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Essential Nursing Care Management and Coordination Roles and Responsibilities

A Content Analysis

Brenda Luther, PhD, RN, Joyce Barra, PhD, RN, and Marc-Aurel Martial, MPH, BSN, RN

ABSTRACT

Background: Care management roles and responsibilities are frequently called out in leading white papers and exemplars; yet, the actual roles and responsibilities are poorly defined.

Method: A qualitative content analysis using 6 landmark white papers and exemplars from national organizations to collect emerging care management and coordination roles and responsibilities.

Results: Three major themes emerged from the content analysis: (1) care management is about complex systems and complex medical and social needs, (2) nurses are central to the interdisciplinary team, and (3) informatics is vital to support and enhance care management.

Implications for Practice: Care managers need to be experienced with complex systems of care as well as complex diagnoses and conditions that our clients and their caregiver's experience. A nurse being central to the clients and embedded within the interdisciplinary team aids in diminishing the burden of negotiating the trajectory of a condition/illness as well as improves the interdisciplinary communication and teamwork. This review of literature has defined the complexity of care management and the discreet roles and responsibilities, as well as how informatics is vital for care managers to target and monitor key populations needing care management.

Key words: *care complexity, care management, centrality of the nurse, content analysis, nursing, original research, qualitative, roles and responsibilities, systems complexity*

Many exemplars from literature (landmark published reports, white papers, and policy papers by institutions), such as Institute of Medicine (IOM), Institute for Healthcare Improvement (IHI), Robert Woods Johnson Foundation, and the American Nurses Association to mention a few, have described the need to improve the coordination of care as a means of patching a fragmented system that often leaves clients and their families to negotiate complex systems of care as they also deal with multiple chronic conditions (MCC). The work of care management and coordination has been called out as a fix to this predominate health care crisis. Although care management is not new to health care, there exist newly defined roles, settings, and responsibilities as highlighted in the initiatives of the Affordable Care Act, the Triple Aim of Healthcare (IOM, 2004), and others. This is a new era of health care with a new purpose of attaining quality and value-driven health care outcomes as a part of this change.

Examining health care quality has brought more questions than answers such as understanding why a client may be readmitted or what hospital processes support our clients and families returning home with the ability to safely and adequately care for themselves. Readmission for most Medicare clients has more to do with where they live than their specific diagnosis or condition (Goodman, Fisher, & Chang, 2013). These variations in care outcomes are puzzling to health care system leaders and are driving the creation of a system of care that assesses and monitors high-risk and high-cost settings and populations. Care management is at the heart of these processes as they work within interdisciplinary teams looking

Address correspondence to Brenda Luther, PhD, RN, College of Nursing, University of Utah, 10 South 2000 East, Salt Lake City, UT 84112 (brenda.luther@nurs.utah.edu).

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at patterns of use and barriers to appropriate use of health care resources (Lamb, 2014).

Clients and their caregivers often complain of being overwhelmed managing their MCC with multiple providers or as they organize and understand their health care needs after a hospitalization. Both of these complaints are due in part to poorly coordinated care between providers and inadequate discharge planning and education. Multiple providers providing care in different systems of services are often unaware of all of their client and caregivers goals of care; thus, our clients are often left without a vision of the goals of care that is cocreated in a person-centered model including goals from all providers (Lamb, 2014). Care managers who reach across systems and are able to interact with clients and their caregivers and providers over time, while now lacking, are expected to grow as new payment methods of accountable care organizations emerge (McCarthy, Cohen, & Johnson, 2013).

Increased demand for care management calls for models, standardization, and clarification of roles and responsibilities. Care management is a broad care process that includes titles such as care coordinators, case managers, and care managers (Lamb, 2014). In addition, case management associations and societies have also recognized the importance of addressing key tenets of practice and have contributed to improving the clarification of roles and responsibilities for care and case management (ACMA, 2013; CMSA, 2016). Traditionally, the processes of care management have focused on episodic points of care such as transitioning clients efficiently through costly care settings, including authorization of and utilization of services; now care management includes comprehensive coordination by way of "integrating medical and systems knowledge" in the context of the client and caregivers (Izumi et al., 2018, p. 55). The terms used to describe roles with the broad term of care management may be different in many settings across the country, but the responsibilities are similar and include intense and focused client and population monitoring and intervention to help improve client care outcomes as they negotiate health care systems and their own complex medical issues (Sochalski & Weiner, 2011).

