

## Doisy College of Health Sciences Program-Level Assessment: Annual Report

Program: **Physician Assistant**

Department: **Clinical Health Sciences**

Degree or Certificate Level: **Graduate/Masters**

College/School: **Doisy College of Health Sciences**

Date (Month/Year): **09/2020**

Primary Assessment Contact: **Caroline Chang**

In what year/cycle was the data upon which this report is based collected? **2019**

In what year/cycle was the program's assessment plan most recently reviewed/updated? **2019**

### 1. Student Learning Outcomes

Which of the program's student learning outcomes were assessed in this annual assessment cycle?

PLO #2 Students will be able to use the critical thinking skills necessary to evaluate patient medical problems.

PLO #4 Students will be able to demonstrate core medical knowledge in the provision of patient care.

### 2. Assessment Methods: Student Artifacts

Which student artifacts were used to determine if students achieved this outcome? Please identify the course(s) in which these artifacts were collected. Clarify if any such courses were offered a) online, b) at the Madrid campus, or c) at any other off-campus location.

#### PLO #2

**2-1 PAED 5300 Evidence based medicine (EBM) / Clinical Question Poster Presentation**

**2-2 PAED 5860 Clinical EBM Clerkship / Clinical Question Project Oral Defense**

#### PLO #4

**4-1 PAED 5250 Nephrology and Genitourinary Fundamentals & 5240 Endocrinology Fundamentals / Combined OSCE Assessment and Plan**

**4-2 PAED 6000 Graduate Seminar / Summative OSCE Assessment and Plan**

### 3. Assessment Methods: Evaluation Process

What process was used to evaluate the student artifacts, and by whom? Please identify the tools(s) (e.g., a rubric) used in the process and include them in/with this report.

#### PLO #2

**2-1 PAED 5300 Evidence based medicine (EBM) / Clinical Question Poster Presentation**

The students take this course during their first semester as PA students to introduce them to the evidence-based medicine concepts they will use throughout the entire program and across their careers as PAs. They are split into pairs or occasionally a trio to generate a clinical question on a topic of interest. They perform a literature search and compilation of evidence-based medicine article results to prove or disprove their clinical question. They generate a professional poster summarizing their question, methods, and findings, then orally present their information to attendees of the poster presentation. The course directors of PAED 5300 generate the rubric used to score the students. All PA faculty members are given the rubric to score the students. Each student pair or group is scored by at least one PA faculty member. The course directors compile the results and apply them to the rubric below, "PLO 2-1." The Program Director reviews the results. The benchmark for this tool is that an average of 85% of students will demonstrate "comprehension" on the corresponding rubric, reflecting entry level knowledge and skills.

## **2-2 PAED 5860 Clinical EBM Clerkship / Clinical Question Project Oral Defense**

This course is taken by our PA students during their clinical phase of the program and builds upon knowledge and skills learned during PAED 5300. Each student selects a clinical clerkship in the medical specialty of their choosing and, in conjunction with their clinical preceptor, generates a clinical question based on a “hot topic” that is specific to that medical specialty. The research evidence-based articles to find a conclusion to their question, then complete an oral defense of the information in front their peers and the PAED 5860 course director. The course director scores the students according to the rubric for this assignment. These results are then compiled by the course director and applied to the rubric outlined below, “PLO 2-2.” The Program Director reviews the results. The benchmark for this tool is that 85% of student will demonstrate “application” on the corresponding rubric, with the knowledge that these skills do not reach “mastery” level until the students are practicing PAs.

### **PLO #4**

#### **4-1 PAED 5250 Nephrology and Genitourinary Fundamentals & 5240 Endocrinology Fundamentals / Combined OSCE Assessment and Plan**

The OSCE, which is combined for both courses, is a comprehensive assessment of knowledge application and synthesis over the didactic phase of the program. It requires that each student take a patient history, perform a physical exam pertinent to the medical situation, and synthesize this information into a patient assessment and management plan. This student assessment takes place on a yearly basis. The course directors for PAED 5240 and PAED 5250 score the students on the assessment and plan portion of this OSCE and then apply the student performance to the corresponding rubric “PLO 4-1” below. The Program Director reviews the results. The benchmark for this tool is that an average of 85% of students will attain “comprehension” on the corresponding rubric, with the knowledge that these particular skills will be further developed during the rest of the didactic phase, and especially clinical phase (phase II) of the curriculum.

