BUSINESS

OF LIFESTYLE MEDICINE

Tonya Cramer, MD, MPH, April Wilson, MD, MPH,
and Brenda Rea, MD, DrPH, PT, RD

Lifestyle Medicine Inpatient Consultation Services at Loma Linda University Health: A Novel Approach in a Tertiary Care Center

Abstract: *As a nation facing primary care provider shortages, an expanding chronic disease burden, and rising health care costs, lifestyle medicine interventions have become critical for patient care and management. The current fee-for-service health care system in the United States is designed for delivering acute care but has made it challenging to deliver and be reimbursed sufficiently for lifestyle interventions that can help prevent and treat chronic disease. Loma Linda University Health began to address these concerns through the creation of an inpatient consultation service for the neurology rehabilitation stroke team. Initiation of the consultation service took 2 years of planning, testing, and resource development. Currently, the consultation service operates one half-day per week in the rehabilitation hospital utilizing 1 attending physician and 2 residents. Visiting residents and medical students are also permitted to rotate with the new service. In coordination with billing experts, a standard number of*

21.2 to 25.4 RVUs (relative value units) has been established for the half-day service. As the service continues to expand, future considerations include adding consultation availability to other departments and increasing the consultation workforce.

Keywords: inpatient; consultation; consult; tertiary care; RVUs; lifestyle medicine consultation

and mental health conditions, resulting in costs of more than \$2.3 trillion per year.¹ Unfortunately, the majority of these people have not just one but multiple chronic diseases. This is reflected by the fact that 71% of all health care spending in the United States (more than \$1.9 trillion a year) is for those living with more than one disease.¹ As the US population ages, these numbers are

Many institutions have used lifestyle medicine visits in the outpatient context, though less frequently at tertiary care centers.

It is well known that the cost of health care in the United States is staggering and exceeds that of any other developed nation. This is largely because 86% of health care expenditures in the United States are for people with chronic

expected to rise,¹ worsening the financial strain of health care. To further complicate the issue, it is estimated that by 2030, the United States will face a shortage of more than 100 000 physicians.²

DOI: 10.1177/1559827618754860. From Loma Linda University, Loma Linda, California. Address correspondence to: Tonya Cramer, MD, MPH, Loma Linda University, 24785 Stewart Street, Suite 204, Loma Linda, CA 92350; e-mail: Tcramer@llu.edu.

For reprints and permissions queries, please visit SAGE's Web site at <http://www.sagepub.com/journalsPermissions.nav>.

Copyright © 2018 The Author(s)

Lifestyle medicine is one approach to care that shows promise in addressing and reversing these trends. It is focused on treating the root cause of chronic diseases rather than just controlling the symptoms. As a nation facing primary care provider shortages, an expanding chronic disease burden, and rising health care costs, these lifestyle medicine interventions have become an absolute necessity for patient care and management. Many institutions have used lifestyle medicine visits in the outpatient context, though less frequently at tertiary care centers. Loma Linda University Health (LLUH) began to address these concerns through the creation of an inpatient consultation service for the rehabilitation stroke team.

The need for lifestyle and preventive medicine services was initially identified by the physical medicine and rehabilitation physicians in relation to a specific focus on those patients recovering from stroke; however, the concept soon expanded to other patients on their service. The process of initiating the consultation service took 2 years of planning, testing, and resource development. Working with the intention of reducing readmission risk, on March 30, 2016, a 6-week trial lifestyle medicine consultation service was piloted. Based on patient care demand, as well as resident and faculty availability, it was estimated that 2 Preventive Medicine residents and 1 Preventive Medicine faculty member would be able to provide consultation for one half-day each week. Patients were invited to have a high level of involvement and to provide feedback on essential features of the service. The pilot service was well received and consideration, evaluation, and planning for a permanent service began.

One of the consultation service patients had multiple chronic diseases, including tobacco dependence and hypertension. Tobacco dependence had been especially difficult for the patient to manage. While in the hospital with a first stroke, the patient temporarily quit smoking until reaching the parking lot

on discharge. He then resumed and continued to smoke until he was admitted for a second stroke. We became acquainted with the patient while admitted to the rehabilitation stroke service, after the second stroke, when a Lifestyle Medicine consultation referral was placed.

The patient struggling with tobacco dependence was delighted to be invited to participate in our pilot program. In fact, it was so exciting that the family all pulled out their smartphones and recorded a video of the encounter. As tobacco dependence was the most acute lifestyle behavioral change needed, the team focused on smoking cessation. Together we created a plan for quitting and staying smoke free. Although the stroke team billing focuses on the primary admission diagnoses such as stroke and dysarthria, the Lifestyle Medicine consultation service associates the billing with underlying lifestyle risk factors that contribute to the disease process. However, it was not clear if this patient's insurance would cover the consultation services. During deliberations with billing experts, several coding options were explored. Although it is possible to bill for time spent in the encounter, the team decided to code based on medical decision making, physical exam, and history.

