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Healthcare without Walls: AI and Remote Monitoring and Telemedicine in the Future

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1. Abstract

The traditional model of healthcare delivery, often confined to physical clinics and hospitals, is being fundamentally reshaped by the rise of remote monitoring technologies and telemedicine platforms. This paper explores the transformative potential of “healthcare without walls”, where continuous patient data collection through wearable sensors and connected devices, coupled with virtual consultations and remote interventions, is becoming increasingly prevalent. We examine the key technological advancements driving this shift, including sophisticated biosensors, secure data transmission protocols, user-friendly telehealth platforms, and the integration of artificial intelligence for real-time analysis and predictive alerts. The abstract further discusses the benefits of this paradigm, such as enhanced patient convenience, improved chronic disease management, early detection of health deterioration, expanded access to care in underserved areas, and reduced healthcare costs. Finally, we address the challenges associated with widespread adoption, including data privacy and security, the need for robust infrastructure, ensuring equitable access, and maintaining the crucial human connection in remote interactions. Ultimately, this analysis underscores how remote monitoring and telemedicine are poised to dismantle the traditional walls of healthcare, creating a more proactive, accessible, and patient-centric future.

2. Keywords

Remote monitoring, Telemedicine, Digital health, Wearable sensors, Connected devices, Virtual care, Telehealth platforms, Remote patient management, Chronic disease management, Healthcare accessibility, Future of healthcare

3. Introduction

For centuries, healthcare has been predominantly tethered to physical locations clinics, hospitals, and consultation rooms. Patients have had to physically present themselves to receive care, creating inherent barriers related to geography, mobility, time constraints, and even psychological reluctance. However, a profound shift is underway, driven by the rapid evolution of digital technologies [1-15]. We are witnessing the emergence of “healthcare without walls”, a paradigm

where the physical constraints of traditional healthcare settings are increasingly being overcome by the pervasive integration of remote monitoring technologies and telemedicine platforms. This transformative movement promises to redefine how, when, and where healthcare is delivered and received, ushering in an era of greater accessibility, convenience, and proactive management.

The core of healthcare without walls lies in its ability to transcend geographical limitations. Telemedicine, encompassing virtual consultations, remote diagnostics, and even telesurgery, enables patients in remote or underserved areas to access specialist care that would otherwise be unavailable [16-32]. Individuals with mobility issues, chronic conditions requiring frequent monitoring, or those simply

seeking the convenience of a virtual appointment can now connect with healthcare providers from the comfort of their homes. This not only improves access but also reduces the burden of travel, time off work, and associated costs, making healthcare more convenient and patient-centric.

Complementing telemedicine is the burgeoning field of remote monitoring. Advances in wearable sensors, implantable devices, and connected home health tools allow for the continuous and passive collection of physiological data. These devices can track vital signs, activity levels, sleep patterns, and even biochemical markers, providing a rich stream of real-time information about a patient's health status [33-48]. This constant surveillance enables early detection of subtle changes that might indicate an impending health issue, allowing for timely interventions and potentially preventing acute episodes requiring hospitalization. For individuals managing chronic conditions like diabetes, hypertension, or heart failure, remote monitoring empowers them to actively participate in their care, track their progress, and receive personalized feedback and adjustments to their treatment plans.

The convergence of remote monitoring and telemedicine creates a powerful synergy. Data collected remotely can inform virtual consultations, allowing healthcare providers to have a more comprehensive understanding of a patient's condition beyond intermittent in-office visits. This continuous feedback loop facilitates proactive management, enabling timely adjustments to medications, lifestyle recommendations, and early interventions. Imagine a future where subtle changes in a patient's gait detected by a smart insole trigger an alert to their physician for a virtual assessment, potentially preventing a fall. Or where continuous glucose monitoring data informs real-time adjustments to insulin delivery via a connected pump, optimizing blood sugar control and reducing the risk of complications.

The implications of healthcare without walls extend beyond individual patient care. At a population level, the aggregated data from remote monitoring can provide valuable insights into disease trends, the effectiveness of interventions, and the identification of at-risk populations. This information can inform public health initiatives, resource allocation, and the development of more targeted and effective healthcare strategies. Furthermore, the ability to deliver care remotely can alleviate the strain on traditional healthcare facilities, particularly in densely populated areas or during public health emergencies [49-60].