What Is Care Management?

Care managers employ a range of strategies mainly focused on helping chronically ill populations optimally care for themselves as they negotiate care across systems and settings (Lamb, 2014; Sochalski & Weiner, 2011). In the light of increasing complexity in health care and the move to focus on value-driven outcomes for our clients, care management keenly focuses on providing effective disease management (DM) that includes having an accurate assessment of our client (Powell & Tahan, 2010). Care managers continually use their ktnowledge of treatments, medications, and tests and proactively to prepare clients for expected points of transitions or destabilization (Salmond & Echevarria, 2017). Care managers are also focused on improving the client's ability to optimally care for themselves in a variety of settings and needs (Goodman et al., 2013; Schraeder & Shelton, 2013) as well as striving to employ and monitor evidence-based care interventions as our clients progress (Lamb, 2014).

Models of care management began to proliferate under the expansion of Centers for Medicaid & Medicare Services pilot projects. These projects have demonstrated reduced costs and often dramatic improvement in health outcomes (IOM, 2011). The IHI Care Coordination Model highlights care coordinators as focused on developing optimal client self-management; providing client advocacy within interdisciplinary teams and systems of care; and skills of navigating complex care systems (Craig, Eby, & Whittington, 2011). Similar to the IHI model, Antonelli and Rogers (2013) describe that care coordinators form a nonjudgmental, open relationship with their clients to develop a shared plan of care and monitor the delivery of this plan of care. Whether focusing on interdisciplinary teams or shared plans of care for high-risk clients, most models using care management demonstrate improvement in reducing costs and use of emergency department services and hospitalizations for their clients.

Managing MCC is complex for individuals as well as providers. Multiple providers, often across different systems of care and settings, add to the complexity of the client's experiences as clients and/or their families are often carrying the burden of communicating shared decisions to all providers.

Why the Need for Care Management?

New value-driven outcome payment structures in primary care brought forward in the Affordable Care Act are basing payment upon attaining positive health care outcomes for our clients versus fee-for-service payment models that reimburse providers for the amount of time and services delivered (Bodenheimer & Berry-Millett, 2009). Value-driven outcomes rely upon using evidence-based care practice guidelines to direct complex chronic illness care and decrease the variability of care provided across settings and providers. These guidelines focus on maintaining health as well as optimally providing DM. Care managers are key to developing and monitoring these guidelines. Care management plays an essential part of achieving positive health outcomes by helping clients optimize skills of self-care, such as how to assess and manage symptoms, or who to call for changes in their condition, as well as supporting informed and timely health care decision making (Lamb et al., 2015). To achieve value-driven health outcomes, care managers engage with clients through a broad set of strategies including education, assessing preferences, sharing information and education, and monitoring and following up on services and referrals (Davis, Schoenbaum, & Audet, 2005).

One in four Americans is living with at least one chronic illness and many are living with MCC (Anderson, 2010). Managing MCC is complex for individuals as well as providers. Multiple providers, often across different systems of care and settings, add to the complexity of the client's experiences as clients and/or their families are often carrying the burden of communicating shared decisions to all providers (DuGoff, Dy, Giovannetti, Leff, & Boyd, 2013). Thus, the setting of health care has become as complex as the conditions our clients are experiencing and often left to navigate by themselves (National Quality Forum [NQF], n.d.).

Fundamental change in the delivery of health care is happening as we move to the new value-driven payment structures for services from the outdated fee-for-service system (IOM, 2004). Health care systems are now redesigning their delivery models—especially for the most vulnerable and costliest of populations such as elderly and those with MCC. Thus, to create a competent workforce to meet the demands of this change, this study's purpose is to describe the new roles and responsibilities as outlined in these exemplars.

