

# A Novel Curriculum to Facilitate Career Choice in an Accelerated Medical Education Program

Sonal Chandratre, MD; Jacob Prunuske, MD, MSPH; Lisa Dodson, MD

## ABSTRACT

**Introduction:** Various specialties face the challenge of resident attrition. Trainees may withdraw due to several factors, including lack of adequate exposure to the specialty prior to joining the program. Making career choices becomes more challenging and stressful for students in an accelerated curriculum.

**Methods:** The authors created and piloted a novel early clinical course: Specialty Longitudinal Integrated Clinical Experience (SPLICE), which provides an opportunity for clinical enrichment and early career exploration in an accelerated medical education program.

**Results:** Initial evaluation by student and faculty demonstrate the curriculum's feasibility and acceptability.

**Discussion/Conclusion:** Further implementation of the curriculum and long-term assessment is needed to determine its impact on career decisions and residency retention.

## INTRODUCTION

Of the total 129,720 active US resident physicians in the 2015-2016 academic year, 2,204 residents left their position prior to completion of training, including 843 residents (38%) who voluntarily withdrew from their position.<sup>1</sup> The remaining 62% of residents in the cohort were either dismissed, deceased, or transferred to a different program in the same specialty. This high voluntary

• • •

**Author Affiliations:** Division of Pediatric Endocrinology, Medical College of Wisconsin-Central Wisconsin (MCW-CW) (Chandratre); Department of Family and Community Medicine, MCW-CW (Prunuske, Dodson), Wausau, Wis.

**Corresponding Author:** Sonal Chandratre, MD, Site Course Director CW Campus, Foundations of Clinical Medicine, Director of Specialty Longitudinal Integrated Clinical Experience, Director of Acting Internships, Medical College of Wisconsin-Central Wisconsin, Division of Pediatric Endocrinology, 333 Pine Ridge Blvd, Suite 2-730, Wausau, WI 54401-4106; phone 715.870.0900; email schandratre@mcw.edu.

withdrawal rate is not a new trend; it has remained stable for the past decade (37% in 2008-2009). In addition, recent literature shows an increase in residents considering leaving their chosen specialty.<sup>2,3</sup>

Resident attrition remains prevalent despite relevant changes and reform measures taken by the Accreditation Council for Graduate Medical Education (ACGME), such as work hour regulations, suggesting that the issue is multifactorial. Factors affecting trainees' withdrawal may include concerns about lifestyle, workload, sleep deprivation, inadequate mentoring, work-life balance, and personal issues. Additionally, residents may withdraw

because (1) they are not initially matched into the specialty of their choice, and (2) late realization that their chosen specialty is not a good fit.

Multiple specialties face the challenge of resident attrition. For example, in a recent meta-analysis, overall prevalence of attrition among general surgery residents was as high as 18%, with most trainees leaving voluntarily.<sup>4</sup> Interestingly, trainees who left certain surgical specialties primarily chose nonsurgical fields for their subsequent career path,<sup>5,6</sup> raising the question whether earlier and more diverse specialty exposure to both surgical and nonsurgical fields would positively contribute to student certainty in their chosen career path.

During mandatory clerkships, students may find it difficult to gain adequate experiences to make career choices prior to scheduling their final year of medical school and entering the Match. The day-to-day expectations during any clerkship may focus on basic competencies, knowledge, and clinical skills, leaving less time for career exploration and assessment of compatibility with the specialty or related subspecialties. Students find

making specialty choices stressful, and medical student stressors contribute to burnout.<sup>7,8</sup> Medical students and residents are more likely to exhibit signs and symptoms of depression compared to their nonmedical peers with a considerable variation among different specialties.<sup>8,9</sup>

What's more, an increasing number of medical schools, including our institution, are exploring accelerated curricular models that allow students to progress from matriculation to residency in less than 4 years. Making career choices may be even more challenging and stressful for students in an accelerated curriculum, which allows less time for elective experiences and requires earlier commitment to a given specialty.

The authors sought to address this issue by creating a novel program to provide exposure to various specialties to medical students early in their curriculum.

## **METHODS**

Given the persistence of voluntary withdrawal of trainees from residency programs, high prevalence of specialty-specific attrition rates despite corrective measures, an increasingly stressful environment for trainees making earlier career choices for a competitive Match process, and concern that medical students may lack adequate knowledge in terms of personal compatibility with a chosen specialty, the authors initiated a novel early clinical course: the Specialty Longitudinal Integrated Clinical Experience (SPLICE). This curriculum provides early mentored exposure to student-selected clinical specialties. It is intended to help medical students gain better and broader perspectives of their potential career paths early in their training and help them prepare to make career choices.

### **Curriculum Setting**

The Medical College of Wisconsin-Central Wisconsin (MCW-CW) is a regional, mission-based campus located in and around Wausau, Wisconsin. MCW-CW was established as a regional campus of the Medical College of Wisconsin in 2016 with the purpose of training community-engaged physicians to serve central and northern Wisconsin. MCW-CW matriculates approximately 25 students annually and allows an option for students to graduate in 3 calendar years using an accelerated curriculum and longitudinally integrated clerkship model.

### **Course Curriculum**

The curriculum was developed in 2017 for second-year medical students (M2) as a required, early clinical, 2-semester course. It provides an opportunity for M2s to gain experience in 2 to 4 medical specialties, specifically exposing them to positive mentoring and allowing them to explore various specialty practices early in their medical education. Prior to this curriculum, students complete the first-year basic sciences courses and 10 weeks of a longitudinally integrated clerkship, which includes

core clerkship experiences in family medicine, internal medicine, pediatrics, surgery, obstetrics and gynecology, anesthesiology, and psychiatry.