However, the realization of this vision is not without its challenges. Ensuring the security and privacy of the vast amounts of data generated by remote monitoring devices and exchanged during telemedicine consultations is paramount. Robust infrastructure, including reliable internet connectivity and secure data transmission protocols, is essential for widespread adoption. Addressing the digital divide and ensuring equitable access to the necessary technologies and digital literacy support are crucial to prevent exacerbating existing health disparities. Moreover, maintaining the crucial human connection and empathy in remote interactions requires careful consideration of communication strategies and the development of user-friendly and intuitive platforms. This introduction will delve deeper into the key technologies driving healthcare without walls, explore its potential benefits across various healthcare domains, and critically examine the

challenges that need to be addressed for its successful and equitable implementation. By understanding the transformative power and the inherent complexities of remote monitoring and telemedicine, we can pave the way for a future where healthcare is truly untethered, reaching individuals wherever they may be and empowering them to take a more active role in their well-being [61-86]. The journey towards healthcare without walls is not just about technological advancement; it is about reimagining the very fabric of healthcare delivery to be more accessible, convenient, proactive, and ultimately, more human-centered in its reach.

4. Challenges

One of the most critical challenges lies in data privacy and security. The continuous collection and transmission of sensitive patient health information through remote monitoring devices and telemedicine platforms create a significant target for cyberattacks and data breaches. Ensuring the confidentiality, integrity, and availability of this data is paramount. Robust encryption methods, secure data storage solutions, strict adherence to privacy regulations (like HIPAA and GDPR), and ongoing vigilance are essential to maintain patient trust and prevent the misuse of personal health information. The interconnected nature of these technologies also amplifies the potential impact of a security vulnerability [87-99], making robust cybersecurity measures non-negotiable.

Another significant hurdle is the digital divide and ensuring equitable access. While telemedicine and remote monitoring can theoretically expand healthcare access, disparities in digital literacy, internet connectivity (especially in rural or underserved areas), and the affordability of necessary devices can exacerbate existing health inequalities. Without deliberate efforts to bridge this gap, "healthcare without walls" could inadvertently create a two-tiered system where those with technological access benefit disproportionately. Strategies to address this include providing subsidized devices, improving internet infrastructure in underserved areas, and offering user-friendly interfaces and digital literacy training.

The need for robust technological infrastructure and interoperability presents a significant challenge. Reliable and high-speed internet connectivity is fundamental for seamless data transmission and real-time virtual consultations. Furthermore, the lack of interoperability between different remote monitoring devices, telehealth platforms, and existing electronic health record (EHR) systems can hinder effective data sharing and clinical decision-making. Establishing standardized data formats, open APIs, and secure communication protocols is crucial for creating a cohesive and efficient "healthcare without walls" ecosystem.

Maintaining the human connection and trust in remote interactions is a crucial consideration. While technology offers convenience, the absence of face-to-face interaction can impact the patient-provider relationship. Building trust and rapport through virtual consultations requires effective communication strategies, active listening skills, and the thoughtful use of video and audio technology. Ensuring that patients feel heard, understood, and cared for remotely is essential for the successful adoption of telemedicine. Furthermore, the potential for misinterpretations or a lack of non-verbal cues in virtual interactions needs to be addressed through training and clear communication guidelines.

The integration of remote monitoring and telemedicine into existing clinical workflows can also be challenging. Healthcare professionals need adequate training and support to effectively utilize these new technologies and interpret the data generated. Clear protocols for remote patient monitoring, virtual consultations, and follow-up care need to be established and seamlessly integrated into their daily routines to avoid overwhelming them or creating inefficiencies. The reimbursement models for telemedicine services also need to be clearly defined and equitable to encourage widespread adoption.

Regulatory and legal frameworks need to adapt to the evolving landscape of healthcare without walls. Issues related to licensure across state or national borders for telemedicine providers, data ownership and liability, and the approval of new remote monitoring devices require careful consideration and the development of clear and consistent guidelines [100-104]. The rapid pace of technological innovation necessitates a flexible and adaptable regulatory approach that balances patient safety with the promotion of innovation.

