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# CRITICAL ANALYSIS IN HOSPITAL ADMINISTRATION IN THE MODERN ERA -EXAMINING CHALLENGES AND OPPORTUNITIES IN HEALTHCARE MANAGEMENT

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## Abstract

Hospital administration today confronts a diverse array of challenges and opportunities driven by factors including technological innovations, shifting patient demographics, regulatory demands, and financial limitations. This article analyzes these challenges and their openings in healthcare administration. The methodology is clarified through a cautious survey of logical information, proofs, and proposals to advise restorative faculty. Much obliged to this inquiry, caregivers can learn about almost all changes within the treatment handle and make the vital strategies to address them. This combination permits inspectors to take advantage of open positions, decreasing competition and expanding the recognition of inspection and efficiency.

*Keywords*: Hospital administration, healthcare management, challenges, opportunities, technological advancements, patient demographics, regulatory requirements, financial constraints.

# Introduction

In contemporary times, hospital administration grapples with mounting complexities arising from swift technological progress, evolving patient demographics, rigorous regulatory mandates, and financial strains. These multifaceted challenges highlight the need to re-evaluate the wellbeing care framework for compelling care direction as we move toward productivity. This



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article provides a diagram of the challenges and prospects in clinic administration. Our investigation incorporates developmental hypotheses, observational information, and case accounts to provide essential points of view on wellbeing administration. By combining different encounters, nurses have a better understanding of complex therapeutic conditions to precisely recognize issues and seize openings. Lastly, this collaboration will become imperative for the healing center administration to attain long-term success, financial advancement, and soundness within the healthcare environment(Chen et. al 2020).

## **Technological Advances**

594

## Electronic healthcare Records (EHR)

Integration of electronic healthcare records (EHRs) has been a significant challenge given the advance in patient the same data and treatment alternatives carried out beneath care coordination. Fabricating is revolutionizing helpful transportation. However, actualizing an EHR system brings collaboration, client engagement, and data creation challenges. Clinic pioneers ought to contribute to the level of EHR that can be harmonious with the existing framework and make strides in the trade information of vital organizations. Readiness and client support must also progress to guarantee that representatives are well prepared and make the most of the fire wellbeing information (El Khatib et. al 2022).

## Cyber security dangers and data security issues

With the digitalization of imperative data, cyber security dangers and data security issues have become far more widespread. There has got to be a need for the head of the clinic. The increase in ransom ware assaults, information breaches, and insider dangers puts the security of patients and the notoriety of healthcare organizations at risk. Chief therapeutic officers should prioritize cyber security measures such as controls, reviews, and powerlessness evaluations to secure delicate data. Also, compliance with laws such as the Welfare Security Compactness and Responsibility Act (HIPAA) is essential to moderating information breaches' legal and budgetary dangers.



## Figure: Technological Advances in Healthcare

(Lee & Yoon 2021).

## Impact of the taking a cost of non-renewable utilize

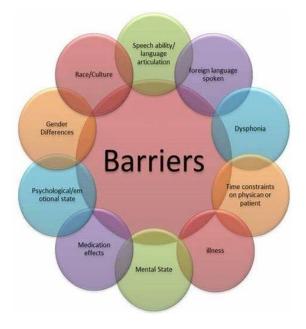
Even if today's advancement is considered a victory, cash is still required from the reestablishing organization to proceed with the accomplishment and execution. Clinic pioneers confront the challenge of competing on the costs of obtaining, actualizing, and supporting development with the desire for returns. A cost-effectiveness assessment should be conducted to assess the long-term effects of the development on quality of care, resource utilization, and income. Working with benefits suppliers, taking advantage of government motivations, and trying to find financing choices can offer assistance and decrease the toll of utilizing today's innovation.

