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Advancement of information technology related to medical and health sector

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ABSTRACT

Information technology (IT) related to medical and health sector has vast area of networking. It is very easy to find out the location and land mark of specified and particular names of hospitals in the field of medical and health centers. It is also very easy to find out the total medical and health facilities under one roof, the list of doctors available, the drug available in pharmaceuticals stores, blood available in the blood banks, three (3) dimensional surgery facility, a deck facility of the patients etc. The Hottes Medical Technologies are related Advance Telemedicine, New Methods of Drug Development, Data Driven Health Care, Nanomedicine, 5G-Enabled Devices, Tricoders, Healthcare's Digital Assistants, Smarters Pacemakers, A Lab. On a Chip, Wearables with a Purpose, Remote Patients Monstorins, Artificial Intelligence, Digital Therapeutics, Technology in Mental Health and Internet of Medical and Health Sector.

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1. Introduction

The medical and health advances are the generation of information of knowledge. ^{1–5} This improves understanding in medical and health sciences, these are significant break through that results in an improvement of the diagnosis, treatment and prevention of diseases. ^{6–8} With the advancement of big data, wearable medical devices, virtual reality, block chain, telehealth and more, medical and health care practioners across the globe are in a much better place to manage their patients in hospitalized and post hospitalized cases. ^{9–12} These technologies have significantly the processes the role of technology in medical and health has reshaped for patient — care, hospital

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management, discovering and innovating better drugs and predicating the course of treatment based preliminary on data. ^{13–15} The importance of technology in medical and health care is deeply — rooted. ^{16–18} The internet of medical technology, artificial intelligence and deep learning technology is now paring its way to provide fast care management and care of emergencies, reduce casualties by providing real — time ewers to patients history — all with a few taps on screen. ^{19,20}

2. Materials and Methods

The Deccan College of Medical Sciences Hyderabad has two major teaching hospitals named Owaisi Hospital and Research Centre 1050 bedded and Princess Esra Hospital and Research Centre 850 bedded, there also a

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number of rural dispensaries working under it. ^{21–25} It is a very great privilege that the Information Technology Department of DCMS, OHRC, PEHRC and rural dispensaries are upgraded with the latest Information Technology Department software. ^{26–30} The Information Technology Department covers from reception desk to patients discharge. ^{31–35}

3. Conclusion

Information Technologies are reaching maturity now, many important technologies have enormous future potentials. ³⁶ As more of the world's information is digitalized and more people and more people and things are network, the economics of the digital networked economy will become ever more important. ³⁷ Recent years have yield significant advances in computing and communication technologies, with profound impact on society. Technology is transfusing the way we work play and interact with others. ³⁸

4. Discussion

Information Technology has helped healthcare professions track patients' records easily and securely. ³⁹ A medical professional can add records, x-rays, tests results and even vital signs to the virtues chart that is easy to record shown and check against other records.

5. Source of Funding

None.

6. Conflict of Interest

None.

References

- indicators O. Paris: Organisation for Economic Cooperation and Development; 2017. Available from: Glossary: OrganisationforEconomicCo-operationandDevelopment(OECD).
- Tackling wasteful spending on health. Paris: Organisation for Economic Cooperation and Development; 2017. Available from: http://dx.doi.org/10.1787/9789264266414-en.
- Health at a glance 2015: OECD indicators. Paris: Organisation for Economic Cooperation and Development; ; 2015. Available from: http://apps.who.int/medicinedocs/documents/s22177en/s22177en. pdf,accessed24February2018.
- Advancing the responsible use of medicines: applying levers for change. IMS Institute for Health Care Informatics; 2013. Available from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2222541.
- World health statistics 2016: monitoring health for the Sustainable Development Goals. *Geneva: World Health Organization*. 2016;p. 1–136. Available from: https://reliefweb.int/sites/reliefweb.int/files/resources/9789241565264_eng.pdf.
- Tracking universal health coverage: first global monitoring report. World Health Organization and World Bank. 2015;78:14. Available from: https://www.who.int/publications/i/item/9789241564977.
- Caring for quality in health: lessons learnt from 15 reviews of health care quality. Paris: Organisation for Economic Cooperation and Development; 2017. Available from: http://dx.doi.org/10.1787/ 9789264267787-en.

