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COOPERATION BETWEEN THE PHYSICIANS AND THE HEALTHCARE STAFF

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ABSTRACT

The cooperation between physicians and other healthcare staff has become one of the most extensively studied and debated topics in contemporary health systems research. A growing body of evidence demonstrates that collaborative practice among health professionals — particularly between physicians and nurses, but also extending to the broader multidisciplinary team — is directly associated with improved patient safety, reduced medical errors, enhanced care quality, and greater job satisfaction among healthcare workers. Conversely, failures in interprofessional cooperation produce measurable harms: increased complication rates, communication breakdowns, professional burnout, and compromised patient outcomes. This study provides a comprehensive examination of the nature, determinants, benefits, and challenges of cooperation between physicians and healthcare staff, drawing on a wide range of contemporary evidence. It further discusses the role of interprofessional education, organisational culture, workforce safety, and teamwork frameworks in shaping the quality and sustainability of collaborative practice. The article concludes with a set of recommendations for strengthening physician-staff cooperation at the individual, institutional, and systemic levels.

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1. INTRODUCTION

Modern healthcare is irreducibly complex. The management of a single hospitalised patient routinely involves the coordinated efforts of physicians, nurses, physiotherapists, pharmacists, social workers, dieticians, and numerous other allied health professionals, each contributing distinct knowledge and skills to a shared clinical goal. In this environment, cooperation is not merely desirable — it is a structural prerequisite for safe, effective, and patient-centred care. The World Health Organization (WHO) has long recognised this reality, advocating through its Framework for Action on Interprofessional Education and Collaborative Practice for the systematic embedding of collaborative principles in both health professional education and healthcare delivery worldwide.

Yet despite this widespread recognition, effective cooperation between physicians and healthcare staff remains inconsistently achieved in practice. Hierarchical professional cultures, communication barriers, role ambiguity, workforce shortages, occupational stress, and inadequate training all conspire to undermine collaborative relationships that evidence consistently shows are essential to optimal health outcomes. The gap between what is known about effective interprofessional cooperation and what is routinely practised in clinical settings represents one of the most persistent and consequential challenges facing health systems globally.

This study examines the foundations of physician-staff cooperation, the evidence for its benefits, the factors that facilitate or impede it, and the structural interventions — including interprofessional education — that have been shown to strengthen it. In doing so, it draws on evidence spanning multiple clinical contexts and international settings, reflecting the universal relevance of this challenge to healthcare systems at every level of development.

2. Conceptualising Cooperation in Healthcare: Definitions and Frameworks

Before examining the evidence on physician-staff cooperation, it is important to establish clarity about what cooperation and collaboration in healthcare actually mean, given that these terms are frequently used interchangeably despite carrying meaningfully distinct connotations.

At the broadest level, interprofessional collaboration in healthcare has been described as a holistic process encompassing teamwork, communication, and cooperation based on shared power and authority (Dahlawi et al., 2023). Henneman and colleagues, cited in this context, characterise collaboration as a process that requires mutual respect, trust, and efficient communication between participating professionals. This framing draws attention to the relational dimensions of collaboration — it is not merely a structural or organisational arrangement, but a dynamic, interpersonal process that must be actively cultivated and maintained.

The literature further distinguishes between multidisciplinary, interdisciplinary, and transdisciplinary models of team-based care, each representing a progressively deeper level of professional integration (Bendowska & Baum, 2023). In the multidisciplinary model, each professional operates independently within their own domain, contributing to patient care without necessarily engaging in joint problem-solving with colleagues. In the interdisciplinary model, professionals from different disciplines cooperate more actively, sharing information and making joint decisions for patient benefit. The transdisciplinary model goes further still, involving significant overlap of professional roles and shared leadership of patient care.

O'Daniel and Rosenstein (2008) highlight that professional communication is the cornerstone of effective team collaboration in healthcare settings. They argue that communication failures are among the most common and consequential causes of preventable patient harm, a finding that underscores the practical stakes of understanding and improving physician-staff cooperation. Rosen and colleagues (2018) further argue that teamwork in healthcare is a multidimensional construct that includes team leadership, mutual performance monitoring, backup behaviour, adaptability, and a shared mental model of clinical goals — all of which require sustained investment and deliberate cultivation.