Methods

Design and Sample

This qualitative content analysis used six exemplars from research and national organizations to collect emerging care management and coordination roles and responsibilities. The samples used in this study were the following exemplars from literature and national organizations (see Table 1).

Data Analysis

Qualitative analytic methods of a summative content analysis described by Hsieh and Shannon (2005) were used in this study. The authors began by identification of current literature exemplars and identification of key words before and during the text analysis. The authors searched for the occurrence of words from the text focusing on frequency and intensity. The authors then focused on the underlying meanings of the words comparing and contrasting their use in each of the texts, examining how the words were used to describe care management processes, roles, and responsibilities. To demonstrate credibility (internal consistency), the authors gathered textual evidence to support the themes (interpretations) developed from the text (Hsieh & Shannon, 2005).

TABLE 1
Exemplars

Title	Authors and Citation
Care Coordination: The Game Changer from the American Nurses Association	Lamb (2014)
Care Coordination Model: Better Care at Lower Cost for People With Multiple Health and Social Needs by the Institute for Healthcare Improvement	Craig et al. (2011)
Emerging Trends in Care Coordination Measurement by the Agency for Healthcare Research and Quality	AHRQ (2014)
The Future of Nursing: Leading Change, Advancing Health from the Institute of Medicine	IOM (2011).
The Revolving Door: A Report on U.S. Hospital Readmissions	Goodman, Fisher, and Chang (2013)
"The Value of Nursing Care Coordination: A White Paper of the American Nurses Association"	Camicia et al. (2013)

TABLE 2
Major Themes

Care Management Is About Complex Systems and Complex Medical and Social Client Needs
Nurses Are Central to the Interdisciplinary Team
Informatics is Vital to Enhance Effective Care Management

Results

The results of this study were three major themes discovered within the exemplars: (1) care management is about complex systems and complex needs, (2) the centrality of the nurse, and (3) informatics is vital to support and enhance care management (see Table 2).

Care Management Is About Complex Systems and Complex Medical and Social Client Needs

Descriptions of systems and client complexity were included in each of the exemplars used in this study. Complexity had many dimensions, primarily the complexity of health care needs for our clients and secondarily the complexity within typically multiple systems of care. Complexity was described in almost all settings of care as well as within patient populations. Initially, complexity emerged as a description of what chronic illness management looks like for our clients and what roles care managers provide to optimize a client's ability to manage his or her chronic illness(es). To address, and ultimately ease complexity of care, care manager roles and responsibilities include assessing client and caregiver educational needs, their level of health literacy, their needs for referral and support services, and the coordination of their care particularly during transitions of care.

Complexity for clients was closely related to our client and family's skills relative to health literacy—their ability to make health care decisions related to their chronic illness. Although clients with chronic illnesses have many interactions with health care providers, Goodman et al. (2013) point out that providers are often unaware of the level of their client's health literacy, their level of knowledge, their ability to manage their condition, and their ability to recognize changes in their condition. One example of how ongoing client education needs to be provided is described in their publication "The Revolving Door:"

> At least two clients had big knowledge gaps when it came to caring for their chronic illnesses. Because they both had these conditions for a long time, they did not seek out new information and their providers did not offer it during the initial hospitalization. As a result, both returned to the hospital with their conditions still out of control. Clients with conditions like diabetes and COPD could use a check-in during their hospital stay to make sure they know the basics about their illnesses. (p. 44)

Another dimension of complexity is that physical care and social issues have a cumulative effect on our clients as they negotiate health care systems. In the *IHI Care Coordination white paper*, Craig et al. (2011) describe how complexity is created when our clients' care is spread across multiple systems of care. Clients feel that they are left to navigate between all the providers without the support of family or other social supports in their environment:

> Specialty care for people … are not in and of themselves complex challenges; the complexity arises when the tasks of making connections among multiple care providers and linking each intervention to the individual's overall care plan fall in the lap of the individual alone without effective partnering or support. (p. 1)

While most authors describe care and systems as complex, Craig et al. (2011) also posit that "the needs of individuals are not complex—they are remarkably simple, but often numerous" (p. 1). They further describe that helping clients navigate systems of care helps them focus on learning necessary self-care management skills "when done effectively, care coordination holds the promise of helping individuals take on more and more of their own health-fostering activities over time, freeing the care coordinator to assist others" (p. 2).

