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Interactive Care Model

A Framework for More Fully Engaging People in Their Healthcare

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Transformation of care delivery requires rethinking the relationship between the person and clinician. The model described provides a process to more fully engage patients in their care. Five encounters include assessing capacity for engagement, exchanging information and choices, planning, determining interventions, and evaluating the effectiveness of engagement interventions. Created by researchers and validated by experts, implications for practice, education, and policy are explored.

With rising healthcare costs and the Patient Protection and Affordable Care Act,[1] engaging people in their health is an effective strategy to improve clinical care, increase satisfaction, and achieve health outcomes. Patient engagement refers to a set of reciprocal tasks by individuals and clinicians as a means of improving health, making informed healthcare decisions, and promoting population health.[2]

A new approach is needed to reach the Institute for Healthcare Improvement's triple aim[3] of better care and outcomes at a lower cost. People will need to be more active in maintaining their health to understand care options and make decisions. At the same time, clinicians need to transition from decision maker

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to partner.[3] Despite several patient engagement frameworks in the literature,[4-6] this new model rethinks care delivery and includes measurement of a person's capacity to engage in his/her health. A new care delivery model that outlines the fundamental shifts in the relationship between people and clinicians to become partners in care is warranted.[6-10]

Health reform placed demands on providers and insurers to revise care delivery processes.[11] Patient engagement is a key component to create a health system that transforms care.[1] When individuals are active in their care, early evidence reveals that patient outcomes improve.[12] Creating a system where people actually own their care journey will require changes from what traditionally is a care model that relies on the clinician as expert, with the development of a treatment plan by clinicians in a patriarchal position of authority.[13]

A key challenge is moving from the theoretical to the operational aspects of person engagement in healthcare. Based on 3 key drivers,[14] this model serves as a framework to translate the "what" of person engagement into the "how." First is the ethical idea that each person has a right to be autonomous, and this right supplants caregiver beneficence.[14] Clinicians have been educated, trained, and socialized to be *providers of* rather than *partners in* care. Clinicians must shift their focus to a person-driven care delivery model to fully engage people. Second is financial,[14] as reform recognizes the economics of healthcare.[1] When fully engaged, people are consumers who can weigh the costs and benefits of how to reach their optimal health.[14] Within the current system, costs are often hidden, and consumer choice is elusive. Last is communication.[14] Information exchange between providers and people is changing. In the future, individuals will document information directly in their record, and health technology continues to evolve to allow patient-facing applications.

Why a New Model?

Person engagement is a critical aspect for the future of healthcare. Organizations and clinicians are challenged to transform care delivery to achieve optimal outcomes. Despite existing frameworks, a care delivery model that takes into account the changing role of healthcare providers and people and outlines the process of fully engaging people in their care is lacking.[4-6,15] A model of care delivery, the Interactive Care Model (ICM), outlines the roles of clinicians and individuals to develop strategies that better engage people in their health. As a process model, it emphasizes the assessment of a person's capacity for engagement, a planning process based on information exchange, interventions tailored to the individual, and an evaluation feedback loop.

Methodology for Model Development

Researchers dedicated to advancing the science of person and family engagement developed the ICM. When developing a model, the following steps are critical and guided the work of the O'Neil Center in the model development process. The steps[16,17] include the following:

1. Identify and define a concept or idea.
2. Complete a thorough literature review.
3. Identify gaps in the literature.
4. Draw the model.
5. Verify the model with stakeholders.

The model development process included a comprehensive literature review, gap analysis, model development, expert review, and reaction panels of clinicians and patients.

The literature review (See Table, Supplemental Digital Content 1, http://links.lww.com/JONA/A418) was conducted on CINAHL and MEDLINE Complete from 2004 to 2014. Search terms focused on patient engagement in the areas of clinical practice, measurement, health reform, policy, frameworks, and technology, generating 1606 articles. After reviewing for duplicates, 927 independent articles remained. Titles and abstracts were reviewed against inclusion criteria of patient engagement use in clinical practice, implications of health reform, existing engagement frameworks, and technology to engage patients. Articles were included if they were peer reviewed, written in English, and published since 2004. Articles were excluded if the focus was on staff engagement, work empowerment, or specific disease conditions or the technology focus was related only to electronic health records (EHRs).

