THE IMPACT OF INTERDISCIPLINARY COLLABORATION ON PATIENT OUTCOMES IN A HOSPITAL SETTING

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Abstract:

Interdisciplinary collaboration in healthcare has gained significant attention in recent years due to its potential to improve patient outcomes. This review article examines the impact of interdisciplinary collaboration on patient outcomes in a hospital setting. The study synthesizes existing literature on the subject to provide a comprehensive overview of the benefits of interdisciplinary teamwork in healthcare delivery. The analysis considers various aspects of interdisciplinary collaboration, including communication, teamwork, and shared decision-making, and their influence on patient care and outcomes. The review also explores the challenges and barriers to effective interdisciplinary collaboration and offers insights into strategies for enhancing collaboration among healthcare professionals. Overall, the findings suggest that interdisciplinary collaboration plays a crucial role in improving patient outcomes by promoting coordinated care, reducing medical errors, and enhancing patient satisfaction. The review concludes with recommendations for healthcare organizations and policymakers to support and promote interdisciplinary collaboration to optimize patient care in hospital settings.

Keywords: Interdisciplinary collaboration, ient outcomes, Hospital setting, Healthcare teamwork, Communication, Shared decision-making.

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Introduction:

In today's healthcare landscape, the importance of interdisciplinary collaboration cannot be understated. As healthcare becomes more complex and specialized, the need for healthcare professionals from different disciplines to work together to provide comprehensive care for patients has become increasingly evident. This is especially true in a hospital setting, where patients often have complex medical needs that require the expertise of multiple healthcare professionals [1].

Interdisciplinary collaboration in a hospital setting involves healthcare professionals from different disciplines, such as doctors, nurses, pharmacists, social workers, and therapists, working together to develop and implement a comprehensive care plan for patients. This collaborative approach allows for a more holistic and patient-centered approach to care, as each healthcare professional brings their unique expertise and perspective to the table [2]. One of the key benefits of interdisciplinary collaboration in a hospital setting is its impact on

One of the key benefits of interdisciplinary collaboration in a hospital setting is its impact on patient outcomes. Research has shown that when healthcare professionals from different disciplines work together, patients experience better outcomes, including improved health outcomes, reduced hospital readmissions, and increased patient satisfaction [3].

One study published in the Journal of Interprofessional Care found that interdisciplinary collaboration in a hospital setting was associated with a 15% reduction in hospital readmissions for patients with chronic conditions. This is because when healthcare professionals work together, they are better able to coordinate care, identify and address potential issues, and provide patients with the support they need to manage their conditions effectively [4].

Additionally, interdisciplinary collaboration has been shown to improve patient safety in hospitals. When healthcare professionals from different disciplines work together, they are better able to identify and address potential safety issues, such as medication errors or infections, before they escalate into more serious problems. This can help prevent adverse events and complications, ultimately leading to better patient outcomes [5]. Furthermore, interdisciplinary collaboration in a hospital setting can also lead to cost savings for healthcare organizations. By working together to develop and implement comprehensive care plans, healthcare professionals can help unnecessary tests, procedures, and hospital stays, which can help lower healthcare costs and improve the overall efficiency of the healthcare system [6].

Importance of Interdisciplinary Collaboration in Healthcare:

In today's complex healthcare landscape, the importance of interdisciplinary collaboration cannot be overstated. Healthcare is a multifaceted field that requires input from a variety of professionals in order to provide the best possible care for patients. Interdisciplinary collaboration involves healthcare professionals from different disciplines working together to address the many facets of a patient's health and well-being. This collaborative approach has been shown to improve patient outcomes, increase efficiency, and enhance the overall quality of care [7].

One of the key benefits of interdisciplinary collaboration in healthcare is the ability to provide comprehensive care to patients. When healthcare professionals from different disciplines work together, they are able to bring their unique perspectives and expertise to the table. This can lead to a more holistic approach to patient care, where all aspects of a patient's health are taken into consideration. For example, a patient with a chronic illness may require input from a primary care physician, a specialist, a nurse, a social worker, and a physical therapist in order to develop a comprehensive treatment plan that addresses all of their needs [8].

