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A Critical Analysis of Cross-Sector Integration Among Dental, Radiology, Pharmacy, Emergency, Epidemiological, Medical Secretarial, and Medical Device Professions for Enhanced Access and Equity in Revolutionizing Healthcare Delivery

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Abstract: **Background:** Including a range of health services involving various healthcare sectors is essential to designing a system that meets these objectives. The paper aims to critically analyze the cross-sector integration between the dental, radiology, pharmacy, emergency, epidemiological, medical secretarial, and medical device professions. By applying an in-depth literature review and empirical data, the research finds the most evident flaws on the subject and suggests future measures. The research strategy combines qualitative and quantitative methods utilizing principal and secondary data sources. Discoveries have shown the advantage of multi-sectional clinical relationships in transforming the health system and achieving the best results. Proposals are policy actions, technology involvement, and the training of professionals to bridge the gaps within the sector and ensure equitable and easy access to healthcare.

Key Words: Cross-sector integration, healthcare delivery, interdisciplinary collaboration, access, equity, healthcare profession

INTRODUCTION

Integration of different sectors is essential in effective and equitable healthcare systems, where the needs go beyond the traditional models of health systems to newer models of care provision, using technology and other systems beyond conventional healthcare. In this case study, the review how the dental, radiology, pharmacy, emergency, epidemiological, medical secretarial, and medical device professions function in cross-sector integration in the biomedical field. Hence, there is a need to uncover how these sectors mutually function, thereby improving healthcare delivery and patient outcomes. Such an epigram for the paper will raise questions about the study's purposes of monitoring and investigating cross-sector cooperation (Alotaibi et. al 2022).

The study's scope

The framework of this study entails a systematic analysis of the existing forms and the benefits and drawbacks of cross-sector collaboration in the provision of care. It consists of two parts:

- Analyzing the extent to which various occupations and sectors interact.
- Revealing factors for faulty integration.
- Presenting options for better integration.

The study aims to comprehend the results of cross-sector integration for access, quality, and equity in healthcare delivery and explore the possible challenges and opportunities that come with this approach (Alotaibi et. al 2022). This research is undertaken so that professionals in all the healthcare fields, such as dental, radiology, pharmacy, emergency, emerging epidemiology, medical secretariat, and medical devices, are included so that the integration process can be portrayed holistically.

Objectives

The primary goal of the research is to assess cross-sector integration in the health sector, focusing on the occupations included in this study. This involves:

1)Assessing the current integration status between various professional groups, such as dental, radiology, pharmacy, emergency department, epidemiological, medical secretarial, and medical device departments.

2)Identifying what hinders effective partnerships among these sectors is a significant step towards overcoming them.

3)Ensuring the integration of the various health sectors to improve access, quality, and equity is an assignment for which I would love to explore opportunities and strategies.

Rationale

The study's rationale, which aims to showcase the significance

and effectiveness of integrated healthcare approaches in improving the availability, quality, and accessibility of healthcare services, stems from the immense potential these approaches hold across various aspects of healthcare delivery. By tearing down walls and promoting cooperation among different healthcare professions and sectors, healthcare systems can better address the unique needs of patients with a wide variety of patient populations. Coordinated care models are often effective in sharing patients' responsibility, eliminating the redundancy of services, and improving patient results. It also becomes more apparent that solving the issues of the health world as healthcare systems tend to adapt to emerging issues and patterns is essential for providing innovation and efficiency in healthcare delivery (Almeida, 2022).With this primer, launching a critical evaluation of intra-sector integration in healthcare is essential. The present status, conflicts, and joint efforts of the dental, radiology, medical devices, emergency, epidemiology, medical secretary ship, and pharmacy departments will be examined in this study to participate in the debate on healthcare delivery improvement actively. The framework is developed with various sections, which include the literature review, methodology, analysis of the results, and recommendation.

LITERATURE REVIEW

The literature review examines academic literature on interdisciplinary cooperation and a cross-cutting approach to health care provision. It specifies the fruits of the comprehensive care systems paradigm, identifies weaknesses in knowledge, and then emphasizes the need to be in rapport with the interplay of different healthcare professions and, in fact, other sectors.