# **Changing Patient Demographics**

The Elderly and the Expanding Chance of Brain Illness: The Elderly and Its Results The increase in patient illnesses poses slight issues for clinic directors in asset allotment, care demonstration, and observation, which is an enormous challenge. Healing centers must adapt their framework and administrations, including specialized clinics, therapeutic administrations, and hospice administrations, to meet the specific needs of more seasoned patients. Also, preventive care and unremitting malady administration programs ought to be prioritized to diminish the burden of patient infections on the healthcare framework and make strides toward improving the population's well-being (Al-Marsy et. al 2021).

## **Cultural Differences and Dialect Boundaries in Healthcare**

Healthcare pioneers must address social and dialect obstructions to be evenhanded in healthcare since the populace's patient differs. Giving interpretation administrations, providing social care preparation to staff, and providing social data to patients can improve communication and increase patient satisfaction.



#### Figure: Cultural and Linguistic Barriers

(Sheng et. al 2021).

## Patient care and personalized medication

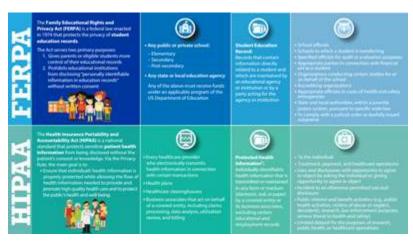
In reaction to changes in patient and therapeutic needs, hospitalists have executed a personalized care show emphasizing self-healing, shared decision-making, and contract administration. Personalized medication, such as hereditary testing and treatment, has the potential to progress treatment and diminish side impacts. Clinical leads must utilize modern treatment, integration, and result evaluation devices to encourage self-care and increase satisfaction.

## Legislation

596

#### Healthcare Law, counting HIPAA and Medicare

HIPAA security strategies in compliance with healthcare laws and directions, counting security and Medicare premiums, is a must for restorative front liners to preserve the separation between the law and cash. - Punishments. Compliance administrations, customary work arrangements, and benchmark audits are fundamental to guaranteeing compliance with administrative benchmarks and understanding directions. Working with legal specialists and industry organizations can give profitable direction on exploring complex information administration forms and following best practices (Akindote et. al 2023). Figure: Health Insurance Portability and Accountability Act of 1996 (HIPAA)



(Batko&Ślęzak 2022).

## Accreditation Criteria and Quality Advance

Clinical accreditation bodies (such as affiliations) have built up well-being and security measures that require clinics to meet distinctive guidelines of quality and patient care. Restorative staff in healing centers must prioritize positive changes such as evidence-based disciplines, clinical pathways, and security hones to guarantee engagement and make the organization effective. Centering on cutting-edge workers, utilizing expository information, and creating a culture of ceaseless learning are vital ways to bolster patient improvement.

## Effects of Benefit Supplier's Changes in Repayment Models

Changes in advantage plans, changes in benefits, changes in repayment models, changes in payments, and changes within the plan's wage are critical to the salary and budgetary quality of the reestablishment. Vital places were influenced. Healthcare suppliers must adjust their money-related administration to oblige changes in plans and installment techniques, such as responsible care organizations (ACOs), remuneration, and motivating force benefits.

#### **Financial Constraints**

597

#### Rising restaurant costs and money-related imperatives

Modern headways and changes such as pharmaceutical and labor costs have expanded therapeutic costs and raised fundamental restorative issues for nursing domestic pioneers with restricted budgets. Clinic supervisors ought to embrace toll administration procedures such as slant improvement, capitalize on the extraordinary legacy, and find it corrosive to stay mindful of budgetary issues while maintaining healthcare quality. Working with payers, suppliers, and community accomplices to draft workable contracts and investigate undiscovered financing models such as speculation stores and gifts can help budget for rising therapeutic costs.

# Reimbursement and fee-based models

598

The move to reimbursement and fee-based models may show the need for cautious monitoring, the adequacy of receipts to be created, and Changes within the administration of healing center accounts. After a cost-to-cost comparison, hospital pioneers should center on supporting care, portability, and care appraisal to create the foremost of repayment. Prescient result administration capabilities, unused treatment integrative, and proactive care can help healthcare providers reimagine this cost-effective care while still having money.

