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Cultures of Interdisciplinary Teams: How to Foster Good Dynamics

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Introduction

Teamwork is the most effective approach in which to accomplish complex tasks. In general, teamwork has been shown to improve production, augment organizational and employee performance, increase job satisfaction, and enhance decision making.[1] In health care, teamwork is of vital importance in order to maximize patient care delivery.[1–9] Interdisciplinary teamwork is recommended as a comprehensive approach for health care teams to provide patient-centered care; combining skills, experience, and knowledge to produce a superior outcome.[10]

The origins of teamwork in health care can be traced to Cabot's work in the early 1900s.[6] His original interdisciplinary team concept was a doctor, social worker, and educator working together in patient care. In today's health care, the interdisciplinary team model is recommended by national organizations as a means to provide quality care. Interdisciplinary care is recognized as central to improving patient care, outcomes, and patient safety.[11] The Joint Commission on Accreditation of Healthcare Organizations (The Joint Commission) requires that long-term care patients receive care in the context of interdisciplinary teams.[12] A 2006 American Geriatrics Society (AGS) position statement supports interdisciplinary care as a means to provide optimal care for older adults.[9,13] Interdisciplinary care extends beyond care of the elderly into the field of hospice and palliative care.

The foundation and philosophy central to hospice and palliative care were built on the interdisciplinary team model.[5,6,14,15] Dame Cicely Saunders, the founder of the hospice movement, was trained as a social worker, nurse, and physician—embodying a nearly complete interdisciplinary team herself.[6,14] With the growth and increased regulation of the hospice industry in the United States, interdisciplinary teams have been further recognized and mandated. The Medicare Hospice Conditions of Participation (COPs) require hospice agencies to use an interdisciplinary approach through the contributions of various skilled professionals and directs them to work together to meet patient and family needs.[13,16,17] Furthermore, the interdisciplinary team is identified as one of the core elements of palliative care by the National Consensus Project for Quality Palliative Care (NCP) and by the National Quality Forum (NQF).[18,19] The NQF recommends that hospice and palliative care be provided by an interdisciplinary team of palliative care professionals as a means to achieve high-quality healthcare.[19]

The purpose of this article is to differentiate the interdisciplinary team from other team structures and to explore the benefits, the key elements in effective team functioning, and the challenges of interdisciplinary teams.

What Is an Interdisciplinary Team?

The World Health Organization (WHO) defines a team as two or more people working interdependently toward a common goal.[20] Health care professionals from different disciplines working together in patient care have historically considered themselves a team; however, theory and research on teamwork reveal that they may only be a group of individuals working side by side.[11] The literature often discusses "teamwork" or "collaboration" without specifying the structure of the team. Many publications use the term *multidisciplinary* interchangeably with *interdisciplinary*, reflecting the diverse expertise of the members rather than to imply the function of the team. Consistent definitions of the composition of an interdisciplinary team are lacking in the literature.[4] Team structure and function vary depending on whether they are modeled after a multidisciplinary, transdisciplinary, or interdisciplinary approach.[4,21]

Multidisciplinary teams are typically hierarchical in structure, with the professional identities of the members placed above team membership.[4,21] The multidisciplinary team has been described as working like "wedges of a pie."[21] Each member has a clearly defined place in the team yet members' contributions may be in relative isolation from each other.

In the transdisciplinary model, team members have less defined roles. Members tend to come from unrelated disciplines and typically include nonacademic participants.[22] The team members' expertise will blur across roles and systematically cross discipline boundaries.[4,21] This model is not often exemplified in health care.

The interdisciplinary model is based on synergistic and interdependent interaction of team members who each possess particular expertise.[3,14] Team members work closely together, actively communicating and sharing information.[4,21] Leadership is often task-dependent, defined by each

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situation.[21] Collaboration is identified as the process central to the interactions between members.[5,6,8,11,12,15,23] A hand analogy describes the interdisciplinary team; the individual fingers of the hand have different abilities, function and dexterity, and work together to achieve more than any one finger can alone.[21]

The literature examining the interdisciplinary approach in the field of palliative care has focused primarily on hospice interdisciplinary teams. Contrary to the common health care culture where the physician is the director of team effort, in the hospice interdisciplinary team, the patient and family are considered the epicenter and the nurse case manager is expected to lead the delivery of team-based care.[13,16] The interdisciplinary team's compilation of perspectives, the "many voices in a novel," enables each participant to contribute knowledge and skill to achieve a greater whole.[1]

What Are the Benefits of the Interdisciplinary Approach?

