



# Journal of Regional Medical Campuses

## **The Impact of Basic Science and Clinical Experience Sequence on Medical Student Performance**

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## The Impact of Basic Science and Clinical Experience Sequence on Medical Student Performance

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### **Topic: Character Limit:**

Medical schools have an obligation to prepare students to perform well on standardized exams, succeed in courses and clerkships, obtain desirable outcomes in National Resident Matching Program, and achieve competency to start residency training. Medical schools are implementing alternate curricular models that disrupt the traditional model of two years of basic sciences followed by two years of clinical sciences. Schools that innovate and explore alternate structures and sequencing that transition toward competency-based education must evaluate the impact of these changes to assess advantages and disadvantages of various curricular models. The impact, benefits, and challenges of these alternate models must be evaluated to drive the best educational practices nationally. The innovative medical program at the Medical College of Wisconsin-Central Wisconsin (MCW-CW) campus provided an opportunity to compare student performance in an accelerated curriculum with student performance in the more traditional four-year curriculum at the Milwaukee (MCW-MKE) campus. In this session, we presented the differences of the three- and four-year curricula, described results of student clerkship OSCE performance, and compared OSCE performance of students beginning clerkship experiences prior to the second-year basic science curriculum at MCW-CW with OSCE performance of students beginning clerkship experiences after the basic science curriculum at MCW-MKE.

### **Short Description:**

Medical schools are implementing alternate curricular models that disrupt the traditional model of two years of basic sciences followed by two years of clinical sciences. The impact, benefits, and challenges of these alternate models must be evaluated to drive the best educational practices nationally. We compared student performance in an accelerated curriculum, in which students begin clerkships prior to completion of basic sciences, with student performance in the more traditional four-year curriculum. We presented structural curriculum differences, described results of student clerkship OSCE performance, compared OSCE performance of students beginning clerkship experiences prior to the second-year basic science curriculum with that of students beginning clerkship experiences after the basic science curriculum, and discussed implications for other institutions.

### **Four questions that were posed to/considered by session participants:**

- 1) *How essential is knowledge of pathophysiology for medical students to obtain basic clinical competencies in history taking, physical examination skills, and communication?*
- 2) *How does clinical exposure prior to pathophysiology instruction impact students' ability to reach an appropriate differential diagnosis?*
- 3) *How appropriate is it to start clinical clerkship experiences prior to pathophysiology instruction?*

### **Three take home points from our session:**

- 1) *Compared to students in a traditional curriculum, medical students starting clinical clerkships prior to pathophysiology instruction achieved comparable OSCE competency evaluations by standardized patients for history taking, physical examination, and communication skills.*
- 2) *Compared to students in a traditional curriculum, medical students without pathophysiology instruction achieved comparable OSCE competency evaluations by faculty on 2 of 4 cases for history and physical, differential diagnosis, and management plans.*
- 3) *Compared to students in a traditional curriculum, medical students without pathophysiology instruction achieved lower competency evaluations by faculty on 2 of 4 cases for history and physical, differential diagnosis, and management plans and further evaluation is necessary to characterize this gap.*

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