NEW Lifestyle: A web-based teaching and learning program for Nutrition, Exercise, and Weight management

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Needs and objectives: Obesity is the second leading cause of preventable death in the US. Guidelines from the Association of American Medical Colleges urge medical schools to develop curricula on obesity, including its epidemiology, harms, and treatment.

Setting and participants: A team of interdisciplinary faculty at Wake Forest School of Medicine (WFSM) developed NEW Lifestyle (Nutrition, Exercise and Weight management), a comprehensive web-based program to educate all medical students about weight management issues. More detailed learning objectives may be viewed at the curriculum’s website (listed below) which is available for use online at no cost.

Description: Funded by grants from the National Cancer Institute, NEW Lifestyle consists of 8 self-contained web-based educational modules, all of which have pre- and post-quizzes. The modules cover obesity related topics including: 1) Epidemiology, 2) Cancer Risk, 3) Adverse Health Effects, 4) Energy Balance, 5) Factors Affecting BMI, 6) Counseling Skills, 7) Bias and Stigmatization, and 8) Obesity Treatment Guidelines. Unique to this program are its emphasis on confronting anti-obesity bias among providers, training medical students in culturally sensitive weight management counseling, and emphasizing the connection between obesity, inactivity, and cancer risk. Each module requires 10-15 minutes to complete. The web site resides in the public domain, allowing learners to complete the modules anytime. At WFSM, the modules were embedded into the basic science and clinical clerkship core curricula beginning with the Class of 2012.

Evaluation: The WFSM Class of 2012 (n=116) was the first class to receive the full curriculum. Across all modules, average pre-quiz scores ranged from 47% - 80%. Overall, the percent correct increased on the post-quizzes by a mean of 28% (range 5.4% - 43%, p<0.01 for all comparisons). After the curriculum was completed, all students were evaluated on an encounter with an obese standardized patient (SP) who complained of inability to lose weight. Students were not aware they were being evaluated on their obesity management skills. We compared the performance on the SP encounter for the Class of 2012 (full curriculum) to the Class of 2011 (no curriculum). Students who received the curriculum more often took a dieting history (85% vs. 53%, p<0.0001), asked about normal eating habits (87% vs. 78%, p=0.08), suggested an exercise plan (91% vs. 83%, p=0.08), advised patients not to skip meals (84% vs. 70%, p=0.01), and expressed empathy about weight struggles (89% vs. 80%, p=0.07). In contrast, students who did not receive the curriculum were more likely to investigate medical issues, e.g., hypothyroidism (45% vs. 14%, p<0.0001), sleep disturbances or snoring (15% vs. 3%, p<0.01), and family history of weight disorders (35% vs 16%, p<0.001). Non-curriculum students also were more likely to stress the need for medical follow-up (56% vs. 18%, p<0.0001), and obesity’s negative health effects (62% vs. 21%, p<0.0001).

Discussion / reflection / lessons learned: Focus groups with students provided essential input for designing the web modules to match students’ learning styles. Courses that offered extra credit for module completion had higher participation rates (80%) than those in which the modules were less emphasized (43%). Therefore, we suggest requiring students to email their post-test scores to course directors. Overall, the web-based program enhanced students’ obesity management skills, making NEW Lifestyle a valuable addition to medical school’s curricula.

Online resource URL (optional): www.NEWLifestyle.org
Pilot of a Resident Curriculum in Team-based Care and Panel Management

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Needs and objectives: Increasingly, primary care practices are turning to team-based models of care, such as the patient centered medical home (PCMH), to meet patient needs and performance targets. Most medical resident clinics, however, function in more traditional models of primary care, leaving trainees ill-prepared for modern practice. To address this training gap, we piloted a curriculum that aimed to:

1. Expose trainees to new and evolving care delivery models.²
2. Increase trainees’ knowledge of the skills and scope of practice of ambulatory care team members.³
3. Teach trainees social work, nutrition, and clinical pharmacy pearls to use in their own practices.⁴
4. Introduce the concept of panel management and provide each resident with personal panel data to encourage population-level thinking and problem-solving.

Setting and participants: Junior internal medicine residents (n=18) rotated through a two-week ambulatory block, spending time at Brigham and Women’s Advanced Primary Care Associates, a new PCMH practice.

Description: Through group workshops and direct patient care experiences, key non-physician health professionals educated residents about their scope of practice, role in the care team, and unique skills. In addition to group didactics and take-home exercises, residents spent one half-day each with a clinical social worker, clinical pharmacist, and nutritionist, who taught and modeled skills that residents can implement in their own practices. Finally, residents were provided diabetic and hypertension quality metrics from their own patient panels and were expected to devise a plan to systematically assist patients not meeting treatment goals. Development of this plan necessitated that residents learn how to better utilize resources within their own clinics and begin to conceptualize patient care beyond the individual.

