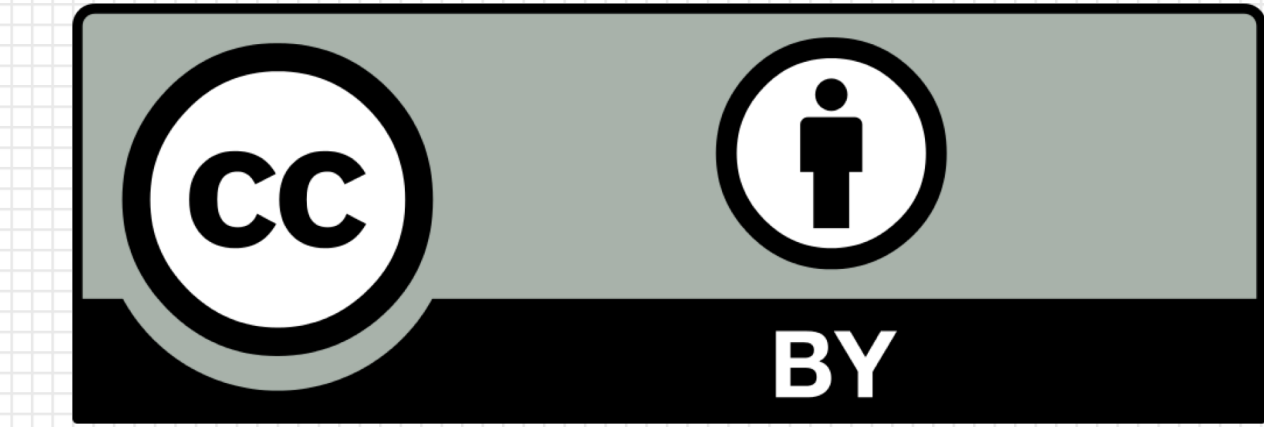# *One less silo:*
Generating an integrated resource to support integrated delivery

Andrew P. Binks, Anita Walz and Renée J. LeClair
Department of Basic Science Education, Virginia Tech Carilion School of Medicine

VTC
Virginia Tech Carilion
School of Medicine

Goal: The overarching goal of this project is to develop a <u>highly integrated</u> and <u>aligned course resource</u> that will replace required traditional textbooks, <u>reducing a financial burden on students.</u>

Rationale

1) **Addressing a need**. Nationally, pre-clinical medical education has transitioned to an integrated delivery format and there is currently *no* published textbook that adequately serves as a single student resource. Textbooks have remained in their discipline-based silos, meaning that students are referred to multiple sections of multiple sources for an integrated class.

2) **Enhancing student engagement**. In the transition to integrated curriculum, much of the delivery has been focused on dynamic classroom activities. These activities are highly reliant on student preparation which require concise, well-aligned preparation materials that currently do not exist. Without focused and aligned preparation material students are less likely to prepare and engagement in class declines.

3) **Reducing a cost burden.** The median student debt at graduation is $190,000, and 14% of graduates start their residency training owing over $300,000.   The cost of textbooks alone over the 4-year period is > $5000.00 initial output (this cost inflates with added loan interest).

What is an OER?

Open educational resources (**OER**) are freely accessible, openly licensed text, media, and other digital assets that are useful for teaching, learning, and assessing as well as for research purposes.

Cost savings

Course	Number of textbooks	Cost savings/student
Block I	8 textbooks	$869.44
Block VI	6 textbooks	$465.96

Design and Methods

Phase 1: Review course Content.

- Determine what knowledge is essential
- Review session objectives and assessment to ensure the resource is tightly aligned.

Phase 2: **Communication**

- Host focus groups for both student users and faculty to get their perspectives and feedback
- All parties need to feel involved in the development process.

Phase 3: Resource Development

- Content development; review and update
- 'Bite-size' approach will make the resource malleable and adaptable to inevitable changes

Phase 4/5: Review and Align

- Integrate the resource into the course

Phase 6: Evaluation

- Evaluate the resource through End of Block Evaluations

Phase 7 and 8: Review and Publish

- Finalize a Pressbooks 1st Edition

VIRGINIA TECH PUBLISHING

Assessment and Evaluation

The implementation of the resource will be assessed on the following:
1) **Student success**. Performance on end of block NBME questions will be compared for AY 18-19 to AY 19 -20.
2) **Student perception.** At the end of the AY 19-20 student overall perception of the course and resource will be compared against the previous years. (See table below)
3) **Student use.** As a proxy measure of how much the students used the resource we will monitor how much they were downloaded from Blackboard. We will make more sophisticated measures of the students use of the resource if the future when we use a more sophisticated delivery platform.

Customizable items	
Please indicate the extent to which you agree you were satisfied with the provided VTC iBook resource.	Likert
Please indicate the extent to which you agree you would utilize a similar cohesive resource if provided in other courses.	Likert
Please describe any additional material that would have been helpful to include in this resource.	Open ended

Discussion

This project has the potential to address several programmatic and national concerns surrounding medical education. The flexibility and utility of an integrated open education resource has the potential to positively impact the learning environment and increase student engagement and performance.

VIVA