Finally, the potential for information overload and alert fatigue for both patients and providers needs to be addressed. The continuous stream of data from remote monitoring devices can be overwhelming if not managed effectively. Implementing intelligent alert systems that prioritize critical information and provide actionable insights is crucial to avoid alert fatigue and ensure that important signals are not missed. Similarly, educating patients on how to interpret the data from their devices and when to seek professional help is essential for empowering them without causing undue anxiety.

5. Future Works: Expanding the Horizons of Healthcare without Walls

The field of healthcare without walls is rapidly evolving, and numerous exciting avenues for future work hold the potential to further revolutionize remote monitoring and telemedicine. Building upon current advancements and addressing existing challenges, future research and development efforts can focus on creating more seamless, intelligent, and human-centered remote healthcare experiences.

One key area for future work lies in **enhancing the sophistication and integration of remote monitoring technologies**. This includes developing more accurate, non-invasive, and user-friendly wearable and implantable sensors capable of continuously monitoring a wider range of physiological parameters and even biochemical markers. Future research could also focus on integrating these devices with smart home technologies and environmental sensors to provide a more holistic view of a patient's health and living conditions. Furthermore, exploring the potential of ingestible sensors and bio-integrated electronics could unlock new possibilities for internal monitoring and targeted interventions.

The application of artificial intelligence. (AI) and machine learning. (ML) will be crucial in transforming the vast amounts of data generated by remote monitoring into actionable insights. Future work should focus on developing more sophisticated algorithms for real-time data analysis, predictive modeling of health risks, and personalized alerts for both patients and providers. AI-powered virtual assistants could also play a greater role in guiding patients through self-

management protocols, answering their questions, and facilitating communication with their healthcare teams. Explainable AI. (XAI) will be essential to build trust in these AI-driven [105-109] recommendations.

Improving the user experience and accessibility of telemedicine platforms is another critical area for future work. This includes developing more intuitive and user-friendly interfaces, particularly for older adults and individuals with limited digital literacy. Future research could explore the use of augmented reality. (AR) to enhance virtual consultations, providing visual aids and interactive tools for remote examinations and patient education. Furthermore, developing culturally sensitive and multilingual telemedicine platforms will be crucial for reaching diverse populations.

Future work should also focus on seamlessly integrating remote monitoring and telemedicine into existing clinical workflows and electronic health record. (EHR) systems. This requires the development of standardized data formats and secure interoperability solutions that allow for the seamless exchange of information between remote devices, telehealth platforms, and traditional healthcare records. This integration will enable healthcare providers to have a comprehensive view of their patients' health status, regardless of where the data originates.

Research into the optimal models of remote care delivery and the impact of healthcare without walls on patient outcomes and healthcare costs is essential. Future studies should investigate the effectiveness of different telemedicine modalities for various conditions, the impact of continuous remote monitoring on disease management and prevention, and the cost-effectiveness of these approaches compared to traditional in-person care. This evidence-based research will be crucial for informing clinical guidelines and reimbursement policies.

Addressing the ethical and legal considerations associated with the increasing use of remote monitoring and telemedicine will be paramount. Future work should focus on developing clear guidelines and regulations regarding data privacy, security, liability, and the licensure of remote healthcare providers. Research into the psychological and social impact of remote care on both patients and providers, including issues of isolation and the maintenance of the therapeutic relationship, will also be crucial.

6. Conclusion

The vision of "Healthcare without Walls", powered by the synergistic advancements in remote monitoring and telemedicine, represents a fundamental shift in how we conceive of and deliver medical care. By dismantling the traditional constraints of physical location, these technologies are paving the way for a future where healthcare is more accessible, convenient, proactive, and ultimately, more patient-centric. The ability to continuously monitor physiological data remotely, coupled with the power of virtual consultations and interventions, holds immense promise for improving chronic disease management, enabling early detection of health deterioration, and expanding access to specialized care for underserved populations.

7. References

1. Panahi O, Farrokh S. (2025) Ethical Considerations of AI in Implant Dentistry: A Clinical Perspective. J Clin Rev Case Rep. 10(2): 1-5.

