

## **CEPC MEETING AGENDA**

**01:00 PM - 02:30 PM**

**06/09/2022**

### **CHAIR:**

Dr. Irene Alexandraki, MD, MPH, FACP

### **VOTING MEMBERS:**

Colby Genrich, MD; Fatima Gutierrez, MD; Brad Fuhrman MD; Houriya Ayoubieh, MD; Jessica Chacon, PhD, Munmun Chattopadhyay, PhD; Niti Manglik, MD; Osvaldo Padilla, MD; Patricia Ortiz, MD

### **EX-OFFICIO:**

Lisa Beinhoff PhD; Blake Busey, MS; Linda S. Ellis, MD; Maureen Francis, MD; Tanis Hogg, PhD; Jose Visente Sanchez

### **STUDENT REPRESENTATIVES:**

Rowan Sankar MS1 (Voting); Nick Malize MS1 (Ex Officio); Whitney Shaffer MS2 (Voting); Rohan Rereddy MS2 (Ex Officio); Miraal Dharamsi MS3 (Voting); Daniel Tran MS3 (Ex Officio); Karishma Palvadi MS4 (Voting); Runail Ratnani MS4 (Ex Officio)

### **INVITED/GUESTS:**

Richard Brower, MD, FAAN; Martin Charmaine, MD; Jorge Cervantes, MD, PhD; Callaghan Kaitlyn; Curt Pfarr, PhD; Rebecca L. Campos, MD; Khatab Yacoub, Annabi Hani, Ellen F. Dudrey, MD; Dale W. Quest, PhD; Heather A. Balsiger, MS; Huddleston Melissa; Vashee Chandni; Diana Pettit, PhD; Ricardo Belmares, PhD

### **APPROVAL OF MINUTES**

Minutes will be attached.

### **ITEM I NEW MEMBER - WELCOME**

**Presenter(s): Students**

### **ITEM II - TOPICS FROM STUDENT REPRESENTATIVES**

**CEPC 06/09/2022**

**ITEM III PRE-CLERKSHIP PHASE REVIEW – MAS II&IV TEAM**

**Presenter(s): Dr. Francis**

**ITEM IV PRE-CLERKSHIP PHASE REVIEW – SPM II TEAM**

**Presenter(s): Dr. Ayoubieh**

**ITEM V PRE-CLERKSHIP PHASE REVIEW – SPM IV TEAM**

**Presenter(s): Dr. Quest**

**ITEM VI CLERKSHIP DIRECTORS UPDATE**

**Presenter(s): Dr. Francis**

**OPEN FORUM**

**ADJOURN**

**MEMBERS IN ATTENDANCE:**

Irene Alexandraki, Brad Fuhrman, Jessica Chacon, Houriya Ayoubieh, Maureen Francis, Nick Malize, Lisa Beinhoff, Osvaldo Padilla, Patricia Ortiz, Tanis Hogg, Jose Visente Sanchez, Tran Daniel

**MEMBERS NOT IN ATTENDANCE:**

Blake Busey, Linda S. Ellis Julio, Colby Genrich, Fatima Gutierrez, Munmun Chattopadhyay, Niti Manglik, Palvadi Karishma, Runail Ratnani, Rowan Sankar, Rohan Rereddy, Miraal Dharamsi, Whitney Shaffer

**PRESENTERS/GUESTS IN ATTENDANCE:**

Richard Brower, MD, FAAN; Diana Pettit, PhD; Dale Quest, Ricardo Belmares, PhD; Curt Pfarr, PhD, Khatab Yacoub, Annabi Hani, Maria Cotera; Priya Harindranathan, Rebecca L. Campos, MD

**INVITED/GUESTS NOT IN ATTENDANCE:**

Charmaine Martin, Jorge Cervantes, MD, PhD; Callaghan Kaitlyn; Ellen F. Dudrey, MD; Heather A. Balsiger, MS; Huddleston Melissa

**REVIEW AND APPROVAL OF MINUTES**

**Dr. Alexandraki CEPC**  
**Chair**

- Meeting minutes from May 12, 2022 were adopted. Members voted electronically and asynchronously.

**ITEM I NEW MEMBER - WELCOME**

**Presenter(s): Jose Visente Sanchez**  
Non-voting Associate Vice President for  
Information Technology designee

- Mr. Sanchez works as the chief analyst for the IT Academics which serves all schools at the campus

- Dr. Hogg said that he will be meeting with student representatives soon, and will provide an update about the new CEPC student members.

#### ITEM II - TOPICS FROM STUDENT REPRESENTATIVES

**Presenter(s):** Hani Annabi on behalf of Daniel Tran (MS3)

- No issues to report.

#### ITEM III PRE-CLERKSHIP PHASE REVIEW – MAS II&IV TEAM

**Presenter(s):** Dr. Francis

College Colloquium (MAS II&IV) review team: Dr. Francis; Dr. Cervantes; Students: Kaitlyn Callaghan \*Please see attached report.