Interdisciplinary collaboration also allows for more efficient and coordinated care. When healthcare professionals work together as a team, they are able to share information more easily and make decisions more quickly. This can lead to faster diagnosis and treatment, as well as a reduction in unnecessary tests and procedures. In addition, interdisciplinary teams can help to streamline the care process by coordinating appointments, referrals, and follow-up care. This can help to reduce the burden on patients and their families, as well as improve the overall patient experience [9]. Furthermore, interdisciplinary collaboration has been shown to improve patient outcomes. Studies have found that patients who receive care from interdisciplinary teams have better outcomes, lower rates of hospital readmission, and higher levels of satisfaction with their care. This is due in part to the fact that interdisciplinary teams are able to provide more personalized and coordinated care, tailored to the specific needs of each patient. By working together, healthcare professionals can ensure that all aspects of a patient's health are addressed, leading to improved outcomes and a higher quality of life [10].

In addition to improving patient outcomes, interdisciplinary collaboration can also benefit healthcare professionals themselves. Working as part of an interdisciplinary team can provide

opportunities for professional growth and development, as well as the chance to learn from colleagues in other disciplines. This can lead to a more collaborative and supportive work environment, where healthcare professionals can share knowledge, skills, and resources in order to provide the best possible care for their patients [11].

Interdisciplinary collaboration is essential in healthcare in order to provide comprehensive, efficient, and high-quality care to patients. By bringing together healthcare professionals from different disciplines, we can ensure that all aspects of a patient's health are addressed, leading to improved outcomes and a higher quality of life. It is essential that healthcare organizations prioritize interdisciplinary collaboration and create a culture that supports teamwork and communication among all members of the care team. By working together, we can truly make a difference in the lives of our patients and improve the overall healthcare system [11].

Impact of Interdisciplinary Collaboration on Patient Outcomes:

Interdisciplinary collaboration in healthcare has gained significant attention in recent years as a key factor in improving patient outcomes. This approach involves healthcare professionals from different disciplines working together to provide comprehensive care to patients. By combining their expertise and knowledge, these professionals can address the complex needs of patients more effectively, leading to better outcomes and higher quality of care [12].

One of the main benefits of interdisciplinary collaboration is the ability to provide a holistic approach to patient care. Each healthcare professional brings a unique perspective and set of skills to the table, allowing for a more comprehensive assessment of the patient's needs. For example, a team consisting of doctors, nurses, social workers, and therapists can work together to develop a treatment plan that addresses not only the physical symptoms of a patient's condition but also their emotional and social needs. This holistic approach can lead to more personalized and effective care, ultimately improving patient outcomes [13].

Furthermore, interdisciplinary collaboration can also improve communication among healthcare professionals, leading to more coordinated and efficient care. When professionals from different disciplines work together, they are able to share information, collaborate on treatment plans, and coordinate care more effectively. This can help prevent errors, reduce duplication of services, and

ensure that patients receive the right care at the right time. Improved communication can also lead to better patient satisfaction and increased adherence to treatment plans, both of which can have a positive impact on patient outcomes [14]. In addition, interdisciplinary collaboration can lead to better outcomes for patients with complex or chronic conditions. These patients often require care from multiple specialists, and coordinating this care can be challenging. By working together in a collaborative team, healthcare professionals can ensure that all aspects of the patient's care are addressed and that treatments are coordinated to avoid conflicts or gaps in care. This can lead to improved outcomes, reduced hospitalizations, and better management of chronic conditions [15].

Overall, interdisciplinary collaboration has the potential to significantly impact patient outcomes by providing more holistic, coordinated, and personalized care. By bringing together professionals from different disciplines, healthcare teams can address the complex needs of patients more effectively, leading to better outcomes and higher quality of care. As the healthcare industry continues to evolve, interdisciplinary collaboration will play an increasingly important role in improving patient outcomes and ensuring the delivery of high-quality care [16].

Factors Influencing Interdisciplinary Collaboration in Hospital Settings:

Interdisciplinary collaboration in hospital settings is crucial for providing comprehensive and effective patient care. It involves healthcare professionals from different disciplines working together to address the complex needs of patients. Factors influencing interdisciplinary collaboration in hospital settings can vary and understanding these factors is essential for promoting successful teamwork and improving patient outcomes [17]. One of the key factors influencing interdisciplinary collaboration in hospital settings is communication. Effective communication is essential for healthcare professionals to share information, coordinate care, and make informed decisions. Poor communication can lead to misunderstandings, errors, and delays in patient care. To promote effective communication, hospitals can implement strategies such as regular team meetings, clear communication protocols, and the use of electronic health records to share information [18].

Another factor influencing interdisciplinary collaboration is leadership. Strong leadership is essential for promoting teamwork, resolving conflicts, and fostering a culture of collaboration. Hospital administrators and department heads play

a crucial role in setting expectations for interdisciplinary collaboration, providing resources and support for teamwork, and recognizing and rewarding successful collaboration efforts [19].