#### **4-2 PAED 6000 Graduate Seminar / Summative OSCE Assessment and Plan**

This particular OSCE is a component in our program of the comprehensive evaluation of each student before they graduate. This evaluation tool also aligns with our accreditation standards. It assessed multiple different skills across all of the organ systems that the students have learned about during their time in the program. The students are given simulated patient scenarios and are expected to synthesize the information and generate an assessment, in the form of a patient diagnosis, and generate a treatment plan for the scenarios. A single PA faculty member serves as the proctor for each skill assessed and completes a specified rubric for each student within a 5-minute time limit. Scored rubrics were compiled by the course director for PAED 6000 and reviewed by the Program Director. This assessment tool rubric is listed below as “PLO 4-2.” The benchmark for this tool is that an average of 85% of students will attain “application” on the corresponding rubric, with the knowledge that these skills do not reach “mastery” level until the students are practicing PAs.

## **4. Data/Results**

What were the results of the assessment of the learning outcomes? Please be specific. Does achievement differ by teaching modality (e.g., online vs. face-to-face) or on-ground location (e.g., STL campus, Madrid campus, other off-campus site)?

### **PLO #2**

#### **2-1 PAED 5300 Evidence based medicine (EBM) / Clinical Question Poster Presentation**

45/45 (100%) of students scored “comprehension” or higher on the corresponding rubric. We met our benchmark for this PLO.

#### **2-2 PAED 5860 Clinical EBM Clerkship / Clinical Question Project Oral Defense**

36/39 (92.31%) of students scored “application” or higher on the corresponding rubric. We met our benchmark for this PLO.

#### **PLO #4**

**4-1 PAED 5250 Nephrology and Genitourinary Fundamentals & 5240 Endocrinology Fundamentals / Combined OSCE Assessment and Plan**

37/43 (86.05%) students scored “comprehension” or higher on the corresponding rubric. We met our benchmark for this PLO.

**4-2 PAED 6000 Graduate Seminar / Summative OSCE Assessment and Plan**

35/39 (89.74%) of students scored “application” or higher on the corresponding rubric. We met our benchmark for this PLO.

\*All of these assessment tools were performed face-to-face on the Saint Louis campus.

### **5. Findings: Interpretations & Conclusions**

What have you learned from these results? What does the data tell you?

#### **PLO #2**

Evidence-based medicine is crucial to the ongoing evaluative process of treating patients, and thus, it is essential for PA students to understand how evidence-based medicine influences clinical practice. Data from the 2-1 and 2-2 measurement tools indicates that our students’ ability to effectively search for, analyze, and apply results of evidence-based medicine concepts is a strength of our program. 2-1 is an effective measurement tool. 2-2 as a measurement tool could be further broken down to provide more specific data on students’ application abilities for this PLO.

#### **PLO #4**

The ability to generate a sound patient assessment and plan during patient encounters is also a critical skill to successful PA practice. It is important to introduce the skill early and continue to help students develop to ensure their readiness for clinical clerkships and later to care for patients as practicing PAs. Data from the 4-1 and 4-2 measurement tools indicate that our students’ assessment and plan generating skills are a strength of our program. Both measurement tools are effective for this PLO. However, the specific rubric for the 4-1 measurement tool should be changed to reflect a different skill other than patient education. This is informed by the data in which students scored higher on the “mastery” level than “application.”

### **6. Closing the Loop: Dissemination and Use of Current Assessment Findings**

**A.** When and how did your program faculty share and discuss these results and findings from this cycle of assessment?

As a program, we have “debrief” sessions during our bimonthly program meetings after the OSCEs and the semester one poster presentation session, where details surrounding these assessments are discussed and data are reviewed. The exception is for the PAED 5860 oral defense data. As the course director and the Program Director were compiling and reviewing this data, we realized that it was in oversight that this data was not discussed with the rest of the faculty.

