CASE REPORT

A case study argument for nursing involvement in medical homes

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Abstract

Patient-centered medical homes are currently being evaluated in the United States (U.S.) as a way of improving quality of care, enhancing patient involvement, increasing access, coordinating care of multiple providers, and controlling costs in primary care settings. A case study of a 47 year old Hispanic woman with a herniated lumbar disk is presented to illustrate the need for integrated, timely care in the context of a medical home. This case demonstrates how challenging it can be to access care, how necessary it is to consider patient preferences, and how important it is to develop positive patient-provider relationships in primary care settings. This case study is the first illustration of why nursing leadership and case management within a medical home setting would improve access and care coordination. The need for patient advocacy, education, and health promotion within medical homes illustrates why nurses need to play a central role as this new method of care delivery is implemented. Nurses should not only be included on interdisciplinary teams providing primary care but also be team leaders within medical homes. Nurses should also play a key role in researching the effectiveness of patient-centered care offered by medical homes and evaluating associated risks. This model of care is consistent with the patient-centered approach that is a central tenet of nursing practice.

Key words

Medical home, Patient-centered care, Nursing

1 Introduction

Franz Kofka's short story, "The guillotine," is a narrative about a mechanized system run amok. The entire short story is told without using a single character. It focuses exclusively on a new innovation; a cold, mechanical, automated system that runs according to its own bizarre schedule. It threatens people with and ultimately results in their death. The hard steel guillotine operates as though it had a will of its own; in a land where human motivations and relationships are totally lacking [1].

Kafka's short story provides an apt analogy for the pervasive alienation, fragmentation, and depersonalization found in the United States (U.S.) healthcare system and perhaps in other healthcare systems around the world. Per capita health care spending in the U.S. is higher than that of other countries while U.S. citizens are among the least healthy within the industrialized world. With a bias toward specialty care rather than primary care it is common to see fragmentation,

increasing numbers of medical errors, mounting safety issues, and significant gaps in service. Reimbursement mechanisms have resulted in 15 minute back-to-back appointment scheduling within primary care. Estimates are that primary care practitioners have three times as much work as there is "time to do it" [2]. It has been suggested that 36 % to 62 % of U.S. citizens use complementary and alternative medicine in part because of the fragmentation and depersonalization that is commonplace within traditional healthcare settings [3].

1.1 The patient-centered medical home: A new approach for coordinating care

Patient-centered medical homes have been proposed as a paradigm capable of addressing the fragmentation and depersonalization which exists within the U.S. healthcare system. This article uses a case study approach to describe why there is a need for medical homes that are capable of providing integrated, timely care. A description of varied roles within the medical home, cost containment issues, and reimbursement structures are discussed.

Patient-centered medical homes are designed to provide individualized, accessible, and coordinated care including health promotion and disease prevention activities [4]. Access is a key necessity within the patient-centered medical home. Patient-centered medical homes include a focus on convenient appointment times, 24/7 access to medical records by varied healthcare providers, asynchronous electronic patient-provider communication, and minimal delays in obtaining specialty authorizations [5]. Medical homes are built on a foundation of sustaining patient/clinician relationships, treating people not the disease, adopting an interdisciplinary approach to care, implementing continuous quality improvement, using outcomes evaluation based on data from electronic health records, and ensuring enhanced reimbursements for providers [4].

Patients enrolled in medical homes are considered to be experts in terms of their own health as well as engaged partners who contribute to shared decision making. Information sharing is two way from provider-to-patient and patient-to-provider. Patient preferences, background, culture, and values shape clinical decisions which are individualized to meet patient needs [5]. Priority is given to evaluating how symptoms, emotions, thoughts, behaviors, and environmental factors shape health and illness. Patients select which intervention would work best for them based on their personal preferences [6]. Above all, a consistent, trusting relationship with a health provider is a necessity as is patient-centered care. Such a relationship enhances patient involvement in their own care and has the potential to minimize medical errors. The focus of care is a medical home is on 'being with' not 'doing for' the patient [5]. The original concept of medical homes began in 1967 when a coordinated care approach was first used for children and families with special needs [7].

Several types of medical home demonstration projects have been described in the literature. Government funded medical home demonstration projects were launched in eight states in the U.S. in 2008 using resources from the Tax Relief and Health Care Act. Blue Cross and Blue Shield, private insurers, have also funded medical home demonstration projects in the U.S. [8]. In yet another model case managers hired by insurance companies were embedded in primary care practices as one way of implementing patient-centered medical homes. These case managers work for the insurance company and meet with patients in the primary care practice as well as conduct follow-up telephone calls to patients. Case managers collaborate with physicians and nurse practitioners and have free access to medical records [9]. In another model which is a demonstration project between a private insurance company and a university medical center, registered nurse (R.N.) care coordinators work in physician offices to provide health coaching, motivational interviewing, assessments, and telephone follow-up contact for patients with chronic illness. Registered nurses identify gaps in care, review patient records prior to visits to ensure all laboratory results are back, and provide patient education following physician visits [10]. In each type of medical home the goal is to enhance coordination of care and improve patient outcomes.