Research on teamwork has shown that interdisciplinary teams can improve clinical outcomes; health care processes; and satisfaction in a variety of disease processes, populations, and settings.[1–9,24] Specific diseases where interdisciplinary care has improved clinical outcomes include stroke, myocardial infarction, congestive heart failure, and geriatric syndromes.[9,25] Interdisciplinary communication can lead to improved outcomes in such areas as symptom control, reduced hospital length of stay, and hospital costs.[2–5,24] Daily interdisciplinary team hospital rounds, compared with usual care, are associated with reduced length of stay and hospital charges without differences in patient mortality.[8] In the geriatric population, interdisciplinary care has shown favorable clinical outcomes in multiple areas (Table 1).[9]

Palliative care provided by an interdisciplinary team has improved outcomes in symptom control, decreased numbers of inpatient hospital days, and lowered overall hospital costs for patients with advanced cancer.[26,27] Among patients with metastatic non–small-cell lung cancer, early palliative care led to significant improvements in the clinical outcomes of quality of life and mood, and longer survival.[28] Interdisciplinary care teams have also been shown to increase the likelihood of patients receiving care concordant with patient and family values, in particular, that death occurs in a preferred setting.[3,5,26]

Interdisciplinary teamwork has also been shown to improve various health care processes.[1] Teamwork has been correlated with enhanced patient safety, organizational commitment, and heightened productivity. Interdisciplinary rounds have been shown to improve communication.[4] A recent study found geriatric interdisciplinary transition teams improved care transitions as quantified by the three-item Care Transitions Measure[29] ("The hospital staff took my preferences and those of my family or caregiver into account in deciding what my health care needs would be when I left the hospital; When I left the hospital, I had a good understanding of the things I was responsible for in managing my health; When I left the hospital, I clearly understood the purpose for taking each of my medications.").[30] An interdisciplinary approach can decrease the incidence of falls and related injuries in the elderly.[9] The AGS supports interdisciplinary care as a means to improve health care processes and systems, including decreasing readmissions to acute care facilities.[3,9]

Studies have revealed improved patient, family, and staff satisfaction levels when an interdisciplinary care approach is utilized.[1,2,4,5,7,8,26,29] Terminally ill patients and their caregivers reported higher satisfaction with care when provided goal-oriented care by an interdisciplinary team.[26] Interdisciplinary collaboration improved nurses' level of job satisfaction and decreased burnout rates.[8]

Table 1. Clinical Outcomes of Geriatric Interdisciplinary Care

Maintaining the functional status of the patient
Decreasing loss in activities of daily living
Reducing use of home health care services
Decreasing rates of depression
Decreasing prevalence and symptoms of delirium
Improving caregiver health
Improving medication adherence
Preventing adverse drug reactions
Decreasing hospital utilization
Reducing hospital length of stay
Delaying nursing home placement
Decreasing nursing home admissions

What Makes an Interdisciplinary Team Work Well?

The secret to effective teamwork is unlikely to reside with one factor. Rather, effective team functioning is dependent on communication, interpersonal relations, team composition and structure, and organizational factors. The most prevalent theme in effective team function is communication.[10,11,16,31,32]

Communication, as the predominant factor facilitating effective team function, has been demonstrated in the care of the elderly and in settings of a palliative care unit, hospice interdisciplinary team, and primary care team.[9,10,11,16,32] Communication includes active information exchange in both a formal and an informal manner.[11,32]

Formal communication is facilitated by regular team meetings. Team meetings have been associated with effective teamwork and higher levels of innovation.[10] They assist in breaking down professional barriers, resolving inter-team conflict, promoting positive interpersonal relations and partnerships, and improving inter-professional communication.[10,13]

