Improving Resident Wellbeing: A Novel Peer-Led Workshop to Strengthen Resident Autonomy

Innovation Highlights
Arianne L. Baker, MD-- Harvard Medical School
Laurel Xu, MD-- CHA Cambridge Health Alliance
Kristina Dzara, PhD-- Harvard Medical School
Ariel Frey-Vogel, MD, MAT-- Harvard Medical School

Purpose: Many Residents work in a unique environment but they have the same psychological needs as other people. Self-Determination Theory (SDT) is an empirical framework that asserts that people need autonomy, relatedness, and competence to achieve psychological wellbeing.1 Research on the resident experience has shown that resident autonomy is related to wellbeing, and correspondingly a lack of autonomy correlates with increased burnout.2-4 Guidance for using SDT in medical education exists5 however there are no published interventions to address development of resident autonomy within this psychological framework.

Residents in the Pediatrics program at the Massachusetts General Hospital (MGH) identified autonomy as a priority for program improvement in 2017. In response, two residents designed a new peer-led workshop for PGY-2 residents based in SDT and adult learning theory to address the need for increased autonomy. The workshop had 3 goals: teach about autonomy and self-determination theory, stimulate reflection on autonomy in training, and facilitate practice in autonomy-supportive behaviors and negotiation for personal autonomy.

Methods: We have conducted two iterations of the workshop, each led by PGY-2 and PGY-3 residents in the MGH Pediatrics residency program. We delivered the first workshop to 18 PGY-2 residents in a 90-minute session at a required program retreat in March 2018. Based on feedback from this group, we extended the second workshop to 135 minutes and conducted it with 6 PGY-2 residents during protected curriculum time in October 2018.

The first pilot workshop included guided reflection in groups, didactic review of self-determination theory and autonomy, discussion of a validated tool for evaluating resident autonomy on rounds, and role-play scenarios. The second workshop iteration expanded the role-play scenarios and excluded the discussion of the autonomy evaluation tool. Participants completed immediate post-workshop evaluations anonymously with both quantitative and qualitative feedback.

Results: Participants gave quantitative feedback (n=24, response rate 92%) and qualitative feedback (n=14, response rate 87.5%). A summary of quantitative feedback is presented in Table 1. Every participant gave the highest possible score to the relevance of the workshop content to their jobs. Both groups also rated the activities as highly stimulating for their learning and indicated desire for more time for role-play. In qualitative feedback, the most valued parts of the workshop were guided reflection in large groups and role-play scenarios. Participants also wrote that the workshop activities reflected their real experiences and offered practical tools to improve their autonomy.

Discussion: Participant feedback demonstrated that the workshop was relevant, useful, and appropriate, which fits with our expectation that these residents have the same psychological need for autonomy as other residents studied in the literature. The overall high ratings of the workshop further suggest that residents are eager to participate in interventions that will increase their feelings of autonomy at work since they recognize its importance in achieving a sense of wellbeing.

Significance: By To our knowledge, this is the first intervention to directly address resident dissatisfaction with autonomy based in SDT. The workshop provides theoretical structure and
practical tools for strengthening feelings of autonomy in themselves and supporting autonomy in others. This workshop could also be expanded easily to other pediatric residency programs and to other specialties with adapted role-play scenarios.

Given that autonomy directly correlates with wellbeing in residents, we hope that participation in this workshop will increase perceived autonomy and therefore increase resident wellbeing. We are conducting further research on the long-term impact of this workshop, both through self-reported effects of participation and through analysis of de-identified faculty evaluations of resident autonomy before and after workshop participation. Future research may also include measurements of wellbeing before and after participation in the workshop.
Resident Heal Thyself: A Four-Dimensional Approach to Resident Wellness

Innovation Highlights
Fatimah O. Bello, MD, MPH-- University of Texas Rio Grande Valley School of Medicine
Brandon Cantazaro, MD-- University of Texas Rio Grande Valley School of Medicine
Jessica Martin, MD, MHSA-- University of Texas Rio Grande Valley School of Medicine
Rex Huang, MD-- University of Texas Rio Grande Valley School of Medicine
Jacqueline Joe, MD-- University of Texas Rio Grande Valley School of Medicine
Chelsea H. Chang, MD-- University of Texas Rio Grande Valley School of Medicine
Timothy Heath, MD-- University of Texas Rio Grande Valley School of Medicine
Andrew Dentino, MD-- University of Texas Rio Grande Valley School of Medicine

Purpose: The high rate of burnout, depression and suicide and other mental issues in residents have been documented. The prevalence of depression in residents is said to range from 20.9% to 43.2% according to a meta-analysis by Mata et al, with variation by gender, residency year and type of residency [1]. Burnout also affects between 18% to 82% of residents while suicide is said to be the leading cause of deaths in male residents and only second to malignancy in female residents [2, 3]. Not surprisingly, there are numerous consequences of these issues. In addition to medical errors and other aspects of patients care, mental health issues have also been shown to have a negative effect on residents professional advancement and personal lives.