2. Omid Panahi, Ali Ezzati, Mansoureh Zeynali. (2025) Will AI Replace Your Dentist? The Future of Dental Practice. On J Dent & Oral Health. 8(3): 2025.
3. Panahi O. (2025) Navigating the AI Landscape in Healthcare and Public Health. Mathews J Nurs. 7(1): 56.
4. Omid Panahi, Faezeh Esmaili, Sasan Kargarnezhad. (2024) Künstliche Intelligenz in der Zahnmedizin, Unser Wissen Publishing.
5. Omid Panahi, Faezeh Esmaili, Sasan Kargarnezhad. (2024) Artificial Intelligence in Dentistry, Scholars Press Publishing.
6. Omid Panahi, Faezeh Esmaili, Sasan Kargarnezhad. (2024) Inteligencia artificial en odontología. Nuestro Conoc, Mento Publishing.
7. Omid Panahi, Faezeh Esmaili, Sasan Kargarnezhad. (2024) L'intelligence artificielle dans l'odontologie. Edition Notre Savoir Publishing.
8. Omid Panahi, Faezeh Esmaili, Sasan Kargarnezhad. (2024) Intelligenza artificiale in odontoiatria. Sapienza Publishing.
9. Omid Panahi, Faezeh Esmaili, Sasan Kargarnezhad. (2024) Inteligência Artificial em Medicina Dentária. Nosso Conhecimento Publishing.
10. Omid Panahi, Faezeh Esmaili, Sasan Kargarnezhad. (2024) Искусственный интеллект в стоматологии, Sciencia Scripts Publishing.
11. Shima Esmailzadeh, Omid Panahi, Fatmanur Ketenci Çay. (2020) Application of Clay's in Drug Delivery in Dental Medicine. Scholars Press Academic Publishing.
12. Maryam Gholizadeh, Omid Panahi. (2021) Investigating System in Health Management Information Systems. Scholars Press Academic Publishing.
13. Maryam Gholizadeh, Omid Panahi. (2021) Untersuchungssystem im Gesundheitsmanagement Informationsysteme, Unser Wissen Publishing.
14. Maryam Gholizadeh, Omid Panahi. (2021) Sistema de investigación en sistemas de información de gestión sanitaria. Nuestro Conoc, Mento Publishing.
15. Maryam Gholizadeh, Omid Panahi. (2021) Système d'investigation dans les systèmes d'information de gestion de la santé. Edition Notre Savoir Publishing.
16. Maryam Gholizadeh, Omid Panahi. (2021) Indagare il sistema nei sistemi informativi di gestione della salute. Sapienza Publishing.
17. Maryam Gholizadeh, Omid Panahi. (2021) Systeemonderzoek in Informatiesystemen voor Gezondheidsbeheer. Onze Kennis Publishing.
18. Maryam Gholizadeh, Omid Panahi. (2021) System badawczy w systemach informacyjnych zarządzania zdrowiem, Nazsa Wiedza Publishing.
19. Omid Panahi, Alireza Azarfardin. (2025) Computer-Aided Implant Planning: Utilizing AI for Precise Placement and Predictable Outcomes. Journal of Dentistry and Oral Health. 2(1).
20. Maryam Gholizadeh, Omid Panahi. (2021) Sistema de Investigaçao em Sistemas de Informaçao de Gestao de Saude. Nosso Conhecimento Publishing.
21. Maryam Gholizadeh, Omid Panahi. (2021) Система исследований в информационных системах управления здравоохранением. Sciencia Scripts Publishing.
22. Leila Ostovar, Kamal Khadem Vatan, Omid Panahi. (2020) Clinical Outcome of Thrombolytic Therapy. Scholars Press Academic Publishing.
23. Panahi O. (2025) Integrating dental and cardiac patient data for comprehensive health insights using AI. Ann Cardiolol. 2(1): 1007.
24. O. Panahi. (2025) The Future of Medicine: Converging Technologies and Human Health. Journal of Bio-Med and ClinicalResearch. RPC Publishers. 2(1).
25. O. Panahi. (2025) The Age of Longevity: Medical Advances and The Extension of Human Life. Journal of Bio-Med and Clinical Research. RPC Publishers. 2(1).
26. O Panahi. (2025) Nanomedicine: Tiny Technologies, Big Impact on Health. Journal of Bio-Med and Clinical Research. RPC Publishers. 2(1).
27. Panahi O. (2025) The evolving partnership: Surgeons and robots in the maxillofacial operating room of the future. J Dent Sci Oral Care. 1(1): 1-7.
28. Omid Panahi. (2019) Nanotechnology, Regenerative Medicine and Tissue Bioengineering. Scholars Press Academic Publishing.
29. Samira Zarei, Omid Panahi, Nima Bahador. (2019) Antibacterial activity of aqueous extract of eucalyptus camaldulensis against Vibrio harveyi. (PTCC1755) and Vibrio alginolyticus. (MK641453.1). Saarbrücken: LAP, Lambert Academic Publishing GmbH & Co.KG.
30. Samira Zarei, Omid Panahi. (2019) Eucalyptus camaldulensis extract as a preventive to the vibriosis. Scholars Press Academic Publishing.
31. Panahi O. (2024) Dental Implants & the Rise of AI. On J Dent & Oral Health. 8(1): 2024.
32. Omid P, Sevil Farrokh E. (2025) Bioengineering Innovations in Dental Implantology. Curr Trends Biomedical Eng & Biosci. 23(3): 556111.
33. Panahi P, Bayılmış C, Çavuşoğlu U. (2021) Performance evaluation of lightweight encryption algorithms for IoT-based applications. Arabian Journal for Science and Engineering. 46(4): 4015-4037.
34. Panahi U, Bayılmış C. (2023) Enabling secure data transmission for wireless sensor networks based IoT applications. Ain Shams Engineering Journal. 14(2): 101866.
35. Omid Panahi, Uras Panahi. (2025) AI-Powered IoT: Transforming Diagnostics and Treatment Planning in Oral Implantology. J Adv Artif Intell Mach Learn. 1(1): 1-4.
36. Panahi O. (2025) The Algorithmic Healer: AI's Impact on Public Health Delivery. Medi Clin Case Rep J. 3(1): 759-762.
37. Panahi O. (2025) The Future of Healthcare: AI, Public Health and the Digital Revolution. Medi Clin Case Rep J. 3(1): 763-766.
38. Panahi O, Raouf MF, Patrik K. (2011) The evaluation between pregnancy and periodontal therapy. Int J Acad Res. 3: 1057-1058.
39. Panahi O, Melody FR, Kennet P. (2011) Drug induced. (calcium channel blockers) gingival hyperplasia. JMBS. 2(1): 10-12.
40. Omid P. (2011) Relevance between gingival hyperplasia and leukemia. Int J Acad Res. 3: 493-494.
41. Omid Panahi, Fatmanur Ketenci Çay. (2023) NanoTechnology, Regenerative Medicine and,