Nurses Are Central to the Interdisciplinary Team

The second theme that emerged from the exemplar sources was the *centrality of the nurse working within the interdisciplinary team*. Throughout the exemplars, the future position of the nurse is described as pivotal in the structure and function of the interdisciplinary team. Whether situated in a health care facility, inpatient or outpatient setting, or placed in a community, the nurse was noted to be instrumental in maintaining positive patient outcomes. Sochalski and Weiner (2011) state in their chapter of the IOM *Future of Nursing: Leading Change, Advancing Health*:

> Increasing evidence is showing that enhanced and integral involvement of nurses in both the coordination and delivery of care, particularly for patients enduring multiple chronic illnesses and complex care regimens, and in care management is critical to achieving cost and quality targets. (p. 377)

Camicia et al. (2013) in the ANA's white paper "*The Value of Nursing Care Coordination*" state that nursing is the "integral role of the in care coordination activities at various practice levels and settings and with various populations" (p. 17). In addition, Lamb (2014) in her extensive study of research and practice in care coordination also found that "RNs are an integral part of direct care through the management of the interdisciplinary team" and that "programs have the best opportunity to improve outcomes and reduce expenditures when RNs are involved" (p. 58). The nurse's role as a care manager is also essential to the main components of the DM as they include "medication self-management, a patient-centered record, primary-care and specialist follow up, and patient knowledge of 'red flags'—the warning signs and symptoms indicative of a worsening condition" (Camicia et al., 2013, p. 9). Care managers without knowledge of the pathophysiology and disease treatment/progression will struggle to meet the needs of those with chronic illnesses.

Versatility and Flexibility

Centrality of the nurse is about *versatility and flexibility* due in part to the inherent and learned skills of nurses being based in biophysical as well as psychosocial knowledge. The nurses have a broad range of *clinical skills* that allow them to manage a variety of patients across the health care continuum and also address a wide variety of chronic illnesses requiring DM; Sochalski & Weiner, 2011). Nurses as care managers (CMs) can provide initial comprehensive and continuing health assessment, recognition of changes in health status, teaching/coaching of patients, and care plan development (Camicia et al., 2013; Lamb, 2014). Whether pediatric or adult chronic care managers, CMs can use their physical assessment skills to initially assess and continue to monitor the progress of their clients. Nursing assessment skills are holistic and grounded in the liberal arts including assessment of development needs, assessment of client and family health literacy, and prioritization of needs to mention a few.

Versatility of the nurse inherently helps with DM vital to targeting populations dealing with chronic illnesses, which are consistently the largest share of health care spending (Goodman et al., 2013). Disease management involves client/family education over spans of time as conditions and settings change, identifying referral and support strategies to help clients and their families adhere to treatment plans, and consistently providing ongoing monitoring of outcomes for patient and communication of those outcomes to the care teams.

Interpersonal Communication Skills

In their principal position within the care management models, the CMs work with a variety of care providers: physicians, social workers, pharmacists, home health services, psychologists, clergy, families, and other nurses. The CMs communicate within health care systems as well as across diverse and separate systems. The CM keeps the interdisciplinary teams aware of the current assessment, plan of care, and most importantly, goals of our clients and families. Interprofessional skills are also client-/caregiver-centered, including skills of education, guidance, support, and coaching for clients and their caregivers. Sochalski and Weiner expand on interpersonal skills for nurses in the future: "will likely be greater opportunity for interventions as counseling, behavior change, and social and emotional support –interventions that lie squarely within the province of nursing practice" (2011, p. 384).