The role of case managers in each of these models of care is quite similar. A major difference is whether the case managers are funded by the government or a private insurance company. Irrespective of what the source of funding might be, it is vital that the clinician-patient relationship remain primary and that patient need drives recommendations for care rather

than a desire to limit care in an effort to control costs. Demonstration projects, as all medical homes are at present, often include more components than the market can realistically support. Therefore, as medical homes become more common it will be necessary to identify a reasonable scope of practice and workload for case managers that both meets patient needs and can be funded in a self-supporting manner.

1.2 Leading the medical home team / ensuring cost containment

Patient-centered medical homes were not designed to be profession-centered or disease-centered. However, to date in medical home demonstration projects it has been common for physicians to be the leaders of the healthcare team. Controversy exists over whether physicians alone will serve as leaders of the medical home or whether N.P.s and R.N.s will be included as team leaders. The American Academy of Nurse Practitioners (N.P.s) argues there are several reasons why N.P.s are especially well suited to be medical home team leaders. First, there is a shortage of primary care physicians in the U.S. who are able to serve as medical home team leaders, a vacuum that N.P.s can fill. Second, N.P.s provide patient-centered care with excellent patient outcomes, both of which are priority goals of medical homes [4].

Medical homes are designed to foster behavior change such as weight loss, chronic pain management, smoking cessation, adherence with care, minimization of sleep disturbances, and a variety of interventions which are common within R.N. practice [6]. Registered nurse case managers in medical homes conduct health promotion assessments, triage patients who need same day appointments, coordinate specialty referrals, answer patient questions, and establish continuous improvement measures to evaluate the quality of care that is provided. Because of this broad based role some have argued R.N.s should be taking a leadership position within the medical home [11]. Advocacy, health education, case management, and a stance of being with rather than doing are key aspects of nursing practice [12]. For these reasons registered nurses are also well suited to play key roles within medical homes as they gain prominence.

Irrespective of who the team leader is (physician, N.P., R.N.), the patient-centered medical home is designed to improve integration of care, reduce over use of primary care, emergency rooms, and hospitals as well as save healthcare costs [5]. This occurs in part because careful coordination of care minimizes unnecessary referrals and admissions. One issue to keep in mind is that participating physicians receive bonus reimbursements of up to $ 50,000 per year if healthcare costs are managed. Therefore, a significant role for nurses within the medical home will be to advocate for patient needs while monitoring that patients receive adequate care and timely access [9].

The following case study is presented to illustrate a number of challenges faced by a patient who received traditional care and to examine how a patient-centered medical home might have resulted in enhanced quality of care, improved access, and decreased costs. Although single case studies do not require human subject’s review, identifiable details of this case have been changed to preserve participant anonymity.

2 Case presentation

A 47 year old Hispanic female visited her primary care physician complaining of extremely severe back pain following surgery. During the surgery the woman was placed in a high lithotomy position (high leg elevation in the Papanicolaou position) for 2 hours while under anesthesia. After anesthesia wore off she had weakness in her left leg, numbness and pain originating in the left sciatic nerve and traveling down the outside of her thigh and leg extending down her left foot. Her primary care physician gave her a prescription for Vicodin (Hydrocodone) to manage her pain. Other than the presenting complaint and a stomach ulcer the woman’s medical history was unremarkable. She had no loss of bladder or bowel control. She was approximately 40 pounds overweight. No one in her family had a history of back problems. The woman had never had a history of back problems prior to the surgery. Her primary care physician referred her to a physical therapist and an orthopedic specialist. The physical therapy clinic in her town had a one month waiting list so the woman had to ask her daughter to drive her 30 miles to a neighboring town for physical therapy on a daily basis. She had to stop on

the highway and stand midway through the trip between her home and the physical therapy clinic because sitting in the car intensified her pain [13].

The woman arrived for her orthopedic appointment and ended up standing 4 hours because the physician was delayed and she was in too much pain to sit. The orthopedic physician ordered a series of X-rays over a 4 visit period. Each group of scheduled X-rays was separated by a 2 week timeframe to avoid excess exposure to radiation. The orthopedic specialist noted the woman had pain with a straight leg raise test on the left side as well as numbness in addition to not being able to bend forward beyond a 15 degree angle. She had no pain when bending backward.

The orthopedic specialist informed the woman it was vital that she not use any medications other than non-steroid anti-inflammatory pills (N.S.A.I.D.s). Notably, the orthopedic specialist did not inquire about the woman's history of bleeding ulcers. The N.S.A.I.D.s did not help her pain. She felt confused because her primary care doctor had told her she would need to take the Vicodin to control her pain. The severity of the pain made it difficult for the woman to participate fully in physical therapy and to manage activities of daily living such as loading the dishwasher, making the bed, dressing, and caring for her disabled husband.

When the woman asked questions about her prognosis the orthopedic physician emphasized he could not conclude anything until all the test results were back. This lack of information was frustrating to the woman who felt no one and nothing was helping her. After several weeks the orthopedic specialist ordered a series of lumbar, cervical, and hip magnetic resonance imaging (M.R.I.). However, it took 2 weeks for the office manager to submit a request for the M.R.I.s and 6 weeks for woman's insurance company to approve them. The M.R.I. was never done on an outpatient basis [13].