- Tissue Bio-Engineering. *Acta Scientific Dental Sciences*. 7(4): 118-122.
42. Omid Panahi. (2024) Dental Pulp Stem Cells: A Review. *Acta Scientific Dental Sciences*. 8(2): 22-24.
 43. Uras Panahi. (2025) AD HOC Networks: Applications, Challenges, Future Directions. Scholars' Press.
 44. Omid Panahi, Artificial intelligence in Dentistry. Scholars Press Academic Publishing.
 45. Panahi O. (2025) Smart Robotics for Personalized Dental Implant Solutions. *Dental*. 7(1): 21.
 46. Pejman Panahi, Michelle Freund. (2011) Safety Application Schema For Vehicular Virtual Ad Hoc Grid Networks. *International Journal of Academic Research*. 3(2).
 47. Pejman Panahi. (2009) New Plan for Hardware Resource Utilization in Multimedia Applications Over Multi Processor Based System, MIPRO 2009. 32nd International Convention Conference on Grid And Visualization Systems. (GVS), 256-260.
 48. Omid Panahi, Sevil Farrokh Eslamlou, Peridontium: Struktur, Funktion und klinisches management.
 49. Omid Panahi, Sevil Farrokh Eslamlou, Peridontio: Estructura, función y manejo clinic.
 50. Omid Panahi, Sevil Farrokh Eslamlou, Le périodontium: Structure, fonction et gestion clinique.
 51. Omid Panahi, Sevil Farrokh Eslamlou, Peridontio: Struttura, funzione e gestione clinica.
 52. Omid Panahi, Sevil Farrokh Eslamlou, Peridontium: Struktura, funkcja i postępowanie kliniczne.
 53. Bakikoyuncu, Pejmanpanahi, Kalman Filtering of Link Quality Indicator Values for Position Detection by Using WSNS. *Int'l Journal of Computing, Communications & Instrumentation Engg.* 1: 2014.
 54. Panahi O. (2025) The Algorithmic Healer: AI's Impact on Public Health Delivery. *Medi Clin Case Rep J*. 3(1): 759-762.
 55. Panahi O. (2025) The Future of Healthcare: AI, Public Health and the Digital Revolution. *Medi Clin Case Rep J*. 3(1): 763-766.
 56. Panahi O. (2013) Comparison between unripe Makopa fruit extract on bleeding and clotting time. *International Journal of Paediatric Dentistry*. 23: 205.
 57. Panahi O, Arab MS, Tamson KM. (2011) Gingival enlargement and relevance with leukemia. *International Journal of Academic Research*. 3(2).
 58. Omid Panahi, Stammzellen aus dem Zahnmark.
 59. Omid Panahi, Células madre de la pulpa dental.
 60. Omid Panahi, Стволовые клетки пульпы зуба.
 61. Omid Panahi, Cellules souches de la pulpe dentaire.
 62. Omid Panahi, Cellule staminali della polpa dentaria.
 63. Omid Panahi, Células estaminais de polpa dentária.
 64. Panahi O, Melody FR. (2011) A novel scheme about extraction orthodontic and orthotherapy. *International Journal of Academic Research*. 3(2).
 65. Panahi O, Nunag GM, Nourinezhad Siyahtan A. (2011) Molecular Pathology: P-115: Correlation of Helicobacter Pylori and Prevalent Infections in Oral Cavity. *Cell Journal*. (Yakhteh). 12: 91-92.
 66. Panahi P, Bayılmış C, Çavuşoğlu U, et al.. (2018) Performance Evaluation of L-Block Algorithm for IoT Applications. *Uluslararası Bilgisayar Bilimleri ve Mühendisliği Konferansı*, 609-612.