## Revenue Administration and Obtainment

Healing center pioneers require income administration and administration to extend income, decrease income, and increment productivity. Great comes about in making cash. The clinic chief must complete revenue-altering assignments such as issuing solicitations, overseeing staff, and handling income and cash streams. Moreover, utilizing toll administration procedures such as end, utilization administration, and income era can assist rehab offices, change commerce, and guarantee long-term security.

## **Opportunities in Healthcare Management**

## Leveraging Innovation to Extend Effectiveness

## Viability of Telemedicine and Farther Checking

Telemedicine and Farther Observing Arrangements Encourage collaboration through virtual chat, further patient care, and telemedicine interventions to empower an alter in healthcare. Healing center pioneers can utilize telemedicine stages to extend care, particularly in underserved zones, and increment patient engagement through simple and reasonable communication. Inaccessible observing arrangements permit specialists to screen patients' crucial signs, medicine adherence, contamination, and back intercessions and avoid sick well-being. By utilizing telemedicine and observing advances, clinics can increase the effectiveness of care, diminish healthcare expenditures, and progress the utilization of resources.

# Leveraging Information Analytics for Prescient Modeling and Population Wellbeing Administration

Information analytics devices empower clinic pioneers to utilize information to support decisionmaking, make strides toward patient and enduring results, and move forward with asset allotment. Using the innovation for exhibit purposes, healing centers can recognize high-risk patients, anticipate malady flare-ups, and better distribute assets to avoid diseases, hospitalizations, and readmissions. Open wellbeing directors utilize information analytics to empower clinics to distinguish at-risk patients, execute intercession plans, and monitor outcomes, progressing open wellbeing results and decreasing healthcare costs. Healing center pioneers must contribute viable information analytics, insights, and capable administration to open up the potential of information in healthcare administration decisions.



Figure : Incredible MBA Healthcare Administration Jobs

# (Karakose et. al 2021).

## Mechanization of commerce administration and diminishment of labor costs

Computerized trade administration is sweet. Clinics have the opportunity to extend effectiveness, decrease human blunders, and diminish working costs. Clinics can utilize progressed innovations such as mechanized handling (RPA) to robotize errands such as planning, charging, and work demands. With the utilization of computerized frameworks, restorative offices can increase effectiveness, move forward income information, and progress representative execution. Also, mechanical technology can improve the proficiency of healthcare offices by moving human assets to more profitable assignments, such as keeping quiet and quality enhancement programs (Poon et. al 2022)..

## **Embracing Patient-Centered Care**

Intelligence as a portal to communication and collaboration: Consistent get-to-work by permitting patients to get to well-being data, arrange, be associated with experts, and advance collaboration, communication, and back. Healing center chairs can be noiseless to get to by giving back, building client connections, and giving continuous direction on how the entry works. Long-term get-togethers advance communication between patients and suppliers, make a difference when patients participate in care and increase patient fulfillment by giving the required service.

Services Drive Healthcare Activities: Care coordination is essential to supporting care conveyance past the healing center, diminishing whittling down, and accomplishing long-term results. Clinic pioneers can execute shared care plans that energize collaboration across different groups, ease care moves, and progress communication with patients and caregivers. Utilizing Chelonian Conservation and Biologyhttps://www.acgpublishing.com/

care coordination advances such as electronic care coordination and care administration computer programs, healing centers can improve the coherence of care, anticipate restorative negligence, and reduce readmissions. Also, healing center pioneers should create associations with community organizations, long-term care offices, and post-acute care suppliers to progress sharing and back-of-care for patients over the healthcare system.

