Endocrine Education Within Clinical Sciences Curricula at United States Schools & Colleges of Pharmacy

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Background

- No previous studies have evaluated the breadth & depth of endocrine curricula at United States (US) schools & colleges of pharmacy
- Most endocrine topics are considered "Tier I" or "Tier 2" in the ACCP Pharmacotherapy Toolkit, suggesting they must be sufficiently covered to prepare students to provide care upon graduation and licensure.[1]
- As PharmD curricula expand and content is removed or downsized, it is important to identify what content to retain/prioritize

Objective

- To determine the breadth and depth of endocrine instruction and assessment within pre-APPE coursework in the clinical sciences across US PharmD programs

Methods

- Cross-sectional survey-based study
- Seventeen-question Qualtrics® survey distributed electronically to one targeted individual at each US PharmD program determined as most likely to be teaching with the endocrine curriculum
- Items included evaluation of specific endocrine content, contact hours, assessment strategies, and Entrustable Professional Activities (EPAs)
- **Inclusion Criteria:** US schools & colleges of pharmacy that are accredited by or in candidate status with the Accreditation Council for Pharmacy Education
- **Statistical Methods:** Data were summarized using descriptive statistics. Chi-square tests were used to assess the association between categorical variables (Fisher's exact tests used instead when expected frequencies < 5). Mann-Whitney-U tests and Kruskal-Wallis tests were used for evaluating ordinal variables. A priori significance level was set at 0.05.
- **IRB Approval:** Exempt status approval by Presbyterian College IRB

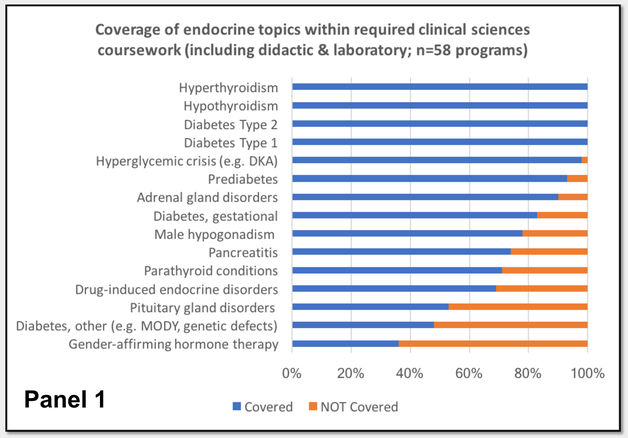
Results

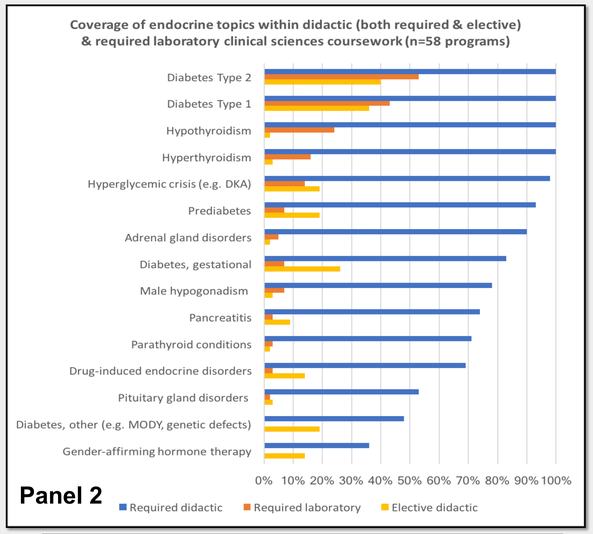
- Fifty-eight of 142 (40.8%) programs participated.
- Coverage of topics and contact hours varied considerably (Panels 1-3)
- For 10 topics, the perception of topic importance differed between programs that cover and those that do not cover the topic ($p<0.05$) (Panel 4)
- The most common assessment strategies were case studies, multiple choice questions, SOAP note writing and skills demonstration, though other methods are also used (Panel 5)
- Inclusion of diabetes-related EPAs was generally consistent across programs (Panel 6)
- Lack of curricular time was the most commonly cited barrier to covering additional endocrine topics, followed by faculty perceptions of importance and availability of faculty expertise. (Panel 7)

