

The Clinical Nurse Leader: *A Catalyst in Community Healthcare Transformation*

Enna Edouard-Trevathan, RN, DNP, MBA, CNL



Today's healthcare crisis offers distinct opportunities for the clinical nurse leader (CNL) to develop and evolve as a community healthcare practitioner delivering high-quality, patient-centered, safe, and efficient care on a microsystem clinical level. Chronic diseases are reaching epidem-

ic proportion in the United States. The risk for several chronic diseases, such as type 2 diabetes, heart disease, stroke, arthritis, asthma, and certain cancers, are attributed to obesity or overweight. Currently, two-thirds of US adults and one-fifth of US children are obese or overweight.

The CNL, the newest nursing leadership role, was created to bring about fundamental change in the healthcare delivery system. As a catalyst, this role can help to reverse the epidemic of overweight, obesity, and associated chronic diseases through coordinated multidisciplinary efforts grounded in evidence-based practice. Locally, the CNL will transform communities by promoting healthy lifestyle choices.

The purpose of this article is to highlight three health conditions (overweight, obesity, and diabetes type 2, some of the most debilitating and costliest chronic conditions affecting the American population and the healthcare system) where the CNL can significantly improve outcome within a community setting. The assimilation of the CNL, a lateral integrator of care within the community, can be an effective complement to primary care in combating these health conditions.

As the health crisis unfolds and resources dwindle, chronic diseases maintain unrelenting pressure on our healthcare system and the community. The Institute for Healthcare Improvement (IHI) recognized that chronic conditions are negatively affecting the fabric of some communities psychologically, physiologically, and financially and are increasing the demands on the healthcare systems.¹ A case can be made to strategically use the CNL at the community level and bolster the work being conducted at the primary care and inpatient units, in order to address prevention and treatment of chronic conditions related to overweight and obesity.

THE CLINICAL NURSE LEADER

The American Association of Colleges of Nursing (AACN) in 2004 implemented a new leadership role, the CNL. The CNL is the most contemporary nursing leadership role introduced into nursing practice within the past 40 years. This role is designed to bring leadership to the microsystem level of healthcare. The CNL is an advanced practice nurse generalist with a master's degree level of education. The CNL is trained to provide high-quality, effective, and safe nursing care in very complex healthcare environments.

The guiding principles for the CNL Partnership Model view the CNL as an overseer of unit-based clients' clinical plans aimed at improving care and reducing cost. The CNL accepts the tasks of improving clinical or client outcomes and advancing nursing practice through the application of evidence-based care to clients and their families. The CNL is a lateral integrator of care and services; decision making is driven by outcome, based on evidence-evaluated strategies to improve performance within the microsystem or the front line of care.^{2,3}

MICROSYSTEMS

Microsystems may comprise the following: patients, clinicians, processes, and recurring patterns such as cultural, information flow, and results.^{4,5} Clinical microsystems are the building blocks or the front-line units where most care is rendered to most people. The CNL is a member of the clinical microsystem that can be described as: "...a small group of people who work together on a regular basis to provide care to discrete subpopulations of patients. It has clinical and busi-

ness aims, linked processes, and a shared information environment, and it produces performance outcomes. Microsystems evolve over time and are complex adaptive systems, and as such they must do the primary work associated with core aims, meet the needs of internal staff, and maintain themselves over time as clinical units."⁴

LESSONS FROM MACROSYSTEMS

The 2009 *Commonwealth Fund's State Scorecard on Health System Performance* reports the findings of 2007 performance that have created urgency for improving healthcare systems to eliminate disparities and improve states' efforts to address population health needs and accessibility.⁶ At the macrosystem level, the scorecard is used as the framework for a state's health systems to identify opportunities for improvement. It is uniquely based on benchmarks for 38 indicators that look at access, quality, costs, and health outcomes.

The most recent scorecard depicts an image of a healthcare system experiencing tremendous pressure. This year, Vermont leads the nation in improved performance and ranks in the top quartile of all states on most of the indicators, and the rationale for its success is the driver for this article. In 2006, Vermont put in place several healthcare reforms that centered on preventing and managing chronic diseases.⁶

HEALTHCARE IMPLICATIONS OF OBESITY IN YOUNG CHILDREN AND ADOLESCENTS

Obesity is a logical physiological response to sedentary lifestyles and poor nutrition in children and is rapidly reaching epidemic proportion in the United States. It is developing onto one of the gravest health distresses for American children and adolescents.⁷⁻⁹ This epidemic is already contributing to high blood pressure and other circulatory illnesses, depression and other mental illnesses, asthma, arthritis, cancer, and type 2 diabetes, a disease that was manifested only in adults until recently.