The model was developed based on current literature findings and gaps identified. Gaps included identification of a silo-driven approach to person engagement, research opportunities for effective engagement interventions, and the influence of engagement on outcomes. A draft model was created, and an interprofessional team of content experts serving on the O'Neil Center's Clinical Advisory Council reviewed the model design. Nursing leaders at a large healthcare system also recommended changes to the model as content experts.
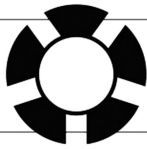
Conceptual Framework

Open systems theory is used widely throughout organizational practices and healthcare. The premise of this model is that there is an input, throughput, and output that have a feedback loop that occurs between the input and output.[18-20] The inputs are generally provided from the external environment and are used to enhance the system.[21] The throughputs are used to create momentum to reorganize and change the system.[21] The outputs are the products or services that are created within the system for the external environment.[21] These components can be applied to various types of organizations and processes to create, refine, and answer questions that are important to both the internal and external environment.

The ICM was developed based on the Open Systems Theory.[18-20] The outer ring of the model (Figure 1), which includes population and global health, community readiness, and practice environment and healthcare systems, is the external environment that is providing inputs of the overall system, which is trying to impact the person/family and support team health journey. The main throughput in the ICM model is the clinician and person/family partnership roles. This partnership is critical to the outputs of the overall system of engaging people in their health journey. The outputs can be seen as the 5 model components of assessing engagement, exchanging information, planning, determining interventions, and evaluating regularly. This process model is designed to improve the overall external environment through enhanced understanding of a person's capacity to engage in their health, partnering with people and their families, and ultimately improving health and life outcomes based on each person's individual values, needs, preferences, and abilities.
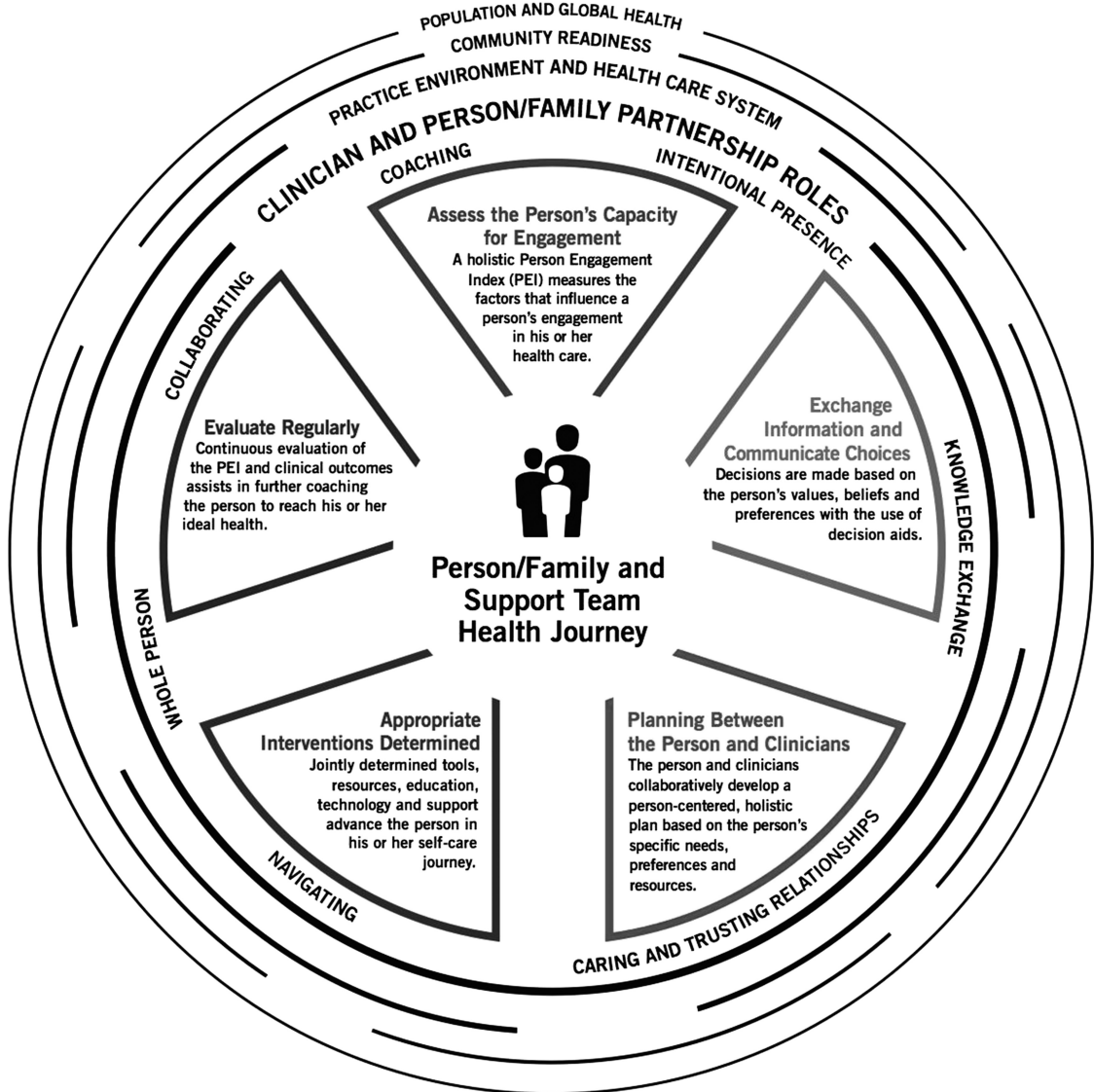
Model Overview