 67. Panahi P, Bayılmış C, Çavuşoğlu U, et al.. (2019) Comparing Present and LBlock block ciphers over IoT Platform. 12th International Conference on Information Security and Cryptology, 66-69.
 68. Panahi U. (2022) Nesnelerin internet için hafif sıklet kriptoloji algoritmalarına dayalı güvenli haberleşme modeli tasarımı. Sakarya Üniversitesi, Fen Bilimleri Enstitüsü, Sakarya.
 69. Baki Koyuncu, Pejman Panahi, Sefika Varlioglu. (2015) Comparative Indoor Localization by using Landmark and Cricket Systems. *International Journal of Emerging Technology and Advanced Engineering*. 5(6): 453-456.
 70. Omid Panahi, Sevil Farrokh Eslamlou, Masoumeh Jabbarzadeh, Digitale Zahnmedizin und künstliche Intelligenz.
 71. Omid Panahi, Sevil Farrokh Eslamlou, Masoumeh Jabbarzadeh, Odontología digital e inteligencia artificial.
 72. Omid Panahi, Sevil Farrokh Eslamlou, Masoumeh Jabbarzadeh, Dentisterie numérique et intelligence artificielle.
 73. Omid Panahi, Sevil Farrokh Eslamlou, Masoumeh Jabbarzadeh, Odontoiatria digitale e intelligenza artificiale.
 74. Omid Panahi, Sevil Farrokh Eslamlou, Masoumeh Jabbarzadeh, Stomatologia cyfrowa i sztuczna inteligencja.
 75. Omid Panahi, Sevil Farrokh Eslamlou, Masoumeh Jabbarzadeh, Medicina dentária digital e inteligência artificial.
 76. Omid Panahi, Masoumeh Jabbarzadeh. (2025) The Expanding Role of Artificial Intelligence in Modern Dentistry. *On J Dent & Oral Health*. 8(3): 2025.
 77. Omid P, Shabnam D. (2025) Mitigating Aflatoxin Contamination in Grains: The Importance of Postharvest Management Practices. *Adv Biotech & Micro*. 18(5): 555996.
 78. Omid Panahi, Ali Ezzati. (2025) AI in Dental-Medicine: Current Applications & Future Directions. *Open Access J Clin Images*. 2(1): 1-5.
 79. Koyuncu B, Gokce A, Panahi P. (2015) Reconstruction of an Archeological site in real time domain by using software techniques. In: 2015 Fifth International Conference on Communication Systems and Network Technologies, 1350-1354.
 80. Omid P, Soren F. (2025) The Digital Double: Data Privacy, Security, and Consent in AI Implants West. *J Dent Sci* 2(1): 108.
 81. Uras Panahi, Redes AD HOC: Aplicações, Desafios, Direções Futuras, Edições Nosso Conhecimento.
 82. Uras Panahi, Sieci AD HOC: Zastosowania, wyzwania, przyszłe kierunki, Wydawnictwo Nasza Wiedza.
 83. Uras Panahi, Reti AD HOC: Applicazioni, sfide e direzioni future, Edizioni Sapienza.
 84. Omid Panahi, Sevil Farrokh Eslamlou, Peridontium: Estrutura, função e gestão clínica.
 85. Omid Panahi, Shabnam Dadkhah, AI in der modernen Zahnmedizin.
 86. Omid Panahi, Shabnam Dadkhah, La IA en la odontología moderna.
 87. Omid Panahi, Shabnam Dadkhah, L'IA dans la dentisterie moderne.
 88. Omid Panahi, Shabnam Dadkhah, L'intelligenza artificiale nell'odontoiatria moderna.
 89. Omid Panahi, Shabnam Dadkhah, Sztuczna inteligencja w nowoczesnej stomatologii.