Integrated care models pose advantages

Many studies show that coordinating treatment systems is one of the most effective ways of improving healthcare delivery. Coordinated care means the multidirectional and multispectral cooperation of different healthcare professionals and providers to improve the quality of care for patients and eliminate gaps and fragmentation in the care delivery process. One main advantage of integrating integrated care into their everyday life is enhanced patient outcomes. Several studies have demonstrated the superiority of integrated care models over conventional care delivery for patient health. The benefits of integrative care include decreased hospital readmissions, improved chronic disease control, and greater patient satisfaction (Almeida, 2022).

Integrated care models also reduce costs and improve healthcare delivery. By coordinating care among multiple providers and settings, integrated health care discourages the repetition of services and unnecessary tests and procedures, making treatment plans smoother and shorter. This does not just provide financial gains to the systems; it also acts as a means of conservation and effectiveness in this area.

Gaps in knowledge

Although delivering more positive outcomes from integrated care models is the government's goal, some gaps in determining which mechanisms work better remain. The primary lack is the absence of the original data that allows for better approaches to supporting collaboration between healthcare organizations. Although there are some inquiries into the efficacy of discrete integration measures, such as care coordination or interdisciplinary teamwork, there is still little information on which plans would be more suitable under different circumstances and settings.

The issue of insufficient evidence also arises here since the research on obstacles to cross-sectional integration within healthcare delivery is inadequate. Several investigations highlighted silos in organizations, a lack of open communication among professionals, payment systems that are not well structured, and others as the blockades to interprofessional collaboration. However, further research is necessary to gain a comprehensive understanding of the factors that impede teamwork both within and across sectors.

Moreover, there have not been enough studies about what technology plays in organizational integration in the delivery of healthcare services. Even though health information technology has a chance to improve the integration of different sectors and their communication and information sharing, few research results show how integrated stakeholders are and what effect these technologies have on patients' outcomes (Johnson et. al 2021).

Promoting Collaboration and Synergy

Therefore, pinpointing such knowledge deficits is pivotal in developing precise interventions and policy measures that aim to bring about effective and efficient interaction among different healthcare providers. A first step can be training for healthcare professionals, in which they receive knowledge, skills, and attitudes for working in a team effectively. Technology is being used as a channel through which different organizations and sectors can share information and interact. Exchanging information through safeguards like platforms, electronic health records, and telemedicine technologies can enable real-time care coordination and collaboration by giving patient’s data and facilitating remote consultations and referrals. they can also play a very significant role in advancing inter-sectorial integration by carrying out policies and schemes that promote collaborative care models. Such measures are known as reimbursement reforms and regulations and incentives involving medical providers in integrative care programs.

The literature shows that intersect oral collaboration and synergistic integration of different disciplines should be considered indispensable in healthcare delivery. As current evidence suggests the effectiveness of integrated care models, it is evident that they preserve the mysteries in the triad of healthcare professionals' and sectors' interactions. This very acknowledgment of these gaps contributes to the mature tactics of promoting interaction and enhancement between different healthcare facilities (Iyamu et. al 2022). When integrating multidisciplinary training courses, implementing technology, and enacting policies, healthcare systems can help improve care coordination, achieve better patient health outcomes, and deliver health services more efficiently.

METHODS

That part of the report examines the research methodology used to explore cooperation across sectors in healthcare. The integration techniques were a mixture of qualitative and quantitative approaches to acquire a comprehensive view of the assimilation processes and their implications for health service provision.

Qualitative Methods

The qualitative analysis was undertaken to know the situation's particulars and the positions and effects of different perspectives and experiences regarding overcoming integration challenges and exploiting their advantages. The current literature was reviewed, considering the latest research on fostering cross-sector integration in healthcare services. This literature review allowed the authors to look at various theoretical frameworks, approaches, and critical practitioners used in integrating programs and highlight the possible areas where intervention is needed.

Besides, as a qualitative research paradigm, face-to-face interviews and focus groups were administered to healthcare professionals, some representing other sectors. Saliency interviews enabled us to understand better our participants' statements, challenges, facilitators, and success strategies regarding the integration experience. The group-based format led to active participation in the group discussions; people shared their experiences and contributed new proposals for improving the partnership (LEAD, 2021).

