The Triumphs and Tribulations of Establishing a Nurse-Run Chronic Disease Management Program in a Large VA Health Care Facility

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Because it serves a large number of patients who struggle to cope with 1 or more chronic diseases, a VA health care facility is the prime setting for a chronic disease management program (CDMP). Here, the authors detail the challenges they experienced while establishing a nurse-run CDMP at their facility.

The Veterans Health Care System is the largest health care organization in the United States that delivers care to a patient population with a high prevalence of chronic conditions.[1] The VHA is increasingly challenged to employ new methods to address critical health care issues. The VHA has instituted massive change and redesign within its organization since the 1990s. Between 1995 and 1999, numerous systemic changes were implemented that produced markedly improved quality, service, and operational efficiency.[1] The need for effective chronic disease management (CDM) presents many challenges to leadership. The prevalence of chronic diseases within the VHA population is monumental. The VHA's immense health care delivery system, with its stable patient population and high prevalence of chronic conditions, creates a unique opportunity for innovating medical care and health services delivery.[1] In an effort to address this ongoing challenge, the Central Texas Veterans Healthcare System (CTVHCS) established the Chronic Disease Management Program (CDMP), a clinic run by nurses to address 3 conditions specifically: hyperlipidemia, hypertension, and diabetes. By using clinics run by nurses and care managers, patients with chronic diseases can be more effectively managed and have better health outcomes.[2]

There are 8 essential factors that contribute to the success of a nurse-run clinic. They are strategic alignment; leadership support; agreement about protocols; clearly defined roles and responsibilities; adherence to the scopes of practice; regulatory compliance; effective communication; and reporting.[3] A policy and procedure manual was written for our CDMP to define roles, ensure consistency with procedures, and measure outcomes. The manual was established as a facility-wide memorandum with endorsement from nursing leadership, the chief of ambulatory care, the pharmacy department, the therapeutics committee, and the medical executive committee. This process set the foundation for our program.

OUR CDMP PROGRAM

Our population-based CDMP was established in April 2009. A multidisciplinary team approach with collaboration of services was used to develop the program. Two nurse case managers, who were responsible for implementing a CDMP to target hyperlipidemia, hypertension, and diabetes for ambulatory care patients, led the team.

Our CDMP works in concert with all the primary care clinics at CTVHCS, which includes 3 major clinics and 4 community-based outpatient clinics (CBOCs). Initially, the program focused on hyperlipidemia, targeting diabetes patients and patients with ischemic heart disease who had calculated low-density lipoprotein cholesterol (LDL-C) levels > 99. In an effort to help primary care providers (PCPs) manage chronic disease,

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the case managers and the multidisciplinary team designed the program's clinic to be led by registered nurses (RNs) in collaboration with clinical pharmacists. A review of systems processes and implementation of patient risk categories allowed for an enhanced medication management approach.

Approximately 90% of nurse-patient interactions are by telephone with the option of face-to-face interviews when it is convenient or deemed necessary. Telephone contact, as part of a diabetes mellitus program, can improve the rates of LDL-C and hemoglobin A_{1c} (HbA_{1c}) testing in previously noncompliant patients with diabetes, and such contact can help narrow the gaps in chronic care management.[4] Telephone calls help assure that the patient is compliant with their medical regimen. They also allow patients to ask health care professionals questions without having to make an appointment at the clinic.

Each patient's clinical data, including diagnosis, LDL-C level, and HbA_{1c} level, are reviewed prior to their enrollment in the program. The LDL-C target for VA performance measures, based on evidenced literature, is < 100. A database for patients with LDL-C > 99 is sorted by facility and the PCP. A template and patient letter were established to guide the nurses through patient phone calls, plan of care, and follow-up management. Traceable data points that identify patients enrolled in various levels of clinical follow-up are 1) enroll RN to manage; 2) enroll pharmacist to manage; 3) not eligible for enrollment; and 4) decline enrollment. These data points were built into the template's design in order to generate reports for follow-up. Face-to-face education and training were provided for all participating RN managers.

Appropriate laboratory tests are reviewed, and any need for medication dosage titration is determined and communicated to the pharmacist or PCP for approval. Laboratory tests are ordered if the previous results are more than 6 to 8 weeks old or if any statin medications were titrated. Simvastatin and pravastatin are the 2 medications that are reviewed for titration by the nurse. If any other statin medication or cholesterol-lowering medications are noted, the patient is referred to the pharmacist or PCP for medication management.

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Referrals to the nutrition service, cardiovascular workshop, or the Move! program are also determined during this process for comprehensive health promotion. MOVE! is a national weight management program designed to help veterans lose weight, keep it off, and improve their health.

A data analyst assists with compiling lists of patients whose clinical outcomes were noted to be outside of the targeted performance guidelines. Patients are enrolled in the program from a database selection that is presented to the RNs and pharmacists (Figure). Patients who are considered uncomplicated are managed by RNs. Patients who are considered complicated are managed by pharmacists, and they are cared for by the pharmacists or PCPs. The RN communicates the uncomplicated patient's needs through progress notes that are written to the pharmacists or PCPs. The RN then reviews the patient's chart to determine the appropriate level of care and develops a plan of care. If the patient meets criteria for the program, he/she is contacted by phone to assess medication adherence, diet, physical activity, and alcohol intake. Assessments are also conducted during primary care visits.