Over the past 20 years, a steady increase in prevalence of obesity in children and adolescents has been observed across all racial-ethnic backgrounds, gender, and age.⁸⁻¹¹ The severity of the health concern can be further broken down according to data from the National Health and Nutrition Examination Survey (NHANES) surveys from 1976-1980 and 2003-2006 for different children age groups. The following increases in obesity prevalence have been recorded: children 2-5 years old, from 5.0% to 12.4%; ages 6-11, from 6.5% to 17.0%; and ages 12-19, from 5.0% to 17.6%.^{10,12} In 1998, some of the subgroups within that population were experiencing a 30% rise in obesity or at risk for overweight.⁹

The challenge for the CNL, when working with this subgroup, is to aim for interventions that can prevent or halt the increase of health-related comorbidities that decrease quality of life before adulthood. It is estimated that, without successful interventions, this population group will become 35% of obese adult Americans, which in turn will represent an additional 30% above the previous two decades.⁸ The most disturbing challenges facing healthcare professionals today are

Focused involvement at the microsystem level will translate to local programs that promote healthy lifestyle choices.

the current state of childhood obesity and the negative healthcare projections on adulthood, if left uncorrected.^{8–10}

HEALTHCARE IMPLICATIONS IN THE ADULT AND AGING POPULATION

According to the Centers for Disease Control and Prevention (CDC), America is evolving into an “obesogenic” society. Americans live an environment that encourages increased intake of nonhealthy foods and minimum physical activities.¹³ Overweight and obesity have been on the rise for the past three decades, primarily from poor nutrition and decreased activity levels. The US obesity rates increased 37% from 1998 to 2006.^{13,14}

Duly noted is the direct link of diabetes type 2 to obesity.¹⁵ According to the 2009 National Health Statistics Reports, the prevalence of diabetes is 14.1% for people age 55–64, 19.2% for ages 65–74, 18.2% for ages 75–84, and 13.0% for ages 85 and older. It was estimated that by the end of 2009, 19.5 million people age 24 to 85 were diagnosed with type 2 diabetes and another 4.25 million went undiagnosed.¹⁶

When focusing on adults 55 and older, the CNL will focus on the prospect of creating healthy aging, which is an emerging public health opportunity, according to the 2009 National Health Statistics Reports.¹⁶ Life expectancy has greatly increased since the turn of the last century. In the early 1900s, the life expectancy for a 65-year-old was another 12 years, and in 2005, that figure increased to 18.7 years.¹⁶ The US Census Bureau projects that by 2030, adults 55 and older will compose approximately one-third, or 31.1%, of the population.¹⁷ As our aging population increases, the likelihood of living with chronic conditions also increases. Living with multiple morbidities increases psychological distress.¹⁸ As a response, the CDC in 2007 released an action plan for aging Americans that included injury prevention, decreased selected chronic health conditions, and improved health promotion and preventive health.¹⁹

COST OF OBESITY AND TYPE 2 DIABETES

The US Department of Health and Human Services (HHS) reports that overweight, obesity, and directly linked health problems have a significant negative impact on the US economy.²⁰ The burden for treatment is estimated to account for

9.1% of total US medical expenditures, or \$78.5 billion in 1998.²¹ *Health Affairs* reports that medical spending related to obesity has doubled in the past 10 years. The annual rate was estimated to be \$147 billion in 2008.^{14,15} Yearly, diabetic patients experience diagnosis-related expenses of \$11,744 and directly attributed expenses of \$6,649. For the next 25 years, the projected cost for the treatment of diabetes and related complications are \$336 billion as the size of the diabetic pool continues to increase.^{14,15,21–24}

GUIDING FRAMEWORK AND MODEL

The caseload for the chronically ill typically is carried by primary care providers. This model is more provider focused and less patient centered.^{25–27} The complexity of the tasks requires the CNL to be versed in the application of several frameworks and models. The most frequently used Chronic Care Model (CCM) has a component for self-management support. CCM includes both patient and specific program supports in primary care to achieve optimal health outcomes. The patient-oriented interventions are multifaceted and comprise educational activities, individualized and group sessions, multidisciplinary care meetings, and assessments of established behavior patterns (such as self-efficacy) to identify barriers that can impede behavior changes.^{28–34}

The Patient Centered Medical Home (PCMH) model encourages coordination of all healthcare services with active communication across the continuum. This patient-driven, team-based approach delivers comprehensive, efficient, and comprehensive care. PCMH have such expected achievable as increased patient engagement and shared decision making in recommended care, decreased hospitalization for chronic diseases, improved health outcomes, reduced mortality rate, increased patient and staff satisfaction, and reduced emergency room (ER) visits.^{35–39}

