Evaluation of Disease State Topics Taught in a Doctor of Pharmacy Curriculum Using the ACCP Toolkit

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BACKGROUND

- In 2016 the American College of Clinical Pharmacy (ACCP) updated the 2009 Pharmacotherapy Didactic Curriculum Toolkit.
- The 2016 ACCP Toolkit was created to help schools and colleges of pharmacy develop, modify, and maintain their curricula.
- The 2016 ACCP Toolkit contains 276 diseases and content topics, organized by organ system when possible, and divided into three tiers.
  - Tier 1 Topics (should receive education and training prior to graduation and licensure)
  - Tier 2 Topics (additional skills may be required after graduation, e.g., residency)
  - Tier 3 Topics (if required, the knowledge/skills would be obtained in practice, but may not necessarily be covered in the curriculum)

Tier 1
N = 87 (32%)

Tier 2
N = 133 (48%)

Tier 3
N = 56 (20%)

- At Virginia Commonwealth University (VCU) disease state topics are taught in the Clinical Therapeutics Modules, Self-Care, and Skills Lab Courses.

Objective

- To assess the 2016 ACCP disease state topics covered in the Virginia Commonwealth University (VCU) Doctor of Pharmacy didactic curriculum.

METHODS

The disease state topics proposed in the ACCP Toolkit, were compared to lectures taught in the Clinical Therapeutics Modules, Self-Care, and Skills Lab courses during the 2016-17 academic year. Of note, the Clinical Therapeutic Modules are organized by organ systems.

Course Coordinators were asked to use a Google Sheet to identify all:

- Tier 1 Topics
- Tier 2 Topics
- Tier 3 Topics

Course coordinators and lecturers were asked to estimate the amount of time (in hours) devoted to each topic. Missing topic areas were then investigated by the first three authors using course syllabi or by emailing the Course Coordinator. The number of topics taught based on tier and the corresponding hours in the curriculum was analyzed using Excel.

RESULTS

Of the 13 Clinical Therapeutics Modules, Self-Care course, and Skills Labs, 99% (n=86) of the tier 1 disease state topics from the ACCP Toolkit were covered in the didactic curriculum. Seventy-seven percent (n=103) of the tier 2 topics were covered. Of the tier 3 topics, 16% (n=9) were covered in the didactic curriculum. See Figure 1.

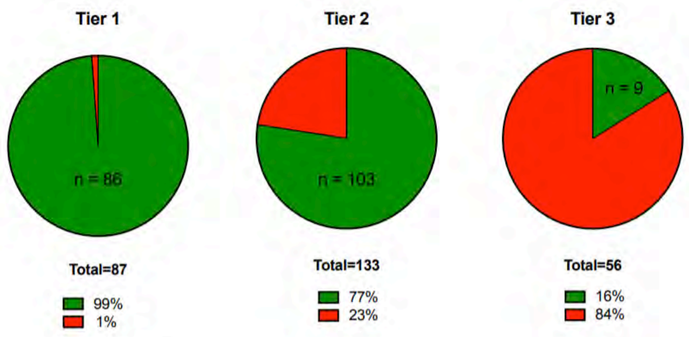


Figure 1: Percentage of Tier 1-3 Topics Covered in Didactic Curriculum

RESULTS - CONTINUED

Description of therapeutic hours by tier are included below in Figures 2 and 3.

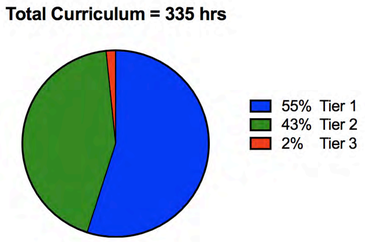


Figure 2: Percentage of Hours By Tier in the Clinical Therapeutics Modules

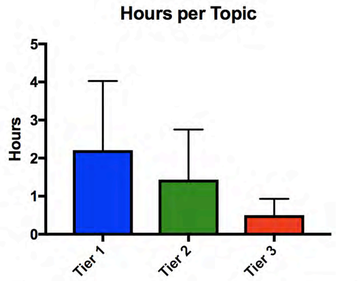
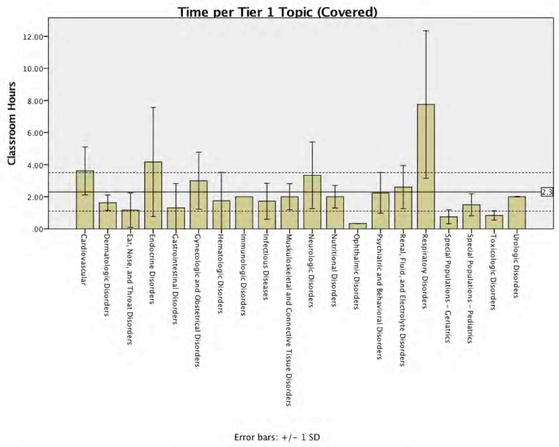


Figure 3: Hours Spent on Average Based on Tier

Tier 1 Topics: ***Total # hours- 184.3 hours, Average # hours/topic: 2.185 +/- 1.869***
- Topics not covered: Special populations-pediatrics: dehydration assessment and oral replacement therapy