All communication to the patient, whether completed by phone or in the clinic, is documented in the established template and recorded in the patient's medical record. The patient letter is used as a communication tool and as reinforcement of the information provided to the patient during the interaction.

MEASURING EARLY SUCCESS

Initial feedback regarding the success of our CDMP has been minimal, but optimistic. A review of the data shows a downward trend in patient LDL-C levels and, therefore, a decreased risk of heart attacks and stroke for veterans in our program. An increase in the cardiovascular workshop attendance has been noted. The most notable impact has been a shift in the direction of process improvement to the likely possibility of directly improving the health of our veterans with chronic diseases such as hyperlipidemia, hypertension, and diabetes mellitus.

THE CHALLENGES WE FACED

The process of implementing our CDMP has brought about many or-

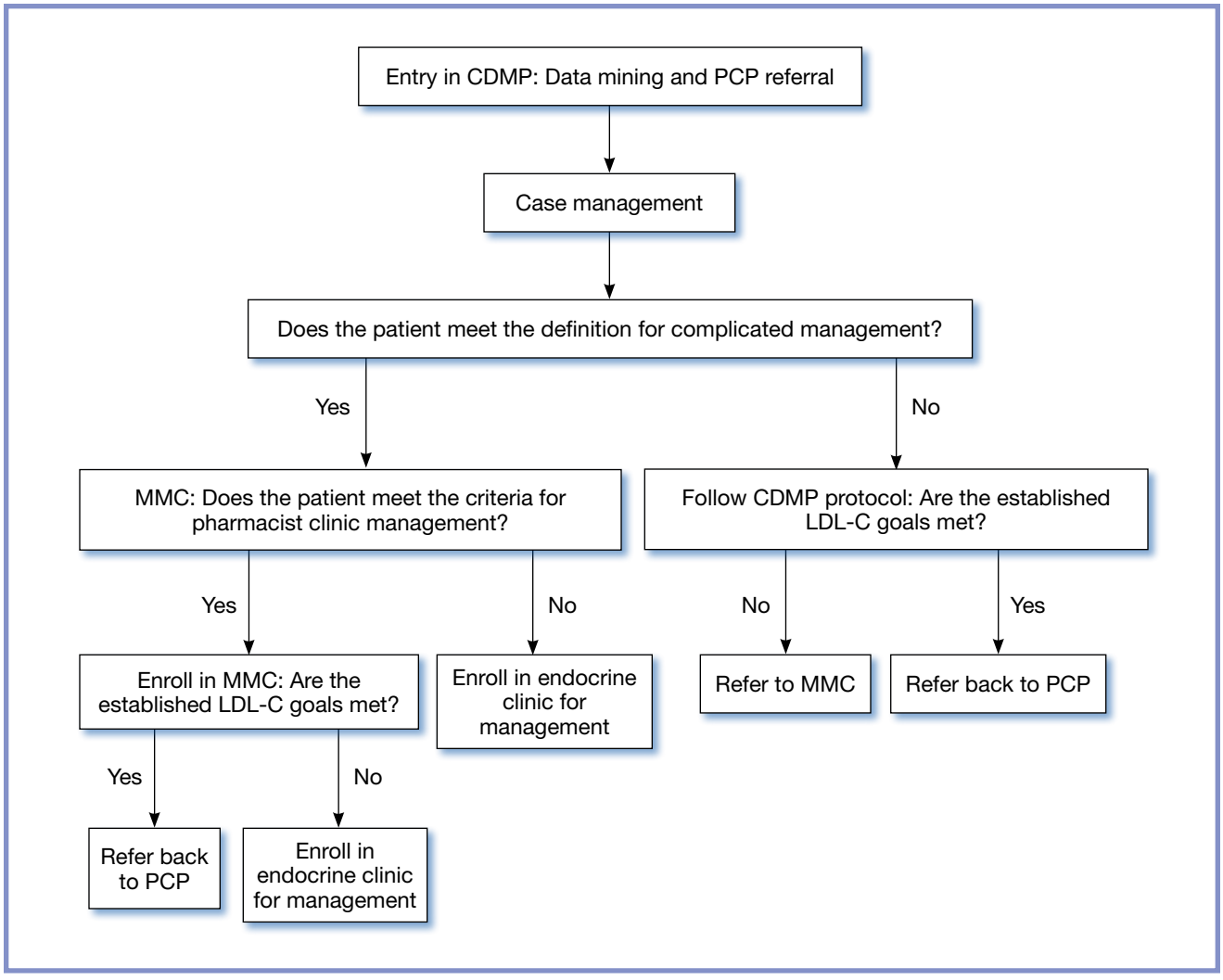

Figure. Database selection for enrolling patient to CDMP. CDMP = chronic disease management program; LDL-C = low-density lipoprotein cholesterol; MMC = medication management clinic; PCP = primary care physician.

ganizational challenges. The exhaustive literature search we conducted before creating our clinic gleaned inadequate information about population-based, nurse-run clinics. Limited information exists about population-based disease management programs that target disease-specific management.[5] Creating the policy was our first major challenge because of an unclear definition of the process and the desired outcomes. We revised our policy multiple times in an effort to establish a cohesive foundation for our program.