The ICM (Figure 1) describes the interactions between providers and people in all care settings in the context of several key systems. Eight domains that impact the assessment of person engagement were revealed: personal preferences based on cultural values, health literacy, activation/motivation, disease burden,

Figure 1. Interactive Care Model. Permission to use granted by GetWellNetwork, Inc.

psychosocial support, preventive health strategies, involvement in safety, and technology use for healthcare.[8,9,22-26] Tables 1 and 2 include a description of the environmental components and partnerships necessary for true person and family engagement to occur. The ICM consists of key process components:

Table 1. *Interactive Care Model Overview: Environmental Components*

	Environmental Components
Model Component	Description
Population and global health	The healthcare system is shifting to manage whole populations to improve outcomes. Management of chronic disease is critical. Greater engagement results in more person-driven data, which can be evaluated to advance the ultimate objective of improved global health.[9,23,24,27]
Community readiness	The borders of healthcare delivery are changing. Determining a community's readiness to support greater involvement of people in their healthcare will impact the clinician-person relationship. If the community supports new delivery methods, encourages screening activities, and helps educate people through local and faith-based efforts, it is likely more people will be engaged with their health.[28]
The practice environment and the healthcare system	The environment and system where care is delivered impact a person's ability to influence the care journey. If the system is set up to understand the value of educated and involved people, then people will be more likely to engage in their care.[29,30] If the system discourages engagement or does not allow for exchange of information or cultivate trusting relationships, care will continue to be a 1-sided, clinician-driven process.

- comprehensive assessment of a person's capacity for engagement;
- information exchange and communication of choices;
- development of a strong clinician-person partnership to create plans;
- implementation of mutually determined, suitable behavioral, technological, and clinical interventions; and
- regular evaluation of the engagement level and clinical outcomes to revise the plan to achieve optimal health.

Interactive Care Model Phases

Assess a Person's Capacity for Engagement

Traditional patient encounters include a medical history and assessment of physical symptoms. Moving forward, assessment needs to include a person's ability to engage in managing his/her care. Determination of a baseline level of engagement can serve as a benchmark for subsequent encounters. Measures exist for pieces of engagement, including patient activation and health literacy. However, no one single measure that assesses all factors of person engagement exists. If such an aggregate score existed, it could be used as a metric that could follow a person throughout the health journey. In addition, the score could serve as an indicator of a person's capacity to engage in care, and interventions could be tailored to the appropriate level of engagement.

