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# Improving Public Health through Interdisciplinary Collaboration: Insights from Nursing, Family Medicine, and General Practitioners

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**Abstract**
Using methods from different fields, like nursing and family medicine together, to provide patient-centered care. Family medicine and nursing work well together in basic care, and nurses are working together more and more to meet the complex needs of their patients. This article looks at modern models of multidisciplinary collaboration, such as team-based care and the Patient-Centered Medical Home (PCMH), and how they affect how well patients do, how much it costs, and how well all-around care is given. The review also talks about problems that can come up with integration, like not knowing what your job is, having trouble communicating, and institutional limitations. It then suggests ways to get around these problems, such as training people from different fields, policies that help, and integrated health IT systems. There are case studies of successful merging that show how collaborative care can be used in real life.

**Keywords:** General Practitioners; Public Health; Family Medicine; Nursing; interdisciplin**ary**

## Introduction

Over the past years, health systems worldwide have given a number of priority policies to patient-centered treatment that is accessible, comprehensive, and responsive to individual patients' needs. Nursing and family medicine remain core strategies in this approach, as many times, nurses are the first point of contact for the treatment-seeking populace, while family medicine practitioners guarantee the continuity of care. A viable strategy for addressing the complex requirements of patients, especially those with chronic illnesses or long-term care needs, is the integration of family medicine and nursing. Collaborative efforts between nursing and family medicine practitioners have been shown to enhance patient satisfaction, care coordination, and health outcomes during transitions in primary care practices (1,2). The rationale for combining family medicine and nursing is quite simple: more comprehensive care becomes possible by integrating the two skill sets. The nursing profession offers a patient-focused approach and places strong emphasis on prevention and health education, while family medicine professionals add the element of diagnostic competence

and continuity of treatment. This collaboration is essential to addressing health care challenges of the day, such as managing chronic diseases, which comprise the majority of health expenditures and demand coordinated, long-term care plans. Working together in community health settings, nurses and family doctors can provide care that is more accessible and culturally sensitive, responding to social determinants of health while increasing health care access3 4 While many benefits emanating from the integration of nursing and family practice are well documented, major barriers persist. Examples of structural barriers to collaboration include strict institutional hierarchy, vague job descriptions, and a lack of interdisciplinary training. For example, if there are no established channels for information sharing and communication within disciplines, the effect of collaborative care is minimized (4,5). Role confusion is one more general issue whereby nurses and family doctors consider that there is some overlapping in their duties leading to inefficiencies and possible conflicts (6). This review will highlights the importance of interdisciplinary between different field and its impact on improving health care system

**Integration of Nursing and Family Medicine**

**Benefits of Integration**

Cross-professional collaboration is essential for delivering high-quality care, a notion that is not novel; as early as 1978, the International Conference on Primary Health Care declared that cross-professional health teams are vital for addressing the diverse primary health needs within the community (7). Subsequently, numerous nations have adopted this vision by establishing primary care teams and multi-professional primary health centers, thereby delivering comprehensive care through the integration of health promotion, preventive, curative, and rehabilitative services (8-10). Given the contemporary rapid ageing population and the rising prevalence of patients with intricate needs, the prospects for interdisciplinary collaboration in primary health care have expanded beyond the expectations of the founders of the Alma-Ata Declaration and the pioneers of health teams. The World Health Report 2008 suggested that primary care teams enhance the treatment process by taking on the coordinator function, so preventing task fragmentation and enhancing continuity of care for high-demand patients.

Primary health care serves as a crucial catalyst for innovation in interdisciplinary collaboration. Collaboration within interdisciplinary health teams has disrupted physician-centric care paradigms, resulting in the adoption of broader responsibilities for nurses, midwives, physiotherapists, psychologists, social workers, and other health professionals in conjunction with family physicians to advance patient-centered and community-focused care (11). Consequently, team-based primary health care has enhanced the professional status of nurses and other non-physician health workers, liberating them from their traditional inferior position in the healthcare system. Recent chronic care concepts adopted in numerous countries have reinforced the role of nurses as primary contact partners in healthcare, aiming to cultivate enduring nurse-patient interactions (12). Thus, this necessitates a tight coordination between the personal general practitioner and the personal nurse (13).

Ideally, each healthcare practitioner in a multidisciplinary team is accountable for their own area of expertise. The primary advantage of integrating the skills, experience, and expertise of various professions within a team is the access to diverse knowledge and competencies, which allows for the provision of a comprehensive range of services and fosters a more holistic understanding of patients' conditions (14).