- Speakers and moderators at the Policy Forum on the Future of Health: statement by Donald M. Berwick. Paris: Organisation for Economic Cooperation and Development; 2018. Available from: http://www.oecd.org/health/ministerial/policy-forum/speakers.htm.
- Arah OA, Westert GP, Hurst J, Klazinga NS. A conceptual framework for the OECD Health Care Quality Indicators Project. Int J Qual Health Care. 2006;18:5–13.
- Braithwaite J, Herkes J, Ludlow K, Testa L, Lamprell G. Association between organisational and workplace cultures, and patient outcomes: a systematic review. *BMJ Open.* 2017;7(11):e013758. doi:10.1136/bmjopen-2016-013758.
- Citizen Voice and Action: civic demand for better health and education services; 2012. Available from: https://www.wvi.org/local-advocacy/ publication/citizen-voice-and-action-project-model.
- OECD reviews of health systems: Costa Rica 2017. Paris: Organisation for Economic Cooperation and Development; 2017. Available from: https://www.oecd.org/costarica/oecd-reviews-of-health-systems-costa-rica-2017-9789264281653-en.htm.
- Monitoring health inequality: an essential step for achieving health equity. Geneva: World Health Organization; 2015. doi:https://apps.who.int/iris/handle/10665/133849.
- Leslie HH, Ndiaye Y, Kruk ME. Effective coverage of primary care services in eight high-mortality countries. *BMJ Global Health*. 2017;2(3):424. doi:10.1136/bmjgh-2017-000424.
- Kruk ME, Leslie HH, Verguet S, Mbaruku GM, Adanu R, Langer A. Quality of basic maternal care functions in health facilities of five African countries: an analysis of national health system surveys. Lancet Glob Health. 2016;4(11):845–55. doi:10.1016/S2214-109X(16)30180-2.
- Leslie HH, Fink G, Nsona H, Kruk ME. Obstetric facility quality and newborn mortality in Malawi: a cross-sectional study. *PLoS Medicine*. 2016;13(10):1002151. doi:10.1371/journal.pmed.1002151.
- Ng M, Misra A, Diwan V, Agnani M, Rector AL, Costa D. An assessment of the impact of the JSY cash transfer program on maternal mortality reduction in Madhya Pradesh. *India Glob Health Action*. 2014;7(1):24939.
- Stenberg K, Hanssen O, Edejer TT, Bertram T, Brindley M, Meshreky C. Financing transformative health systems towards achievement of the health Sustainable Development Goals: a model for projected resource needs in 67 low-income and middle-income countries. *Lancet Glob Health*. 2017;5(9):875–87.
- Abegunde D. Inefficiencies due to poor access to and irrational use of medicines to treat acute respiratory tract infections in children. *Geneva: World Health Organization*. 2010; Available from: https://www.who.int/healthsystems/topics/financing/healthreport/ BP52ARIFINAL.pdf.
- Ministerial statement: the next generation of health reforms. Organisation Econ Cooperation Dev. 2017;27:1–17.
- Lohr KN. Medicare: a strategy for quality assurance, volume I; 1990. p. 25. doi:10.17226/1547.
- of Medicine (US) Committee on Quality of Health Care in America I. Crossing the quality chasm: a new health system for the 21st century; 2001. p. 25057539. doi:10.17226/10027.
- WHO. what is quality of care and why is it important? Geneva: World Health Organization; 2018. Available from: http://www.who.int/maternal_child_adolescent/topics/quality-of-care/definition/en/,accessed25.
- Global Health Observatory data. Geneva: World Health Organization. 2018; Available from: https://apps.who.int/gho/data/node.main.
- Data for measuring health care quality and outcomes: OECD Health Care Quality Indicators Project; 2018. Available from: https://www.oecd.org/els/health-systems/health-care-quality-indicators.htm.
- Demographic and Health Surveys. DHS Program; 2018. Available from: https://dhsprogram.com/,accessed26.
- Donabedian A, Wheeler JR, Wyszewianski L. Quality, cost, and health: an integrative model. *Med Care*. 1982;10:975–92. doi:10.1097/00005650-198210000-00001.
- Das J, Holla A, Das V, Mohanan M, Tabak D, Chan B. In urban and rural India, a standardized patient study showed low levels of provider

- training and huge quality gaps. *Health Affairs*. 2012;31(12):2774–84. doi:10.1377/hlthaff.2011.1356.
- 29. Peabody JW, Tozija F, Muñoz JA, Nordyke RJ, Luck J. Using vignettes to compare the quality of clinical care variation in economically divergent countries. *Health Ser Res.* 2004;39(6):1951–70. doi:10.1111/j.1475-6773.2004.00327.x.
- Wilson RM, Michel P, Olsen S, Gibberd RW, Vincent C, El-Assady R. Patient safety in developing countries: retrospective estimation of scale and nature of harm to patients in hospital. *BMJ*. 2012;344:832. doi:10.1136/bmj.e832.
- United States Department of Health and Human Services, Agency for Healthcare Research and Quality; 2015. Delivering Quality Health Services: A Global Imperative For Universal Health Coverage 81; 2015. Available from: https://www.ahrq.gov/sites/default/files/ wysiwyg/research/findings/nhqrdr/2019qdr.pdf.
- Schoen C, Osborn R, Squires D, Doty MM, Pierson R, Applebaum S. New 2011 survey of patients with complex care needs in 11 countries finds that care is often poorly coordinated. vol. 30; 2011. p. 2437–85.
- WHO. The world health report: health systems financing: the path to universal coverage. 2010;p. 106. Available from: https://apps.who.int/ iris/handle/10665/44371.
- Brownlee S, Chalkidou K, Doust J, Elshaug AG, Glasziou P, Heath I. Evidence for overuse of medical services around the world. *Lancet*. 2017;390(10090):156–68. doi:10.1016/S0140-6736(16)32585-5.
- Health care systems: efficiency and policy settings; 2010. Available from: http://dx.doi.org/10.1787/9789264094901-en.

- Strengthening integrated, people-centred health services. Resolution WHA69.24, adopted at the World Health Assembly; 2016. Available from: https://apps.who.int/gb/ebwha/pdf_files/WHA69/A69_R24-en. pdf.
- Global Strategy on Human Resources for Health: Workforce 2030;
 Available from: https://apps.who.int/iris/bitstream/handle/ 10665/250368/9789241511131-eng.pdf.
- Frenk J, Chen L, Bhutta ZA, Cohen J, Crips N, Evans T. Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. *Lancet*. 2010;376(9756):1923–58.
- Organization GWH. Guidelines on transforming and scaling up health professionals' education and training; 2013. Available from: https://www.who.int/publications/i/item/transforming-and-scalingup-health-professionals%E2%80%99-education-and-training.

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