A most important interprofessional skill nurses need to master for clients and caregivers is education. Goodman et al. (2013) provide us insight into the complexity of ongoing education for our clients with examples that some with chronic conditions are not educated about their illnesses:

> Patients with chronic conditions may pose particular challenges to hospital providers when it comes to discharge. There may be an assumption these patients already know about how to care for their condition even when this is not the case. This situation emerged with two of the patients. Both had diabetes and neither had a clear grasp on what their diet should be, how to adjust their insulin levels, and even how to inject their insulin. These gaps in knowledge could have led to their readmissions. (p. 38)

In addition, they also provide us examples of client education needs overtime and how we miss opportunities for further education, thus encouraging us to have consistent check-ins with clients and families and their educational needs:

> … patients have big knowledge gaps when it came to caring for their chronic illnesses. Because they both had these conditions for a long time, they did not seek out new information and their providers did not offer it during the initial hospitalization. As a result, both returned to the hospital with their conditions still out of control. Patients with conditions like diabetes and COPD could use a check-in during their hospital stay to make sure they know the basics about their illnesses. (p. 44)

Assessment and Monitoring

Another common and essential skill needed in care management is assessment and monitoring—both ongoing over a period of time. The nurse CM possesses

the ability to complete a comprehensive assessment of the clients' health status as well as an assessment of their health goals, their functional capacity, and their social and environmental needs (Lamb, 2014). In addition, the CMs add a strength-based assessment to the typically problem-based assessment usually present in the histories and narratives of clients dealing with chronic illnesses, providing the interdisciplinary team a vision of their client's goals and skills of self-care. The CMs systematically gather and monitor their client's progress as well as appropriately sharing this knowledge across systems of care.

Transitions between settings of care, namely, from hospital to home or other settings, have been identified as the riskiest and most complex times for almost all clients and specifically for those with chronic conditions or elderly clients. Nurses as CMs during these transitional experiences have possibly been the earliest to be studied for effectiveness and cost (Lamb, 2014). The CMs' skills during transitions involve facilitating collaboration with primary care providers, updating of new medications or medication changes, and helping clients and families identify exacerbations and the best next steps to deal with those exacerbations (Camicia et al., 2013).

Goodman et al. (2013) further describe transitions and the process of dealing with client exacerbations after discharge pointing out that there are few barriers to returning to the hospital. An emergency department physician stated:

> The resistance to using an ER is very low. You dial 911 and you get delivered right to the doctor's stretcher. …but to get to an office you got (sic) to have a car, the car's got to park, you have to take an elevator. This means that no matter what improvements hospitals make to reduce avoidable readmissions, patients may still return to the hospital in large numbers because they do not face any substantial barriers to doing so. (p. 41)

Informatics Support for Effective Care Management

Analysis of these data revealed the theme of informatics support as essential in informing the care management roles as well as creating efficient care management processes. Informatics support care management in multiple ways such as communication, risk stratification, screening, tracking, and monitoring. Yet, poorly defined structures and processes of care management, in itself as stated in the Agency for Healthcare Research and Quality's (AHRQ's) document "*Emerging Trends in Care Coordination Measurements*" (2014), are limiting the power of informatics support:

> Just as the concept of care coordination is ambiguous in the health services research literature, there is as yet little agreement within the clinical sphere about what constitutes care coordination, who should do it, when, and how. This ambiguity limits clinicians' efforts to coordinate care, and also limits documentation of coordination activities. As patterns of coordination-related clinical workflows emerge in the U.S. health care system, so too will the ability of EHRs to capture and facilitate those processes. (para. 6)

Care managers often take on communicating between multiple providers, doing so by way of mail, fax, or phone calls with minimal support from informatics structures. Often, electronic health records (EHRs) do not support communication between settings or providers for many reasons, with the most important being protection of health information between different systems of care and the most complex being EHRs being "siloed" systems between differing providers of care (AHRQ, 2014). Yet, in reality, our clients often receive care with multiple providers in multiple systems of care. Clients being discharged from the hospital and receiving primary care from a provider in another system of care need their goals of care, treatment plans shared, medications, next steps shared and care management is typically who oversees this transfer of information (AHRQ, 2014).