3. The Evidence Base for Cooperation: Patient Outcomes and Safety

The case for physician-staff cooperation rests on a substantial and growing body of evidence demonstrating that collaborative practice is associated with significantly better patient outcomes across a wide range of clinical settings and conditions.

Bendowska and Baum (2023) provide a comprehensive synthesis of this evidence in their study of Polish medical students' perceptions of interdisciplinary cooperation, noting that the WHO's 2010 Framework for Action documented that interdisciplinary teams were associated with better outcomes in family medicine, infectious disease treatment, and humanitarian relief. Facilities where

health professionals cooperated effectively reported reduced rates of medical complications and errors, decreased mortality rates, shorter hospitalisation periods, and fewer communication misunderstandings. Subsequent research confirmed improvements in patient access to care, care coordination, and patient safety.

Rosen and colleagues (2018) emphasise that teamwork in healthcare represents one of the key discoveries enabling safer, high-quality care, noting that the evidence linking team-based practice to improved patient outcomes has accumulated sufficiently to warrant describing effective teamwork as an evidence-based intervention in its own right. Their analysis highlights that failures in teamwork contribute to a disproportionate share of adverse events in clinical settings, making investment in teamwork development not simply a cultural aspiration but a patient safety imperative.

The specific domain of physician-nurse collaboration has received particularly extensive empirical attention. Tang and colleagues (2013) conducted an integrated literature review of collaboration between hospital physicians and nurses, finding consistent evidence that effective physician-nurse collaboration was associated with improved patient outcomes, greater patient satisfaction, reduced medication errors, and better management of complex clinical conditions. Their review identified communication, mutual respect, shared decision-making, and clearly defined professional roles as the key facilitators of effective collaboration in hospital settings.

Gjessing and colleagues (2023) examined a particularly sensitive domain of physician-nurse collaboration — the decision-making process around ending life-prolonging treatment for intensive care patients. Their findings are instructive because they reveal both the profound importance and the significant challenges of collaborative practice in high-stakes clinical decisions. They found that while nurses brought invaluable knowledge of patients' wishes and responses to treatment — gained through sustained bedside presence — the collaboration between nurses and physicians in these decisions was often constrained by hierarchical dynamics, with nurses' contributions not always receiving equal weight in formal decision-making processes. This finding resonates with a broader pattern identified in the literature: that even when the value of collaboration is intellectually acknowledged, its practice remains uneven.

Baek and colleagues (2023), in their cross-sectional study of nursing teamwork and patient-centred care, demonstrated that nursing teamwork — itself an expression of cooperative professional practice — was essential in promoting patient-centred care. Their findings highlight that cooperation within professional groups, as well as between them, contributes to the relational and humanistic dimensions of healthcare that patients value most highly.

Janes and colleagues (2021) further extended the evidence base by examining the association between healthcare staff engagement and patient safety outcomes in a systematic review and meta-analysis. Their findings demonstrated a significant positive association between staff engagement — which encompasses cooperative working relationships, professional autonomy, and job satisfaction — and patient safety outcomes. This finding is important because it links the quality of interprofessional relationships not just to clinical processes but to the broader organisational conditions that determine whether healthcare systems are safe and resilient.

4. The Physician-Nurse Collaboration: A Special Focus

Given nurses' central role in direct patient care — they are typically the healthcare professionals with the most frequent and sustained contact with patients across all clinical settings — the quality of physician-nurse collaboration warrants particular attention. This relationship has been the subject of extensive research, and the findings reveal both its critical importance and the persistent tensions that complicate it.

Dahlawi and colleagues (2023) observed that the physician-nurse relationship has historically been characterised by significant power asymmetry, with physicians in a position of authority and nurses in a subordinate, compliance-oriented role. This traditional hierarchical model, while increasingly challenged in contemporary healthcare discourse, continues to shape actual clinical practice in many settings — particularly in countries and cultures where hierarchical professional structures are deeply embedded. In Middle Eastern healthcare settings, for example, the communication hierarchy between doctors and nurses often positions nurses as doctors' assistants rather than as autonomous professional collaborators, with significant implications for the quality and character of collaborative practice.