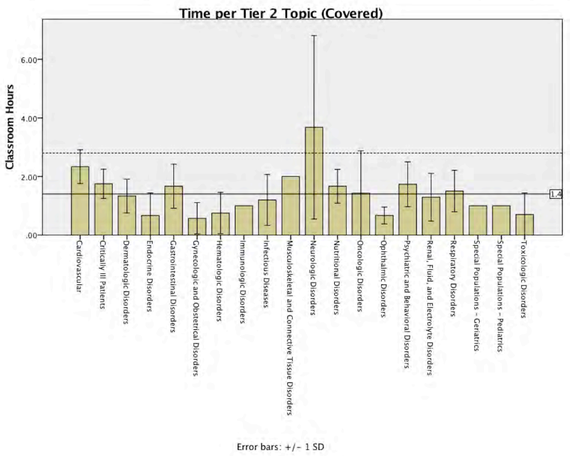
Tier 2 Topics: ***Total # hours- 144 hours, Average # hours/topic: 1.437 +/- 1.298***
- Includes 30 topics spread amongst different organ systems

Tier 3 Topics: ***Total # hours- 6.7 hours, Average # hours/topic: 0.622 +/- 0.433***
- 9 topics that are covered in the curriculum include: aneurysm, pituitary gland disorders, polycystic ovary syndrome, mycobacterial infections, miscellaneous viral infections, interstitial lung disease, anticholinergic toxicity, cholinergic toxicity, and disaster/emergency preparedness



The time spent on tier 1 and 2 topics covered in the didactic curriculum based on organ system is shown in Figures 4 and 5. The average hours spent per tier 1 topic is highest for the respiratory module followed by endocrine disorders (Figure 4).

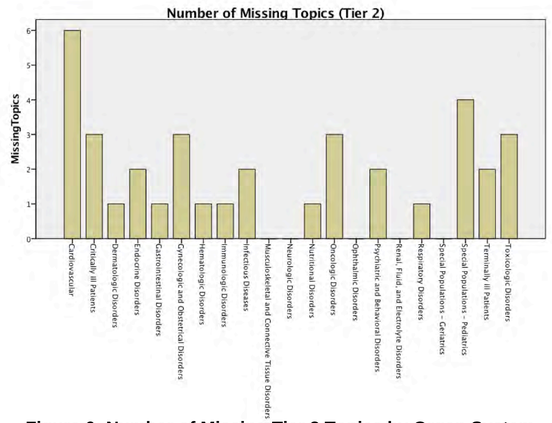
Figure 4: Average Classroom Hours Spent on Tier 1 Topics by Organ System



The average hours spent per tier 2 topic is highest for neurologic disorders (Figure 5).

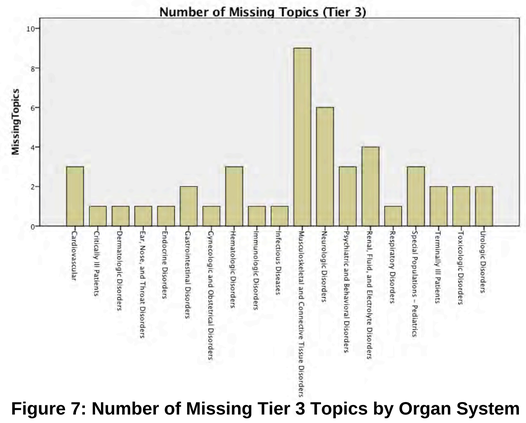
Figure 5: Average Classroom Hours Spent on Tier 2 Topics by Organ System

RESULTS - CONTINUED



The number of missing Tier 2 and 3 topics was assessed (Figures 6 and 7). The greatest number of missing topics was seen with the cardiovascular system (n=6), followed by special populations – pediatrics (n=4).

Figure 6: Number of Missing Tier 3 Topics by Organ System



The greatest number of tier 3 missing topics was seen in the musculo-skeletal and connective tissues disorders category (n=9) followed by neurologic disorders (n=6). (See Figure 7).

Figure 7: Number of Missing Tier 3 Topics by Organ System

LIMITATIONS

- Individual faculty were responsible for reporting which topics and how many hours were devoted to each
- Only missing topics were verified using syllabi by faculty investigators
- The hours reported per topic was also self-reported

CONCLUSIONS

Completing a comprehensive evaluation of the ACCP Toolkit disease state topics in our curriculum identified topics that are inadequately covered and conversely those included in the curriculum, but may be better left for students to learn on Advanced Pharmacy Practice Experiences (APPEs) or during residency training. Some topics not covered have already been incorporated into the curriculum or will be included in electives.

Comparing VCU's results with other colleges and universities may help evaluate the implementation of the ACCP Toolkit and improve the balance of disease state topics within the didactic curriculum.

REFERENCE

Schwinghammer TL, Crannage AJ, Boyce EG, et al. The 2016 ACCP pharmacotherapy didactic curriculum toolkit. *Pharmacotherapy.* 2016 Nov;36(11):e189-e194.

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