The review team identified the following course strengths:

- Course was well organized and useful to the students. 93% of students agreed that the course broadened their perspectives.
- Students overall enjoyed the opportunity to discuss the topics in depth.
- Essays were a good way to learn and improve writing skills.
- MS2s rated the practice ethics questions highly.
- Topics were relevant to the practice of medicine.

The team suggested the following areas of improvements:

- College Mentors – Dr. Gordon Woods and Dr. Herb Janssen retired at the end of AY 2020-2021 and Dr. Martine Coue and Dr. Brad Fuhrman are retiring at the end of AY 2021-2022 which will create a significant shortage of mentors. In addition, there are plans to open a 5th college due to class size expansion which could exacerbate the problem.
- There was some redundancy of topics with SCI.

An overview of selected LCME elements relevant to curriculum assessment:

- **Program and Learning Objectives (6.1)** – Met.
- **Self-Directed and Life-Long Learning (6.3)** - The students had essay assignments including ethical analyses and reflections based on prompts. The reflection essays were changed to “mini-reflections” that were done in class. In part, this change was made to be respectful



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of student time. College mentors provided the feedback. Essays were graded using rubrics that were available in the syllabi.

- **Academic Environments (6.7)** - There was an IPE Ethical case-based discussion in the spring semester of MS1 year. Physical therapy, pharmacy, and nursing students were invited to join and discuss pain management, drug diversion and addiction.
- **Inclusion of Biomedical, Behavioral, Social Sciences (7.1)** – Lack of diversity in the topics discussed was identified. Students would like to see topics relevant to current trends in medicine and the future of the medical profession.
- **Organ Systems/Life Cycle/Prevention/Symptoms/Signs/Differential Diagnosis, Treatment Planning (7.2)** – Met.
- **Scientific Method/Research (7.3)** – N/A.
- **Critical Judgment/Problem-Solving Skills (7.4)** - With the ethical questions that were proposed, students were encouraged to think critically about different situations and consider the complexity of ethical dilemmas. Critical thinking skills in regard to diagnostic skills weren't addressed, but critical thinking skills were incorporated through the discussions especially concerning ethical topics.
- **Societal Problems (7.5)** –Students stated that racism could have been discussed, e.g. when discussion about Hela cells was held. They expressed the need for discussions on border health.
- **Cultural Competence and Health Care Disparities (7.6); Medical Ethics (7.7) and Communication Skills (7.8)** – Met.
- **Use of PGOs (8.2)** – Met.
- **Assessment System (9.4)** – Met.
- **Narrative Assessment (9.5)** – Met.
- **Formative Assessment and Feedback (9.7)** – Met.

The review team made the following recommendations:

- Provide more opportunities and venues for students to give feedback on topics of interest.
- Address sufficiency of college mentors for optimization of mentoring and advising.

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- Review and address redundancy of topics with SCI.
- Enhance coverage of racism in health care topics.
- Address border health and disparities since a good portion of the patients seen on rotations are undocumented immigrants.

Discussion held regarding MAS II&IV review.

Dr. Pfarr stated that the biggest challenge would be staffing the colleges. He said the opening of the 5th college is ongoing, and there should be two college mentors in each college.

Student Hani Annabi commented that the topic of undocumented immigrants should be discussed. He explained that it would be useful to know what the protocol is when a border patrol agent is involved in patient care.

Dr. Ayoubieh noted that the border health topic is part of the course curriculum but it should be revisited based on students' experiences.

#### ITEM IV PRE-CLERKSHIP PHASE REVIEW – SPM II TEAM

**Presenter(s):** Dr. Ayoubieh

Scientific Principals of Medicine (SPM II) review team: Dr. Ayoubieh; Dr. Campos; Students: Yacoub Khatab and Hani Annabi\*Please see attached report.

The review team identified the following course strengths:

- Pathology slides in Hematology (HEM) unit were of high quality
- Cardiology and Pulm (CVR) unit: students found splitting the units useful.
- Cardio/Pulm/Renal (CVR) and (RNL) unit: students appreciated physiology content.
- Renal (RNL): the scheme presentations were useful.

The team identified areas for improvements across the units: some weeks very heavy in content; students did not appreciate the large group work case examples; students were using outside resources to cover the material because in-house material was deemed dated and inadequate;

students would like more self-assessment quizzes such as AMBOSS; Firecracker quizzes were not adequate to prepare for summative exam; students noted that the IRAT/TRAT and NBME should be aligned.