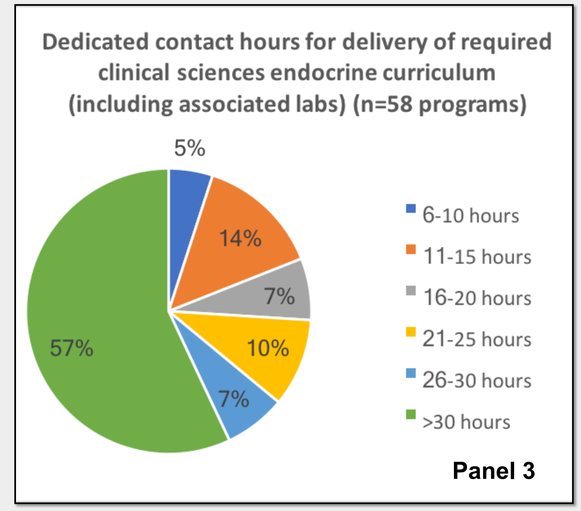
References

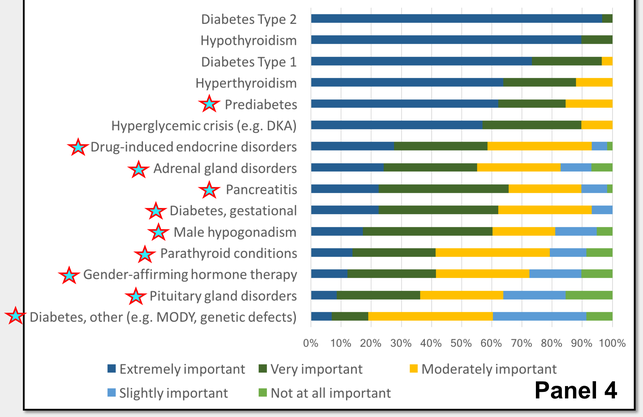
1. J Am Coll Clin Pharm. 2020;3:455-64.

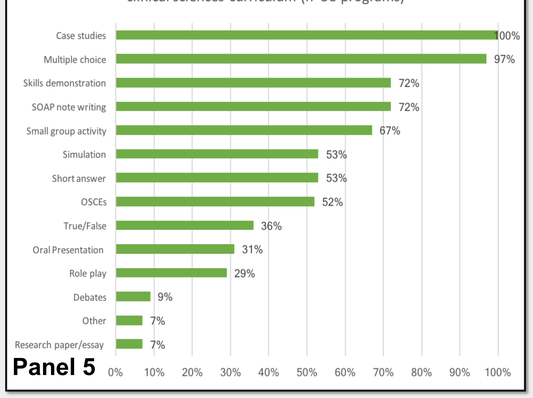
Results

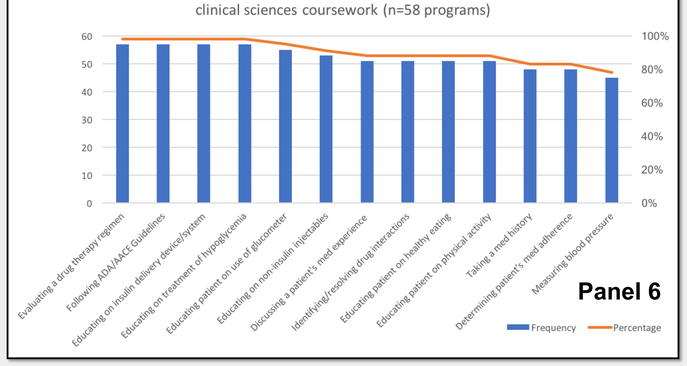


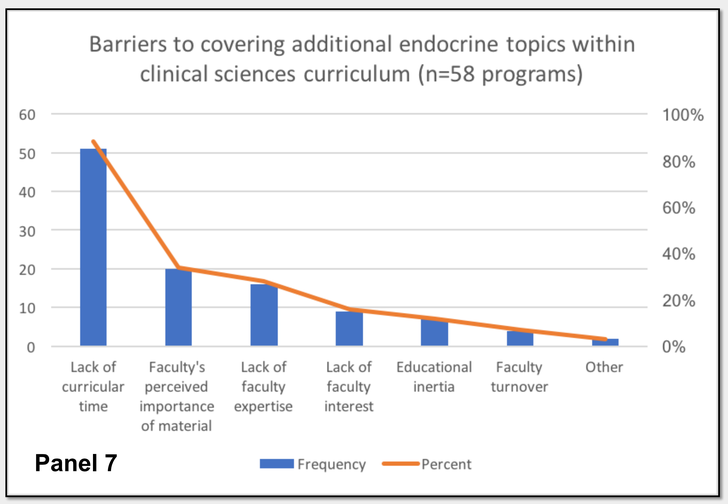












Discussion & Conclusions

- There is inconsistency in endocrine curricular across US PharmD programs, including topics covered, contact hours, assessment strategies, and perception of topic importance
- There is a disparity between what is covered in didactic coursework (most topics covered in >70% of programs) and what is reinforced through laboratory coursework (only type 2 diabetes present in required labs for >50% of programs)
- There is wide variation in the number of contact hours dedicated to endocrine coursework in clinical sciences
- In general, "Tier 1" topics in the ACCP Pharmacotherapy Toolkit[1] were consistently present in required coursework, "Tier 3" topics were generally absent, and the most variation was observed for topics falling within "Tier 2"
- Several discrepancies were noted between coverage & faculty perception of importance of various topics, such as:
  - **Gender affirming hormone therapy:** 53% of programs responded not covering anywhere in the curriculum, although there was a wide range in responses regarding perceived importance
  - **Prediabetes:** 100% of programs responded it's at least moderately important, yet 7% of programs not currently covering in required didactic coursework
- Despite the variety of approaches, respondents consistently noted their methods were appropriately educating student pharmacists to develop diabetes-related EPAs.