Rotation feedback was regularly elicited through quantitative and qualitative surveys. Overall, residents felt that the group workshops and individual sessions with non-physician health care workers were valuable. The most common suggestions for curriculum improvement were to schedule more patient visits during the half-day sessions and include more panel data.

Evaluation: To measure the educational impact of the pilot rotation, a 26-item survey was developed to assess changes in residents’ self-reported knowledge and skills on aspects of primary care. Questions used a 5-point Likert scale to indicate the extent to which residents agreed or disagreed with statements. Comparing responses to the pre- and post-rotation survey, there were statistically significant increases in residents’ self-reported knowledge of new models of care, panel management concepts, and the roles and skills of social workers, pharmacists, and nutritionists (p<.001). Of note, all differences were greater than 1.3 points on the scale. A similar increase was reported for confidence in responding to domestic violence and using diabetic equipment (p<.02); there was also an increase in comfort in dietary counseling and engaging patients in their own healthcare. However, residents reported no significant difference in their confidence in implementing systems-based solutions (p=.07).

Discussion / reflection / lessons learned: A brief, easily adaptable curriculum had a significant impact on resident knowledge and attitudes towards interdisciplinary care and shows promise for higher utilization of health care teams. Having multiple clinic sites remains a challenge to providing uniform panel data and information on local resources.
Implementing a Longitudinal Integrated Clerkship (LIC) for the third year at The Commonwealth Medical College

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Needs and objectives: The Commonwealth Medical College (TCMC) is a new (2009) community based, allopathic medical school which provides a distributed model of education with three regional campus “hubs” over a 16 county region in northeastern and north central Pennsylvania. TCMC sought to design a third year curriculum which would offer opportunities for meaningful longitudinal relationships with patients and faculty and avoid the fragmentation of educational experiences seen in traditional third year hospital based clerkships.

Setting and participants: All third year medical students (63) at The Commonwealth Medical College, a community-based allopathic medical school with three regional campuses, located in both small urban and rural communities.

Description: The longitudinal integrated clerkship (LIC) is a model of third year education where students: 1) participate in the comprehensive care of patients over time; 2) experience continuous learning relationships with faculty; and 3) meet the core clinical competencies across multiple disciplines simultaneously. Students are assigned to six preceptors, one in each of the six core disciplines. Students spend one half day weekly with each preceptor in office-based settings. Three half days of ‘white space’ allow students to follow patients longitudinally into other care settings (hospital, OR, specialty appointments, etc) and a half day of weekly structured educational sessions round out the curricular experience. In addition, six one week ‘bursts’ in inpatient Surgery and Medicine allow for concentrated experiences in the hospital setting. Cross-campus comparability is ensured through central oversight and a strong regional educational leadership structure. The success of the model is enhanced by robust faculty development.

Evaluation: Students log all clinical encounters into an e-portfolio. These are reviewed regularly by the educational leadership team to ensure the educational objectives are being met. All students complete OSCEs and take NBME content exams in each of the six disciplines. In addition, faculty evaluations at 30 days, 6 months and end of year are completed along with measures of professionalism such as cultural competency and empathy.

Discussion / reflection / lessons learned: Recent reports from the Macy and Carnegie Foundation support the expansion of the longitudinal integrated clerkship as a model that supports longitudinal exposure to patients and faculty, enhances patient-centered attitudes and the maintenance of empathy, while demonstrating equivalent or better outcomes on measures such as written examinations and OSCEs compared with traditional inpatient block clerkships. Yet, no other US medical schools have as of yet expanded this curricular model broadly. TCMC offers a model for expansion of LICs that is generalizable to other US medical schools including best practices for ensuring comparability, monitoring of educational outcomes, and faculty development to support the model.
Establishing KLIC - The UCSF-Kaiser Permanente Longitudinal Integrated Clerkship

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Needs and objectives: Medical education is in an exciting period of transformation as medical schools work to incorporate modern learning principles into their structure and align forces impacting delivery of care with educational priorities. Guiding principles of longitudinal integrated clerkships (LICs) emphasize continuity with preceptors, patients and site. LIC benefits include enhanced patient-centeredness, moral development, observation and feedback on clinical skills, identity formation, and countering of the hidden curriculum. Creating LICs, however, can be both faculty and resource intensive. This educational transformation may require symbiotic partnerships with integrated community health systems such as Kaiser Permanente (KP), with potential benefits for both institutions. Our objective was to create a one year LIC at KP that emphasized: longitudinal relationships between patients, students, teachers, and healthcare systems, the course of chronic illness and the patient’s experience of disease, the development of clinical reasoning skills through early introduction to patients with undiagnosed illness, and the skills and integrated knowledge needed for compassionate, effective patient-centered care.