Inter-professional primary healthcare teams (PHTs), comprising general practitioners (GPs) and various health professionals, are being promoted as a substitute for solo GP practice. The teams are

anticipated to enhance their capacity for preventative care, chronic disease management, and a more effective allocation of responsibilities across pertinent professions (15) A fundamental characteristic of European health systems is the general practitioner serving as the initial access point and gatekeeper. A trend is evident of PHT practices evolving from GP practices (16). Nurses are frequently the increasing component, although there are significant variations in the composition of PHTs across Europe (17,18) Groenewegen posits that "nurses are the lubricant in the primary care innovation machinery" (19) and data substantiates that a greater quantity and novel roles for nurses result in enhanced healthcare outcomes in primary care (20). Neglecting patients' views of PHTs may result in changes that are primarily focused on service provider evaluations and political goals, so becoming detached from the actual experiences of patients in their daily lives.

PHT changes that extend the patient-GP interaction to other health professionals may impair continuity of care( 21) Continuity of treatment is a critical quality attribute of primary healthcare that gains significance for patients as they age, acquire various comorbidities, face complex issues, or experience social or psychological vulnerabilities. Continuity serves not as a conclusion but as a mechanism to achieve high-quality patient care. The extent to which a sequence of distinct healthcare events is perceived as cohesive, interconnected, and aligned with the patient's medical requirements and personal circumstances (21). Continuity can be perceived from several viewpoints, such as that of patients, providers, and organizations. This study seeks to examine continuity from the patient's perspective. We focus on how individual patients perceive alterations in service integration and coordination when their primary healthcare transitions from single-profession general practitioner care to team-based care involving a general practitioner and a nurse.

To improve hospital care for older patients, family doctors and other health care workers should work together more. Japan's population is getting older quickly, and more family doctors can help with IPC interventions in the hospital care of older patients, which will lead to better clinical results. Family doctors in Japan work in a variety of places, like offices and hospitals mouth care in hospitals can lower the risks of problems like aspiration pneumonia and nutritional deficiencies that can happen because of bad mouth hygiene (22,23). Working together with doctors, nutritionists, and therapists can make both physical and nutritional treatments better 24,25). The increase in IPC could lead to many things, such as a drop in hospital return rates (26,27).In earlier research, aspiration pneumonia and death rates were lower when patients were cared for by a team of workers from different fields (28,29). Physicians who work as family doctors in Japan are taught how to work well with other doctors . IPC measures for older patients care led by family doctors can make things better for their patients.

The drop in the number of readmissions is one sign that care for older people in hospitals is getting better. Polypharmacy helps older people with a number of long-term illnesses (29, 30). Because they have more than one illness, older people may be more likely to have their chronic illnesses, infections, and heart problems get worse (30).Re-admission of older patients raises the risk of illness and death, which should be avoided (31,32). The rate of readmission can be lowered by improving the discharge and follow-up processes in outpatient areas and having different healthcare workers do IPC well.

High rates of readmission put more stress on healthcare services. They caused more people to go to hospitals, which requires more work from many medical workers (33) Most of the time, dedication is stronger in hospitals than in the community (34). The rise in the number of hospitalized patients can wear down medical staff, which could eventually cause burnout (35-37). Also, staying in the hospital costs more than getting care in the community, which affects the finances of healthcare services (38). Using IPC intervention to lower the number of times older patients have to be

readmitted can make things easier for healthcare workers and processes (39). The World Health Organization (WHO) has observed that "physicians specializing in Family Medicine or general practice" are typically integral to effective primary care strategies(40).

The World Health Assembly has recommended the training and retention of sufficient health workers, possessing an appropriate skill mix, including primary healthcare nurses, midwives, allied health professionals, and family physicians, capable of functioning in a multidisciplinary environment alongside nonprofessional community health workers to effectively address the health needs of the population. The Africa Region of the World Organization of Family Doctors (WONCA) has released a consensus statement regarding the contributions of Family Medicine and the role of family physicians within the African setting(41).

The National Development Plan explicitly acknowledges the significant role of family physicians in clinical governance in South Africa and in enhancing the quality of district health services. The proposal indicates that family physicians trained in several specialist areas can provide valuable clinical leadership within health districts.