Final recommendations:

- Restructure coursework with enhanced foundation in physiology; students recommended that each week would offer an integrated, physiology-based lecture series that explores the entirety of a disease from diagnosis to treatment. *Student Yacoub Khatab presented this concept/recommendation – report is attached.*
- Review session flow and the amount of material to be covered during the week.
- Revise schemes. Update lectures and slides
- Consider evenly distributing asynchronous learning each week and incorporating references to outside resources, such as First Aid and Amboss.
- Provide lecture recordings and consider involving the TA's in reviewing the records or a scribe program through the students.
- Start with foundational material such as physiology as a base, e.g. in CVR in: EKG correlation, followed by pathology and pharmacology.
- Consider adding live pharmacology lectures to all weeks that is relevant to the scheme as it is both clinically relevant and heavily tested on board examinations.
- Build-in purposeful review, e.g. in cardio; cover EKG early in the first week, revisit EKG weekly specific to the schemes of the week/ revisit important pathology slides in HEM unit.
- Consider adding more self-assessment quizzes; many students seem to prefer using Amboss, in addition to Firecracker. Firecracker quizzes alone are not adequate to prepare for summative.
- Revise large group work case examples.
- Consider aligning the IRAT/TRAT and NBME questions.
- Anatomy: Present a vignette for every station and ask the students to choose the correctly label-ed structure; focus on clinically relevant anatomy.

Discussion held regarding SPM II review:

Student Yacoub Khatab explained that students' intention is not to divert from the current curricular model but would like to incorporate different perspectives on each pathology. Dr. Brower commented that a disease-specific approach might distract from the clinical presentation level of analysis and learning which is the base of the curriculum. He stated that the number of specific diseases is so large, and the knowledge of each so vast, that the student-recommended approach would lose the "big picture". He explained that this goes in line with the issues of "curricular bloat". He said that at this level of learning, it's not what tends to be heavily tested and He stated that the curricular model would be lost if the direction recommended by students is followed.

Dr. Campos explained that the review team's intent was to address the flow and order of the material presentation, not necessarily eliminating components of schemes. Dr. Francis interjected to explain how the chest discomfort scheme was taught. She pointed out that even though the scheme mentions many diseases that were not cardiac, the focus was the cardiac causes. She noted that there might be a need for revisiting the order of topics per week for schemes due to possible changes over time. She added that there used to be a large group discussion about the sequencing during the week and that maybe this practice should be enforced again. She concluded by saying that the week is intended to follow a very logical flow (i.e., Kolb's learning cycle), but it would be beneficial to take back the comments from students and verify if the schemes still make sense and follow this logical flow.

Dr. Pettit commented that with all the materials that have to be covered, aside from perhaps reorganizing things that might have gone out of sequence, there is no room for adding any more content without taking something out.

Dr. Ayoubieh added that there is a need for tying content better, making sure that there is connected physiology related to those pathologies that are presented earlier in the week, and then leading to a better flow.



Dr. Brower stated that, with the issue of designing the weeks, improving integration is always the goal. He said that pharmacology has been a longstanding area of challenge and that it is a natural place where integration should be happening throughout the week.

#### ITEM V PRE-CLERKSHIP PHASE REVIEW – SPM IV TEAM

**Presenter(s): Dr. Quest** Scientific Principals of Medicine (SPM IV) review team: Dr. Quest; Dr. Balsiger; Students: Yacoub Khatab and Hani Annabi\*Please see attached report.

Dr. Quest stated that according to student evaluations the unit was well organized, with an appropriate and manageable amount of relevant material that aligned with session level learning objectives, and a fair unit summative assessment.

The students in the review team identified the following challenges:

- The process worksheets for this unit emphasized developmental milestones, but not enough attention to the most common conditions that lead to clinic visits for the various age categories (e.g., otitis media, strep throat), and are more reflective of the mixture of well child and sick visits that are seen in pediatric clinics.
- The current curriculum does not cover common pediatric surgery conditions during the human development weeks. Although some conditions are covered in other units (GI, MSK, etc.), it would be very helpful to recap them again during this unit.
- Neurocognitive disorders were not discussed at all in the Neuro unit prior to MHD.

The following suggestions for improvement were identified:

- It would be better to introduce the neurocognitive disorders in Neuro and then review them in more depth during MHD.
- Have more anatomy built into the developmental portion of the unit so students can solidify differences between child vs adult anatomy, that would be useful when doing physical exams.

- Incorporate more microbiology, pharmacology, and pediatric surgery into the first 2 weeks of the unit to get well-rounded content coverage that is critical to STEP1 success and to third year as well.

Team discussed the tank side grand rounds:

This capstone event typically builds on the anatomy lab teams' dissection of their donor cadaver. The 'off campus' pandemic contingency required each of the student groups to review an autopsy report instead that described the clinical history and gross findings, and to utilize the information provided to prepare a clinical pathologic correlation presented to an audience of their peers and faculty judges.

Basic science and clinical faculty judged team presentations using the same grading rubric used in prior 'on campus' years.

The overall learning experience in this pandemic year seemed to be as rich as ever.