How communication is structured and what information is shared during team meetings can affect the interpersonal relations of the team.[3] The sharing of patient and family information as psychosocial stories, as opposed to biomedical data, has been shown to help build positive relationships between team members.[1,3,16] Hearing each other's stories can heighten awareness and understanding of each discipline's perspective about a patient's care plan and goals.[3] A "think aloud" approach to dialogue has been found to be beneficial in rehabilitation settings.[25]

What information is exchanged informally may be just as important as that discussed during more structured team meetings. This informal exchange of patient information often occurs in the work areas, hallways, or over lunch and is thought to be a critical part of communication.[11,32] Informal exchange requires team members to practice in geographic proximity with sufficient space to facilitate close communication.[4,10,31,32] Team narrative frequently begins through informal communication before it becomes solidified in the formal exchange of interdisciplinary team meetings.

Interpersonal relations between team members are important, especially high levels of mutual trust and respect.[4,10,32] Trust has been noted to be the most important indicator for successful cooperation in a palliative care team.[32] Respect combined with open communication can facilitate the free sharing of thoughts and information to promote collaboration.[11,31,33] Mutual respect can reinforce the value of each team member, regardless of his or her level of experience, seniority, or discipline.

Team respect and commitment can be facilitated in a work environment characterized by friendliness, optimism, humor, and the setting of high standards. A high level of team commitment, where team goals are identified and shared, is positively associated with group cohesiveness and team creativity.[4,32] Wittenberg-Lyles et al. describe the collective ownership of goals to be the highest ranked aspect of interdisciplinary collaboration by hospice team members.[5]

The structure and composition of the team has been found to be important for effective team functioning.[10] For example, team size may affect team outcomes.[4,10,20] Many studies suggest that smaller teams have higher levels of participation that significantly correlates with team effectiveness.[10,20] The WHO suggests that a team consisting of five to seven members may be the most effective size.[20]

As to composition, teams whose members have greater occupational diversity have higher overall effectiveness.[10] The diversity of members in experience and knowledge can improve group performance.[33] Less informed members asking questions may give rise to creative ideas of a group. In hospice, the COPs require interdisciplinary teams to include physicians, nurses, home health aides, counseling and social services, chaplaincy, bereavement, and volunteers.[34] The NQF recommends a core group of professionals from medicine, nursing, and social work in the interdisciplinary team, including some combination of volunteer and bereavement coordinators; chaplains; psychologists; pharmacists; nursing assistants; home attendants; dietitians; speech and language pathologists; physical, occupational, art, play, music, and child-life therapists; case managers; and trained volunteers.[19] Other characteristics of effective teams are clearly defined leadership and team member stability. Full-time staff working together longer with less movement of members to other areas can promote more effective teamwork.[10,20]

Organizational factors that positively affect team collaboration include administrative support, innovation, and effective implementation of change.[4,10,31] Support for team innovation can predict team effectiveness and the quality of teamwork.[10] A decentralized and flexible organization can positively affect collaboration.[4] In addition, providing performance feedback to the team can further improve performance and team member self-respect.[10,32] Team feedback has been shown to have a strong association with inpatient mortality.[35]

Barriers and Challenges to Effective Interdisciplinary Team Function

Many barriers exist to prevent a team from maximizing its collective performance. Communication breakdown, hierarchical structures, muddied roles of team members, and systems issues contribute to ineffective team functioning.

As communication is the core of collaboration, its breakdown can lead not only to ineffective teamwork, but can directly affect patient care and outcomes. Lack of communication and collaboration may be responsible for up to 70% of the adverse events reported in health care.[8] The Joint Commission denotes the lack of collaboration and communication between health care providers as a main cause of patient errors.

Lack of or inefficient communication has been noted to be one of the most significant factors correlating with ineffective collaboration in a palliative care team.[32] Contributing to this barrier are the challenges of geographic proximity and sufficient time for the exchange to occur.[4,10,11,25,31,32] Large patient caseloads with higher acuity and the lower lengths of stay that are prevalent in today's health care system interfere with the time needed for effective communication between team members.[1] Clinical demands on team members may interfere with the ability to dedicate time to meet on a regular basis. Shorter lengths of stay for hospice patients also limits the time for interdisciplinary team members to collaborate.