TRANSFORMATIONAL HEALTHCARE AGENT

The effective contribution of the CNL is based on clinical microsystems, intervention development and evaluation, translation of evidence that is practice-based, research findings, and interdisciplinary partnership developments. The role design is small, functional, and in the front line, yet is nimble and powerful enough to deliver healthcare to most people within the context of population-based services. The CNL is also an expert in providing nursing care to groups of patients and trained in dealing with patient situations that require complex and an all-encompassing level of understanding. This higher comprehension enables the CNL to seek suitable resources in acquiring supplemental theoretical or technical information when caring for a challenging client or group.^{2,3}

The focused involvement at the microsystem level will eventually translate to the creation of local programs that promote healthy lifestyle choices. This transformation will lead to policy and environmental changes and initiatives at state and national levels, providing necessary guidelines and resources in fighting obesity and its related chronic diseases that burden society psychologically, physiologically, and economically.^{3,4}

CONCLUSIONS

The CNL is well positioned to tackle the current and future states of overweight, obesity, and obesity-related chronic illnesses affecting American communities. At the microsystem level, the CNL, as an advocate for health prevention and promotion, can positively impact a society that is becoming obesogenic. The CNL has an opportunity to apply patient-driven, interdisciplinary interventions for disease prevention and management, assisting young and old populations in living healthier and longer lives and thus bending the cost curve for chronic illnesses and decreasing the financial burden on the healthcare system. **NL**