Integrating patient criticism components for superior comes about patient input components such as overviews, center bunches, and online audits can be given. Experiences can be given approximately patient encounters, inclinations, and satisfaction with healthcare administrations. Healing center pioneers can coordinate patient criticism into quality enhancement programs to distinguish regions for enhancement, address patient concerns, and move forward with fitting conveyance. By requesting and acting on patient criticism, clinics can cultivate a culture of quality change, mobilize patient care pioneers, and act to keep patients fulfilled and faithful. Clinic pioneers ought to utilize patient criticism information to actualize mediation plans, track execution over time, and degree the viability of clinical procedures to advance fabulousness in patient care.

## **Regulatory Compliance as a Competitive Advantage**

600

Contributing to compliance administration to streamline administrative necessities: Compliance administration guarantees healing centers meet rigid controls, screen compliance's lawful and administrative status, and decrease legitimate and money-related dangers. Healing center directors can contribute to the compliance administration program at the heart of compliance, robotizing and announcing administration and giving momentary permeability to compliance. By executing quality administration, clinics can progress execution administration, guarantee due dates are met, and illustrate adherence to ethical and legitimate commitments. In expansion, compliance administration underpins chance administration, inner controls, and ceaseless advancement of compliance forms to guarantee competitive compliance (Usak et. al 2020).

Participate in quality change programs to progress notoriety and patient fulfillment: Support in quality enhancement programs such as certification, record quality, and patient safety measures illustrates the hospital's commitment to giving quality care and moving forward with patient results. Clinic pioneers can engage frontline staff within the quality enhancement preparation, make quality change groups, and distribute assets to bolster quality enhancement activities. By participating in quality enhancement endeavors, hospitals can increase their notoriety, separate themselves within the industry, and pull in patients looking for quality care. Moreover, execution advancement methodologies offer assistance in incrementing patient fulfillment, decreasing therapeutic blunders, and moving forward clinical results, eventually expanding organizational victory and stability.

Work with controllers to execute a compliance methodology: Collaboration permits healing centers to adjust to administrative changes, participate in legal requirements, and avoid compliance issues. Clinic pioneers can lock in with the administration, participate in

administration gatherings and workgroups, and take an interest in progressing talks to oversee desires and get direction on compliance. By working with controllers, healing centers can get modern administrative forms, expect administrative changes, and create compliance techniques to decrease compliance chances. Furthermore, collaboration with administrative offices cultivates a culture of straightforwardness, belief, and cooperation, advances administrative compliance, and serves as a compliance officer for a building sanitation organization.

## **Financial Planning**

601

Diversification of wages from organizations and joint ventures: Separating salary from associations and associations together permits the healing center to decrease its effect on conventional wage reliance and grow pay. Clinic pioneers can investigate partnerships with therapeutic groups, mobile care centers, and extra-benefit suppliers to supply extra administrations and inventories and increase income expansion. Furthermore, clinics can connect with educational clinics, investigate centers, and healthcare organizations to pick up ability, advance commercial replication of scale, and advance their competitive position. By expanding income streams, clinics can diminish income changes, progress money-related execution, and maintain long-term development and profitability(Upadhyay, 2020).

Implementing fetched reserve fund measures through supply chain optimization and asset allotment: Leveraging investment funds through supply chain optimization, asset assignment, and operations permits healing centers to decrease costs, move forward results, and progress in budgetary solidity. Clinic supervisors can utilize information analytics and innovation arrangements to move forward with item administration forms, make better connections with human assets, and create cost-saving hones. Furthermore, healing centers can utilize asset allotment techniques such as capacity arranging, staff optimization, and benefit conveyance to adjust capital utilization, meet patient needs, and decrease pointless costs. By measuring fetched reserve funds, healing centers can fortify their funds, reinvest the cash into critical plans, and provide more noteworthy value to patients and suppliers.