Methods: Sequel to our sub-par performance on residents wellness on the 2016/2017 ACGME survey, a multifaceted evidence-based model similar to the George Washington University’s Resident Wellness Program was created to meet the needs of our relatively new program [4]. We identified appropriate programs central to the 4 key dimensions that may contribute to wellness and reduce mental health issues namely; (1) Regular and Customized Mentoring, (2) Professional Services, (3) Well-being and Recreational Activities and (4) Class bonding and Program meetings. Various strategies including suicide prevention didactics, yoga classes, tai-chi classes, one-on-one resident mentoring, class getaways, monthly physician wellness and feedback forum, faculty open door policy, creation of an athletic and family-focused student residents’ clubs among others were utilized. We consistently received positive feedback in addition to the persistently high level of morale. For the current academic year, the validated Keim at al Brief Resident Wellness Profile (BRWP) [5] survey was administered to the 39 residents in the Internal Medicine program. Residents were asked to voluntarily complete the Mood Graphical Rating (MGR) and the 6-item subscale of the BRWP survey anonymously. The aim was to assess how our residents compare on wellness, with other residents in other programs. Results of the survey was analyzed using the SAS 9.4 software.

Results: 33 (85%) residents out of 39 completed the survey. Of the 33, 11 were females, 13 were PGY-1s, 11 were PGY-2s and 9 were PGY-3s. The mean BRWP score for all residents was 24 (SD= 2.7) while the mean mood graphical rating score was 4.8 (SD=1). Both are higher than the averages from published data from nationally representative sample which ranged from 18-20.2 for the BRWP survey and about 3.6 for the MGR. The mean BRWP score was 25 (SD=2.1) for males and 22.2 for females (SD=3); which was statistically significant (p=0.004). A similar non-statistically significant trend was observed with the mood scale. By PGY-level, a one-way ANOVA showed a trend of lowest BRWP and mood rating scores with the PGY-2s and highest scores with the PGY-3s; although this relationship was not statistically significant.

Discussion: Our findings suggest that our residents have a high level of professional achievements and mood state, higher than what has been previously reported in similar studies. Similar to what currently exists in literature, females tended to have lower scores. However, our study shows a novel finding of PGY-2s having the lower scores than PGY-1s and PGY-3s; albeit not a statistically significant finding.
Significance: The findings from this study may indicate that structured, resident-focused, wellness programs improve residents' emotional states and professional outlooks. Furthermore, it might be beneficial to introduce personalized wellness programs to females and possibly second-year residents who may have unique needs. Lastly, the findings from our study are very timely in view of continuing discussions especially the increasing rate of burnout and suicide, which have been shown to be higher in physicians than other professionals.
Reimagining electives in the third year: a focus on career exploration and integration

Innovation Highlights
Leslie Sheu, MD-- University of California San Francisco
Sarah Goglin, MD-- University of California San Francisco
Sara Clemons, MEd-- University of California San Francisco
Patricia Cornett, MD-- University of California San Francisco

Purpose: Students traditionally have opportunities to explore different careers in medicine through their core clerkship rotations and elective experiences. Electives tend to occur in the preclerkship years in the form of student-initiated electives and interest groups, and in the fourth (final) year of medical school in the form of clinical electives. Preclerkship electives are important for early exposure, but can lack clinical context. Fourth year electives are helpful in honing student skills within a student's chosen area of interest, but tend to occur after a residency decision has been made (1-4). As part of Bridges, the new UCSF School of Medicine curriculum, innovative clerkship year redesign now offers extensive opportunities for student-driven career exploration through Clinical Immersive Experiences (CIExes). We report on our experiences with developing and implementing CIExes, as well as student evaluation data after the first year.

Methods: As part of curricular redesign, the Family Community Medicine clerkship, previously a 6-week clerkship, became a longitudinal clerkship experience. The 6 extra weeks in the clerkship year thus allowed students to participate in 3 2-week CIExes. In our first year of the innovative CIEx program, we developed over 70 CIExes across disciplines. There are four types of CIExes: Integrative Electives, Apprenticeship Electives, Clinical Skills Building Electives, and Sub-Specialty Electives. Students sign up for CIExes before the clerkship year, and are encouraged to reconsider their CIEx selections and add and drop CIExes as available in the context of developing career plans over the course of the year. Students created learning goals at the beginning of each CIEx, and filled out an evaluation survey at the end of each CIEx. We analyzed evaluation data using descriptive statistics of Likert-scaled questions and thematic analysis of open-ended questions.

Results: 162 students completed 275 CIEx experiences by September 1, 2018 (the clerkship year runs from January 1-December 31; data collection is ongoing). CIEx experiences were highly rated, with a mean overall quality of 4.5 (out of 5) (SD 0.7). Students reported CIExes to complement their learning in the clerkship year (4.65/5, SD 0.6), advance their clinical learning and/or skills (4.50/5, SD 0.75), and add value (4.65/5, SD 0.6). The top three reasons students selected a CIEx were for career exploration, to build clinical skills and knowledge, and prepare for future rotations. Students valued the outstanding teachers (residents, fellows, attendings), great role models, and variety and flexibility of CIExes to fit their learning needs. Regarding career exploration, students most frequently commented on the desire to gain exposure to specialties that they were considering for residency but had limited clinical experience with, or not knowing anything about a particular field and being curious about it.