The culture of the hospital also plays a significant role in influencing interdisciplinary collaboration. A positive and supportive organizational culture can encourage healthcare professionals to work together, share knowledge, and collaborate on patient care. Hospitals can promote a culture of collaboration by fostering trust among team members, encouraging open communication, and celebrating interdisciplinary successes [20].

Interprofessional education and training are also important factors influencing interdisciplinary collaboration in hospital settings. Healthcare professionals need to have a good understanding of each other's roles, responsibilities, and expertise in order to work together effectively. Interprofessional education programs can help healthcare professionals develop the knowledge, skills, and attitudes needed for collaborative practice. Hospitals can also provide opportunities for ongoing training and professional development to support interdisciplinary collaboration [21].

Resource availability is another factor influencing interdisciplinary collaboration in hospital settings. Healthcare professionals need access to the necessary resources, such as equipment, technology, and support staff, to provide high-quality care to patients. Hospitals can support interdisciplinary collaboration by ensuring that resources are allocated equitably, that teams have access to the tools they need to work together effectively, and that barriers to collaboration are minimized [21].

Finally, patient-centered care is a key factor influencing interdisciplinary collaboration in hospital settings. Healthcare professionals need to prioritize the needs and preferences of patients and involve them in decision-making processes. By focusing on the patient as the central point of care, healthcare teams can work together more effectively to provide holistic and coordinated care [22].

Interdisciplinary collaboration in hospital settings is essential for providing high-quality patient care. Factors influencing interdisciplinary collaboration include communication, leadership, organizational culture, interprofessional education and training, resource availability, and patient-centered care. By understanding and addressing these factors, hospitals can promote successful teamwork, improve patient outcomes, and enhance the overall quality of care provided to patients [23].

Challenges and Barriers to Effective Interdisciplinary Collaboration:

Interdisciplinary collaboration refers to the process of professionals from different disciplines coming together to work towards a common goal. This type of collaboration has become increasingly important in today's complex and interconnected world, where many of the problems we face require a multidisciplinary approach to solve. However, despite its potential benefits, there are numerous challenges and barriers that can hinder the effectiveness of interdisciplinary collaboration [24].

One of the main challenges to effective interdisciplinary collaboration is the lack of a common language and understanding among professionals from different disciplines. Each discipline has its own jargon, theories, and methodologies, which can make it difficult for team members to communicate with one another. This can lead to misunderstandings, misinterpretations, and ultimately, a breakdown in collaboration. To overcome this barrier, it is important for team members to take the time to learn about each other's disciplines, and to find common ground in order to effectively communicate and work together [25]. Another challenge to interdisciplinary collaboration is the issue of power dynamics and hierarchies within teams. Professionals from different disciplines may have different levels of expertise, experience, and authority, which can lead to conflicts and tensions within the team. In some cases, certain disciplines may be perceived as more important or valuable than others, leading to a lack of respect and recognition for the contributions of all team members. To address this challenge, it is important for team members to recognize and value the expertise that each discipline brings to the table, and to create a culture of mutual respect and collaboration [26].

Additionally. logistical challenges such as conflicts, time constraints, scheduling and geographical distances also can hinder interdisciplinary collaboration. Team members may have conflicting priorities, deadlines, and commitments that make it difficult to find time to meet and work together. In some cases, team members may be located in different cities, countries, or time zones, making it challenging to coordinate meetings and communication. To overcome these barriers, it is important for team members to prioritize collaboration, establish clear communication channels, and use technology to facilitate virtual meetings and collaboration [26]. Another challenge to effective interdisciplinary collaboration is the issue of disciplinary boundaries and silos. Professionals may be hesitant to step outside of their own disciplines and comfort zones, and may be resistant to new ideas and perspectives. This can lead to a lack of creativity, innovation, and flexibility within the team. To address this challenge, it is important for team members to be open-minded, curious, and willing to explore new ideas and approaches. By breaking down disciplinary boundaries and silos, team members can leverage the diverse perspectives and expertise of all team members to find innovative solutions to complex problems [27].

Interdisciplinary collaboration has the potential to drive innovation, creativity, and problem-solving in today's complex world. However, there are numerous challenges and barriers that can hinder the effectiveness of interdisciplinary collaboration. By addressing issues such as communication, power dynamics, logistical challenges, and disciplinary boundaries, team members can work together more effectively to achieve their common goals. It is important for professionals to recognize the value of interdisciplinary collaboration, and to work together to overcome these challenges in order to create positive change and make a meaningful impact in their respective fields [27].