Vatn and Dahl (2022), in their study of interprofessional collaboration between nurses and doctors for treating patients in surgical wards, found that collaboration was shaped by a complex interplay of professional role clarity, communication patterns, and institutional culture. They noted that effective

collaboration was more likely when professional roles were clearly defined and mutually understood, when communication channels were open and bidirectional, and when the organisational culture of the ward actively supported collaborative practice. Conversely, when any of these conditions was absent, collaborative practice tended to deteriorate into a transactional exchange of information rather than a genuine partnership in patient care.

Tang and colleagues (2013) identified four key dimensions of physician-nurse collaboration in their integrated literature review: shared decision-making, open communication, mutual respect, and professional role clarity. Their analysis highlighted that each of these dimensions was both individually important and interdependent with the others — effective collaboration requires all four to be present simultaneously. A relationship characterised by open communication but lacking mutual respect, for example, may not produce genuine collaboration because nurses may feel unable to express clinical concerns in ways that are taken seriously by their physician colleagues.

Gjessing et al. (2023) observed that in end-of-life care settings, nurses' distinctive knowledge of patients — their preferences, fears, and responses to suffering — made them irreplaceable contributors to the decision-making process around life-prolonging treatment. Yet this contribution was not always recognised or systematically integrated into formal clinical decision-making. The authors called for structural changes to decision-making processes that would formalise nursing input, ensuring that the full breadth of clinically relevant knowledge was available and considered in these consequential decisions.

Gregoriou and colleagues (2025), in their systematic literature review of physicians' and nurses' attitudes toward interprofessional collaboration, found that while both groups generally expressed positive attitudes toward collaboration in principle, significant divergence remained in how the two groups understood and experienced collaboration in practice. Nurses consistently valued collaboration more highly and reported greater willingness to engage in collaborative practice than did physicians. This finding, which echoes those of earlier studies reviewed by Dahlawi et al. (2023), may reflect differences in professional culture, educational socialisation, and the structural position of each profession within the healthcare hierarchy.

5. Barriers to Physician-Staff Cooperation

Understanding why cooperation fails is as important as understanding what makes it succeed. The barriers to effective physician-staff cooperation are multiple, operating at individual, professional, organisational, and systemic levels.

At the individual and professional level, the most consistently identified barriers include differences in professional culture, communication styles, and perceptions of role boundaries. Hall, as discussed by Bendowska and Baum (2023), has argued that each medical profession develops its own culture — including beliefs, customs, and behaviours — and that the traditional organisation of medical education, in which students learn exclusively within their own professional group, reinforces these cultures and the professional silos that accompany them. Medical students are trained to assume leadership and responsibility for clinical decisions, which can make it challenging for them to develop the collaborative mindset required for effective teamwork when they enter clinical practice.

Stereotypes and prejudices about other health professions represent a related barrier. Bendowska and Baum (2023) note that negative stereotypes — for example, of nurses as physicians' assistants rather than autonomous professionals — are often formed before students even enter their professional education programmes, shaped by broader social representations of healthcare roles. These stereotypes can persist and intensify through professional education if interprofessional learning opportunities are not deliberately provided.

Communication failures are among the most significant and consequential barriers to cooperation. O'Daniel and Rosenstein (2008) describe how the communication hierarchy in healthcare — in which information flows more easily down professional hierarchies than across or up them — creates conditions in which critical clinical information may not reach the professionals who need it, or may not be acted upon even when received. This problem is particularly acute in high-pressure clinical environments such as intensive care units and emergency departments, where communication failures can have immediate and serious consequences for patient safety.

At the organisational level, structural barriers to cooperation include inadequate staffing, poor team composition, lack of shared physical space for interprofessional communication, and institutional cultures that do not actively value or incentivise collaborative practice. Rosen and colleagues (2018) note that many healthcare organisations have invested extensively in the technical aspects of care

delivery while underinvesting in the team processes that determine whether that technical capability translates into safe and effective care.