Communication within the team may be influenced by the team leader's area of expertise.[16] When the physician or nurse leads the hospice interdisciplinary team discussion, the sharing of biomedical information tends to be emphasized more than the sharing of psychosocial information.[13,16] The primary emphasis on biomedical information can lead to tension between team members.[3,13]

An organizational culture that promotes hierarchy can impede collaboration and have negative patient outcomes. Studies have revealed that female nurses are more collaborative with female versus male physicians.[8] Physicians tend to be dominant health care professionals, yet culture can influence this hierarchy. Physicians from the United States have been found to be less hierarchy-based than physicians from other countries. Recognizing cultural hierarchy and gender dominance as potential barriers to communication is important for effective collaboration to occur.

One of the most cited barriers to effective teamwork involves the absence of clear roles for team members.[3,5,10,13,21,25,31,32] The flexibility of interdisciplinary teams incorporates a purposeful role-blurring.[31] However, role ambiguity and competition can impede effective collaboration. Role ambiguity may be especially troublesome for interdisciplinary teams where social workers, nurses, and chaplains have overlapping roles. Role conflict in hospice interdisciplinary teams has been noted to involve social workers predominately, likely due to overlapping responsibilities with other team members.[13,31] Chaplains report that they most often experience role conflict with social workers, followed by nurses.[31]

Systems issues, particularly the lack of interdisciplinary team training, has more recently been recognized as a barrier to effective interdisciplinary team functioning. Teamwork and skills are not traditionally taught in medical and nursing school curricula.[5,11,15] Current health care education is typically discipline-specific; the opportunity to truly exercise an interdisciplinary approach is limited until very late in the educational process, if at all. Research highlights that the attitudes and skills needed to participate effectively in an interdisciplinary team may be lacking when they are not modeled and mentored in the early years of health care education.[4]

Integrating interdisciplinary teamwork into professional health care education is essential for the standardization of this model and the delivery of quality health care.[5,7,11,15] In

2003, the Institute of Medicine recommended that "all health professionals should be educated to deliver patient-centered care as members of an interdisciplinary team." Team communication skills should be routinely incorporated into medical curricula.[1,9] This process is exemplified in palliative medicine fellowship programs, which include an interdisciplinary approach to education as a core competency in order to achieve accreditation by the Accreditation Council for Graduate Medical Education.[36]

Summary

Interdisciplinary care can improve clinical outcomes, health care processes, and levels of satisfaction in various settings, as exemplified in the field of hospice and palliative care.[1–9,25,29] Successful interdisciplinary teams possess skills and produce superior health care outcomes that are not achieved by individuals alone—like the fingers working together as a hand.[21] Communication and collaboration are identified as essential to the successful functioning of the interdisciplinary team. Establishing clear goals and roles, mutual respect and trust between team members, team structure, and organizational support will help a team to work most effectively. For this effective means of care delivery to be standard in health care, it must be mainstreamed into health professional education early in curricula.

More rigorous studies focusing on the interdisciplinary approach are needed to provide better evidence of its impact on professional practice and health care outcomes.[37] Standardized tools that measure health care team effectiveness and outcomes are necessary to better conceptualize and improve interdisciplinary team collaboration. Narrowing and defining specific terms used in the teamwork literature can help to differentiate the effects of the interdisciplinary approach from other models of teamwork. Without a standard definition of interdisciplinary care, the comparison and evaluation of outcomes is severely limited.[22] Specific attributes, size, and types of members that compose an optimal interdisciplinary team also need further investigation.[38]

Palliative care research can benefit from focusing on interdisciplinary team studies that use standardized tools, definitions, and identify team structure in order to maximize the optimal team approach to patient-centered care.