Goodman et al. (2013) point out that outcomes of care are potentially improved with increased communication:

> … it matters if the attending physician was affiliated with the hospital or part of the outpatient clinic connected with the hospital. When there were not these affiliations, some patients were confused about follow-up care and who they were required to go to when they became sick at home. (p. 34)

Health care systems are now creating protected and limited access to portions of the EHR for providers outside of the system of care. Where once care managers copied and mailed or faxed this information, now providers are given limited access to view the necessary information.

Communicating within systems of care and between systems of care is a workflow process that can improve care management processes. Eliciting goals of care is a good example of the valuable communication. Often, goals of care are buried within episodic visit documentation in a narrative format (AHRQ, 2014). Once our clients and caregivers create their personal goals for their health care treatment, these goals need to be communicated to the whole health care team. Some of the team is within the care managers' health care system (and EHR) and some of the providers are outside of the system of care. Providers both inside and outside of the system

of care need to know the goals of the clients and caregivers in order to provide quality of care, avoid duplication of services, and avoid care inconsistent with the shared plan of care; all of which result in a reduction in errors and cause overuse of services.

Camicia et al. (2013) report in the ANA's *Care Coordination White Paper* describes how sharing cocreated plans of care across systems of care is integral to improving quality and satisfaction and decreasing redundancies of care.

> Ideally, patient- and family-centered care coordination integrates shared plans of care among all relevant providers and through episodes of care in multiple settings. Care coordination is foundational to the health care reform goals of improving the quality of care for individuals and populations via the efficient and effective use of resources. (p. 4)

Population health is another emerging role for CMs. Here too informatics supports effective and efficient development of panel registries with enough data and information to be able to identify risk, target key population groups, and identify trends in resource utilization. Population health is also key to maintaining health and preventing illness and includes risk stratification processes for population groups by way of screening for the potential risk for individuals. Most models of care management are designed for high-risk or at-risk populations. Preventing illness within these groups is as important as managing illness. The process of identifying these populations should be an automatic part of EHRs versus a manual process of chart review or identification and communication from providers. Inherent in all of the documents used is the need to screen or identify populations who will be most benefitted by care management, yet it is not defined how to do this efficiently.

Another automatic informatics support process should be the extraction of outcome measurement. Again, in AHRQ's document, "Emerging Trends in Care Coordination Measurements" (2014) states:

> It is likely that one formerly common approach to care coordination measurement—manual chart review—will be replaced in the future. As EHR technology and EHR-based measurement methodologies develop further, many measures that formerly relied on manual chart review will likely be supplanted by EHR-based measures for which data can be automatically extracted rather than requiring time-consuming manual review. In some cases this will involve revising measure specifications that were designed for chart review methods to instead adhere to the emerging standards for eMeasure specifications, as has been done for some of the currently available EHR-based measures. As the field of EHR-based measurement matures, additional measures will be developed that leverage the types of data most readily available from within EHRs. (para. 36)

Limitations

The limitations of this study are mostly related to the selection of the exemplars chosen. The authors searched for published position statements from national agencies and researchers in care management to ensure that they had representative exemplars meeting the purpose of this study. The authors searched for frequently referenced and current exemplars. The authors reached out to other disciplines (such as social work and pharmacy) to search for other national exemplars focused on how their professions are retooling their roles and responsibilities toward health care reform and care management. Limited literature was found. Another common limitation of qualitative analysis is the credibility of the researchers. The authors were care managers in community, inpatient, and home settings as well as faculty in care management and experienced qualitative researchers. In addition, experts in care management from other disciplines and experienced qualitative methods were consulted as data emerged.