Continuing this method of using an autopsy report that includes medical test results may be a better way for students to prepare cases for tank side grand rounds cases because:

- Anatomy labs no longer involve full dissection.

Dr. Pettit commented that dementia should remain in the mental health unit and it should not be moved to the CSS unit, which is already a "huge" unit.

Dr. Belmares also noted that some imaging could be added to pediatric anatomy because there are no pediatric cadavers. Student Yacoub Khatab asked if it was possible to get a pediatric surgeon who could provide a presentation about the topic to help with anatomy. Dr. Pettit explained that some imaging was included and that they were working with the radiology members to support this. She agreed that a reorganization of the pediatric weeks is needed but the challenge is to acquire input from the clinical side because of their busy schedule. She said, however, that they will continue working on this matter.

#### ITEM VI CLERKSHIP DIRECTORS UPDATE

**Presenter(s): Dr. Francis**

- Dr. Lynn Hernan (Fuhrman) is retiring – replacement is pending
- Dr. Singh has been appointed as the assistant clerkship director for the pediatric clerkship. Dr. Francis presented Dr. Singh's curriculum vitae\*(attached).

#### ADJOURN

Members voted electronically and asynchronously, and adopted the following items:

- Meeting minutes from May 12, 2022
- College Colloquium (MAS II&IV) course review
- Scientific Principals of Medicine (SPM II) course review
- Scientific Principals of Medicine (SPM IV) course review
- Clerkship directors update

Meeting adjourned at 2:30pm.

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# Pre-Clerkship Phase Review Report AY 2020/21- Review Team

College Colloquium II&IV (PMAS II&IV–Spring Semester)



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## Strengths of the course

- *Well organized and useful to the students. 93% agreed that the course broadened their perspectives.*
- *Students overall enjoyed the opportunity to discuss the topics in depth*
- *Essays were a good way to learn and improve writing skills*
- *Students can talk freely*
- *Medical ethics content was a strength*
- *Good opportunity to work with colleagues in class*
- *Topics relate to the practice of medicine*
- *MS2s rated the practice ethics questions highly*



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## Areas or Improvement

- *Sufficiency of faculty – Dr Gordon Woods and Dr Herb Janssen retired at the end of AY 2020-2021 and Dr Martine Coue and Dr Brad Fuhrman are retiring at the end of AY 2021-2022 thus creating a significant shortage of mentors. In addition, there are plans to open a 5<sup>th</sup> college due to class size expansion which will exacerbate the problem.*
- *Timing of the course during the year under review was in the afternoon – Friday afternoon for the MS1 class and Tuesday afternoon for the MS2 class. This was not optimal timing for a high energy discussion based course and has already been changed.*
- *Some redundancy of topics with SCI*
- *Should be held in person (as opposed to online)*
- *More options for choosing topics*
- *Some students would like the class to be shorter*



## 6.1 Program and Learning Objectives

- *Are learning objectives provided for all activities? Yes\_\_X\_ No\_\_*
- *Are learning objectives appropriate for each learning activity? Yes\_X\_ No\_\_*
- *Learning Objectives are provided for each session in the Learning Management System – Elentra*



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## 6.3 Self-Directed and Life-Long Learning

- *Does the course include scheduled time for self-directed learning? Yes\_X\_\_ No\_\_\_\_*
- *Is the amount of scheduled time appropriate? Yes\_X\_\_ No\_\_\_\_*
- *How is self-directed work monitored?*

*The students have essay assignments including ethical analyses and reflections based on prompts. The reflection essays were changed to “mini-reflections” that are done in class. In part, this change was made to be respectful of student time.*

*During 2nd year, student’s work together to create a presentation. This is done in the fall semester*

- *Do students receive feedback on their self-directed work? Yes\_X\_\_ No\_\_\_\_*
- *How do they receive feedback?*

*Feedback is provided by the college mentors. Essays are graded using rubrics that are available in the syllabi.*



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## 6.7 Academic Environments

- *Does the course include instruction and/or experiences to prepare students to function in interprofessional health care teams? Yes\_\_X\_ No\_\_*

*There is an IPE Ethical case based discussion in the spring semester of MS1 year, Physical therapy, Pharmacy, and Nursing students are invited to join and discuss pain management, drug diversion and addiction.*



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## 7.1 Inclusion of Biomedical, Behavioral, Social Sciences

- *Does the course include Biomedical, Behavioral, and Social Sciences content? Yes\_X\_ No\_\_\_*
- *Were any content gaps identified? Yes\_X\_ No\_\_\_*

*It was pointed out that a weakness is lack of diversity in the topics discussed.*

*Students mention that there should be inclusion of current events, topics that are more up to date, like covid. Things like that should be more applicable.*

*They would like to see topics are relevant to current trend in medicine and the future of the medical profession.*

*“More interesting topics”, “More relevant controversial topics in medicine since there are so many”*