Five weeks after the initial surgery the woman went to her local emergency room (E.R.) because her pain was out of control and she had trouble getting out of bed. She was hospitalized in the E.R. for 2 days. A M.R.I. done in the E.R. indicated she had an enormous herniation between her fifth lumbar vertebra and her sacrum. She was given a prescription for Vicodin in the E.R. and referred to a pain management specialist for an epidural steroid injection in her back. The epidural injection which was scheduled week 6 decreased her pain by 40% but did not help with the numbness, tingling, and shooting pains that engulfed her left leg making it difficult for her to walk or maintain her balance [13].

After seven weeks of being off work from her job as a receptionist in a law firm the woman was referred to a spinal surgeon. The woman still could not sit for any significant amount of time. She was placed on a 1 month waiting list because of the spinal surgeon's busy schedule. During this month-long period the woman experienced minimal relief from a second epidural injection and by standing or lying on her side and taking the Vicodin prescription. She worried because she had no remaining sick leave and was the sole support of her family including her disabled husband, a 26 year old daughter who had recently lost her job, and her granddaughter age 5. When she met with the spinal surgeon the woman expressed her frustration with the healthcare system summarizing that "no one at any point considered what would work for my life," "everyone tells me something different" and "all I've done is wait for appointments that haven't helped me so far."

3 Discussion

How might care have been improved for this woman had an R.N. case manager or an N.P. been the team leader of a patient-centered medical home? Could the visit to the emergency room and those associated costs have been avoided had the woman received consistent information about pain control, shorter referral / wait times, and access to adequate pain medication? Could the need for any of the X-rays or any of the specialist referrals have been minimized if the M.R.I. had been scheduled and read in a timely manner? Each of these questions is significant considering the costs associated with E.R. stays, how painful a herniated disk is, and how long this woman waited between appointments while being transferred from one practice to another.

Had the woman received care from a patient-centered medical home a nurse could have taken the time to provide needed education? The woman could have received health education about the importance of pain management, the value of weight loss, and the need for active participation in physical therapy. She could have also received education about the necessity of timely intervention for a herniated disk in order to avoid nerve root damage, and the reality that herniated disk pain often decreases over time [13]. Conflicting information about pain control which she received from her primary care physician, the orthopedic specialist, and the pain control specialist could have been addressed by an R.N. or a N.P. working within a medical home. A nurse would also have recognized the importance of avoiding N.S.A.I.D.s given her history of bleeding ulcers. Fortunately, the woman stopped taking the N.S.A.I.D.s because they were not effective before they caused a problem with her ulcers.

Improved access to care, shorter referral times, and a caring patient-provider relationship would have changed the woman's perception that she was poorly treated and improved her quality of life. She should have received access to physical therapy near her home, had a reasonable M.R.I. appointment schedule, and adequate pain control. She needed to receive care that was consistent with her values and her need to return to work as soon as possible so she could support her family.

4 Risks associated with medical homes

Although there are multiple advantages associated with broader implementation of medical homes across the U.S. including decreased fragmentation of care and minimization of medical errors, there are also risks that need to be modulated as this approach to care is expanded. One of the principles of a medical home is to control costs. A risk is that this principle will overshadow other goals of the medical home. In order to motivate physicians to incur the additional costs associated with developing a primary care medical home such as the salary of a case manager and implementation of an electronic medical record capable of addressing continuous quality improvement requirements, yearly fees of up to $50,000 per year are being offered. It will be important to ensure that such fees are actually used to implement the medical home rather than rewarding physicians and other practitioners who limit needed referrals. In a similar vein one of the models being used when developing medical homes is to have R.N.s work for private insurers although the nurses are based in and see patients in the primary care practice and have free access to the medical record. Traditionally, nurses have served as patient advocates which explains why nurses are the most trusted profession according to public opinion. Nurses have historically maintained their advocacy role while working for hospitals and primary care practices [14]. One would expect these advocacy skills to continue even if nurses were employed by a private insurance company operating a medical home whose goal it was to avoid unnecessary expenses and referrals. However, that reality would need to be monitored to ensure that necessary tests, referrals and treatments were obtained, not limited.

5 Conclusion

It is vital to advocate for a central role for R.N.s and N.P.s in the medical home model that is currently being explored in the U.S. Because patient advocacy, personalized care, care planning, and health education are key aspects of nursing care, nurses are well situated to take on central roles within medical homes [12]. It is also critical for nurses to be involved in examining outcomes from medical homes to make a case for their expansion. Fragmented systems of care and existing reimbursement mechanisms do not allow adequate time to ensure coordinated, patient-centered care. The medical home concept offers great promise in terms of increasing coordination and quality of care, reducing unnecessary costs, and making use of the skills of R.N.s and N.P.s. Nurses provide the warmth, human connection, and integration necessary to implement patient-centered care in medical homes. Nurses have the power to transform a healthcare system from that of a guillotine like gauntlet of excessive waiting, mechanized care, and conflicting recommendations into a healing institution rooted in relationship and caring.

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