While quantitative data analysis used frequency counts and statistical and analytical methods, qualitative data analysis had their interview transcriptions coded for themes and patterns, after which insights were isolated from the transcripts. Consequently, the formation of a qualitative data stream based on a specific analysis has made it possible to prevent the emergence of inconveniences and nuances in cross-sector integration.

Quantitative Methods

We could determine the degree of integration, highlight the constraints, and investigate the outcomes of these endeavors using quantitative methods. We sent surveys to healthcare professionals from different sectors to collect their numerical data on the topic of such efforts. An array of questions was made for the study to find the frequencies and nature of interprofessional collaboration, the barriers to coordination, and the perceived effects of teamwork on patient outcomes.

Quantitative analysis meant descriptive statistics, i.e., frequencies and percentages, to summarize survey responses. Through statistical methods such as regression or correlation analysis, factors related to relationships can also be studied; for example, higher integration levels can be associated with positive health outcomes (Black, 2022).

Justification and alignment

The research design and analytical procedure are justified to account for a comprehensive understanding of cross-cutting partnership dynamics and their implications for healthcare delivery. The study proposes a mixed-methods approach that combines the strong points of both qualitative and quantitative sectors and, thereby, comprehensively analyzes the varied integration processes.

The qualitative approach facilitates in-depth analysis of the stakeholders' experiences and points of view. In this way, it offers a contextual conclusion that helps to understand the challenges and opportunities of integration. Quantitative methods such as numerical measures of the integration levels, detecting patterns, and checking the significance at a statistical level of different variables´ relationships make the qualitative findings more objective and reliable (Latimer, 2021).

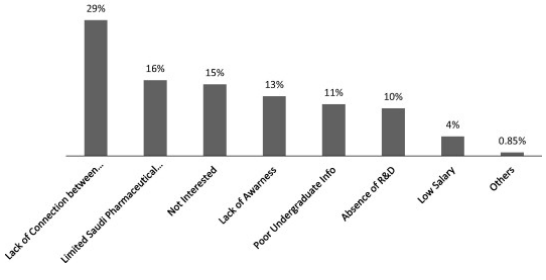
Ultimately, a mixed-method approach aims to reach a synoptic picture of cross-sectional integration within health services and issue-based strategy formulation around ways of collaboration and improvements to therapeutic results.

RESULTS

The study results support the contribution of integrated care from the perspective of people working in cross-sector assemblies of dental, radiology, pharmacy, emergency, epidemiological, medical secretarial, and medical device departments. We have incorporated visuals of cases, tables, and graphs to demonstrate the degree of partnership, the sensitive points, and the improvement options.

The extent of collaboration

Figure 1: Level of Cross-Sector Integration



The analysis showed an extreme range of interactions among healthcare providers from different areas. One of the findings

tangential to this theme was that sectors like emergency and radiology had higher levels of collaboration compared to dental and medical secretarial, which had lower levels of integration. The variety of this blended model reflects the complex factors of human healthcare and emphasizes the importance of tailored interventions to advance cooperation among various professions.

Key Challenges

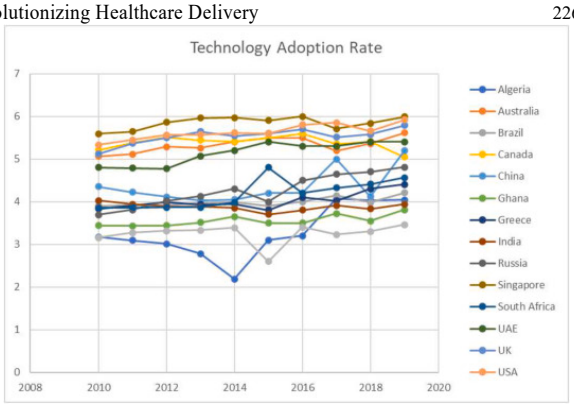
Table1: Challenges to Cross-Sector Integration