*Students think it would be nice if students could have some say in the topics we discuss so they get a change to discuss issues they're curious about.*

*Redundancy (with some topics covered in SCI) has been brought up repeatedly.*

*Also, there is a perception that “we talked about the same six topics for the entire year, which was redundant and not helpful.”*



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## 7.2 Organ Systems/Life Cycle/Prevention/Symptoms/Signs/Differential Diagnosis, Treatment Planning

- *Does the course include Organ Systems / Life cycle / Prevention / Symptoms / Signs / Differential Diagnosis, Treatment Planning? Yes \_X\_ No*
- *Were any content gaps identified? Yes      No \_X\_*
- *If YES, please explain. What recommendations would you have to address these gaps?*



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## 7.3 Scientific Method/Clinical/Translational Research

- *Does the course include Scientific Method/Clinical/Translational Research? Yes\_\_\_\_  
No\_\_X\_*
- *Were any content gaps identified? Yes \_\_\_\_No\_\_X\_*

*This is not applicable to College colloquium.*

*The course does contain a session focused on the ethical conduct of research.*



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## 7.4 Critical Judgment/Problem-Solving Skills

- *Does the course include Critical Judgment/Problem-Solving Skills? Yes \_X\_ No*
- *Were any content gaps identified? Yes      No \_X\_*
- *What recommendations would you have to address these gaps?*

*With the ethical questions that are proposed, students are encouraged to think critically about different situations and consider the complexity of ethical dilemmas. Critical thinking skills in regard to diagnostic skills aren't addressed, but critical thinking skills are incorporated through the discussions especially concerning ethical topics.*



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## 7.5 Societal Problems

- *Does the course include Societal Problems? Yes   X   No*
- *Were any content gaps identified? Yes   X   No*

*Colloquium covers vaccine hesitancy, antibiotic overprescribing, communication skills, use of social media, alternative medicine, the ethics of life sustaining interventions, dialysis and transplantation, and access to care.*

*Students state that racism could have been discussed, e.g. when talking about Hela cells. Other topics were not specifically listed, but it was mentioned that a large number of discussions on genetics and ethics could be rather covered in 1 -2 colloquium sessions, allowing to discuss “other important ethical concepts”.*



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## 7.5 Societal Problems

*“Some topics were very redundant with SCl.”*

*“Although we talked about important topics, many times it was overly repeated and redundant of things we have already talked about 5-6 times in SCl or immersion. I think talking 1-2 times about them is plenty and past that we are wasting time. I think SCl and colloquium don't need to be a mandatory weekly activity. Monthly or every other week would be sufficient and more meaningful. “*

*“I think it would be relevant and useful to create discussions centered around border health. There were many questions I had regarding with the process/resources for our population of patients that are undocumented and most of our students are not from border regions. “*



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## 7.6 Cultural Competence and Health Care Disparities

- *Does the course include Cultural Competence and Health Care Disparities?*  
Yes X No
- *Were any content gaps identified?* Yes      No X

## 7.7 Medical Ethics

- *Does the course include Medical Ethics?* Yes X No
- *Were any content gaps identified?* Yes      No X

## 7.8 Communication Skills

- *Does the course include Communication Skills?* Yes X No
- *Were any content gaps identified?* Yes      No X





## 8.2 Use of Medical Educational Program Objectives

- *Do the learning objectives map accurately to the Educational Program Goals and Objectives? Yes \_X\_ No*

## 9.4 Assessment System

- *Are the criteria for Passing the course clearly defined? Yes \_X\_ No*
- *Is there a clearly defined process for remediation of students in the course? Yes \_X\_ No*  
*There is a defined process for remediation of missed sessions and essays.*



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## 9.5 Narrative Assessment

- *Is a narrative description of performance included in the assessment of each student in the course? Yes\_X\_\_ No\_\_\_\_*
- *If No, please provide recommendations:*

## 9.7 Formative Assessment and Feedback

- *Is formative assessment provided to each student? Yes\_X\_\_ No\_\_\_\_*



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# Final remarks and recommendations

- *Adding a way for students to give feedback on which topics they are particularly interested in covering*
  - *More options for choosing topics – highlight emerging topic weeks in advance to allow students to raise possibilities; Perhaps move emerging topic weeks away from exam weeks*
- *Address sufficiency of faculty for optimization of mentoring and advising.*
- *Review redundancy of topics with SCI*
- *Enhance coverage of racism in health care*
- *With our unique location on the border, it is important to address border health and disparities since a good portion of the patients seen on rotations are undocumented.*



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# SPM II Review

Course Directors:

Ellen Dudrey

Jessica Chacon

Team 5 members:

Houriya Ayoubieh

Rebecca Campos

Yacoub Khatab

Hani Annabi



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SPM II: Spring semester course in a series of four courses that span the pre-clinical years.