References

1. The Institute for Health Improvement. Chronic conditions: all conditions. <http://www.ihl.org/IHI/Topics/ChronicConditions/AllConditions>. Accessed October 20, 2009.
2. American Association of Colleges of Nursing. *White Paper on Education and Role of the Clinical Nurse Leader*. February 2007. <http://www.aacn.nche.edu/Publications/WhitePapers/ClinicalNurseLeader.htm>. Accessed October 29, 2009.
3. American Association of Colleges of Nursing. Guiding principles for the partnership model. 2004. <http://www.aacn.nche.edu/CNL/ImplementationConf/guidingprinciples6-04.doc>. Accessed October 29, 2009.
4. Nelson EC, Batalden PB, Huber TP, et al. Microsystems in health care: part 1. Learning from high-performing front-line clinical units. *Jt Comm J Qual Improv*. 2002;28(9):472-493.
5. Nelson EC, Batalden PB, Homa K, et al. Microsystems in health care: part 2. Creating a rich information environment. *Jt Comm J Qual Saf*. 2003;29(1):5-15.
6. McCarthy D, How SKH, Schoen C, Cantor D, Belloff D. Aiming higher: results from a state scorecard on health system performance, 2009. The Commonwealth Fund Web site. October 2009. <http://www.commonwealthfund.org/Content/Publications/Fund-Reports/2009/Oct/2009-State-Scorecard.aspx?> Accessed October 7, 2009.
7. Homer C, Cooley W, Strickland B. Medical home 2009: what it is, where we were, and where we are today. *Pediatr Ann*. 2009;38:483-490.
8. Sothorn MS, Gordon ST. Prevention of obesity in young children: a critical challenge for media professionals. *Clin Pediatr*. 2003;42:101-111.
9. Hill J, Throwbridge F. The causes and health consequences of obesity in children and adolescents. *Pediatrics*. 1998;101:497-575.
10. Ogden CL, Carroll MD, Flegal KM. High body mass index for age among US children and adolescents, 2003–2006. *JAMA*. 2008;299:2401-2405.
11. Blasi MJ. A burger and fries: the increasing dilemma of childhood obesity. *Child Educ*. 2003;79:321-322.
12. CDC National Center for Health Statistics, Health E-Stat. NHANES data on the Prevalence of Overweight among children and adolescents: United States, 2003–2006. <http://www.cdc.gov/obesity/childhood/prevalence.html>. Accessed November 23, 2009.
13. Centers for Disease Control and Prevention. *Overweight and Obesity*. <http://www.cdc.gov/obesity/index.html>. Accessed October 2, 2009.
14. Fleming C. Obesity spending estimated at \$147 billion annually. *Health Aff*. July 29, 2009. <http://healthaffairs.org/blog/2009/07/29/obesity-spending-estimated-at-147-billion-annually/>. Accessed September 9, 2009.
15. Huang ES, Basu A, O'Grady MJ, Capretta JC. Using clinical information to project federal health care spending. *Health Aff*. 2009;28(5):w978-w990.
16. Schoenborn CA, Heyman KM. Health characteristics of adults aged 55 years and over: United States, 2004–2007. *Natl Health Stat Report*. 2009 Jul 8;(16):1-31. <http://www.cdc.gov/nchs/data/nhsr/nhsr016.pdf>. Accessed September 2, 2009.
17. US Census Bureau. *Statistical Abstract of the United States, 2008*. Washington, DC: U.S. Government Printing Office; 2008.
18. Fortin M, Bravo G, Hudon C, Lapointe L, Dubois MF, Almirall J. Psychological distress and multimorbidity in primary care. *Ann Fam Med*. 2006;4(5):417-422.
19. Centers for Disease Control and Prevention and the Merck Company Foundation. *The national report card on healthy aging*. In: *The State of Aging and Health in America 2007*. Whitehouse Station, NJ: The Merck Company Foundation; 2007.
20. U.S. Department of Health and Human Services. *The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity*. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General; 2001.
21. Finkelstein EA, Fiebelkorn IC, Wang G. National medical spending attributable to overweight and obesity: how much, and who's paying? *Health Aff (Millwood)*. 2003;Suppl Web Exclusive: W3-219-26.
22. Wolf AM, Colditz GA. Current estimates of the economic cost of obesity in the United States. *Obes Res*. 1998;6(2):97-106.
23. Wolf AM. What is the economic case for treating obesity? *Obes Res*. 1998;6(suppl):2S-7S.
24. Finkelstein EA, Trogon JG, Cohen JW, Dietz W. Annual medical spending attributable to obesity: payer- and service-specific estimates. *Health Aff (Millwood)*. 2009;28:w822-w831.
25. Bodenheimer T, Chen E, Bennett H. Confronting the growing burden of chronic disease: can the U.S. health care workforce do the job? *Health Aff (Millwood)*. 2009;28:64-74.
26. Epping-Jordan JE, Pruitt SD, Bengoa R, Wagner EH. Improving the quality of health care for chronic conditions. *Qual Saf Health Care*. 2004;13(4):299-305.
27. Bodenheimer T, MacGregor K, Shafiri C. Helping patients manage their chronic conditions. Oakland, CA: California Healthcare Foundation. June 2005. <http://www.chcf.org/documents/chronicdisease/HelpingPatientsManageTheirChronicConditions.pdf>. Accessed October 7, 2009.
28. Corser W, Xu Y. Facilitating patients' diabetes self-management a primary care intervention framework. *J Nurs Care Qual*. 2009;24(2):172-178.
29. Corser W, Holmes-Rovner M, Lein C, Gossain V. A shared decision-making primary care intervention for type 2 diabetes. *Diabetes Educ*. 2007;33(4):700-708.
30. Improving Chronic Illness Care. *The Chronic Care Model*. Seattle, WA: MacColl Institute for Healthcare Innovation. http://improvingchroniccare.org/index.php?p=The_Chronic_Care_Model&s=2. Accessed October 1, 2009.
31. Coleman K, Austin B, Brach C, Wagner E. Evidence on the chronic care model in the new millennium. *Health Aff (Millwood)*. 2009;28:75-85.
32. Belalcazar ML, Swank PR. Translating the chronic care model into the community: results from a randomized controlled trial of a multifaceted diabetes care intervention: response to Piatt et al. *Diabetes Care*. 2006;29:2761-2762; author reply 2762.
33. Anderson D, Christison-Lagay J. Diabetes self-management in a community health center: improving health behaviors and clinical outcomes for underserved patients. *Clinical Diabetes*. 2008;26:22-27.
34. Scanlon D, Hollenbeak C, Beich J, Dyer A, Gabbay R, Milstein A. Financial and clinical impact of team-based treatment for Medicaid enrollees with diabetes in a federally qualified health center. *Diabetes Care*. 2008;31:2160-2165.
35. American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, American Osteopathic Association. Joint principles of the patient-centered medical home. February 2007. http://www.aafp.org/online/etc/medialib/aafp_org/documents/policy/fed/jointprinciplespcmh0207.Par.0001.File.dat/022107medicalhome.pdf. Accessed September 7, 2009.
36. Glasgow R, Peeples M, Skovlund S. Where is the patient in diabetes performance measures? The case for including patient-centered and self-management measures. *Diabetes Care*. 2008;31(5):1046-1050.
37. Sidorov J. The patient-centered medical home for chronic illness: is it ready for prime time? *Health Aff (Millwood)*. 2008;27:1231-1234.
38. Rittenhouse D, Casalino L, Gillies R, Shortell S, Lau B. Measuring the medical home infrastructure in large medical groups. *Health Aff (Millwood)*. 2008;27:1246-1258.
39. Carrier E, Gourevitch MN, Shah NR. Medical homes: challenges in translating theory into practice. *Med Care*. 2009;47(7):714-722.

Enna Edouard-Trevathan, RN, DNP, MBA, CNL, is an ambulatory care nurse manager at the VA Palo Alto in Palo Alto, CA, and adjunct faculty at the University of San Francisco, San Francisco, CA. She can be reached at Enna.Trevathan@gmail.com.

1541-4612/2010/\$ See front matter
Copyright 2010 by Mosby Inc.
All rights reserved.
doi:10.1016/j.mnl/2010.01.005