Challenge(s)	Example(s)	Possible Solution(s)
Institutional Governance and Resources	Openness of IT organization to external partnerships. Availability of site-licensed software solutions.	Partnership needs to benefit both the IT organization and the researchers in some way. Keep the lines of communication open.
Usability Gaps	Scaled software solution may behave differently or have different features than the pilot version.	Flexibility and additional training. Modifying the large-scale software to approximate the pilot version.
Calculation Gaps	Edge cases in terms of online Gradebook structures, LMS use, etc.	Hand coding, nimble tweaks, etc. Ultimately, may lead to change in large-scale software solution.
Automatization Gaps	Persistent manual processes (e.g., lists of student cohorts) required for large-scale solution.	Automatic processes must be created and/or modified in conjunction with new fields in the data warehouse.
Access Gaps	Two-factor authentication that not all intended end users possess.	May require a work-around, if possible, a change in the way the data is displayed, or a

These barriers included limited standard information, communication and organizational challenges, lack of mutual trust, and divergent agendas. These complications encompass language barriers, resource scarcity, and other professional practices that are not universal in working environments (Dongarwar et. al 2022). One constraint was communication barriers, such as the inability to have an interoperable health information system. This would have made exchanging patient information and care coordination among different sectors difficult. Other problems have also arisen due to limited resource capacities, such as insufficient funding and staffing for smaller healthcare institutions. Furthermore, the gap in professional culture and practice standards among different sectors rudely interrupted the collaboration between various healthcare professionals, cinching that the cultural gap must be tackled.

Areas for improvement

Graph 1: Impact of Technology Adoption on Cross-Sector Integration

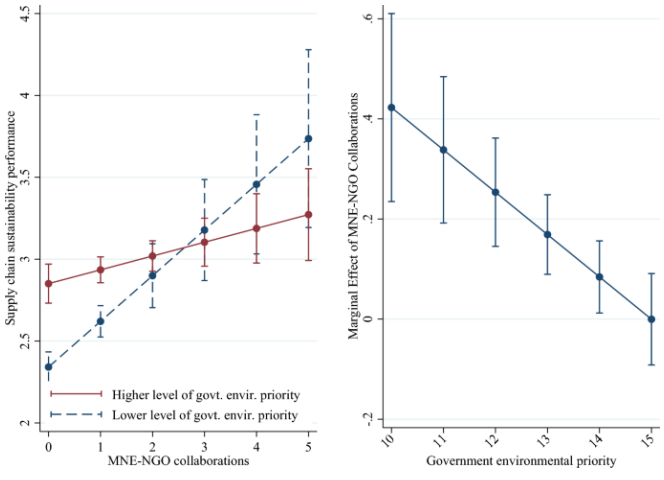


(Tseng et. al 2021).

The analysis has also recognized the limitations, which may make it harder to increase collaboration between the healthcare sectors to integrate cross-sectional concepts in healthcare. One example of technology application is a case study that shows this as an essential factor for integration efforts (Tseng et. al 2021). Graph 1 shows a positive link between technology adoption and sector interoperability; in other words, combining healthcare settings with higher levels of technological adoption is associated with more integration among multiple sectors.

Policy Support

Figure 2: Impact of Policy Support on Cross-Sector Integration



(Kistler & Kurtzman 2021).

Another layer of policy support that was found to be necessary for the seamless integration of waste management ecosystems has also been found. Policy support for integration plays a critical role, as shown in Figure 2, with the period being an essential factor. The chart analysis evidences that the integration levels keep rising after

the reconstruction of reimbursement policies, regulatory changes, and introduction schemes that favor collaborative care models. This implies that shaping policies and creating this environment can lead to integrated health facilities and incremental changes in their mode of delivery (Alfaifi & Arabian 2022).

Since the research team has come up with essential findings on the status of healthcare system integration, it could serve as a practical guide towards fostering a richer inter-sector integration that contributes to quality patient care. In certain spheres, clusters appear to be entirely cohesive in how they interact, while in others, barriers such as communication, resources, and work culture impede their progress. Though the study indicates some enrichment areas, it also recommends upgrades, such as technology use and policy improvement. Effective cross-sector collaboration and integration, facilitating access to healthcare services, proper use of vital resources, and, therefore, improving patients' results can be achieved by identifying and solving the system's problems and leveraging the opportunities for improvement in healthcare systems.