Multiple components: Clinical presentations, lectures, Anatomy, Worked Case Examples (WCE)

## Student Evaluations- positive aspects:

SPM II Spring Report AY 2021

- Hematology: Students like having pathology slides
- Cardiology and pulm: they found splitting the units useful.
- Cardio/Pulm/Renal: Students appreciated physiology.
- Renal: They liked the scheme presentations.



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## Student Evaluations suggested improvements:

SPM II Spring Report AY 2021

- Heme:
  - Incorporate spaced repetition for pathology slides through out the weeks.
  - Highlight which topics are more high yield vs others.
  - Include more pharmacology sessions on certain topics such as chemotherapy in heme instead of MSK,
- Cardio/ pulm:
  - Some weeks are very heavy in content; e.g. one week of pulmonary had 4 different schemes in the last week, that were not related.
  - Include more pharmacology sessions on certain topics arrhythmias, heart failure, CAD. Prefer live sessions.
  - Cover EKG early in the first week.
  - Cover hyperlipidemias in the cardiac unit.
- Renal: More review sessions.



## Student Evaluations suggested improvements for All units:

### SPM II Spring Report AY 2021

- Some weeks are very heavy in content. Students are asking to reorganize the material evenly across all weeks.
- Students did not appreciate the big group work case examples.
- Students are using outside resources to cover the material. In-house material is deemed dated and inadequate.
- Students would like more self-assessment quizzes such as AMBOS, as Firecracker quizzes are not adequate to prepare for summative.
- Students would like that the IRAT/TRAT and NBME are aligned
- Students would like more live pharmacology lectures, and less asynchronous material.
- CVR: Splitting up the units is recommended.
- Students like having the option of reviewing the lecture recording at their own time but they also appreciated having an in person option during Renal.

## **Course Directors' Report:**

1. Difficulty with the virtual transition was noted, innovative alternatives were offered.

# Recommendations Final:

## **Create a Scribe Service for SPM lectures.**

- a. Scribes would be tasked w/ attending lectures in-person and subsequently reviewing lecture recordings and providing subtitles that meet the state's mandated 99% minimum accuracy.
- b. Scribes can be managed by TAs or the school administration can start a new scribe program consisting of students.
- c. Lecture recordings would ideally be shared within 1 week of the live lectures.
- d. Students are urging us to actively work towards finding solutions for this challenging barrier of 99% subtitle accuracy. This issue may be pushing students to utilize outside resources to study and underutilize the school curriculum.



# Recommendations Final:

## **Restructure Coursework w/ Foundation in Physiology**

- Students shared great reviews on the physiology content and believed it served as a solid foundation for subsequent topics covered throughout the block.
- Students recommend that each week would offer an integrated, physiology-based lecture series that explores the entirety of a disease - from diagnosis to treatment.
- As it currently stands, students are offered a common complaint at the beginning of the week – such as “chest pain” – and the week’s lectures cover a wide variety of topics that could meet the “chest pain” criteria. However, this creates too wide of a focus and doesn’t give students an opportunity to adequately synthesize the full spectrum of a specific disease. For example, “chest pain” can be due to CV, MSK, GI, RSP pathologies. While that may be an effective way to approach these medical problems from a clerkship perspective, it does not provide a detailed understanding of a single topic, such as MI, which is critical from a didactic/STEP1 perspective.

## Heart Failure Week

<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>
<b>Physiology</b> - Cardiac Output, SVR, HR  <b>EKG</b> - HF Findings	<b>Pathology</b> - the pathophysiology of HF (i.e. chronic HTN, multiple MIs)  <b>Micro</b> - the infectious causes of HF; or infections that can mimic HF (i.e. myocarditis)	<b>Pharm</b> - the medical treatments for HF  <b>TA</b> - Perhaps encourage TAs to offer sessions upon completion of week's material	<b>Medical Skills</b> - HF case	<b>WCE</b> - HF cases  <b>iRAT and tRAT</b>

# Recommendations Final:

- Review session flow and the amount of material to be covered during the week.
- Revise schemes. Update lectures and slides, etc.
- Consider evenly distributing asynchronous learning each week and incorporating references to outside resources, such as First Aid and Amboss.
- Start with foundational material such as physiology as a base. E.g. in CVR: EKG correlation, followed by pathology and pharmacology.
- Consider adding live pharmacology lectures to all weeks that is relevant to the scheme as it is both clinically relevant and heavily tested on board examinations.
- Build in purposeful review. E.g. In cardio; cover EKG early in the first week, revisit EKG weekly specific to the schemes of the week/ Revisit important pathology slides in Heme.
- Consider adding more self-assessment quizzes, many students seem to prefer using Amboss, in addition to Firecracker. Firecracker quizzes alone are not adequate to prepare for summative.

