe. This would require all ministries of health in the world to execute global reform project targets while guaranteeing that their roles are not in conflict with their conventional commitments to scrutinize the delivery of health services to their citizens. Such changes require regulatory roles and procedures to be established to overcome conflicts and avoid impediments between health subsystems (Babaei et al., 2023).

Managers also characterize the virtual subsystem's role within the context of a globalized greater vision, mission, and objectives, including the limits of the scope and obligations of the system. Worldwide, project managers are frequently required to act as managers and leaders, as characterized by new managerial roles (Trinity: leader, designer, and strategist) (Babaei et al., 2023). Managers must be capable of starting the global health system project, project planning and scope management, time, cost, quality and resource management, and project control. However, a leader ought to be mindful of project starting forms, risk management, communication, strategy development, objective setting, and motivation packages (Babaei et al., 2023; Brinkerhoff et al., 2019).

The unexploited managerialism qualities of post-bureaucratic styles (modern managerial roles suited the transform of data to informatics), as well as transformative leaders need to be within the worldwide project to progress communication, construct the notoriety of the project and its deliverables. Consequently, they will influence the decision-makers in favor of amplifying goals to: 1) patient-centered health records & provider-patient connections; structure/culture of healthcare organizations, IT governance, accountability, and risk analysis; ethical issues, legal, privacy and security, standards and regulatory policies; vertical health systems databases, data

mining & other data stewardship and software issues, telecommunication networks, hardware, firmware & interface issues; mega-themes, use trends and diffusion of virtual Health Systems; 2) Plan, improvement, execution, acknowledgment, selection, and assessment of virtual health Information System Technologies (ISTs); 3) interoperability, web administrations & socio-technical issues in virtual health system plans; 4) IST changing commerce forms and clinical practices, and quality enhancement; 5) Key IST planning for virtual health systems: arrangement with trade objectives, human assets, preparing, financing, return on venture, plan, advancement, testing, usage, and assessment; 6) virtual health system governance, responsibility, measures & standard selection, risk analysis & administration issues, and universal viewpoints; venture group administration all through the virtual wellbeing IST life cycle & ask for proposition; and, 7) change management and supplier appropriation resistance, business process redesign, workflow analysis, vendor selection, and influence on virtual health systems implementation success (Babaei et al., 2023; Hanson et al., 2022; Jaydeep, 2023).

Guidelines of fully capacitated shared data repositories and usages by various entities should be securely created and guided with relevant analytical and training programs. This would encourage the generation of new insights through artificial intelligence capacity-building facilities for the research and robotic era. And help in interpretation of newly developed standardized indicators for inclusive health scopes.

Characteristically, the time taken to utilize the cost of constructing virtual health entities (e.g., electronic domestic medical advisers, virtual clinics, or “e-health incubators,” restorative bunches that exceed expectations and organizational boundaries) will allow individuals to relate through the web rather than face-to-face institutions to operationalize honest virtual health care delivery systems. Consequently, clients can express their choice of where to go for high-quality treatment. It is expected that, within 20 of years, the lines between more distant treatment and in-facility treatment will be so uncertain that any differences will end up futile.

Among other effective components for the development of virtual health coverage, the applications of ICT and cell phones, the middle utility of voice and brief advising framework, complex functionalities, and applications of the fifth generations (5Gs), which are not judicious to the common mass, will be a must because healthcare will capably be an information-driven advantage shared data repositories and usage by various entities.

The concept is not simple to process, but it is covered with existing virtual practices that would have required essential speculation in technologies and updated most of the current classical healthcare systems worldwide. The growing concept of e-government applications will consolidate e-health programs in the health sector within e-governance. This leaves no excuse to prevent health workers from this move, which requires them to have professional ICT aptitudes and resources. Furthermore, it requires more dependence on ICT components for work-related and instructional workouts. Subsequently, instructive assistance and learning materials through electronic resources, videoconferencing, and ordinary techniques will be essential parcels of the proposed system of unique and standardized collection, storing, upgrading, and recovering the six proposed types of data, and of particular indicators, analysis, interpretation, and recommendations. In addition to all other necessary

concepts, the specified information in the article is anticipated to be operationalized in terms of indicators to facilitate the accomplishment of the virtual healthcare system. In this way, a unified format will be filled by conceivable information sources which can normally be altered as recorded rates, proportions, and ratios, and arranged into GPS appropriate for sound choice and high-quality measures.

6. Conclusion

The rising need for a comprehensive digitally-enabled-care model to guide global coverage in the future is pivotal to reduce losses in humans and improve access to high-quality and cost-effective digital health solutions.

This study discovered that it is imperative to organize the virtual health information system at the country's level to be governed by an international organization in terms of its provision of services, resources generation, stewardship, and financing as hypothetically it is functioning in comparative health care systems across the world. The model is found to be not basic, but it is secured with the existing virtual practices it would have required an essential speculation in technologies and update most of the current classical healthcare systems in the globe. The developing concept of e-government applications will consolidate the health sector that will leave no excuse to avoid the health workers from this move, which needs them to proficient the ICT aptitudes and assets. And require more dependence on ICT components for work-related and instruction work out. Subsequently, instructive assistance and learning materials through electronic resources, videoconferencing, and different unordinary techniques will be essential parcels of the proposed system of unique and standardized collection, storing, upgrading, recovering proposed types of data, analysis, interpretation, and recommendations.

Among other successful components to the development of virtual health coverage, the application of cell phones middle utility of voice and brief advising framework, complex functionalities and applications fifth generations (5Gs), which is not judicious to common mass will be a must since healthcare will capably be an information-driven advantage shared data repositories and usages by various entities.

Guidelines of fully completely shared data repositories and usages by various entities ought to be securely created and guided with relevant analytical and training programs to facilitate the generation of modern bits through manufactured insights (modeling) capacity-building facilities for research and robotic era, interpretation of newly developed standardized indicators for inclusive health scope.

This study recommends the utilization of the current developments in technology and transforming health systems as it suggests the construction of a virtual healthcare system by utilizing the proposed Electronic domestic medical adviser, virtual clinics, or "e-health incubators" which will allow individuals to relate through the internet rather than the face-to-face institutive fragmented structure systems. Consequently, clients can express their choices in choosing where to go for treatment of high quality. It is expected that within twenty long periods, the lines between more far off treatment and in-facility treatment will end up so dubious that any contrasts will end up worthless.

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