DISCUSSION

The section on discussion analyzed the study's results in connection with background knowledge and the theory of existing literature. It touches on some cross-sector integration effects on healthcare delivery and how patient outcomes can be improved, costs can be reduced, and the available resources can be fairly distributed. Among the major themes are how leadership, organizational behavior, and IT infrastructure reinforce the sense of teamwork and communication among the diverse medical specialists. Besides, the discussion deals with the challenges of grid incorporation, including regulations, capital expenditures, and autonomy.

Implications for Healthcare Delivery

A multispectral approach leads to dramatic changes in healthcare delivery mechanisms. It ensures collaboration and coordination among the educational, medical, finance, and data management sectors. It is possible to maintain the pace of integrated care models by removing the vertical walls and setting a diverse team working mode. It will improve the quality, efficiency, and power of healthcare services. Patients benefit from smooth care in different care environments, individual care plans drawn in line with personal needs, and better continuity of care (Aggarwal et. al 2020).

Role of Technology Infrastructure

Technology infrastructures are an essential determinant for us to link all involved sectors to precisely perceive the multidimensional nature of health care nowadays. Interoperable health information systems, electronic health records, and telemedicine technologies are simply the "magic pill" that can erase the skeleton of different providers and settings, including hospitals, clinics, and private facilities (Slavkin, 2022). Although care delivery might be made more efficient by the second means, patients will still have unhindered access to information about their condition and overall health once it is followed. Diseases can be diagnosed, and patients' health can be monitored from anywhere in urban and rural areas; thus, even the underprivileged can access healthcare facilities. As per the very idea, the telemedicine system assists in overcoming communication obstacles, and everyone can enjoy equal rights to medical care.

Abdications and the Obstacles to Integration

Besides the factors that support the advantage of cross-sector integration, numerous obstructions and challenges must be overcome to ensure fully effective and integrated cooperation among the various healthcare professions. Rules and regulations, as well as licensing that limits the scope of practice, can restrict inter-professional collaboration. Barriers such as insulation and evasion from innovation are additional impediments that one should consider to succeed in cross-sector integration (Asif, 2022). Health workers may not embrace new roles or workflows because of the fear of conflicting with established hierarchies and mandates. Joint action must solve these barriers, cooperate with the diversified stakeholders, erase their worries, and establish an integrated social service environment.

CONCLUSION

Therefore, the study perceives integration across various sectors as the key to a new healthcare model that guarantees equal access and ensures equity. Different health care professions in other disciplines can join hands to collect information from patients, from the dental to the radiology field to the emergency, epidemiological, medical secretarial, and medical device sectors. This collaboration helps healthcare systems offer much-needed patient-centered services. Policymakers' authorities, healthcare administrators, and providers will be guided by best practices focusing on a conducive culture of collaboration, investing in interoperable technology solutions, and creating incentives to boost cross-sector integration (Ntekim et. al 2020). Through these techniques, a more coordinated and comprehensive strategy in health care delivery for improving patients and achieving the health equity goals of all people will be attained.

RECOMMENDATIONS

Based on the findings and discussion, we propose several recommendations to enhance cross-sector integration in healthcare delivery. Based on the findings and discussion, we propose several recommendations to improve cross-sector integration in healthcare delivery.

- ✓ Fashion interdisciplinary training programs ensure mutual understanding and collaboration among healthcare professionals and provide opportunities for interaction and cooperation.
- ✓ Include infrastructure investment in interactive health information systems facilitating collaboration and data sharing across sectors (Holzmeyer, 2021).
- ✓ Enforce policy interventions to facilitate joint efforts and attract results-based care payments.
- ✓ Support and drive a learning culture of calibration and technical improvement by the staff to adjust to the new healthcare practices and technologies.

- ✓ Appoint mixed interagency working groups or committees to become pursuance-, management-, and obstacle-solving systems responsible for integration moves.