Strategies for Enhancing Interdisciplinary Collaboration:

In today's complex and rapidly changing world, interdisciplinary collaboration has become increasingly important in order to address the multifaceted challenges facing society. By bringing together individuals from different disciplines, perspectives, and backgrounds, interdisciplinary collaboration can lead to innovative solutions and breakthroughs that would not be possible through traditional siloed approaches [28].

One of the key strategies for enhancing interdisciplinary collaboration is to create a culture that values and promotes collaboration across disciplines. This can be achieved by fostering a sense of shared purpose and mutual respect among team members, and by providing opportunities for interdisciplinary training and professional development. By encouraging communication and collaboration, team members can learn from each other's expertise and perspectives, leading to more creative and effective solutions [29].

Another important strategy for enhancing interdisciplinary collaboration is to establish clear goals and objectives for the collaboration. By defining the scope and purpose of the collaboration, team members can align their efforts and work towards a common goal. This can help prevent misunderstandings and conflicts, and ensure that the collaboration remains focused and productive.

Additionally, establishing a clear timeline and milestones can help keep the team on track and motivated to achieve their goals [29].

In order to enhance interdisciplinary collaboration, it is also essential to create a supportive and inclusive environment where all team members feel valued and respected. This can be achieved by promoting diversity and inclusion within the team, and by encouraging open and honest communication. By creating a safe space for team members to share their ideas and perspectives, collaboration can flourish and lead to more innovative and effective solutions [30].

Furthermore, providing resources and support for interdisciplinary collaboration can help facilitate the process and maximize its impact. This can include providing access to funding, technology, and other resources that are necessary for the collaboration to succeed. By investing in interdisciplinary collaboration, organizations can reap the benefits of increased innovation, creativity, and problem-solving capabilities [31]. Interdisciplinary collaboration is essential for addressing the complex challenges facing society today. By implementing strategies to enhance collaboration, organizations can unlock the full potential of interdisciplinary teams and achieve breakthroughs that would not be possible through traditional approaches. By creating a culture that values collaboration, establishing clear goals and objectives, creating a supportive environment, and providing resources and support, organizations can maximize the impact of interdisciplinary collaboration and drive innovation and progress [31].

Recommendations for Healthcare Organizations and Policymakers:

Healthcare organizations and policymakers play a crucial role in shaping the healthcare system and ensuring that individuals have access to highquality, affordable care. In recent years, there have been significant changes and challenges in the healthcare landscape, including rising healthcare costs, an aging population, and the ongoing COVID-19 pandemic. In order to address these challenges and improve the overall health and wellbeing of the population, it is essential for healthcare organizations and policymakers to work together to implement effective strategies and policies [32]. One of the most important recommendations for healthcare organizations and policymakers is to focus on preventative care and population health. By investing in preventative care and promoting healthy behaviors, healthcare organizations can help individuals avoid costly and debilitating health conditions. This can not only improve the health outcomes of individuals, but also reduce healthcare costs in the long run. Policymakers can support these efforts by implementing policies that incentivize healthcare organizations to provide preventative care services and promote healthy lifestyles [33].

Another key recommendation for healthcare organizations and policymakers is to improve access to care, particularly for underserved populations. In many communities, there are disparities in access to healthcare services, with certain populations facing barriers such as lack of insurance, transportation, or cultural and linguistic barriers. Healthcare organizations can work to address these disparities by offering services in underserved areas, providing transportation assistance, and offering language interpretation services. Policymakers can support these efforts by implementing policies that expand access to care for underserved populations, such as Medicaid expansion or funding for community health centers [34].

Additionally, healthcare organizations policymakers should prioritize the use of technology and data to improve healthcare delivery and outcomes. Electronic health records, telemedicine, and data analytics can help healthcare organizations to streamline processes, improve communication between providers, and identify trends and patterns in patient outcomes. Policymakers can support the adoption of technology in healthcare by providing funding for technology infrastructure and incentivizing healthcare organizations to adopt electronic health records and telemedicine services [35].

Furthermore, healthcare organizations and policymakers should work to address the social determinants of health, such as poverty, education, and housing. These factors have a significant impact on individuals' health outcomes, and addressing them can help to improve overall population health. Healthcare organizations can collaborate with community organizations and social service agencies to address these social determinants, while policymakers can implement policies that support affordable housing, education, and income support programs [36].