The occupational health challenges faced by healthcare workers represent a further, often overlooked barrier to effective cooperation. Ezie and colleagues (2023) documented the extensive physical, psychological, and social hazards faced by healthcare workers, including exposure to biological pathogens and harmful chemicals, psychosocial stress, violence, and burnout. During the COVID-19 pandemic, 23% of front-line healthcare personnel worldwide reported depression and anxiety, and 39% reported insomnia. Holtzclaw and colleagues (2020) similarly documented that the health challenges faced by healthcare professionals — including high levels of occupational stress, long working hours, and inadequate access to healthcare themselves — substantially undermined their capacity for effective professional functioning, including their ability to engage in cooperative and communicative practice with colleagues.

The significance of healthcare worker safety for cooperative practice is direct: workers who are physically exhausted, psychologically distressed, or experiencing burnout are less able to sustain the cognitive and emotional resources that effective collaboration requires. Ezie and colleagues (2023) argue compellingly that protecting and promoting the health, safety, and well-being of healthcare workers is not merely a welfare concern but a patient safety imperative, as healthcare worker health directly determines the quality of patient care. This argument establishes a clear connection between the occupational conditions of healthcare work and the interprofessional dynamics that cooperation depends upon.

6. Facilitators of Effective Cooperation

Against the backdrop of these barriers, the literature also identifies a robust set of facilitating factors that, when present, substantially improve the quality and consistency of physician-staff cooperation.

Shared education and interprofessional learning experiences are among the most powerful facilitators of cooperative attitudes and behaviour. Bendowska and Baum (2023) found that students who participated in classes with peers from other medical faculties, in which educators actively encouraged interaction and cooperation, rated the advantages of interdisciplinary team-based care significantly higher than students without such experience. Dahlawi and colleagues (2023) reached a similar conclusion, arguing that interprofessional education should be systematically integrated into medical school curricula to develop the collaborative attitudes, knowledge, and skills that future physicians will need to practise effectively as members of interdisciplinary teams.

Rosen and colleagues (2018) identify shared mental models — common understandings of team goals, individual roles, and the clinical situation — as a critical facilitator of effective teamwork. When team members share a mental model, they can coordinate their activities efficiently even in novel or high-pressure situations, anticipating each other's needs and adjusting their behaviour accordingly. Developing shared mental models requires deliberate investment in team communication, joint training, and structured processes for sharing clinical information across professional boundaries.

Mutual respect and professional recognition are relational facilitators of cooperation that are highlighted across multiple studies. Tang and colleagues (2013) identified mutual respect as one of the four essential dimensions of physician-nurse collaboration, noting that it requires active cultivation — physicians and nurses must invest effort in understanding and valuing each other's professional contributions, rather than assuming that respect will emerge spontaneously from shared clinical work. Vatn and Dahl (2022) found that surgical ward nurses and physicians collaborated more effectively when each group demonstrated genuine recognition of the other's expertise and contributions to patient care.

Organisational leadership and culture play a crucial role in setting the conditions for cooperative practice. Janes and colleagues (2021) found that staff engagement — which is substantially shaped by organisational leadership — was positively associated with patient safety outcomes, suggesting that organisational investments in creating a culture of engagement and cooperation have measurable safety benefits. Institutions that model cooperative values at leadership level, create structures for interprofessional communication, and reward collaborative behaviour are more likely to achieve and sustain effective physician-staff cooperation than those that leave such dynamics to emerge organically.

7. Interprofessional Education as a Strategic Response

The evidence reviewed in this article converges on interprofessional education (IPE) as one of the most strategically important investments healthcare systems can make to improve physician-staff

cooperation. IPE — defined as educational experiences in which students from two or more health professions learn about, from, and with each other — addresses the root causes of many cooperation failures by building shared understanding, mutual respect, and collaborative competencies from the earliest stages of professional formation.

Dahlawi and colleagues (2023) found that medical students across year levels demonstrated lower JSAPNC (Jefferson Scale of Attitudes toward Physician-Nurse Collaboration) scores compared to counterparts in other medical schools where collaborative models were more actively promoted. This finding suggests that the attitudes toward collaboration formed during medical education have lasting effects on professional behaviour, and that medical schools have both an opportunity and a responsibility to cultivate positive collaborative attitudes from the first year of study.