These guidelines, in turn, target an integrated and patient-centric approach to healthcare delivery systems for all patients. These measures will help to improve access, equity, and quality of care for all (Slavkin, 2020).

REFERENCE

1. Slavkin, H. C. (2020). Societal needs and the role of health care in shaping the future of dentistry in the 21st century. *Journal of the California Dental Association*, *48*(3), 145-155. https://www.tandfonline.com/doi/pdf/10.1080/19424396.2020.12222561
2. Alotaibi, A., Saleh, W., Abdelbaki, A., & Alosaimi, M. (2022). Health research priority agenda for Ministry Of Health, Kingdom of Saudi Arabia from 2020 to 2025. *Journal of Epidemiology and Global Health*, *12*(4), 413-429. https://link.springer.com/article/10.1007/s44197-022-00061-5
3. Holzmeyer, C. (2021). Beyond 'AI for Social Good'(AI4SG): social transformations—not tech-fixes—for health equity. *Interdisciplinary Science Reviews*, *46*(1-2), 94-125. https://journals.sagepub.com/doi/abs/10.1080/03080188.2020.1840221
4. Aggarwal, N., Ahmed, M., Basu, S., Curtin, J. J., Evans, B. J., Matheny, M. E., ... & Thadaney-Israni, S. (2020). Advancing artificial intelligence in health settings outside the hospital and clinic. *NAM perspectives*, *2020*. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8916812/
5. Ntekim, A., Ibraheem, A., Adeniyi-Sofoluwe, A., Adepoju, T., Oluwasanu, M., Aniagwu, T., ... & Olopade, O. I. (2020). Implementing oncology clinical trials in Nigeria: a model for capacity building. *BMC Health Services Research*, *20*, 1-9. https://link.springer.com/article/10.1186/s12913-020-05561-3
6. Economos, E. T., Goedken, C. C., Sherlock, S. H., Suda, K. J., Goetz, M., Balkenende, E., ... & Livorsi, D. J. (2022). Investigation of factors influencing inpatient antibiotic prescribing decisions in the Veterans' Health Administration. *Antimicrobial Stewardship & Healthcare Epidemiology*, *2*(1), e99. https://www.cambridge.org/core/journals/antimicrobial-stewardship-and-healthcare-epidemiology/article/investigation-of-factors-influencing-inpatient-antibiotic-prescribing-decisions-in-the-veterans-health-administration/99F2C877ED045AB08941706C88360D60
7. Potter, P. A., Perry, A. G., Stockert, P. A., & Hall, A. (2021). *Fundamentals of nursing-e-book*. Elsevier health sciences. https://books.google.com/books?hl=en&lr=&id=tfpVEAAAQBAJ&oi=fnd&pg=PP1&dq=Transforming+Healthcare:+Analyzing+Interdisciplinary+Collaboration+for+Better+Access+and+Equity+in++Dental,+Radiology,+Pharmacy,+Emergency,+Epidemiological,+Medical+Secretarial&ots=V-E8JDrOuo&sig=ixQUqQ8ZUuQ-Gaph1vZIABOft8M
8. Asif, M. (2022). *Social Pharmacy*. Notion Press. https://books.google.com/books?hl=en&lr=&id=HxN4EAAAQBAJ&oi=fnd&pg=PT7&dq=Transforming+Healthcare:+Analyzing+Interdisciplinary+Collaboration+for+Better+Access+and+Equity+in++Dental,+Radiology,+Pharmacy,+Emergency,+Epidemiological,+Medical+Secretarial&ots=yI70syGMhD&sig=23w9mr3B6y8P5TthYtTPLu11YOc
9. Alfarizi, M., & Arifian, R. (2022). G20 health vision in achieving SDGs 2030: Arranging the global health management architecture. *Insights in Public Health Journal*, *3*(1). http://jos.unsoed.ac.id/index.php/iphj/article/view/5565