Setting and participants: KLIC [Kaiser Permanente (KP)-University of California San Francisco (UCSF) Longitudinal Integrated Clerkship (LIC)], a one year LIC for 8 UCSF third year medical students at KP Oakland, CA.

Description: Academic leaders in established LICs at UCSF began discussions with Northern California Regional KP in fall of 2009. In 2011-12, KP Oakland was chosen to pilot 8 students in an LIC, mirroring the PISCES program at UCSF. Students complete all 8 core clinical clerkships over one year with supervision from one preceptor for each clerkship. Students establish a patient “cohort” panel of 50-75 patients for whom they will provide longitudinal care over the course of one year. Unique aspects of the KLIC program include a novel leadership, health systems and quality improvement curriculum “PULSE.”

Evaluation: Students are evaluated with formative and summative evaluations including Brief Structured Clinical Observations and faculty quarterly R-I-M-E evaluation sessions. Each clerkship is evaluated by the students at midpoint and end of year (currently pending), as well as the overall course. Didactics and PULSE leadership sessions are also evaluated. Program evaluation is semi-annual and ongoing.

Discussion / reflection / lessons learned: As medical education continues to transform, it will be important for university settings to collaborate further with community training sites. Benefits to UCSF may include additional resources available at the community site, a sustainable model of LIC training, opportunity for innovation across the continuum of UME and GME at KP, and a primary care focused educational site. Benefits to KP may include faculty development and faculty appointments at the university for staff, participation in an educational program aligned with the structure of KP’s healthcare system, opportunity to train physician workforce who will be competent in systems-based practice and practice-based learning and to recruit future residents and staff, as well as train future doctors who can appreciate and disseminate KP values. This symbiotic LIC clerkship site is expected to be replicated at between UCSF and other local KP medical centers, but can also be exported to other university-community alliances.
Creation and Implementation of a Women’s Leadership Curriculum for Internal Medicine Residents

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Needs and objectives: While women comprise approximately half of the physician community, women hold far fewer academic leadership positions. Prior studies indicate that women who participate in leadership development curricula are more likely to attain deanships, department chairmanships, or full professorship. Few women’s leadership training programs for residents have been described. Female residents at our institution express perceived deficiencies in leadership skills and career development training for women.

We created and implemented a Women’s Leadership Curriculum with the following objectives. Residents will identify personal leadership strengths and compare these to those measured by an inventory tool; examine the contrasting careers of prominent women faculty, using these models to inform their own career development plan; evaluate strategies for effective communication and demonstrate ability to use skills in small groups; and evaluate different negotiation strategies and apply negotiation skills to daily activities.

Setting and participants: Interns, junior residents and senior resident groups participate in separate half-day seminars each year. Clinical duties are covered by others for these sessions to allow all women in a given class to participate. Most sessions rely on faculty leaders, minimizing program expense. Senior residents facilitate selected sessions with more junior attendees to encourage peer-mentoring.

Description: The session objectives are aligned with the learners’ career development stage. The intern session focuses on identifying leadership strengths and learning strategies to resolve conflict and lead teams. The junior session addresses career planning and communication; methods include a workshop on how to be effectively mentored, a faculty panel on career transitions, and an interactive communication session. The senior session provides residents with basic negotiation skills.

Evaluation: Senior residents felt that the objectives of the session were important to career development (93% strongly agreed, 7% agreed) and that they are now better able to recognize negotiation opportunities (62% strongly agreed, 38% agreed). Participants have indicated in follow-up surveys that they have used newly developed negotiation skills in daily work activities (31%). Qualitative responses indicate that the emphasis on negotiation skill development is considered especially valuable.

Discussion / reflection / lessons learned: Our preliminary findings indicate that women residents appreciate a dedicated curriculum in leadership skills. With departmental support, launching the program was feasible. Our residents prioritized content in negotiation, communication and self-evaluation. In this first year of implementation, the curriculum is highly valued by residents who express belief that topics are important and useful. As the program continues, we hope to develop a strategy for assessing these skills in the inpatient and outpatient settings via direct observation on rounds and resident self-review of videotaped sessions.