Discussion: Students find CIExes in the clerkship year to be valuable to their learning and career exploration. They appreciate the diversity of options and the flexibility within each CIEx based on their learning goals. Next steps include understanding the impact CIExes have on students fourth year elective choices, residency decisions, and overall professional identity formation.

Significance: Our data suggests that clinical electives in the clerkship year complement students learning in the core clerkships and aid in their career development. As pressures to successfully match in a chosen residency increases and we shift more towards deliberate emphasis on the process of professional identity formation throughout medical training, our experience with CIExes serves as a model for other schools to consider ways to integrate clinical electives into the clerkship year.
A Novel Longitudinal Interprofessional Ambulatory Training Practice

Innovation Highlights
Lauren Block, MD, MPH-- Donald and Barbara Zucker School of Medicine at Hofstra/Northwell
Nancy LaVine, MD-- Donald and Barbara Zucker School of Medicine at Hofstra/Northwell
Johanna Martinez, MD-- Donald and Barbara Zucker School of Medicine at Hofstra/Northwell
Celia Lu, PharmD-- St. Johns University
Alice Fornari, EdD-- Donald and Barbara Zucker School of Medicine at Hofstra/Northwell
Joseph Conigliaro, MD, MPH-- Donald and Barbara Zucker School of Medicine at Hofstra/Northwell
Daniel Coletti, PhD-- Donald and Barbara Zucker School of Medicine at Hofstra/Northwell

Purpose: Demand for primary care providers in the United States is growing as the supply is dwindling. Trainees satisfied with continuity ambulatory experiences are more likely to pursue primary care. Existing interprofessional (IP) training programs focus on either IP education or IP collaboration; few blend IPE and team-based care.

Methods: In an effort to enhance the ambulatory experience, we developed and implemented a longitudinal interprofessional training program for physician, physician assistant, psychology, and pharmacy trainees. The IMPACcT (Improving Patient Access, Care, and cost through Training) program includes team-based clinical practice, IP education, and primary care-focused career mentoring. Residents, faculty, and IP trainees complete on-service ambulatory weeks together. Dedicated administrative team members, co-located in the precepting space, coordinate care and lead team huddles. Huddles include medication review, identification of psychosocial and preventive care needs, and task delegation. A weekly interprofessional sign-out facilitates follow-up. Program evaluation includes learner experiences, patient satisfaction, clinical quality metrics, and career choice compared to the traditional resident practice. Learner outcomes are assessed using the Interprofessional Collaborative Competency Attainment Survey (ICCAS).

Results: In the first two years, 15 residents, 39 medical students, 20 pharmacy students, five pharmacy residents, 16 PA students, and three psychology externs participated in IMPACcT. Learners reported increased perceived competence in IP communication and teamwork (p<0.001 for all items on the ICCAS) and increased interest in an academic career following the IMPACcT experience (post vs. pre-training (72.9 vs. 66.4 on 100-point scale, p<0.02). Clinical quality outcomes indicated improved provider continuity and arrival rate compared to the traditional resident practice (56.5% vs. 32.9%; 66.3% vs. 62.2%, p<0.01). Rates of diabetes control, mammography, and pneumococcal vaccination were comparable between the clinics, but a greater proportion of IMPACcT patients underwent colorectal cancer screening (421/686=61.3% vs. 2466/4924=50.0%) and were screened for depression (588/1020=57.6% vs. 3020/8069=37.4%; p<0.01 for both comparisons). Patient satisfaction was higher in the IMPACcT clinic in the areas of coordinated care and team functioning. Ten of eighteen physician graduates in the program chose further training in primary care compared to 20 of 150 graduates not in the program (55.6% vs. 13.3%, p<0.01).

Discussion: We designed, implemented, and evaluated a team-based primary care practice and longitudinal training program. Continuity of care and patient satisfaction indicators, including coordination of care and knowing team member names, were higher in IMPACcT than the traditional residency clinic. Structured huddles, led by dedicated administrative staff, provided continuity, delineated roles for each trainee, and encouraged clinician accountability. Depression and colorectal screening were higher in IMPACcT clinic, perhaps due to the attention paid to prevention during huddles and the presence of behavioral health providers on the IP team. Co-locating the care coordinator in the precepting space allowed for continuous communication with the care team and patients. This likely contributed to the higher arrival rates for patients in the IMPACcT clinic. The total number of patients seen per resident per year was equal in the IMPACcT...
and traditional clinic model. Provider continuity was significantly higher in the IMPACcT clinic than
the traditional practice. Previous studies have demonstrated continuity to be a positive influence on
primary care career choice. We are encouraged by preliminary career choice data and the apparent
interest among our graduates in academic careers. Limitations to our program include a single
location and limited follow-up.

**Significance:** IP team-based approaches to trainee ambulatory practices are increasingly
prevalent. Adapting trainee practices to include longitudinal team based care, IP team-based
huddle and signout, and situating interprofessional team members strategically may help further the
goals of continuity, patient satisfaction, and team communication, with a positive secondary
outcome of increased interest and pursuit of primary care careers.