Discussion

Meeting the demands of health care reform requires a workforce prepared for current client and system needs. Health and illness are changing with the steep increase of MCC as well as increasing numbers of aging clients. In addition, the management and preventative focus of population health requires a workforce with the skills of how interventions affect populations at a broader level and ultimately improve health outcomes for individuals (Salmond & Echevarria, 2017). Thus, nursing and the interdisciplinary team need to be prepared to change and adapt to new and expanded roles. This review of emerging literature has defined the complexity of care management, the discreet roles and responsibilities, and how informatics is vital for care managers to target and monitor key populations needing care management.

Health care is often described as complex, but the nuances of complexity are often hidden. Complexity in these data reveals that it is at both a systems level and a client level. Systems of care are fragmented and disconnected from each other. Our clients often receive care and education from multiple systems; thus, sharing the plans of care, goals of care, and care planning is not naturally supported between systems without a care manager there to connect the

disparate systems. Clients and their families and caregivers face complex care for their chronic conditions and often lack the understanding of the underlying physiologic processes happening to them (Goodman et al., 2013). Adding to the complexity for our clients is that providers often inaccurately assess the level of their health literacy (Goodman et al., 2013). Effectively negotiating complex systems and complex care requires our clients to have the support of care management to assist in ongoing education directed at self-care management, identification of discrepancies in care goals (McCarthy et al., 2013), and the ability to look ahead upstream and anticipate common points of destabilization for their clients (Fraher, Spetz, & Naylor, 2015; Salmond & Echevarria, 2017).

From these data, nursing emerges as a powerful and central workforce due in part to a broad knowledge background including chronic illness pathophysiology and interventions, as well as understanding our client and family's responses to illness as they experience the trajectory of chronic illness (Cipriano, 2012; Izumi et al., 2018). The value of the nurse being central to the efforts of the care management team is that the nursing profession includes care directed at physical, behavioral, social, and economic dimensions of care (Fraher et al., 2015). These data call out for CMs to possess the skills of coaching, monitoring, supporting, referring, and communicating with clients and families as well as interdisciplinary teams.

In addition, these results support the findings of Izumi et al. (2018) where their new findings of nursing in care management use their medical knowledge to assess their client's available treatment options and negotiate and tailor those options with their client's health care providers and care givers. Accurate assessment, meaningful relationships overtime, and medical knowledge are the aspects of care managers who participate in appropriate care, satisfaction of the client and caregiver, and even cost savings.

Nursing represents the largest number of professionals in health care, with our health care system having four times as many nurses as there are physicians (Fraher et al., 2015). Being the largest health care profession, nursing education and professional development need to focus on developing the skills of caring for chronic conditions, communicating during transitions, coaching and mentoring our clients and families to optimal self-care management, and employing effective population health interventions—with all these actions focusing on older adults and their caregivers.

These data also described how health care informatics is vital to effective care management. Informatics supports identification and measurement of high-risk and high-cost clients needing care management assessment and monitoring. Informatics gives the health care team members the ability to develop patient registries and stratify their medical panels and direct care management toward those at need rather than reacting to clients and families currently struggling with care complexities (Cipriano et al., 2013).

Future work in informatics can develop identification of those who may develop characteristics and patterns of high-risk clients. Monitoring population groups requires database development including automatic alerts to care managers to ensure that their client groups are receiving their care guidelines and interventions. Informatics can also support ongoing communication and data sharing between providers and services, examples being communicating between primary and specialty care to alert of care planning changes and goals of care or alerts between primary care and pharmacies detecting unfilled prescriptions. Telehealth informatics allows care managers to remotely consult, monitor, and communicate with their clients. Nurses can leverage informatics support to better meet their client and systems needs in efficient and effective care management.

Implications for Practice

Care management processes should be developed in a person-centered model of care. Care management models of care and outcomes measurement should be tailored to the clients most at risk with ever diligent awareness to older adults and MCC. System leaders need to support ongoing professional development of care management teams with support of the nurse as central to the team based on their clinical knowledge and ability to lead evidence-based initiatives that develop care process guidelines for our clients and systems.