The plans for National Health Insurance (NHI) and the re-engineering of primary care anticipate a role for family physicians at district hospitals and within district clinical specialist teams (DCSTs), yet their function concerning primary care and community-based services, such as ward-based outreach teams, remains ambiguous. The national Human Resources for Health program proposed a target of 0.2 family physicians per 10,000 individuals, indicating a total requirement of 1,060 family physicians for the nation. In 2013, the number of family physicians was 545(41).Those who practice family medicine have obtained advanced degrees in the field and are considered experts in general medicine. The postgraduate training follows the same structure as the specialized training: a four-year full-time program, with registrar postings providing supervised clinical training, and a single national exit test administered by the Colleges of Medicine of South Africa (CMSA). Family physicians are hired in public service positions at the same level as specialists and are registered in a separate register at the HPCSA after graduation(41).

**Functions of the primary care physician**

On a national level, family medicine experts have reached consensus on six critical responsibilities that family physicians should be held accountable for Essentially, a family doctor is a primary care physician with training to treat most common medical issues seen in primary care and district hospitals. When it comes to the services offered and abilities needed by the district health services, his or her training covers a wide range of clinical disciplines. We have outlined these ten clinical domains . Emergency obstetric care, general anesthesia, conducting primary and secondary trauma patient surveys, creating intraosseous access, performing fine-needle aspiration biopsies, interpreting radiographs, and providing brief behavior change counseling are all examples of the clinical skills outlined in detail on a national level Family medicine education also emphasizes the following qualities of an expert generalist: Enhancing the healthcare system necessitates the concurrent achievement of four objectives: elevating the quality of care, improving population health, decreasing healthcare expenditures, and augmenting job satisfaction among healthcare professionals. Multiple studies suggest that the aforementioned objectives can be attained through collaboration within interdisciplinary teams(41).

Littlechild and Smith (42) assert that collaboration within interdisciplinary teams enhances productivity, optimizes the utilization of team members' skills, fosters a heightened sense of individual accountability for goal attainment, ensures comprehensive patient care, stimulates creativity, and yields innovative solutions in patient care. In 2010, the WHO reported that interdisciplinary teams were linked to improved outcomes in family medicine, infectious disease management, and humanitarian assistance. Furthermore, such teams were found to be more

effective in terms of reducing epidemics and non-communicable diseases (43). Institutions with collaborative health professionals documented diminished rates of medical complications and errors, lowered death rates, abbreviated patient hospitalization durations, and fewer communication misunderstandings among medical personnel (43). Furthermore, later studies revealed enhancements in patient access to healthcare, effective care coordination, and heightened patient safety (44). According to the studies, the introduction of cooperation grounded on interdisciplinary teams decreases the frequency of complications in the departments of internal diseases (45). Besides, complication rates due to intravenous cannula insertions reduced, which the researchers credited to an infectious diseases specialist as well as an epidemiology nurse involved in the therapeutic team (46). A decrease in the frequency of adverse medication reactions was also observed. This was associated with the involvement of a pharmacist in the team (47) and the performance of interdisciplinary ward rounds.( 48)The interdisciplinary team constitutes an essential component of patient care in the palliative and hospice settings (49). In essence, the nature of palliative and hospice care adopts a holistic approach to the care ofpatients. Symptom management is greatly enhanced, bu rden is relieved, and the quality of life of caregivers is improved; moreover, the efficiency of attaining care goals is increased. This practice enables the patient to undergo the dying process in an environment of their choice (50). In addition, relatives of patients tend to rate the care more positively in terms of pain management efficacy, the communication abilities of medical staff and dignity concerning (51) This model has been associated with a rise in work motivation and job satisfaction and a notion of continuous improvement among physicians and nurses (52)

The patient-centered approach to care has clearly positioned the patient as a valuable member of the team, a cornerstone of family practice, particularly in the setting of chronic illness.(53) Patient involvement in decisions affecting their care has indeed promoted patient self-care, inspired behavior change, and compliance. Studies have shown that active engagement of patients as members of the healthcare team has resulted in improved delivery of health services, among them a reduction in medical errors. Health practitioners are now in a position to feel the real-life impact medical decisions have on a patient's life, more so with the involvement of patients as active team members. Team-based health care improves patient and provider satisfaction; enhances patient safety; increases effective use of limited health resources; and improves continuity of treatment (54,55); and promotes clinical outcomes (56 - 58). Team-based treatment has also been shown to improve patient education, enhance preventative care, and save health care costs.16 Moreover, team-based care increases the capability of doctors by transferring responsibilities from them to other medical specialists.(59) Nonetheless, patients have voiced worries about a team-based treatment paradigm eroding their trust in their doctors.(60). Patients' role in the primary care team has not been adequately explained, despite the fact that they view themselves as members of their own healthcare team. According to a study conducted on chronic illness patients in general practice in Australia, individuals desire to be acknowledged as collaborators in the administration of their medical care.19 "Having a voice in their own care" is what they anticipate (61). It has also been demonstrated that patients' perceptions influence their involvement with the medical staff.(62) The Patient-as-Partner concept, in which patients are active members of multidisciplinary teams, is an evolution of the patient-centered approach.(63)

Patients' awareness and knowledge of the roles of other health professionals on the team seem to be ambiguous, with the exception of doctors who they view as team leaders and who bear overall

responsibility for clinical decision-making about their care .Patients may not believe that nurses have a leadership role in clinical decision-making because they are unaware of the entire range of talents that nurses may possess.

