

Take-Home Message
 A change in curricular structure creates excellent opportunities to review anticipated outcomes, generate a fresh institutional assessment plan that will measure the impact of implemented changes, and conduct research in medical education.

Creation of an Institutional Assessment Plan that Drives Medical Education Research

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Background

In 2010, the University of Nevada School of Medicine (UNSON) began a curriculum reform process from a traditional, discipline-based curriculum to an integrated, systems-based model.¹ Of primary concern to the UNSON faculty was how the new curriculum would affect student learning outcomes. In response to this issue, the Office of Medical Education partnered with the Behavior Analysis Program with the Department of Psychology at the University of Nevada, Reno to form a collaborative Curriculum Evaluation Group (CEG). The alliance was formed in order to gain expertise in Behavior Analysis and avoid internal bias inherent in measuring outcomes of our own institution.

Key Research Questions^{2,3}

CURRICULAR PROGRAM ASSESSMENT

1) Does an integrated, systems-based block format with added clinical context better prepare UNSON students for Residency than the traditional discipline-based format?

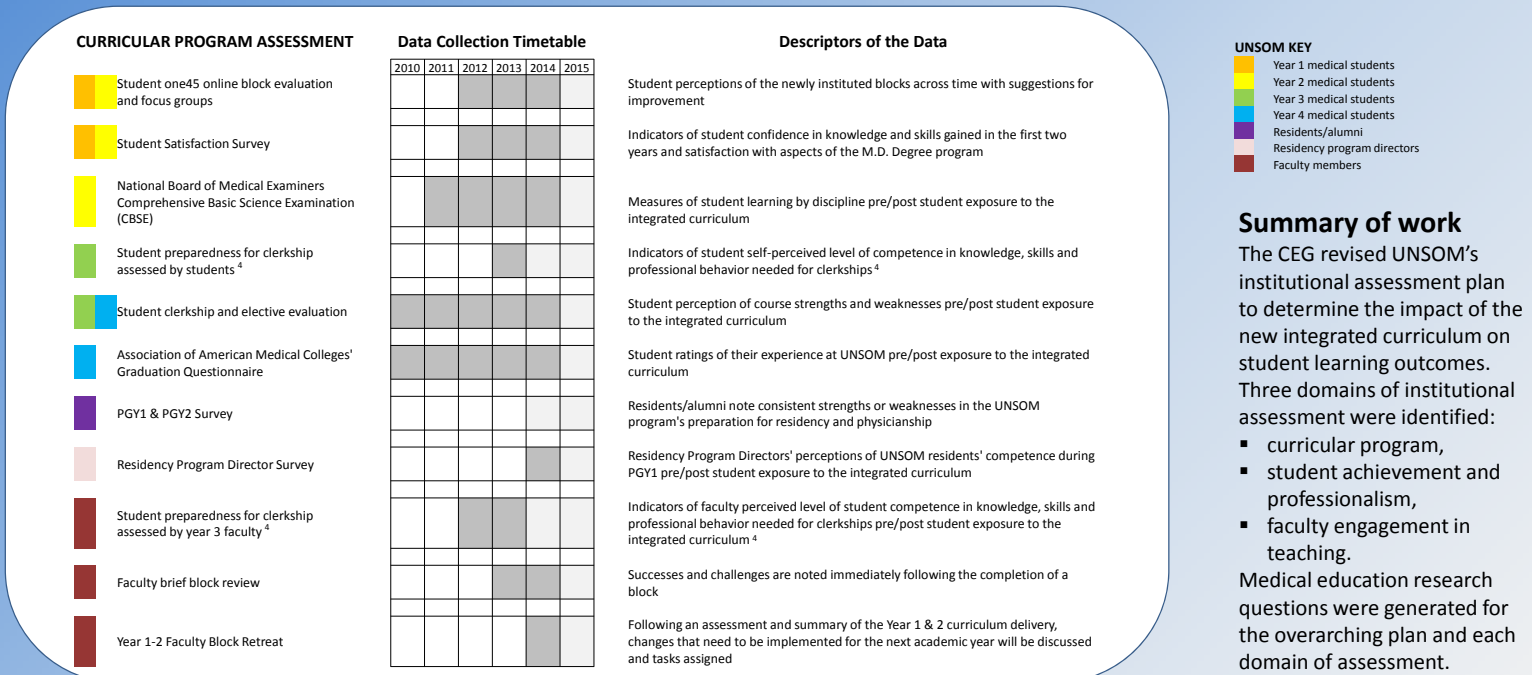
STUDENT ASSESSMENT PROGRAM

2) Do students perform better academically and acquire a higher level of clinical skills when engaging with integrated curriculum content?