Implications for Education

Education implications are directed at both future and existing care managers. Nursing curricula need to expand upon the physical, behavioral, social, and economic dimensions of care, with additional emphasis on population health, chronic and complex care, focused skills of care for older adults, and practice at the skills of assessing, monitoring, and motivation of clients and families dealing with chronic and complex illnesses. The curricula need to be innovative clinical experiences helping students view the life experience of their clients with chronic conditions.

With 2.9 million nurses already in the workforce, professional development needs to be flexible enough to help these current nurses refine their skills as they move from acute care settings to other settings such as acting

across systems of care, outpatient and primary care, and even our client's homes. Education faces barriers in that our educators and instructors are also often lacking care management experiences or not current with new and developing roles and responsibilities. Health care and educational systems need to assess and address current knowledge, skills, and attitudes required for care management roles and responsibilities.

New educational opportunities are developing that support attaining competencies of care management such as the American Academy of Ambulatory Care Nursing's certification program directed at evidence-based content for nurses and other professionals. Universities such as the University of Pennsylvania's School of Nursing, Arizona State University, and University of Utah's College of Nursing are developing certificate and master's programs of study with curriculum concepts of person-centered care and strength-based assessment, communication and interdisciplinary teamwork, and supporting optimal self-care management for clients with chronic illnesses.

Implications for Policy

Current payment structures typically pay only clinicians, not care managers, putting care management as an expense rather than a source of revenue for health care systems. Providing comprehensive care management that crosses systems and settings of care requires financial support and the ability of care managers to provide and bill for services. Policy needs to support nurses receiving payment for services such as ongoing education, client and family education, and certification of eligibility for services and care needs, as well as supporting them to work to the fullest extent of their licensure as stated by the IOM.

Conclusion

As health care reforms, so do the roles and responsibilities of nurses and the interdisciplinary models of care management used to optimize our care of clients and their families/caregivers. Nursing as a central role using big data to target at-risk clients and focusing on the complex system and complex client and caregiver needs is a vital essential care coordination role. Health care systems now need to support change directed to addressing the complexity of care our clients face. Better management of those with complex and chronic illnesses also represents an opportunity to control health care costs. Care management represents the possibilities of improving quality of care and controlling costs by developing an embedded care management program with a focus on targeting those at risk and providing coordinating care for those populations. To staff these programs, health systems and higher education needs curriculum directed at comprehensive assessments, relationship building with clients and caregivers, and interdisciplinary communication. Health systems also need to leverage informatics support to help care managers identify and monitor high-risk population groups and communicate across systems of care.

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Brenda Luther, PhD, RN, is the director of the Masters and Certificate Care Management Specialty and an associate professor at the College of Nursing and within the Gerontology Interdisciplinary Program at the University of Utah. Dr. Luther teaches courses in care management, evidence-based practice, and health promotion. Dr. Luther has specialized in disability care and care management, working with children and their families at Shriners Hospitals for Children, Intermountain Hospital in Salt Lake City, Utah. She started her career in care coordination at Shriners working with public, private, and nonprofit agencies to bring about coordinated and connected services for children in Utah, Idaho, Montana, Wyoming, Arizona, and Colorado. Her clinical interests are care management, successful transition to adulthood for children with disabilities, and health promotion for children with physical disabilities.

Joyce Barra, PhD, RN, is currently a faculty member in the graduate program at Weber State University where she teaches courses in educator socialization, assessment, and teaching strategies. She also manages the executive leadership students in their master's practicum. Dr. Barra's past experiences include directorships in ADN, BSN, and MSN programs. Her interests include specialized accreditation, both domestic and international, and interdisciplinary collaboration. Dr. Barra has a background in adult Med-Surg Nursing and a love of qualitative research, especially related to teaching and learning.

Marc-Aurel Martial, MPH, BSN, RN, is a clinical instructor at the College of Nursing, University of Utah. He specializes in public and global health and care transitions. He is currently a PhD student at the University of Utah with a focus on improving access to essential public health services and health outcomes for disadvantaged populations, primarily in rural Haiti. His dissertation research project will examine the impact of an anemia prevention and treatment program among preschool children in a rural mountainous community in Haiti.