10. Almeida, R. P. P. (Ed.). (2022). *Handbook of Research on Improving Allied Health Professions Education: Advancing Clinical Training and Interdisciplinary Translational Research: Advancing Clinical Training and Interdisciplinary Translational Research*. IGI Global. https://books.google.com/books?hl=en&lr=&id=yQBuEAAAQBAJ&oi=fnd&pg=PR1&dq=Transforming+Healthcare:+Analyzing+Interdisciplinary+Collaboration+for+Better+Access+and+Equity+in++Dental,+Radiology,+Pharmacy,+Emergency,+Epidemiological,+Medical+Secretarial&ots=KvUqNVm4if&sig=xjfrHQs_N6ik0AlksOhzOKC2mLE
11. FRIDAY, M. 2022 Leadership and Faculty Development Program Conference and Minority Health Policy Annual Meeting. https://dicp.hms.harvard.edu/sites/default/files/2023-02/LFDP_Conference_Program_Book_2021.pdf
12. Johnson, K. B., Neuss, M. J., & Detmer, D. E. (2021). Electronic health records and clinician burnout: a story of three eras. *Journal of the American Medical Informatics Association*, *28*(5), 967-973. https://academic.oup.com/jamia/article-abstract/28/5/967/6053200
13. Kistler, S. K., & Kurtzman, L. (2021). *Health Equity and Anti-Racism Report: HEAR 2021*. Wexner Medical Center. https://kb.osu.edu/handle/1811/92827
14. Latimer, K. (2021). Future in Focus: One Clear Vision: The 2020 Vizient Connections Education Summit Report. *American Journal of Medical Quality*, *36*(4S), S1-S129. https://journals.lww.com/ajmqonline/_layouts/15/oaks.journals/downloadpdf.aspx?an=00008488-202107001-00001
15. Tseng, W., Pleasants, E., Ivey, S. L., Sokal-Gutierrez, K., Kumar, J., Hoeft, K. S., ... & Neuhauser, L. (2021). Barriers and facilitators to promoting oral health literacy and patient communication among dental providers in California. *International journal of environmental research and public health*, *18*(1), 216. https://www.mdpi.com/1660-4601/18/1/216
16. Dongarwar, D., Adu-Gyamfi, S., Malmberg, E., & Salihu, H. M. (2022). Fifth Annual Summer Research Summit on Health Equity Organized by the Center of Excellence in Health Equity, Training and Research, Baylor College of Medicine, Houston, Texas 77030, USA on May 17, 2022. *International Journal of Maternal and Child Health and AIDS*, *11*(2 Suppl). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9513838/
17. Church, D. L., & Naugler, C. (2020). Essential role of laboratory physicians in transformation of laboratory practice and management to a value-based patient-centric model. *Critical Reviews in Clinical Laboratory Sciences*, *57*(5), 323-344. https://www.tandfonline.com/doi/abs/10.1080/10408363.2020.1720591
18. LEAD, A. (2021). A Call to Improve Patient and Public Health Outcomes of Diabetes through an Enhanced Integrated Care Approach. https://www.apha.org/Policies-and-Advocacy/Public-Health-Policy-Statements/Policy-Database/2022/01/07/Call-to-Improve-Patient-and-Public-Health-Outcomes-of-Diabetes
19. Black, B. (2022). *Professional nursing-e-book: concepts & challenges*. Elsevier Health Sciences. https://books.google.com/books?hl=en&lr=&id=PmeYEAAAQBAJ&oi=fnd&pg=PP1&dq=Transforming+Healthcare:+Analyzing+Interdisciplinary+Collaboration+for+Better+Access+and+Equity+in++Dental,+Radiology,+Pharmacy,+Emergency,+Epidemiological,+Medical+Secretarial&ots=uWxpgmJq5V&

sig=Immu8XZ9uVatHrFiIgfP-QPfvgQ

20. Balogun, J. A. (2021). *Nigerian Healthcare System*. Springer International Publishing. https://link.springer.com/content/pdf/10.1007/978-3-030-88863-3.pdf
21. Iyamu, I., Gómez-Ramírez, O., Xu, A. X., Chang, H. J., Watt, S., Mckee, G., & Gilbert, M. (2022). Challenges in the development of digital public health interventions and mapped solutions: findings from a scoping review. *Digital health*, *8*, 20552076221102255. https://journals.sagepub.com/doi/abs/10.1177/20552076221102255