TEACHING FACULTY EVALUATION

3) What is the impact of curricular change on the teaching faculty? (See also CCME Presentation Tuesday, April 29th at 8:30 – 10:00 AM)

Multiple assessment methods were intentionally selected in order to measure (triangulate) the pre/post curricular implementation effects on the curricular program, student achievement and satisfaction, and faculty engagement.



Summary of work
 The CEG revised UNSON's institutional assessment plan to determine the impact of the new integrated curriculum on student learning outcomes. Three domains of institutional assessment were identified:

- curricular program,
- student achievement and professionalism,
- faculty engagement in teaching.

Medical education research questions were generated for the overarching plan and each domain of assessment.



STUDENT ASSESSMENT PROGRAM

Data Collection Timetable

Descriptors of the Data

	2010	2011	2012	2013	2014	2015
Preceptor assessment of Years 1 & 2 clinical skills during community-based experiences						
Student grade distribution for each block						
Evaluation of student performance in the Practice of Medicine two year course by faculty, MS 4 student group leaders and standardized patients						
National Board of Medical Examiners (NBME) Pathology subject exam given at the end of Year 2						
National Board of Medical Examiners (NBME) Comprehensive Basic Science Exam (CBSE) given at the end of year 2						
US Medical Licensing Examination Step 1 exam						
Student grade distribution and comments for each clerkship						
National Board of Medical Examiners (NBME) Subject Exams for Clerkships: FM, IM, OBG, Peds, Psych, and Surg						
Clinical Reasoning in Medicine Course						
US Medical Licensing Examination Step 2CK						
US Medical Licensing Examination Step 2CS						

Assessment of student clinical performance and professionalism

- 1) Grade distribution variability for the same block by class year
- 2) Grade distribution variability across blocks
- 3) Grade distribution variability by assessment strategy

Assessment data of student clinical skills provided by faculty, MS 4 student group leaders and standardized patients

Class mean for the pathology shelf exam

Class mean for the NBME Comprehensive Basic Science Exam

- 1) Class mean for the Step 1 exam
- 2) Mean scores for the separate disciplines

- 1) Grade distribution variability for the same clerkship by class year
- 2) Grade distribution variability across clerkships
- 3) Grade distribution variability by assessment strategy
- 4) Qualitative comments from faculty and/or resident comments

Class mean for the Clerkship Subject exams

Observed history and physical exam skills checklist, note writing assessment and communication rating scale by standardized patients

- 1) Class mean for the Step 2CK exam
- 2) Mean scores for the separate disciplines

Student pass rate for the Step 2CS exam

Conclusions

Curricular change allows all stakeholders in medical education an opportunity for self-assessment and program improvement. Assessment and evaluation are tools that can be used to study and measure the effectiveness of that change.

TEACHING FACULTY EVALUATION

Data Collection Timetable

Descriptors of the Data

	2010	2011	2012	2013	2014	2015
Block level teaching evaluation and focus group comments by students						
Clerkship and elective teaching evaluations by students						
Brief block review by Year 1-2 Block Directors committee members						
Faculty Interview data from Curriculum Evaluation Group's (CEG) project ⁵						

Measurable quantitative and qualitative changes in block, clerkship and elective teaching evaluations dependent upon student involvement with the integrated curriculum

Discussion of peer faculty teaching performance during block delivery

- 1) Faculty concerns at the outset of curriculum implementation
- 2) Change in concerns during medical education program implementation
- 3) Change in concerns after faculty have gained more experience with the integrated curriculum
- 4) Change in faculty leadership roles as curricular reform progresses

References

¹ Irby DM, Cooke M and O'Brien BC. Calls for reform of medical education by the Carnegie Foundation for the Advancement of Teaching: 1910 and 2010. *Acad Med*, 2010; 85(2):220-227.

² Vassar M, Wheeler DL, Davison M and Franklin J. Program evaluation in medical education: an overview of the utilization-focused approach. *J Educ Eval Health Prof*, 2010, 7: 1.

³ Durning SJ, Hemmer P and Pangaro LN. The structure of program evaluation: an approach for evaluating a course, clerkship, or components of a residency or fellowship training program. *Teaching & Learning in Med*, 2007; 19 (3):308-318.

⁴ Peterson LN, Eva KW, Rusticus SA and Lovato, CY. The readiness for clerkship survey: can self-assessment data be used to evaluate program effectiveness? *Acad Med*, 2012; 87:1355-1360.

⁵ Houtmanfar R, Rodrigues NJ and Smith GS. Role of communication networks in behavioral systems analysis. *J Org Behav Mgt*, 2009; 29 (3):257-275.