

Operation La Sierra: A Novel Wellness Initiative for Neurological Surgery Residents

Setting and Problem

Residency education in neurological surgery is physically and mentally demanding. During training, many physicians report suboptimal diet, lack of exercise, poor sleep, and limited attention to personal wellness. Burnout and resident attrition are high. Resident physicians rarely see physicians for regular checkups and often neglect personal illnesses.

At the Medical University of South Carolina neurological surgery program, we experienced resident attrition due to poor physical and mental health. This prompted a detailed discussion among residents and faculty regarding the daily stresses and limitations to attend to personal wellness during residency. These discussions have led to the development and implementation of Operation La Sierra, a wellness program named after the California high school that became famous for its physical education program in the 1960s.

Intervention

La Sierra was implemented in our program in July 2015 and is available on a voluntary basis to all faculty and resident physicians in the department, as well as to other health professionals and office staff. All participants were provided with a Fitbit Charge HR wrist monitor (Fitbit Inc, Boston, MA) to wear at all times (when appropriate) and volunteered to undergo baseline physical and psychological testing, bloodwork, and survey instruments. Volunteers also underwent InBody body composition testing to determine percentage of body fat, metabolic rate, and other markers. Testing results were confidential, and all participants receive a generic identifier through which their results are recorded.

Wellness lectures on exercise, diet, alcohol avoidance, and mental health are incorporated into weekly departmental conferences. Weekly team-based 1-hour exercise sessions with the aid of physical trainers are incorporated into the workweek, and individuals who decide not to participate may opt out of these sessions. Healthy food choices are provided at morning conferences. Progressive exercise, sleep, and dietary goals are employed in phases to promote advancing fitness gains. The program administers periodic anonymous online surveys to assess concerns whether the program interferes with patient care responsibilities and individuals' perceptions whether there is coercion to participate. To date, we have estimated the cost of the intervention to be approximately \$500 annually per resident and faculty member participant.

Outcomes to Date

Six faculty neurosurgeons and 9 residents volunteered to participate. Baseline health screening demonstrated abnormalities in 80% (12 of 15) of participants, with elevated resting systolic blood pressure in 60% (9 of 15) of individuals. The average body mass index was 27.6; the average amount of fat loss required to reach ideal body weight was 25.4 pounds. Assessments also identified 36% (5 of 14) of respondents with a possible sleep disorder. Seventy-seven percent (10 of 13) of participants demonstrated quality of life scores below the national average. Importantly, surveys indicated that all participants communicated that they wished they had more time to take better care of themselves.

In the 4 months since the initiation of the wellness program, InBody results have demonstrated an average weight loss of 3.6 pounds and 1% of body fat per participant. Survey results indicated that 64% (7 of 11) of participants believed the program improved their physical health (9% [1 of 11] no, 27% [3 of 11] maybe), and 64% (7 of 11) reported improved mental well-being (18% [2 of 11] no, 18%

[2 of 11] maybe). No participant indicated that the program interfered with clinical responsibilities, and 91% (10 of 11) reported that it promoted team building and camaraderie (9% [1 of 11] maybe); 91% (10 of 11) indicated that wellness initiatives are important for resident physicians (9% [1 of 11] somewhat); and 82% (9 of 11) reported that La Sierra had a positive impact on the department (18% [2 of 11], neutral). Repeat psychologic surveys and physical testing are pending at this time.

The program is accepted by faculty and residents, and other departments at our institution have expressed interest in joining the initiative. Those who have opted out have not perceived adverse effects on evaluations. Overall, Operation La Sierra appears to (1) identify potentially undiagnosed medical conditions; (2) promote healthy lifestyle choices; (3) build camaraderie among our physicians; and (4) help residents' self-motivation to improve personal wellness. This program has been accomplished, at low cost and without loss of clinical activities, by incorporating sessions into routine resident and faculty activities.

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