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References

1. Goldsmith J, Wittenberg-Lyles E, Rodriguez D, Sanchez-Reilly S: Interdisciplinary geriatric and palliative care team narratives: Collaboration practices and barriers. Qual Health Res 2010;20:93–104.
2. Kuziemsky CE, Borycki EM, Purkis ME, Black F, Boyle M, Cloutier-Fisher D, Fox LE, MacKenzie P, Syme A, Tschanz C, Wainwright W, Wong H: An interdisciplinary team communication framework and its application to healthcare "e-teams" systems design. BMC Med Informatics Decision Making 2009;9:43. www.biomedcentral.com/1472-6947/9/43. (Last accessed November 13, 2010.)
3. Propp KM, Apker J, Ford WSZ, Wallace N, Serbenski M, Hofmeister N: Meeting the complex needs of the health care team: Identification of nurse-team communication practices perceived to enhance patient outcomes. Qual Health Res 2010;20:15–28.
4. Kilgore RV, Langford RW: Reducing the failure risk of interdisciplinary healthcare teams. Crit Care Nurs Q 2009; 32(2):81–88.
5. Wittenberg-Lyles E, Oliver DP, Demiris G, Regehr K: Interdisciplinary collaboration in hospice team meetings. J Interprofessional Care 2010;24:264–273.
6. Parker-Oliver D, Bronstein LR, Kurzejeski L: Examining variables related to successful collaboration on the hospice team. Health & Social Work 2005;30:279–286.
7. Rock W: Interdisciplinary teamwork in palliative care and hospice settings. Am J Hosp Palliat Care 2003;20:331–333.
8. Fewster-Thuente L, Velsor-Friedrich B: Interdisciplinary collaboration for healthcare professionals. Nurs Admin Q 2008;32:40–48.
9. Geriatrics Interdisciplinary Advisory Group: Interdisciplinary care for older adults with complex needs: American Geriatrics Society position statement. J Am Geriatr Soc 2006;54:849–852.
10. Xyrichis A, Lowton K: What fosters or prevents interprofessional teamworking in primary and community care? A literature review. Intern J Nurs Studies 2008;45:140–153.
11. Sargeant J, Loney E, Murphy G: Effective interprofessional teams: "Contact is not enough" to build a team. J Continuing Educ Health Professions 2008;28:228–234.
12. Bokhour BG: Communication in interdisciplinary team meetings: What are we talking about? J Interprofessional Care 2006;20:349–363.
13. Wittenbery-Lyles EM, Oliver DP, Demiris G, Regehr K: Exploring interpersonal communication in hospice interdisciplinary team meetings. J Geront Nurs 2009;35:38–45.
14. Oliver DP, Wittenberg-Lyles E, Demiris G, Tatum P, Regehr K, Burt S: The role of the hospice medical director as observed in interdisciplinary team case reviews. J Palliat Med 2010;13:279–284.
15. Meier DE, Beresford L: The palliative care team. J Palliat Med 2008;11:677–681.
16. Wittenberg-Lyles EM, Gee GC, Oliver DP, Demiris G: What patients and families don't hear: Backstage communication in hospice interdisciplinary team meetings. J Hous Elderly 2009; 23:92–105.
17. Medicare and Medicaid Programs: Hospice conditions of participation; final rule. www.cms.gov/CFCsAndCoPs/05_Hospice.asp. (Last accessed November 13, 2010.)
18. National Consensus Project: Clinical practice guidelines for quality palliative care, 2nd ed. www.nationalconsensusproject.org. (Last accessed November 13, 2010.)
19. National Quality Forum: A national framework and preferred practices for palliative and hospice care quality: A consensus report. www.qualityforum.org/Publications_Old/2006/12/A_National_Framework_and_Preferred_Practices_for_Palliative_and_Hospice_Care_Quality.aspx. (Last accessed November 13, 2010.)
20. World Health Organization: Team building. www.who.int/cancer/modules/Team%20building.pdf. (Last accessed November 13, 2010.)
21. Crawford GB, Price SD: Team working: palliative care as a model of interdisciplinary practice. Med J Australia 2003; 179:S32–S34.
22. Tress B, Tress G, Fry F: Defining concepts and the process of knowledge production in integrative research, pp. 13–26. www.library.wur.nl/frontis/landscape_research/02_tress.pdf. (Last accessed November 13, 2010.)