The assessment of a person's capacity to engage can be captured with a single index measuring all of the domains impacting a person's capacity to engage and based on a person's needs, values, and preferences. O'Neil Center researchers are working to de-

velop such an instrument, the Person Engagement Index, to gauge a person's ability to engage in care and drive efforts to increase engagement levels.

Exchange Information and Communicate Choices

Assessment data will be used to develop care partnerships and communicate options for shared decision making. Partnering is a significant change from traditional care requiring providers to develop additional skills to embrace an effective person-driven model.[7] Information exchange needs to occur in an egalitarian relationship recognizing the expertise of both parties. This will require a shift in thinking for clinicians into a more equal partnership with the person in control of his/her health decisions. Research has shown the benefit of tailoring education and resources to the individual.[12,24,27,32] The use of decision aids is 1 successful method. Tailored decision aids account for an individual's health status and values and use provider coaching to stimulate discussion for informed decisions.[41] Decision aids actively promote health by providing information on treatment options and implications so value-based decisions can be made.[41]

Studies have shown the positive impact of shared decision-making between providers and people.[7,26,32] Individuals must share their values, beliefs, and preferences. Providers must listen to people to understand preferences, provide individualized evidence for treatment plans, and help decipher health alternatives.[7] Providers must also be aware that people with low health literacy and a low activation score, who are in the precontemplation or contemplation phase of changing health behavior, may be unprepared to be a partner in health decision making.[42] Despite such obstacles, people should be encouraged to exchange information so they can become educated about

Table 2. *Interactive Care Model Overview: Clinician and Person/Family Partnership Roles*

	Clinician and Person/Family Partnership Roles
Model Component	Description
Intentional presence	Clinicians should practice intentionality and be fully present with those they serve to build trust. One theory posits that caring consciousness that is authentic, focused, and open to a healing relationship between patients and clinicians matters.[31] To transform the clinician-people interactions, it is essential that both sides be fully aware, with a consciousness to heal that allows for an open exchange.[31]
Knowledge exchange	Effective information exchange requires the process of data gathering between a clinician and a person. While clinicians have valuable expertise and knowledge, so does the person. People know themselves better than anyone else and should be comfortable sharing knowledge about their health conditions and symptoms, care goals, and response to the current circumstances.[7,32] Each person brings a broad spectrum of understanding and knowledge to the clinical setting, from highly knowledgeable to completely unaware.[22] Clinicians help navigate the person through the knowledge exchange process and describe the risks and benefits of different care choices.
Caring and trusting relationships	For clinicians to transform practice and assist people with self-care, a caring and trusting relationship should be established. This relationship is "transpersonal"—beyond mere physical interaction and healing.[33] It transcends the practice environment and influences the exchange to promote well-being.
Collaborating	Collaboration has been defined as a "true partnership, valuing expertise, power, respect on all sides and recognizing and accepting separate and combined spheres of activity and responsibility."[34(p7)] A collaborative approach requires a shift in thinking to one where the clinician and the person are equals on the care journey. In true collaboration, clinicians no longer "do for" but rather "partner with" the person to achieve optimal health.[6,7,29,35,36]
Navigating	To ensure optimal care, health professionals need to partner with people, ensuring they understand how the system works, when to seek services, what services are available, and how to access them. They can also help navigate care options and serve as an advocate. Patient navigator roles have been used in underserved populations to reduce health disparities and assist with the multifaceted needs of cancer care.[37-39] As care delivery continues to change, the extension of a comprehensive navigation system is a likely progression.
Whole person	The importance of a holistic approach to address all aspects of care and social determinants is significant for self-care management. What was once deemed "alternative therapy" is now more widely accepted as an effective method to promote healing and health.[40] Healthcare is transforming to an integrative approach where people are requesting and choosing complimentary therapies as part of their treatment modalities.[40]
Coaching	The concept of clinician as coach has been effective.[8,25] People can also coach clinicians on their individual circumstances. Coaching suggests an activity to continually improve oneself in any capacity; improving health is no exception.

their choices. Providers must adjust their communication and education styles to meet each individual's needs.