One of the primary concerns for the initiation of a permanent service was the financial feasibility of the service. Information on reimbursement for the services was unavailable for 30 to 90 days following provision of the consultations offered during the pilot. Financial analysis of the service began in August 2016. The consultation services were covered by all insurers including Medicaid, Medicare, and the various commercial carriers used by patients. The payor mix on the LLUH Rehabilitation Service is 26% PPO, 25% Medicare, and 49% Medi-Cal (California Medicaid) or Medical HMO. The patient case complexity and medical decision making resulted in coding appropriate for primarily level 3 and 4 patients. Using Medicare billing as the standard, the

inpatient billing collects 88% of Medicare allowable, due to the large number of Medicaid (Medi-Cal) patients on the service.

Having proven financial viability, discussions on the development and initiation of a permanent inpatient consultation service began in the fall of 2016. In coordination with billing experts, a standard schedule for the 2 residents and single attending was created. This schedule enables billing for up to 21.2 to 25.4 RVUs (relative value units) per half day, with the breakeven point being 15 RVUs (based on 50% of Medical Group Management Association). This revenue generation breakeven point only considers the 1 faculty member salary while 2 the resident salaries are supported by the institution. When reviewing our billing codes for the first 3 months of the permanent service, 17% were follow-up visits, 26% were consultation visits, and 57% were initial visits. One of the billing challenges identified during the pilot study was that new patient visits were underdocumented relative to the complexity of the medical decision making, and follow-up visits were overdocumented. In response, electronic medical record templates were created to support the level of care and the patient complexity.

To create a comprehensive lifestyle management approach, it was recognized that an outpatient service would be needed to follow-up with these stroke patients after discharge.

On successful completion of the inpatient trial, the coordinated trial and launch of our first outpatient lifestyle medicine consultation service took place. This outpatient service line was embedded in a primary care clinic at LLUH. The outpatient lifestyle medicine consultation service provides follow-up for continuity of care for our inpatient consultations and the opportunity for primary care referrals into the service. After proving the financial viability of this outpatient service, we were able to officially begin the inpatient consultation service with the rehabilitation stroke team.

During the first official patient consultation, the attending considered bringing up some issues related to a poor diet but ultimately decided to defer that discussion to the following week and create a progressive path toward health that did not overwhelm the patient instead. A documentary on the benefits of a plant-based diet was offered to the patient as a fun resource that could be engaged during downtime between rehabilitation therapy sessions. On entering the room for follow-up the next week, not only did the patient relate cessation of nicotine cravings with appropriate nicotine replacement therapy but also announced the decision to follow a plant-based diet and asked for a way to find a primary care doctor who would support these efforts.

Since April 2017, the inpatient consultation service continues to operate one half-day per week in the rehabilitation hospital utilizing 1 Preventive Medicine attending physician and 2 Preventive Medicine residents. The typical patient load includes 3 to 5 new consultations and 3 to 5 follow-ups. At the lower end of this range, the RVUs are insufficient to reach our 15 RVU breakeven point. We have identified several key processes to improve referral rates, including education and creation of referral

algorithms for patient care coordinators, residents, attendings, and administration. In addition, we have opened our availability to other rehabilitation teams in the hospital. We will be tracking and working on these processes over the upcoming months. We are also exploring avenues to increase our availability beyond our current one half-day per week so that we can expand to the nonrehabilitation services in our institution.

When considering lifestyle medicine as a primary means of addressing and reversing chronic disease at the root cause, finding ways to integrate lifestyle medicine into inpatient settings is essential. LLUH has explored and successfully implemented such a service within a rehabilitation stroke inpatient setting. We are hopeful that our inpatient lifestyle medicine consultation service will continue to expand within our own institution and the lessons learned will be useful to other institutions as well. Every step of progress can be celebrated and shared as the field of lifestyle medicine transforms the way health care is delivered.

Acknowledgments

Thank you to the following additional faculty at Loma Linda for their work and insights in the creation of the inpatient service and this article: Dr Camille Clarke, Dr Stewart Wilkey, and Dr Karen Studer.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Ethical Approval

Not applicable, because this article does not contain any studies with human or animal subjects.

Informed Consent

Not applicable, because this article does not contain any studies with human or animal subjects.

Trial Registration

Not applicable, because this article does not contain any clinical trials. **AJLM**

References

1. Gerteis J, Izrael D, Deitz D, et al. *Multiple Chronic Conditions Chartbook* (AHRQ Publications No. Q14-0038). Rockville, MD: Agency for Healthcare Research and Quality; 2014.
2. Mann S. New research shows shortage of more than 100,000 doctors by 2030. <https://news.aamc.org/medical-education/article/new-aamc-research-reaffirms-looming-physician-shortage/>. Published March 14, 2017. Accessed December 13, 2017.