Bendowska and Baum (2023) emphasise the importance of introducing IPE early in professional education, before profession-specific stereotypes and hierarchical attitudes become entrenched, and of maintaining interprofessional learning opportunities through to the final year of study. The optimal structure of IPE should include elements at the classroom, simulation, and practice levels, providing students with opportunities to develop collaborative skills in progressively realistic and complex clinical contexts. Crucially, Bendowska and Baum (2023) also note that educators conducting multidisciplinary classes must be aware of the existing stereotypes and prejudices among students and must actively use pedagogical strategies to challenge these and promote genuine interprofessional learning.

Dahlawi and colleagues (2023) provide a detailed set of recommendations for integrating IPE into medical school curricula, emphasising that collaborative skills development must be assessed as well as taught — interprofessional competencies should be included in both formative and summative assessments, so that students receive regular, structured feedback on their progress toward collaborative practice. They also note that peer feedback in interprofessional settings can be particularly valuable, as observations from colleagues from different professional backgrounds can offer insights that are not available within a single professional perspective.

8. Cooperation in High-Stakes Clinical Contexts

The quality of physician-staff cooperation is tested most severely in high-stakes clinical contexts — intensive care units, emergency departments, surgical wards, and end-of-life care settings — where the consequences of cooperation failures are most acute. The evidence from these settings offers both cautionary insights about the persistence of cooperation challenges and instructive examples of collaborative practices that make a measurable difference to patient outcomes.

Gjessing and colleagues (2023) examined decision-making around ending life-prolonging treatment in intensive care, a context that concentrates the most complex ethical, clinical, and interpersonal challenges of physician-nurse collaboration. Their findings highlight the importance of structural processes — formal meetings, documented nursing assessments, explicit invitations to nursing staff to contribute to treatment decisions — in ensuring that the full breadth of clinical knowledge available to the team is systematically mobilised in high-stakes decisions. In the absence of such structures, the collaboration tends to be informal and dependent on individual relationships, producing wide variation in the extent to which nursing knowledge actually shapes clinical decisions.

Vatn and Dahl (2022) found that in surgical ward settings, effective physician-nurse collaboration required not just positive interpersonal relationships but also clearly defined processes for communication and decision-making. When such processes were present, nurses and physicians were able to cooperate effectively even in complex clinical situations; when they were absent, cooperation tended to be ad hoc and inconsistent, with significant implications for patient care quality.

Rosen and colleagues (2018) review the evidence on teamwork in healthcare more broadly, identifying adaptability, backup behaviour, and team leadership as particularly important in high-intensity clinical environments. Teams that function effectively under pressure are those that have developed strong collaborative habits during routine practice — they have invested sufficiently in team processes during normal operations to draw on those processes effectively when clinical demands escalate.

9. Cooperation and the Well-Being of Healthcare Workers

The relationship between interprofessional cooperation and healthcare worker well-being is bidirectional and mutually reinforcing. On one hand, effective cooperation — characterised by mutual respect, shared decision-making, and open communication — is itself a source of professional satisfaction and psychological support, reducing the

isolation and stress that healthcare workers experience in demanding clinical environments. On the other hand, when cooperation is poor — marked by hierarchical conflict, communication failures, and professional disrespect — it becomes an additional source of occupational stress, contributing to burnout, turnover, and health deterioration among healthcare staff.

Bendowska and Baum (2023) note that cooperation in interdisciplinary healthcare teams has been associated with greater job satisfaction and a reduced risk of professional burnout syndrome among medical professionals, in addition to its benefits for patients. This finding positions effective cooperation not just as a patient safety intervention but as a workforce sustainability strategy — an investment in the conditions that enable healthcare workers to sustain their professional engagement over the long term.

Ezie and colleagues (2023) describe the profound toll that occupational hazards take on healthcare workers' health and well-being, from physical exposures to biological and chemical hazards to the psychological burden of high-stress, high-demand work. Their analysis of the six health system pillars makes clear that a deficient health workforce — depleted by occupational illness, burnout, and attrition — undermines every other pillar of the health system, from service delivery to governance. Protecting healthcare workers' safety and well-being is thus not separable from ensuring the quality of cooperation between them; the two goals reinforce each other and must be pursued together.