**B.** How specifically have you decided to use findings to improve teaching and learning in your program? For example, perhaps you’ve initiated one or more of the following:

Changes to the Curriculum or Pedagogies

- Course content
- Teaching techniques
- Improvements in technology
- Prerequisites

- Course sequence
- New courses
- Deletion of courses
- Changes in frequency or scheduling of course offerings

Changes to the Assessment Plan

- Student learning outcomes
- Student artifacts collected
- Evaluation process

- Evaluation tools (e.g., rubrics)
- Data collection methods
- Frequency of data collection

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Please describe the actions you are taking as a result of the findings.

1. Because the oral defense presentations for PAED 5860 occur every six weeks, an entire year is required to assess all students, we need to be sure to have a scheduled date by which to discuss these data among all PA faculty members.
2. The rubric for assessment tool 2-2 will be revised to provide more specific assessment data for our program, but the PLO rubric will not be modified.
3. The specific rubric for assessment tool 4-1 will be revised in how the requirements for “mastery” are approached, but the PLO rubric will not be modified.

If no changes are being made, please explain why.

NA

## 7. Closing the Loop: Review of Previous Assessment Findings and Changes

**A.** What is at least one change your program has implemented in recent years as a result of assessment data?

We have changed how we approach assessing our students, based on last year’s assessment report, to include more objective and quantitative data, and move away from data that can be viewed as subjective.

**B.** How has this change/have these changes been assessed?

These changes have been assessed by utilizing the revised assessment tools, as outlined in our program’s AY18-19 Assessment Plan and applying the corresponding data to the rubrics for these tools.

**C.** What were the findings of the assessment?

We are meeting our program benchmarks and are more easily able to draw these conclusions using the objective, data-driven assessments.

**D.** How do you plan to (continue to) use this information moving forward?

We will continue using as much quantitative, objective data as possible.

**IMPORTANT: Please submit any assessment tools and/or revised/updated assessment plans along with this report.**

## Appendix

Program Learning Outcome	Comprehension – Students will ...	Application – Students will ...	Mastery – Students will ...
<b>PLO #2</b> - Students will be able to use the critical thinking skills necessary to evaluate patient medical problems.	Research and summarize information related to a clinical question.	Draw conclusions from research related to a clinical question.	Incorporate changes in clinical practice based upon research related to a clinical question.

PLO 2-1

Name of Tool	Comprehension	Application	Mastery
PAED 5300 Clinical Evidence based medicine (EBM) question poster presentation	Students will present summarized finding on their posters to an audience of allied health faculty, staff and students.	Students will draw patient-centered conclusions from the collected research related to his/her clinical question on the project, as verbally relayed to an audience of allied health faculty, staff and students.	Students will discuss the application highlights related to their clinical question during the poster reception to an audience of allied health faculty, staff and students.

An average of 85% of students will demonstrate “comprehension” on the corresponding rubric.

PLO 2-2

Name of Tool	Comprehension	Application	Mastery
PAED 5860 Oral Defense of clinical EBM question project	Students will able to develop a relevant clinical question and provide an objective variety of evidence during their oral defense.	Students will provide professional critical appraisals of all articles utilized and draw a corresponding answer to their clinical question during their oral defense.	Students will incorporate changes in clinical practice based upon the conclusion of their research related to their clinical question.

85% of student will demonstrate “application” on the corresponding rubric

Program Learning Outcome	Comprehension – Students will ...	Application – Students will ...	Mastery – Students will ...
<b>PLO #4</b> - Students will be able to demonstrate core medical knowledge in the provision of patient care.	Describe an assessment and plan that includes the basic components.	Employ an assessment and plan that includes an accurate differential diagnosis.	Construct an assessment and plan that includes an accurate management plan.

PLO 4-1

Name of Tool	Comprehension	Application	Mastery
PAED 5250 Renal & PAED 5240 Endocrine Combined OSCE Assessment and Plan	Students will document an assessment and plan that includes the basic components.	Students will write and discuss an assessment and plan that includes the proper differential with pertinent labs and diagnostics included.	Students will write a complete assessment and plan that includes proper patient education.