Cost Arrangements Based on Contracts and Installments with Leasers: Took toll Transactions Based on Contracts and Installments with Banks. Paying leasers with clients permits healing centers to extend budgetary support, make strides in care coordination, and achieve toll savings with superior results. Clinic pioneers can collaborate with payers to form value-based repayment models that compensate suppliers for conveying quality, cost-effective care. Moreover, clinics may participate in uncommon installment programs for claim-to-fame care, such as joint substitution and obstetric administrations, to improve care and diminish waste(Leo et.,al 2021).

## **Case Studies and Practical Applications**

## Case Consideration: XYZ Clinic Employments EHR System

XYZ Clinic started utilizing electronic wellbeing records (EHR) to coordinate care and streamline the care administration. Despite introductory resistance and commerce challenges,

EHR frameworks have expanded proficiency by giving momentary access to patient data and encouraging momentary message connection for doctors. patient results are achieved through evidence-based decision-making and diminished pharmaceutical mistakes. From a money-related viewpoint, EHR frameworks have been demonstrated to be cost-effective, giving fetched reserve funds through reduced printed material and expanding income through exact charging. It also increases budgetary execution by empowering XYZ Clinic to get incentives(Labrague& de Los Santos 2021)..

## Preparing: Compliance Administration at DEF Therapeutic Center

The DEF Restorative Center actualizes a compliance administration framework to comply with administrative prerequisites and advance a reasonable culture. The best hones incorporate solid approaches, representative preparation, observing programs, and collaboration with administrative organizations. The program empowers the administration by instilling straightforwardness and responsibility in workers(Tortorella et.,al 2020).. It also upgrades the clinic's notoriety, expanding patient belief and fulfillment. In terms of effectiveness, DEF Therapeutic Center cited the chance of compliance, maintaining a strategic distance from risk, and maintaining monetary integrity.

## Conclusion

602

Managing the complexity of cutting-edge healing center administration requires a vital approach to unraveling various issues and taking control. Healthcare pioneers can lead their organizations to victory by leveraging innovation, implementing patient care guidelines, remaining ahead of administrative patterns, and utilizing sound budgetary methodologies. This article gives knowledge on how to optimize well-being administration by investigating inquiries about writing and real-world applications. These thoughts increase efficiency and offer assistance and superior, patient care. As healthcare proceeds to advance, pioneers must stay adaptable and proactive, ceaselessly creating techniques to meet the changing needs of the healthcare environment. By doing this, clinics can fulfill their commitment to giving quality care and moving forward with patient results today(Labrague& de Los Santos 2021).

# Reference

- Chen, P. T., Lin, C. L., & Wu, W. N. (2020). Big data management in healthcare: Adoption challenges and implications. *International Journal of Information Management*, 53, 102078.<u>https://www.sciencedirect.com/science/article/pii/S026840121830937X</u>
- El Khatib, M., Hamidi, S., Al Ameeri, I., Al Zaabi, H., & Al Marqab, R. (2022). Digital disruption and big data in healthcare-opportunities and challenges. *ClinicoEconomics and Outcomes Research*, 563-574.<u>https://www.tandfonline.com/doi/abs/10.2147/CEOR.S369553</u>