Holtzclaw and colleagues (2020) draw attention to the paradox that healthcare professionals — whose work is centred on promoting health — often struggle to maintain their own health and well-being. Long working hours, high stress, limited autonomy, and inadequate organisational support create conditions in which the cognitive and emotional resources required for effective cooperation are chronically depleted. This insight has important implications for how healthcare organisations approach the challenge of improving physician-staff cooperation: structural improvements to working conditions and workforce well-being are as important as educational and cultural interventions in creating the conditions for sustainable collaborative practice.

10. Recommendations for Strengthening Physician-Staff Cooperation

Drawing on the evidence reviewed in this article, a number of recommendations emerge for healthcare organisations, educational institutions, and policymakers seeking to strengthen physician-staff cooperation.

At the educational level, medical and nursing schools should prioritise the systematic integration of interprofessional education into their curricula, beginning in the first year of study and continuing through to graduation. IPE should include classroom, simulation, and practice-based components, providing students with opportunities to develop collaborative skills at progressively complex levels of clinical engagement. Educators should be specifically trained in interprofessional pedagogy, and collaborative competencies should be formally assessed as part of professional qualification requirements. As Dahlawi and colleagues (2023) recommend, the integration of IPE should be accompanied by regular curriculum review to identify gaps in collaborative skills development and opportunities for enhancement.

At the organisational level, healthcare institutions should invest in creating structural conditions for effective cooperation. This includes establishing regular interprofessional team meetings and huddles, developing clear processes for sharing clinical information across professional boundaries, and creating governance structures in which the contributions of all health professions to patient care are formally recognised and integrated into decision-making. Drawing on the findings of Gjessing and colleagues (2023), particular attention should be paid to ensuring that nursing staff have structured opportunities to contribute their distinctive patient knowledge to high-stakes clinical decisions, rather than relying on informal relationships that may or may not facilitate such contributions.

At the cultural level, healthcare organisations should actively challenge hierarchical professional cultures that undermine cooperative practice. This requires leadership commitment to modelling collaborative values, acknowledging and addressing stereotypes and prejudices when they emerge, and creating institutional cultures in which mutual respect between all professional groups is expected and enforced. Janes and colleagues (2021) demonstrate that staff engagement — a proxy for a respectful, collaborative organisational culture — has measurable effects on patient safety outcomes, providing a strong evidence-based justification for cultural investment.

At the workforce well-being level, as Ezie and colleagues (2023) and Holtzclaw and colleagues (2020) argue, improving physician-staff cooperation requires investment in the occupational health and

safety of healthcare workers. Organisations must address the structural causes of burnout, including excessive workloads, inadequate staffing, and insufficient psychosocial support, in order to create conditions in which healthcare workers have the physical and psychological resources required for sustained, high-quality cooperative practice.

11. CONCLUSION

Cooperation between physicians and healthcare staff is not a peripheral or optional feature of effective healthcare — it is central to the quality, safety, and humanity of the care that health systems provide. The evidence reviewed in this article demonstrates comprehensively that effective cooperation is associated with better patient outcomes, safer care, greater patient satisfaction, and improved professional well-being across a wide range of clinical settings and patient populations. Conversely, cooperation failures are consistently implicated in adverse patient outcomes, communication breakdowns, and healthcare worker distress.

The challenge of building and sustaining effective physician-staff cooperation is complex, operating at individual, professional, organisational, and systemic levels. It requires investments in interprofessional education, organisational culture, workforce well-being, and structural processes for communication and decision-making. None of these investments alone is sufficient; the evidence suggests that sustainable improvements in cooperation require a coordinated, multilevel approach.

As healthcare systems face growing demands from ageing populations, rising chronic disease burdens, and the aftermath of global health crises, the importance of effective cooperation between physicians and all members of the healthcare team will only intensify. The goal of providing comprehensive, patient-centred, high-quality care cannot be achieved by any single profession working in isolation. It requires the full, coordinated contribution of all health professionals, working together in relationships of genuine mutual respect, open communication, and shared commitment to the patients in their care.

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