Planning Between People and Clinicians

A crucial element of creating an effective health management plan is determination of goals and aspirations in the care process. Health is the ultimate outcome, and the development of an emotional, psychological, and spiritual bond helps drive behavioral change. Planning also involves each person's ability to make informed decisions regarding care options. Effective engagement rests on a trusting clinician-person relationship, with both sides actively engaged. Providers and people have important contributions to make regarding their condition, treatment plan, and health goals. To guide appropriate interventions and measure success, providers and people should set mutual goals and agreed-upon outcomes. The more involved people are in the planning process, the greater their sense of accountability and engagement. Family and caregivers become partners in the journey, helping to promote self-care activities.

Effective person engagement requires preparation by the providers. It entails translating information from the assessment phase into the person's present and future healthcare needs. Providers must ensure that materials match one's level of health literacy and engage the person's support system in the health journey. Clinicians must transition care from an acute or primary setting to one in which the person and support system take ownership of care. In the future, more care will be provided outside traditional settings, and resources need to be available at any health-related site, including through technology. Clinicians can assist people in the identification and mobilization of appropriate resources.

Determine Appropriate Interventions

Health reform[14] and the Affordable Care Act[1] emphasized the need for care coordination and engagement to improve health outcomes. Appropriate interventions need to be matched to a person's level of engagement and readiness to own his/her self-care management.

Interventions that support, educate, and provide health interactions through mobile and other technologies empower people in their self-care management. Education is a foundational strategy for enhancing one's care. Education tailored to the individual's health literacy level is critical.[22] People need to be educated on how to navigate their care and best utilize the health system.[9] Clinicians must teach people early identification of health issues, when to consult providers and respond to individual concerns. If people learn to consult providers before acute health episodes, conditions can be managed proactively with fewer complications, fewer readmissions, and improved health. Interaction and knowledge acquisition throughout the care continuum can improve the process.

The interprofessional health team can be instrumental in working with individuals to develop interventions including education, peer support groups, reminders, and tracking tools for disease-specific pathways. Many interventions are delivered through technology including EHRs, patient portals, and mobile applications (mHealth), which can improve engagement.[23] Clinicians can help people identify Web-based resources and technologies that are most appropriate for them. Providers serving as a coach or navigator help build the needed self-management skills. Research found improved health outcomes when coaching was tailored to the activation level.[12] Support groups can also help people achieve goals by sharing experiences with people who have similar health concerns.[25] Technology can provide a platform to convene peers to work on health issues together, facilitated by clinician advisors.[10] Prescribed education, disease-specific or preventive pathways, reminders, and action alerts are some ways to enhance engagement and transition care management from clinician to person.

Acknowledgement of one's disease and participation in programs to manage it are important for healthcare success. Community efforts to manage population health are increasing. Tracking health measures can further engage people. Technology can trigger the person and clinician to act when results warrant. People who can track medication usage, make appointments, receive education, and contact clinicians electronically are more apt to be involved in their care journey and decision-making processes.[2,23,43] The ability to contribute to and validate one's EHR can also help people manage their care and thus potentially improve outcomes. As people grasp how to most effectively access health services for their needs, costs should decrease, and quality of care should improve.

Evaluate Regularly

To determine the effectiveness of care, the evaluation of outcomes is essential. The Person Engagement Index will be a tool for continued evaluation of a person's ability and capacity to engage. Comparative data can show the effectiveness of a particular intervention tailored to a person's engagement level. Outcomes include person-level outcomes, such as individual laboratory results, weight, medication usage, blood pressure, and other clinical measures. In addition, system-level outcome measures should be tracked, including unexpected emergency department visits, admission and readmission rates, prevalence of disease in the community, and other population health metrics. Clinical outcomes and progression in healthcare management should be regularly evaluated at predetermined intervals, as well as when care monitoring requires earlier intervention. Evaluating the outcomes of engagement interventions will determine the most effective strategies.