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An average of 85% of students will attain “comprehension” on the corresponding rubric

PLO 4-2

Name of Tool	Comprehension	Application	Mastery
PAED 6000 Summative OSCE Assessment and Plan	Students will score $\geq 31.5/45$ (70%) items correct on OSCE stations 4+5, which specifically require assessment and plan data from students	Students will score $\geq 36/45$ items correct on OSCE stations 4+5, which specifically require assessment and plan data from students	Students will score $\geq 15/17$ correct on station 3, which specifically require patient education.

An average of 85% of students will attain “application” on the corresponding rubric

**PLO 2-1 Artifact, Summary from Instructional PowerPoint**

**PAED 5300: Evidence Based Medicine, Clinical Question Poster Presentation**

Students will be paired for each poster.

Each pair must generate a clinical question, which

- Must be approved by the course director
- Cannot be changed once approved
- Cannot be a duplicated topic from the list provided over the last two years

Find a minimum of four articles that meet the the following guidelines:

- Students will present 4 different types of publications on their poster. Different types of publications may include original research (RCTs, Case Studies, Prospective, etc). Only 1 Meta-Analysis and 1 Systematic Review publication.
- To maximize your literature search, utilize at least 3 different databases.
- Publications identified/selected are to be current (past 5-8 years).
- Publications should be from appropriate scientific journals.
- Selected publications should be relevant to the clinical practice and your CQ.
- Each publication is to be from a different journal, have different authors, different location (clinical facilities), etc. While many reputable studies may be found in a specific journal well known for a given specialty, it is more objective to provide evidence from different resources and authorities.

From the articles, generate an answer to your clinical question and how this could be applied to patient care.

Each pair will have a professionally produced poster made, that includes a title, abstract, methods, table summarizing the studies, and clinical application.

Each team member must present 2 of the articles during the poster presentation and overall each team member will contribute equally to the oral presentation.

**PLO 2-2 Artifact, Student Instructions**

**PAED 5860 Clinical EBM Clerkship / Clinical Question Project Oral Defense**

**Instructions/Overview:**

The goal of the EBM Project is to research a Clinical Question (CQ) appropriate to the clinical discipline, in collaboration with the on-site preceptor(s).

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- ✿ The student will provide an evidence-based review (using the EBM tools learned in PAED 5300) of the articles identified to address and answer the CQ.
- ✿ This project should objectively answer the CQ of interest and discuss application of the CQ to reflect the "real-world" issues of health care.
- ✿ It is unacceptable to copy "word for word" or use excessive "quotes" (>once) or plagiarize sentences out of an article/textbook/journal. The course director will sample any suspicious content for plagiarism.
- ✿ If a CQ project reveals >10% text similarity from web sources, publications or other sources of documents, it will be considered plagiarism. The CQ project will need to be re-written to successfully complete the course.
- ✿ This Worksheet is to be completed in its entirety (typed) and submitted to **Blackboard** (under Home Page) (1<sup>st</sup> priority) by **Tuesday** the **last week** of the rotation, by **5:00 PM, CST**. As a back-up, each student is to **also** their project via email to the Course Director by the same deadline time and day.
- ✿ **Five points** will be deducted for every 30 minutes the worksheet is late after the above deadlines.
- ✿ The Worksheet should be neatly typed, legible, concise but with well-thought out responses under each section.
- ✿ Students are to work with their preceptor to identify a clinical question (CQ)/topic within the 1<sup>st</sup> two weeks of the rotation.
- ✿ Students are to submit their proposed EBM CQ to the course director via email, by the end of the second week, **5:00 pm (CST) Friday**.
- ✿ The proposed EBM CQ is to be submitted in the **appropriate full sentence** format, along with the **PICO** listing.
- ✿ Students will be notified within 48 hours (excluding weekends) of approval, denial or request for revision to their CQ.
- ✿ **Remember your clinical question/topic must be approved by the Course Director.**
- ✿ Students are to review previously used CQs/topic (in Blackboard course) to avoid duplication.
- ✿ **CQ of similar topic(s) will be denied.**
- ✿ Previously used CQs/topics will be updated on Blackboard after each clerkship during the year 2020.
- ✿ This worksheet is worth a total of 100 points (20% of total grade). Page limits are enforced and 10 points will be deducted per section if not compliant to the instructions.