- Al-Marsy, A., Chaudhary, P., & Rodger, J. A. (2021). A model for examining challenges and opportunities in use of cloud computing for health information systems. *Applied System Innovation*, 4(1), 15.<u>https://www.mdpi.com/2571-5577/4/1/15</u>
- Lee, D., & Yoon, S. N. (2021). Application of artificial intelligence-based technologies in the healthcare industry: Opportunities and challenges. *International journal of environmental research and public health*, 18(1), 271.<u>https://www.mdpi.com/1660-4601/18/1/271</u>
- Sheng, J., Amankwah-Amoah, J., Khan, Z., & Wang, X. (2021). COVID-19 pandemic in the new era of big data analytics: Methodological innovations and future research directions. *British Journal of Management*, 32(4), 1164-1183.<u>https://onlinelibrary.wiley.com/doi/abs/10.1111/1467-8551.12441</u>
- Akindote, O. J., Adegbite, A. O., Dawodu, S. O., Omotosho, A., Anyanwu, A., &Maduka, C. P. (2023). Comparative review of big data analytics and GIS in healthcare decisionmaking. World Journal of Advanced Research and Reviews, 20(3), 1293-1302.<u>https://wjarr.com/content/comparative-review-big-data-analytics-and-gishealthcare-decision-making</u>
- Batko, K., &Ślęzak, A. (2022). The use of Big Data Analytics in healthcare. *Journal of big Data*, 9(1), 3.<u>https://link.springer.com/article/10.1186/s40537-021-00553-4</u>
- Karakose, T., Yirci, R., Papadakis, S., Ozdemir, T. Y., Demirkol, M., &Polat, H. (2021). Science mapping of the global knowledge base on management, leadership, and administration related to COVID-19 for promoting the sustainability of scientific research. *Sustainability*, *13*(17), 9631.<u>https://www.mdpi.com/2071-1050/13/17/9631</u>
- Poon, Y. S. R., Lin, Y. P., Griffiths, P., Yong, K. K., Seah, B., &Liaw, S. Y. (2022). A global overview of healthcare workers' turnover intention amid COVID-19 pandemic: a systematic review with future directions. *Human resources for health*, 20(1), 70.https://link.springer.com/article/10.1186/s12960-022-00764-7
- Usak, M., Kubiatko, M., Shabbir, M. S., Viktorovna Dudnik, O., Jermsittiparsert, K., &Rajabion, L. (2020). Health care service delivery based on the Internet of things: A systematic and comprehensive study. *International Journal of Communication Systems*, 33(2), e4179.<u>https://onlinelibrary.wiley.com/doi/abs/10.1002/dac.4179</u>
- Garg, S. K., Rodbard, D., Hirsch, I. B., &Forlenza, G. P. (2020). Managing new-onset type 1 diabetes during the COVID-19 pandemic: challenges and opportunities. *Diabetes technology* & therapeutics, 22(6), 431-439.<u>https://www.liebertpub.com/doi/abs/10.1089/dia.2020.0161</u>
- Kraus, S., Schiavone, F., Pluzhnikova, A., &Invernizzi, A. C. (2021). Digital transformation in healthcare: Analyzing the current state-of-research. *Journal of Business Research*, 123, 557-567.<u>https://www.sciencedirect.com/science/article/pii/S0148296320306913</u>

- Karakose, T., Yirci, R., &Papadakis, S. (2021). Exploring the interrelationship between covid-19 phobia, work–family conflict, family–work conflict, and life satisfaction among school administrators for advancing sustainable management. *Sustainability*, 13(15), 8654.<u>https://www.mdpi.com/2071-1050/13/15/8654</u>
- Fusco, A., Dicuonzo, G., Dell'Atti, V., &Tatullo, M. (2020). Blockchain in healthcare: Insights on COVID-19. International Journal of Environmental Research and Public Health, 17(19), 7167.https://www.mdpi.com/1660-4601/17/19/7167
- Labrague, L. J., & de Los Santos, J. A. A. (2021). Fear of Covid-19, psychological distress, work satisfaction and turnover intention among frontline nurses. *Journal of nursing management*, 29(3), 395-403.https://onlinelibrary.wiley.com/doi/abs/10.1111/jonm.13168
- Leo, C. G., Sabina, S., Tumolo, M. R., Bodini, A., Ponzini, G., Sabato, E., &Mincarone, P. (2021). Burnout among healthcare workers in the COVID 19 era: a review of the existing literature. *Frontiers* in public health, 9, 750529.<u>https://www.frontiersin.org/journals/publichealth/articles/10.3389/fpubh.2021.750529/full</u>
- Upadhyay, N. (2020). Demystifying blockchain: A critical analysis of challenges, applications and opportunities. *International Journal of Information Management*, 54, 102120.<u>https://www.sciencedirect.com/science/article/pii/S0268401219303688</u>
- Kichloo, A., Albosta, M., Dettloff, K., Wani, F., El-Amir, Z., Singh, J.,&Chugh, S. (2020). Telemedicine, the current COVID-19 pandemic and the future: a narrative review and perspectives moving forward in the USA. *Family medicine and community health*, 8(3).<u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7437610/</u>
- Tortorella, G. L., Fogliatto, F. S., Mac Cawley Vergara, A., Vassolo, R., &Sawhney, R. (2020).
   Healthcare 4.0: trends, challenges and research directions. *Production Planning & Control*, 31(15), 1245-1260.https://www.tandfonline.com/doi/abs/10.1080/09537287.2019.1702226
- Labrague, L. J., & de Los Santos, J. A. A. (2021). Fear of Covid-19, psychological distress, work satisfaction and turnover intention among frontline nurses. *Journal of nursing management*, 29(3), 395-403.https://onlinelibrary.wiley.com/doi/abs/10.1111/jonm.13168