Interactive Care Model Summary

As care delivery systems change, so do individual roles of people and providers to reach the goals of improved quality and lower cost. The clinician-person relationship will be critical to impact outcomes and overall population health. The ICM provides a framework to deliver care that influences a person's capacity to engage and tailor interventions most effectively. It invites people to participate in their care and creates strong clinician-person partnerships while improving care quality, safety, and outcomes. It offers a proactive approach to successful population health management through self-care. The role of both the person and the provider needs to shift to encompass this changing paradigm of person and family engagement.

Implications for Practice, Education, and Policy

Practice Implications

Delivery systems need to be redesigned to allow time for information exchange; development of a healing, trusting relationship; and planning between clinicians and people. The elimination of non–value-added activities for providers is essential to redirect time to these essential communication and planning skills. This may require the reallocation of resources to partner with people to build self-care skills. Rapid development of accountable care organizations and care coordination services positions people and clinicians to transition to a new care delivery partnership.[1] Clinical roles will be redefined, providing opportunities to develop and practice new skills focused on teaching, coaching, and navigating. Competencies for actively engaging people in their care need to be redefined and instilled into practice settings. Data capture will need to be user-friendly and transparent so people can be an integral part of the information exchange. Electronic

health records need to include patient-provided documentation, and interfaces will be required to ensure that technology systems interact with both people and clinicians. Interoperability of all technology systems will be required to ensure systems are truly patient-centric. Progressive healthcare organizations are already giving people a voice, partnering with them on patient and family advisory councils to "change the conversation" about how care is planned, delivered, and received. Interprofessional care delivery needs to be standard practice. Evidence supporting its benefits continues to grow. For example, increased interprofessional communication can reduce medical and safety errors.[44] This new ICM applies to every clinician who contributes to care and impacts the engagement process. Using this model can help ensure a consistent approach to managing a person's engagement level and improving participation in care across all disciplines.

Education Implications: Clinicians

Competencies that assist clinicians in actively engaging people in their care will need to be developed and taught in interprofessional prelicensure programs. Clinicians will need to transition from "do-ers" of care to partners in the care process. New clinical roles need to be well defined and fostered including navigator roles, coaching roles, and educator roles. Equally important, continuing education must include competency development for clinicians in their new role, including managing the care process, assessing capacity for engagement, exchanging information, developing plans, and appropriately intervening. Clinical competencies, skills, and attitudes can be developed for more effectively engaging people in their care journey.

Education Implications: Person

For people to actively manage their healthcare needs, the most effective methods of education need to be tested and evaluated. While many health technology applications and Web sites exist, research is needed to guide people and providers to the most effective education. Providers can help people identify valid health data from various sources and determine technology applications geared toward the person's individual needs. Rigorous evaluation of education methodologies and its effectiveness should be conducted to determine the most effective educational strategies.

Policy Implications

With growing healthcare expenses, especially chronic disease management, research on the impact of engagement interventions on outcomes, cost, satisfaction, and clinical effectiveness needs to continue. Healthcare policies that incentivize people to take a more active role in their health need to be considered. Insurance subsidies or other financial inducements for people who engage in wellness and prevention activities are examples. Health policy should continue to reward organizations that deliver person-centered, high-quality, safe, cost-effective care. Policy makers must change payment models to focus on value and support education and competencies for a modern healthcare system[7] with highly engaged healthcare consumers.

Next Steps

Developed by researchers, reviewed by clinical experts, and shared broadly with clinicians and people in several major health systems, the ICM provides a roadmap to deliver care in a more person-centric, interprofessional way. As a process model, it provides the steps necessary in the care process to more effectively engage people in their care. The O'Neil Center will lead testing of the model and the development of research protocols. In addition, development of a Person Engagement Index is underway. Feedback from focus groups will inform further iterations of the model for enhanced engagement strategies. The ICM can serve as the conceptual framework to test the impact of clinician-person partnerships on health outcomes. It can help determine how to move toward a system that impacts population and global health. Research can determine the impact of person engagement on health behaviors, outcomes, and costs. Further investigation is warranted to support early evidence that people engaged in their health have better outcomes.

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