23. Boon HS, Mior SA, Barnsley J, Ashbury FD, Haig R: The difference between integration and collaboration in patient care: Results from key informant interviews working in multiprofessional health care teams. J Manipulative Physiol Ther 2009;32:715–722.
24. Penrod JD, Deb P, Dellenbaugh C, Burgess JF, Zhu CW, Christiansen CL, Luhrs CA, Cortez T, Livote E, Allen V, Morrison RS: Hospital-based palliative care consultation: Effects on hospital cost. J Palliat Med 2010;13:973–979.
25. Clarke DJ: Achieving teamwork in stroke units: The contribution of opportunistic dialogue. J Interprofessional Care 2010;24:285–297.
26. Hearn J, Higginson IJ: Do specialist palliative care teams improve outcomes for cancer patients? A systematic literature review. Palliat Med 1998;12:317–332.
27. Edmonds PM, Stuttaford JM, Penny J, Lynch AM, Chamberlain J: Do hospital palliative care teams improve symptom control? Use of a modified STAS as an evaluation tool. Palliat Med 1998;12:345–351.
28. Temel JS, Greer JA, Muzikansky A, Gallagher ER, Admane S, Jackson VA, Dahlin CM, Blinderman CD, Jacobsen J, Pirl WF, Billings JA, Lynch TJ: Early palliative care for patients with metastatic non-small-cell lung cancer. N Engl J Med 2010;363:733–742.
29. Arbaje AI, Maron DD, Yu Q, Wendel VI, Tanner E, Boult C, Eubank KJ, Durso SC: The geriatric floating interdisciplinary transition team. J Am Geriatr Soc 2010;58:364–370.
30. The National Quality Forum: The specifications of the three-item care transition measure - CTM-3. www.caretransitions.org/documents/CTM3Specs0807.pdf. (Last accessed November 13, 2010.)
31. Wittenberg-Lyles E, Oliver DP, Demiris G, Baldwin P, Regehr K: Communication dynamics in hospice teams: understanding the role of the chaplain in interdisciplinary team collaboration. J Palliat Med 2008;11(10):1330–1335.
32. Jünger S, Pestinger M, Elsner F, Krumm N, Radbruch L: Criteria for successful multiprofessional cooperation in palliative care teams. Palliat Med 2007;21:347–354.
33. Neumann V, Gutenbrunner C, Fialka-Moser V, Christodoulou N, Varela E, Giustini A, Delarque A: Interdisciplinary team working in physical and rehabilitation. J Rehabil Med 2010; 42:4–8.
34. Medicare Benefit Policy Manual (CMS Pub. 100-02, Ch.9 §40.4). www.cms.gov/manuals/Downloads/bp102c09.pdf. (Last accessed November 13, 2010.)
35. West MA, Borrill C, Dawson J, Scully J, Carter M, Anelay S, Patterson M, Waring J: The link between the management of employees and patient mortality in acute hospitals. Int J Hum Resource Manage;13:1299–1310.
36. Accreditation Council for Graduate Medical Education (ACGME): Companion document: Core competencies for hospice and palliative medicine fellowship training. www.cgme.org/acWebsite/downloads/RRC_progReq/540_hospice_and_palliative_medicine_companion_02122008.pdf. (Last accessed November 13, 2010.)
37. Zwarenstein M, Goldman J, Reeves S: Interprofessional collaboration: Effects of practice-based interventions on professional practice and healthcare outcomes Cochrane Database Syst Rev 2009;8:CD000072.
38. Kim MM. Barnato AE, Angus DC, Fleisher LF, Kahn JM: The effect of multidisciplinary care teams on intensive care unit mortality. Arch Intern Med 2010;170:369–376.
39. Hansson A, ArvemoT, Marklund B, Gedda B, Mattsson B: Working together—primary care doctors' and nurses' attitudes to collaboration. Scand J Public Health 2010;38:78–85.
40. McCormick AJ, Curtis R, Stowell-Weiss P, Toms C, Engelberg R: Improving social work in intensive care unit palliative care: Results of a quality improvement intervention. J Palliat Med 2010;13:297–304.
41. Voight PE: Symposium emphasizes trust, teamwork, culture. AORN J 2009;90:485–486.
42. Lewin JS: Interdisciplinary teams and the road to discovery. Radiology 2010;254:26–30.
43. NHPCO Facts and Figures: Hospice Care in America, 2009. www.nhpco.org/files/public/Statistics_Research/NHPCO_facts_and_figures.pdf. (Last accessed November 13, 2010.)

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