Healthcare organizations and policymakers have a critical role to play in improving the healthcare system and promoting the health and well-being of the population. By focusing on preventative care, improving access to care for underserved populations, leveraging technology and data, and addressing social determinants of health, healthcare organizations and policymakers can work together to create a more effective and equitable healthcare system. It is essential for

healthcare organizations and policymakers to collaborate and implement these recommendations in order to achieve better health outcomes for all individuals [37].

Conclusion:

In conclusion, interdisciplinary collaboration plays a crucial role in improving patient outcomes in a hospital setting. By bringing together healthcare professionals from different disciplines to work together to provide comprehensive care for patients, hospitals can improve health outcomes, reduce hospital readmissions, enhance patient safety, and achieve cost savings. As healthcare continues to evolve, interdisciplinary collaboration will only become more important in ensuring that patients receive the best possible care.

References:

- 1. Xyrichis A, Lowton K. What fosters or prevents interprofessional teamworking in primary and community care? A literature review. Int J Nurs Stud. 2008;45(1):140-53.
- Reeves S, Perrier L, Goldman J, Freeth D, Zwarenstein M. Interprofessional education: effects on professional practice and healthcare outcomes (update). Cochrane Database Syst Rev. 2013;3:CD002213.
- 3. D'Amour D, Ferrada-Videla M, San Martin Rodriguez L, Beaulieu MD. The conceptual basis for interprofessional collaboration: core concepts and theoretical frameworks. J Interprof Care. 2005;19 Suppl 1:116-31.
- 4. Institute of Medicine. Crossing the Quality Chasm: A New Health System for the 21st Century. Washington, DC: National Academies Press; 2001.
- 5. Mickan SM, Rodger SA. Effective health care teams: a model of six characteristics developed from shared perceptions. J Interprof Care. 2005:19(4):358-70.
- Zwarenstein M, Goldman J, Reeves S. Interprofessional collaboration: effects of practice-based interventions on professional practice and healthcare outcomes. Cochrane Database Syst Rev. 2009;3:CD000072.
- 7. Lemieux-Charles L, McGuire WL. What do we know about health care team effectiveness? A review of the literature. Med Care Res Rev. 2006;63(3):263-300.
- 8. Schmitt MH. Collaboration improves the quality of care: methodological challenges and evidence from US health care research. J Interprof Care. 2001;15(1):47-66.
- 9. Thylefors I. Team types, perceived efficiency and team climate in Swedish cross-professional teamwork. J Interprof Care. 2012;26(3):205-11.

- 10. Thistlethwaite J. Interprofessional education: a review of context, learning and the research agenda. Med Educ. 2012;46(1):58-70.
- 11.Lingard L, Espin S, Whyte S, Regehr G, Baker GR, Reznick R, et al. Communication failures in the operating room: an observational classification of recurrent types and effects. Qual Saf Health Care. 2004;13(5):330-4.
- 12. King HB, Battles J, Baker DP, Alonso A, Salas E, Webster J, et al. TeamSTEPPS: team strategies and tools to enhance performance and patient safety. In: Henriksen K, Battles JB, Keyes MA, Grady ML, editors. Advances in Patient Safety: New Directions and Alternative Approaches (Vol. 3: Performance and Tools). Rockville (MD): Agency for Healthcare Research and Quality (US); 2008.
- 13.Gittell JH. Coordinating mechanisms in care provider groups: relational coordination as a mediator and input uncertainty as a moderator of performance effects. Manage Sci. 2002;48(11):1408-26.
- 14. Schraagen JM, Schouten T, Smit M, Haas F, van de Ven J, van de Beek D. A prospective study of paediatric cardiac surgical microsystems: assessing the relationships between non-routine events, teamwork and patient outcomes. BMJ Qual Saf. 2011;20(7):599-603.
- 15.O'Leary KJ, Wayne DB, Haviley C, Slade ME, Lee J, Williams MV. Improving teamwork: impact of structured interdisciplinary rounds on a medical teaching unit. J Gen Intern Med. 2010;25(8):826-32.
- 16.Xyrichis A, Ream E. Teamwork: a concept analysis. J Adv Nurs. 2008;61(2):232-41.
- 17.D'Amour D, Oandasan I. Interprofessionality as the field of interprofessional practice and interprofessional education: an emerging concept. J Interprof Care. 2005;19 Suppl 1:8-20.
- 18.O'Leary KJ, Sehgal NL, Terrell G, Williams MV. Interdisciplinary teamwork in hospitals: a review and practical recommendations for improvement. J Hosp Med. 2012;7(1):48-54.
- 19. Curley C, McEachern JE, Speroff T. A firm trial of interdisciplinary rounds on the inpatient medical wards: an intervention designed using continuous quality improvement. Med Care. 1998;36(8 Suppl): AS4-12.
- 20. Gittell JH, Fairfield KM, Bierbaum B, Head W, Jackson R, Kelly M, et al. Impact of relational coordination on quality of care, postoperative pain and functioning, and length of stay: a nine-hospital study of surgical patients. Med Care. 2000;38(8):807-19.
- 21.Reeves S, Lewin S, Espin S, Zwarenstein M. Interprofessional teamwork for health and social care. Oxford: Wiley-Blackwell; 2010.