90. Omid Panahi, Shabnam Dadkhah, A IA na medicina dentária moderna.
91. Uras Panahi, Redes AD HOC: Aplicaciones, retos y orientaciones futuras, Ediciones Nuestro Conocimiento.
92. Uras Panahi, Réseaux AD HOC: Applications, défis et orientations futures, Editions Notre Savoir.
93. Uras Panahi, AD HOC-Netze: Anwendungen, Herausforderungen, zukünftige Wege, Verlag Unser Wissen.
94. Panahi O. (2025) The Role of Artificial Intelligence in Shaping Future Health Planning. *Int J Health Policy Plann.* 4(1): 1-5.
95. Panahi O. (2025) AI in Health Policy: Navigating Implementation and Ethical Considerations. *Int J Health Policy Plann.* 4(1): 1-5.
96. Panahi O. (2024) Dental Implants & the Rise of AI. *On J Dent & Oral Health.* 8(1): 2024.
97. Panahi O, Falkner S. (2025) Telemedicine, AI, and the Future of Public Health. *Western J Med Sci & Res.* 2(1): 102.
98. Panahi O. (2025) Innovative Biomaterials for Sustainable Medical Implants: A Circular Economy Approach. *European Journal of Innovative Studies and Sustainability.* 1(2): 1-5.
99. Panahi O. (2025) Wearable Sensors and Personalized Sustainability: Monitoring Health and Environmental Exposures in Real-Time. *European Journal of Innovative Studies and Sustainability.* 1(2): 1-5.
100. Panahi O. (2025) AI-Enhanced Case Reports: Integrating Medical Imaging for Diagnostic Insights. *J Case Rep Clin Images.* 8(1): 1161
101. Panahi O. (2025) AI and IT in Medical Imaging: Case Reports. *J Case Rep Clin Images.* 8(1): 1160.
102. Omid Panahi. (2025) Robotics in Implant Dentistry: Current Status and Future Prospects. *Scientific Archives of Dental Sciences.* 7(9): 55-60.
103. Omid P, Soren F. (2025) The Digital Double: Data Privacy, Security, and Consent in AI Implants. *Digit J Eng Sci Technol.* 2(1): 105.
104. Panahi O. (2025) Algorithmic Medicine. *Journal of Medical Discoveries.* 2(1).
105. Panahi O. (2025) Deep Learning in Diagnostics. *Journal of Medical Discoveries.* 2(1).
106. Panahi O. (2025) AI in Health Policy: Navigating Implementation and Ethical Considerations. *Int J Health Policy Plann.* 4(1): 1-5.
107. Panahi O. (2025) The Role of Artificial Intelligence in Shaping Future Health Planning. *Int J Health Policy Plann.* 4(1): 1-5.
108. Panahi O. (2025) Secure IoT for Healthcare. *European Journal of Innovative Studies and Sustainability.* 1(1): 1-5.
109. Omid P, Evil Farrokh E. (2024) Beyond the Scalpel: AI, Alternative Medicine, and the Future of Personalized Dental Care. *J Complement Med Alt Healthcare.* 13(2): 555860.