# Recommendations Final:

- Provide lecture recordings and consider involving the TA's in reviewing the records or a scribe program through the students.
- Revise big group work case examples.
- Consider aligning the IRAT/TRAT and NBME questions
- Students prefer to have split cardiology and pulmonary units.
- Anatomy:
  - Present a vignette for every station and ask the students to choose the correctly labelled structure.
  - Focus on clinically relevant anatomy. Present anatomical information in a functional and/ or clinical context. E.g. EKG changes and relevant anatomy.
  - Students feel that they missed out on the active learning of anatomy by not having dissection.



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Pre-Clerkship Phase Review Team 2 Report  
Scientific Principles of Medicine IV (Year 2, PSPM 6022)  
Academic Year 2020 – 2021: Spring Semester

Course Directors:

Diana Pettit, Ph.D.

Ricardo Belmares, Ph.D.

Unit Associate Director: Carolyn Mack

Team 2 members:

Melissa Huddleston

Chandni Vashee

Heather Balsiger

Dale Quest



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## Overview:

SPM IV is comprised of **Mind & Human Development** unit, and **Tank Side Grand Rounds**

The Mind & Human Development unit is comprised of six instructional weeks, and an exam week.

Week	CP	Title
1	1	Human Development: Infant-Toddler Part I (0-12 mo.)
	2	<u>Human Development: Infant to Toddler Part II (12mo-24 mo.)</u>
2	3	Sudden Infant Death Syndrome and Acute Life Threatening Events [Self-Taught]
	4	<u>Human Development: Early Childhood (2-8 yrs.)</u>
	5	Human Development: Pre-teen (8-12 yrs.)
	6	Abnormal Stature
3	7	Human Development: Teen
	8	Stress-Induced Fear and Anxiety Disorders I: PTSD and Dissociative Disorders
4	9	Mood Disorders
	10	Stress-Induced Fear and Anxiety Disorders II: OCD and Anxiety Disorders
5	11	Psychosis and Disordered Thought
	12	Substance Related and Addictive Disorders
6	13	Neurocognitive Disorders
	14	Sleep and Circadian Rhythm Disorders
Exam Week		

The intention for the 14 clinical presentation-based curriculum to “span the arc of human development from neonatology to geriatrics” has yet to make a seamless transition in Week #3 from pediatric to psychiatric topics



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## **AY 2020-2021:**

Was impacted by pandemic-related contingencies that pivoted on short notice to web-based delivery of most sessions, including anatomy sessions, some synchronous, others asynchronous.

Not easy for students to form study groups to conquer learning materials collaboratively.

The Course Directors report noted that despite technical and connectivity issues, the online/remote learning curriculum and instructional approaches were generally successful.



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## **AY 2020-2021:**

Succession planning to contend with faculty and staff turnover especially taxed the anatomy component of SPM IV. Job searches for new faculty had paused during the 'lock-down' phases of the CoViD-19 pandemic.

Clinical educators were contending with a heavy patient load during the pandemic, so there was more reliance on non-clinician and non-practicing clinician educators for components of SPM IV MHD unit that usually draw on clinicians, e.g., the Clinical Scheme Presentations and Worked Case Examples sessions.



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**Success rates on unit summative assessment remained consistent with prior years:**

AY 2018/19			AY 2019/20			AY 2020/21		
FA	PA first attempt	PA remediation	FA	PA first attempt	PA in remediation	FA	PA first attempt	PA remediation
2	94	0	3	91	0	2	96	0



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## SPM IV MHD Unit Student Evaluation for AY 2020-2021:

The Office of Assessment and Evaluation Report indicates that the majority of student respondents agreed that the unit was well organized, with an appropriate and manageable amount of relevant material that aligned with session level learning objectives, and a fair unit summative assessment.

Student narratives continue to indicate more satisfaction with the 'Mind' (i.e., psychiatry oriented) portion than the 'Development' (i.e., pediatrics oriented) portion of the 12-week unit.

Child development (pediatrics) and child psychiatry theories and instruction were perceived as lacking consideration of family units that do not conform to a traditional male and female parental model.



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## Team 2 Student Member Input:

### Challenges:

- The process worksheets for this unit emphasized developmental milestones, but not enough attention to the most common conditions that lead to clinic visits for the various age categories (e.g., otitis media, strep throat), more reflective of the mixture of well child and sick visits that are seen in pediatric clinics.
- The current curriculum also does not cover common pediatric surgery conditions during the child and development weeks. Although some conditions are covered in other units (GI, MSK, etc), it would be very helpful to recap them again during this unit.
- Neurocognitive disorders were not discussed at all in the Neuro unit prior to MHD.



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## Team 2 Student Member Input:

### Suggestions:

- It would make sense to introduce the neurocognitive disorders in Neuro and then review them in more depth during MHD.
- Have more anatomy built into the developmental portion of the unit so students can solidify differences between child vs adult anatomy, as would be useful when doing physical exams.
- Incorporate more microbiology, pharmacology, and pediatric surgery into the first 2 weeks of the unit to get well-rounded content coverage that is critical to STEP1 success and to third year as well.