Making treatment decisions, facilitating provider-to-provider contact, scheduling several appointments, and advocating for themselves are frequently part of their job description. Involving patients as team members is crucial for both direct care and the creation and execution of care plans. However, there are currently few evaluative tools available to gather information regarding patients' interactions with their healthcare team (64) General patient satisfaction is commonly reported using surveys and questionnaires (65)

Self-report bias (66) difficulty differentiating between particular aspects of care (67) confusion of patient "satisfaction" with more informative patient "experience" (68) and problematic survey design and administration (69) are just a few of the well-documented limitations of self-report tools, despite their ease of use.

Patient narratives of their experiences are also frequently produced through focus groups and interviews. These narratives are susceptible to collective phenomena and language barriers, even though they might be more suited to examining the subtleties of individual experiences (70) Since people prefer to recount specific occurrences in a linear form rather than discussing the more subtle, interacting, and underlying factors, verbal communication presents inherent obstacles when collecting data on complex experiences .Researchers may not be able to fully capture various voices and opinions in focus groups due to moderator effects and changes toward dominating speakers (71) When assessing patient perceptions on interprofessional teams, focus groups may also perpetuate normative discourses when contentious viewpoints or unpopular opinions are masked by lively group interactions (72). But even with these small drawbacks, focus groups, interviews, and surveys can still be useful. The discussion section provides examples of the usual advantages and drawbacks of well-known technologies. In light of these concerns, we recommend incorporating visual techniques into focus groups and other assessment instruments to create a comprehensive picture of patients' perceptions of their interprofessional healthcare teams. Incorporating visual tools into health sciences research can aid in participants' reflection, narrative, and thought processes (73). Visual techniques like mapping can be used in conjunction with other tools to provide a more thorough, customized, and adaptable view of team-based chronic illness care

**Strategies for Efficient Integration**

The successful integration of nursing and family medicine necessitates focused methods that consider educational, organizational, policy, and technical elements. Implementing these methods can augment teamwork, mitigate role ambiguity, boost communication, and foster a supportive atmosphere for interdisciplinary collaboration in patient-centered care(74). Instruction and Development: Interdisciplinary education and training are important to facilitate effective integration. Programs bringing together students in nursing and family medicine for learning experiences, such as combined case studies, simulation exercises, and workshops, help foster mutual respect and a deeper appreciation of each discipline's contribution to patient care. These learning opportunities develop communication skills and prepare healthcare professionals to work well together in real-world settings. Continuing education programs on interdisciplinary collaboration, including team-based care and patient-centered communication, further assist professionals currently in practice(42,75).Explicit Role Definition and Scope of Practice: Establishing responsibilities and scopes of practice for nurses and family physicians is essential to eliminate overlap, reduce confusion, and enhance efficiency. Explicit standards delineating each professional's roles within interdisciplinary models facilitate the establishment of a structured yet adaptable care environment.

Collaborative care agreements, team charters, and workflow standards can be established to define the roles of individual members and set expectations. For example, active care planning and decision-making between nurses and family physicians facilitate a shared sense of responsibility and respect for each professional knowledge (45).

## Conclusion

Integrating nursing with family medicine illustrates one of the most forward thinking approaches to some of the challenges facing today's healthcare world. Interdisciplinary care models, which incorporate the skills of both professions, serve to increase patient-centered care, improve chronic illness management, and maximize resource utilization.

In this way, using collaborative methods across a variety of platforms can provide comprehensive, preventive, and accessible care according to diverse patient needs, particularly among underserved communities. Its benefits are obvious: improved patient outcomes, increased efficiency, and greater patient satisfaction. Yet, to realize these benefits requires addressing the challenges of role ambiguity, organizational constraints, and barriers to communications. Interdisciplinary education, enabling policy, leadership to champion collaboration, and advanced integrated health IT are essential to ensure successful integration. Looking to the future, new integration models, ongoing research to identify best practices and policies to incentivize interdisciplinary care will be required to advance these collaborative approaches.

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