Leo, C. G., Sabina, S., Tumolo, M. R., Bodini, A., Ponzini, G., Sabato, E., &Mincarone, P. (2021). Burnout among healthcare workers in the COVID 19 era: a review of the existing literature. *Frontiers* in public health, 9, 750529.<u>https://www.frontiersin.org/journals/publichealth/articles/10.3389/fpubh.2021.750529/full</u>

- Upadhyay, N. (2020). Demystifying blockchain: A critical analysis of challenges, applications and opportunities. *International Journal of Information Management*, 54, 102120.https://www.sciencedirect.com/science/article/pii/S0268401219303688
- Kichloo, A., Albosta, M., Dettloff, K., Wani, F., El-Amir, Z., Singh, J.,&Chugh, S. (2020). Telemedicine, the current COVID-19 pandemic and the future: a narrative review and perspectives moving forward in the USA. *Family medicine and community health*, 8(3).<u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7437610/</u>
- Tortorella, G. L., Fogliatto, F. S., Mac Cawley Vergara, A., Vassolo, R., &Sawhney, R. (2020).
   Healthcare 4.0: trends, challenges and research directions. *Production Planning & Control*, 31(15), 1245-1260.
   https://www.tandfonline.com/doi/abs/10.1080/09537287.2019.1702226
- Javed, A. R., Shahzad, F., UrRehman, S., Zikria, Y. B., Razzak, I., Jalil, Z., & Xu, G. (2022). Future smart cities: Requirements, emerging technologies, applications, challenges, and future aspects. *Cities*, 129, 103794.https://www.sciencedirect.com/science/article/pii/S0264275122002335
- Ocloo, J., Garfield, S., Franklin, B. D., & Dawson, S. (2021). Exploring the theory, barriers and enablers for patient and public involvement across health, social care and patient safety: a systematic review of reviews. *Health research policy and systems*, 19, 1-21.<u>https://link.springer.com/article/10.1186/s12961-020-00644-3</u>
- Mourtzis, D., Angelopoulos, J., &Panopoulos, N. (2022). A Literature Review of the Challenges and Opportunities of the Transition from Industry 4.0 to Society 5.0. *Energies*, 15(17), 6276.<u>https://www.mdpi.com/1996-1073/15/17/6276</u>
- MacNeill, A. J., Hopf, H., Khanuja, A., Alizamir, S., Bilec, M., Eckelman, M. J., & Sherman, J. D. (2020). Transforming the medical device industry: road map to a circular economy: study examines a medical device industry transformation. *Health Affairs*, 39(12), 2088-2097.<u>https://www.healthaffairs.org/doi/abs/10.1377/hlthaff.2020.01118</u>
- Erhan, T., Uzunbacak, H. H., & Aydin, E. (2022). From conventional to digital leadership: exploring digitalization of leadership and innovative work behavior. *Management Research* 1543.<u>https://www.emerald.com/insight/content/doi/10.1108/MRR-05-2021-</u> 0338/full/html