### **Section 1: Development of your Clinical Question (CQ)** (8 points:2-page limit)

- A. Why did you choose this clinical discipline for your evidence-based medicine clerkship?                      What do you hope to accomplish during this rotation?
- B. Provide a list of "3" common events/topics you have encountered in this practice setting during the 1<sup>st</sup> 2 weeks. These can be patient's complaints, diagnostics, treatments, etc.
- C. Prioritize the above 3 topics by relevance with your preceptor including discussion comments from you and your preceptor.
- D. Provide the agreed upon CQ in a sentence format along with the PICO listing.
- E. Provide a summary on how you and your preceptor agreed on a CQ topic and include how this CQ topic may benefit the patients of this practice.

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**Section 2: Medical Literature Search** (8 points:1-page limit)

**Guidelines**

- To maximize your literature search, utilize at least 3 different databases.
- Articles identified/selected are to be current (past 5-7 years).
- Articles are to be from scientific journals and include a standard abstract.
- Each article selected should be relevant to the clinical practice and your CQ.
- **3 different types of study designs/articles** are required for this project. Different types of articles may include publications of original research, RCTs, meta-analyses, systematic reviews, case studies, etc. If you elect to use a meta-analysis and a review, you can **only use "1" of each**.
- Each article is to be from a different journal, different authors, different location (clinical facilities), etc. While many reputable studies may be found in a specific journal well known for a given specialty, it is more objective to provide evidence from different resources and authorities.

A. Provide a list of Resources (databases, etc.), Search Terms and number of Results (number of articles) used for your search. You can add additional lines to the table.

Resources	Search Terms	Results

B. Describe how you narrowed down the selection of articles to evaluate.

C. Provide the citation (AMA format) of each article and type of article (RCT, Case Report, etc) it is.

Citation	Type of Article
1.	
2.	
3.	

D. Each article is to be emailed to the Course Director in **PDF** format by the end of week 3 of the rotation.

**Section 3: Critical Appraisal of Select Studies/Articles** (20 points each)

**Guidelines**

- The following format is to be used for each study appraisal.
- Each study/article appraisal is to be no more than 1 to 1 ½ pages in length.
- You are to type your responses within each box.
- You can delete these guidelines for more room on the page.

**Study #1, 2, 3 listed separately:**                      **Full Citation (AMA format). Source of funding.**

<b>1</b>	<b>Rationale of study article selection:</b>
<b>2</b>	<b>Describe the study design:</b>

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3	Was the study design appropriate?
4	Are your patients (on rotation) similar to those in the study?
5	Does the study research question match your EBM CQ?
6	Were the baseline characteristics of the study patients similar at the start of the trial?
7	Briefly describe how the study design minimized bias in: a. Recruitment b. Randomization c. Results analyses
8	Briefly describe areas of study flaws/bias, concerns or weaknesses:
9	What are the results?
10	Do these results apply to your clinical patient(s)?

**Section 4: Summary of Overall Evidence**  
(12 points for each: 2-page limit for #4 and #5)

1	How well did the studies you selected answer your EBM topic/CQ?
2	Is/are the intervention(s) in the studies realistic in <i>your clinical rotation practice</i> ?
3	How well do the results of your studies apply to the <i>patients</i> on your EBM rotation?
4	What concerns/barriers/issues would prevent your clinical site from implementing your EBM topic/CQ?

**Section 5: Patient/Clinical Education (12 points)**

Using the results of your EBM topic/CQ, provide an instructional plan on how you can educate:

1. The patient(s) in this clinical practice
2. The preceptor and providers
3. The staff

**Section 6: References**

- Include any additional references/resources utilized for this Worksheet.

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