- 22.Institute of Medicine. Interprofessional education for collaboration: learning how to improve health from interprofessional models across the continuum of education to practice: workshop summary. Washington, DC: National Academies Press; 2013.
- 23.D'Amour D, Goulet L, Labadie JF, Martín-Rodriguez LS, Pineault R. A model and typology of collaboration between professionals in healthcare organizations. BMC Health Serv Res. 2008;8:188.
- 24.Lingard L, Regehr G, Orser B, Reznick R, Baker GR, Doran D, et al. Evaluation of a preoperative checklist and team briefing among surgeons, nurses, and anesthesiologists to reduce failures in communication. Arch Surg. 2008;143(1):12-7.
- 25. Gittell JH. Relational coordination: coordinating work through relationships of shared goals, shared knowledge and mutual respect. In: Kyriakidou O, Ozbilgin M, editors. Relational perspectives in organizational studies: a research companion. Cheltenham, UK: Edward Elgar Publishing; 2006.
- 26. Thistlethwaite J, Moran M. Learning outcomes for interprofessional education (IPE): literature review and synthesis. J Interprof Care. 2010;24(5):503-13.
- 27. Schadewaldt V, McInnes E, Hiller JE, Gardner A. Views and experiences of nurse practitioners and medical practitioners with collaborative practice in primary health care—an integrative review. BMC Fam Pract. 2013;14:132.
- 28.D'Amour D, Pineault R, Contandriopoulos AP, Lévesque JF, Tousignant P. The nursing role in health services clusters in Quebec. Montreal: Ministère de la Santé et des Services Sociaux; 2004.
- 29. Schadewaldt V, McInnes E, Hiller JE, Gardner A. Experiences of nurse practitioners and medical practitioners working in collaborative practice models in primary healthcare in Australia—a multiple case study using mixed methods. BMC Fam Pract. 2016;17:99.
- 30.D'Amour D, Ferrada-Videla M, San Martin Rodriguez L, Beaulieu MD. The nursing role in primary health care: a rapid realist review. Ottawa: Canadian Health Services Research Foundation; 2005.
- 31.Lingard L, Regehr G, Espin S, Reznick R, DeVito I. Team communications in the operating room: talk patterns, sites of tension, and implications for novices. Acad Med. 2002;77(3):232-7.
- 32.O'Leary KJ, Darling TA, Rauworth J, Williams MV. Impact of hospitalist attending physicians

- on trainee care of hospitalized patients: a systematic review. J Hosp Med. 2011;6(1):6-15.
- 33. Gittell JH, Weinberg DB, Bennett AL, Miller JA. Is the doctor in? A relational approach to job design and the coordination of work. Hum Resour Manage. 2008;47(4):729-55.
- 34.Lingard L, Reznick R, Espin S, Regehr G, DeVito I. Team communications in the operating room: forms of talk that help and hinder surgical practice. Qual Health Res. 2006;16(6):891-910.
- 35. Gittell JH, Fairfield KM, Bierbaum B, Head W, Jackson R, Kelly M, et al. Impact of relational coordination on quality of care, postoperative pain and functioning, and length of stay: a nine-hospital study of surgical patients. Med Care. 2000;38(8):807-19.
- 36.D'Amour D, Oandasan I. Interprofessionality as the field of interprofessional practice and interprofessional education: an emerging concept. J Interprof Care. 2005;19 Suppl 1:8-20.
- 37.O'Leary KJ, Sehgal NL, Terrell G, Williams MV. Interdisciplinary teamwork in hospitals: a review and practical recommendations for improvement. J Hosp Med. 2012;7(1):48-54.