Although VHA is ahead of many large health care systems with its integrated and computerized patient record system (CPRS), it has limited capabilities for interactive templates for the ambulatory care setting. Therefore, our information technology departments experienced major challenges designing an electronic template for CDM and a patient letter for documentation purposes that would be user-friendly.

The organizational methods of each clinic played a significant role during the initial program phase. Even though all the clinics are primary care clinics within the VA System, each clinic and CBOC has a unique culture based on the population served, the staff employed there, and the services provided. Levels of acceptance to change and implementation of the program were varied. The program was designed as a

nurse-run clinic. Nurses work with pharmacists to independently manage patients who struggle with hyperlipidemia. Some RNs demonstrated a lack of enthusiasm as a result of practice change and an increased level of autonomy, while others embraced the opportunity to directly impact health outcomes. Some of the facility's CBOCs do not have direct access to pharmacists, and this posed another barrier to implementing the CDM clinics.

There was reluctance from some PCPs to endorse a nurse-run clinic. Reluctance seemed to revolve around concerns of PCP responsibility for patient outcomes and follow-up. Some PCPs expressed concern for a lack of involvement in the direct care of patients, while others welcomed the assistance to manage well-established, evidenced-based health care by structured procedures. As a result, mechanisms were built into the program to keep PCPs informed about medication changes. All treatment plan changes are communicated in writing through the patient medical record and co-signed by the PCP or pharmacist.

Early in the program, mass mailing of letters to patient homes was used to invite patients to the program and to solicit active patient participation in their health care. Patient privacy and the organization's guidelines regarding correspondence to patients were adhered to strictly. All letter contents were generalized and did not contain confidential patient information. This method proved to be ineffective. Many patients reported not receiving a letter, and many who received letters did not follow the enclosed instructions.

A sound follow-up system remains a major concern for our program. Processes for patient follow-up in our system almost always require patient appointments. Because we are using a telephone-driven approach, a new method had to be established. RN clinic profiles were established so future appointment slots would be available to support phone and laboratory collection requirements.

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The most daunting obstacle has been the difficulty in creating automated reports and in developing a patient tracking and follow-up system. A policy was developed describing standing procedures for low-risk patient management that promotes RNs working to the full extent of their scope of practice. Consistent and effective communication during implementation of process improvement is a challenge to achieve and maintain, but worthy of persistence in order to succeed. The nature of patient care that includes lab work and 6 to 8 week follow-up and management requires detailed reporting prompts for follow-up, which is outside the capabilities of our current CPRS. Although there have been many challenges in establishing our program, administrative, medical, and nursing leadership, along with information technology have supported all aspects of our program's development.

WHERE WE GO FROM HERE

We anticipate several changes in the development of the diabetes mellitus and hypertension phases of our program. The mass mailing will be replaced by scripted phone calls. Drop-in group medical appointment clinics will be used as a complementary adjunct to our program. The previous methods used to communicate to physicians and other staff members about the program will be altered to market the primary care team in order to facilitate greater acceptance and support of the program overall.

The Patient Centered Medical Home (PCMH) model is a future endeavor for VHA. We anticipate that nurse case management will play a pivotal role in its establishment. The CDMP's process and intent are compatible with PCMH. Partnerships with community organizations are also being developed in an effort to provide veterans with access to all available community services that are beneficial and supportive to health wellness.

Patients with chronic, long-term conditions have received uncoordinated and fragmented care.[2] Nurse case managers can provide a much-needed avenue for patient access to consistent medical care and inject the possibility of stabilizing or improving the status of patients who have chronic conditions.[6] Nurses are 1 component of the health care team who are uniquely positioned to assess patient needs from a holistic perspective and to direct and institute the receipt of appropriate care in a timely manner. We have established the framework of a process design that potentially can be deployed in many other clinical situations.

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SUMMARY

CDM remains a very daunting issue for the health care industry. CTVHCS's population-based case management program has encountered various barriers during implementation of the nurse-run clinic, but persistence and leadership support have brought about some positive outcomes. The program is continuously evolving with the intention that the patient is monitored holistically by a multidisciplinary team. A reevaluation of the program's processes will be conducted in an effort to identify other avenues for improvement.

Defining the Do's

In our experience, 6 elements are required to implement a successful CDMP within our VA system. They include:

- Dedicated program development personnel
- Leadership support
- Achieving buy-in from all members of the care provision team to include PCPs, pharmacists, and nursing staff
- Data analyst(s)
- Creation of policies and procedures for the program
- Creation of tracking databases

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