The curriculum consists of weekly half-day clinical experiences in at least 2 different specialties across several medical settings, including outpatient, inpatient, consultative, operating room, and emergency department. Based on students' choices, appropriate preceptors in the community are contacted by the course director. Students are assigned 1 attending physician mentor for a one-on-one experience to enhance learning and create opportunities for discussing career paths.

Specific learning objectives include the usual clinical student responsibilities of history-taking, physical exam, and developing assessments and management plans in collaboration with their preceptors. Students are encouraged to engage in procedures with appropriate supervision based on their competence. An important additional explicit expectation of the curriculum is deliberate career mentoring by their community faculty mentor. To minimize the clerical "burden," students are not expected to document in patient charts; however, they are encouraged to closely observe preceptors charting.

### **Evaluation and Grading**

Student experiences are individualized and include completion of course and institutional requirements. The curriculum is graded Satisfactory/Unsatisfactory based on the preceptors' narrative assessments, student participation, student self-assessment, and a written reflection of the experience. Self-assessment and reflection on the specialty experiences are important elements of this curriculum. Students are prompted to include the impact of their clinical experiences on knowledge, attitudes, skills, and perspectives in relation to their individual learning plan and career planning, and they are encouraged to share their assessment and reflection with faculty mentors.

## **RESULTS**

Twenty-two second-year medical students worked with 38 different preceptors during the initial pilot, after which the students were asked to complete a standardized clerkship evaluation form that included questions about the curriculum. Eighteen students (82%) completed the evaluation. Twenty-eight percent rated the course outstanding and 72% rated the course very good, the top 2 ratings of a 6-item scale. Narrative comments highlighted the value of the opportunities and experiences provided by the course and its impact on career choices.

## **DISCUSSION**

The MCW-CW curriculum provides opportunity for both clinical enrichment and early career exploration in our accelerated curriculum beginning in the second year of training. Early attention to career planning and specialty choice may be a method for reduc-

ing student stress related to career decisions and has potential to decrease resident attrition by facilitating informed career choices.

Limitations of this project include its uncertain applicability to schools using a more traditional four-year model, small numbers of students and faculty participants, and limited data in this early stage of implementation.

## CONCLUSION

We plan to further evaluate the impact of this curriculum by collecting qualitative and quantitative data from graduating medical students by sending them a follow-up survey after they are matched in a residency program. Additional research may allow us to evaluate whether this curriculum's early specialty exposure influences students' specialty choices, readiness for the Match, and stress associated with making specialty choice, thereby reducing their chances of voluntary or involuntary withdrawal from residency training.

**Funding/Support:** None declared.

**Financial Disclosures:** None declared.

---

## REFERENCES

1. Accreditation Council for Graduate Medical Education. Data Resource Book: Academic Year 2016-2017. <http://www.acgme.org/About-Us/Publications-and-Resources/Graduate-Medical-Education-Data-Resource-Book>. Published 2017. Accessed April 14, 2018.

2. Attenello FJ, Buchanan IA, Wen T, et al. Factors associated with burnout among US neurosurgery residents: a nationwide survey. *J Neurosurg*. 2018;129(5):1349-1363. doi:10.3171/2017.9.JNS17996
3. Sajjadi S, Norena M, Wong H, Dodek P. Moral distress and burnout in internal medicine residents. *Can Med Educ J*. 2017;8(1):e36-e43.
4. Khoushal Z, Hussain MA, Greco E, et al. Prevalence and causes of attrition among surgical residents: a systematic review and meta-analysis. *JAMA Surg*. 2017;152(3):265-272. doi:10.1001/jamasurg.2016.4086
5. Kennedy KA, Brennan MC, Rayburn WF, Brotherton SE. Attrition rates between residents in obstetrics and gynecology and other clinical specialties, 2000–2009. *J Grad Med Educ*. 2013;5(2):267-271. doi:10.4300/JGME-D-12-00141.1
6. Badran KW, Kelley K, Conderman C, Mahboubi H, Armstrong WB, Bhandarkar ND. Improving applicant selection: identifying qualities of the unsuccessful otolaryngology resident. *Laryngoscope*. 2015;125(4):842-847. doi:10.1002/lary.24860
7. Dahlin ME, Runeson B. Burnout and psychiatric morbidity among medical students entering clinical training: a three year prospective questionnaire and interview-based study. *BMC Med Educ*. 2007;7:6. doi:10.1186/1472-6920-7-6
8. Dyrbye LN, West CP, Satele D, et al. Burnout among U.S. medical students, residents, and early career physicians relative to the general U.S. population. *Acad Med*. 2014;89(3):443-451. doi:10.1097/ACM.0000000000000134
9. Shanafelt TD, Bradley KA, Wipf JE, Back AL. Burnout and self-reported patient care in an internal medicine residency program. *Ann Intern Med*. 2002;136(5):358-367. doi:10.1097/ACM.0000000000000134

advancing the art & science of medicine in the midwest

**WMJ**

*WMJ* (ISSN 1098-1861) is published through a collaboration between The Medical College of Wisconsin and The University of Wisconsin School of Medicine and Public Health. The mission of *WMJ* is to provide an opportunity to publish original research, case reports, review articles, and essays about current medical and public health issues.

© 2019 Board of Regents of the University of Wisconsin System and The Medical College of Wisconsin, Inc.

**Visit [www.wmjonline.org](http://www.wmjonline.org) to learn more.**