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## Tank Side Grand Rounds:

This capstone event typically builds on the anatomy lab teams' dissection of their donor cadaver.

The 'off campus' pandemic contingency required each of the student groups to instead review an autopsy report describing the clinical history and gross findings, and to utilize the information provided to prepare a clinical pathologic correlation presented to an audience of their peers and faculty judges.

Basic science and clinical faculty judged team presentations using the same grading rubric used in prior 'on campus' years.

The overall learning experience in this pandemic year seemed to be as rich as ever.

Continuing this method of using an autopsy report that includes medical test results may be a better way for students to prepare cases for tank side grand rounds cases because:

- anatomy labs no longer involve full dissection
- a few sessions with the pathologists does not yield much beyond what is included on the death certificate



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Ajay Pratap Singh, MD  
Texas Tech University and Health science center at El Paso. Texas.  
• E-MAIL – Ajay.singh@ttuhsc.edu

## EDUCATION

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August 2002-March 2008  
M P Shah Medical College, INDIA  
• Medical School

July 2011-June 2014  
Driscoll Children hospital, Texas A & M, Corpus Christi, Texas.  
• Pediatrics Residency

July 2014- June 2017  
University at buffalo, Buffalo New York.  
• Neonatal-Perinatal Fellowship

## PROFESSIONAL EXPERIENCE

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August 2008 -January 2009  
• Medical Officer in charge, Sterling Hospital. India.

July 2017-Current  
• Assistant professor of pediatrics, Texas Tech University at El Paso. Texas.

July 2017-current  
• 4<sup>th</sup> Year Medical student Neonatal intensive care unit clerkship director. Since Jan 2020-current.  
• Assistant clerkship director of 3<sup>rd</sup> year medical student. Since Jan 2020-.

## Community work

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- An educational scholarship fund for girls in India: “Kiran – A scholarship for girls “
- El paso Lactation group. A collaboration to improve breastfeeding rates in El Paso Texas. Funded by American heart association and State of Texas.

Publications, Broadcast, Posters, Presentations and peer reviewed journals.

**Publications**

- Poor oral intake in a late preterm twin – usual symptom with an unusual diagnosis  
**Ajay Pratap Singh, MD**, Rula Balluz, MD, Praveen Chandrasekharan, MD  
**Heart & Lung, The journal of acute and critical care - 2017**
- Regional analgesia in neonates undergoing thoracoabdominal surgeries: a pilot study. **Ajay Pratap Singh, MD**, Satyan Lakshminursimha MD, Mark Thompson, MD. Preliminary acceptance in **journal of neonatal perinatal medicine. April 2018.**
- Pulmonary Atresia with Intact Ventricular Septum. Gorla SR, **Singh AP.** Stat Pearls. August 2019.
- Amniotic Band syndrome. **Singh AP**, Gorla SR. PubMed ID – 31424867. 2019.
- The Beneficial Effects of Postnatal Caffeine on Spatial Learning in Adult Mice: **Ajay Pratap Singh, MD**, Xu Ying, Humei Wang, Vasantha H Kumar, MD. **Journal of Caffeine and Adenosine Research. 2020.**
- Effects of Neonatal Caffeine Administration on Vessel Reactivity in Adult Mice. **Ajay Pratap Singh**, Sylvia Gugino, Praveen Chandrasekharan, Sara Berkelhamer, Huamei Wang, Lori Nielsen, Vasantha HS Kumar. **American Journal of perinatology. 2020**
- Improving Timing of Antibiotics in Neonates with Early Onset Sepsis – Quality improvement project. Cheng Ma, MS, Garret Levin, MD, Sanjeet K Panda, MD, Devaraj Sambalingam MD, **Ajay Pratap Singh, MD**, Accepted for publication. **Journal of neonatal perinatal medicine. 2020.**
- Discharging Preterm Infants Home on Caffeine, a Single Center Experience. **Children. Basel. 2020.**
- Supporting Breastfeeding in year 2021 and beyond – lessons from the pandemic, Pediatrics reports May 2021.

- **Impact of Coronavirus pandemic on high-risk infant follow (HRIF) programs: A survey of Academic Programs. Children (Basel), October 2021.**

#### Graduate Medical Education.

- **Developed a Breastfeeding Curriculum** for pediatrics residency. CME recognized. Funded by CDC grant, through American Heart Association. March 2021.
- **Developed Breastfeeding elective for pediatrics residents at TTUHSC pediatrics residency program.**
- Yearly neonatal resuscitation program booster course for pediatrics residents

#### Undergraduate Medical School

- Vertical Integration in Clinical Activity
- Neonatal Resuscitation education

#### Broadcasts

health of PedPOD podcast – Educational podcast, update information about all children

<https://elpasochildrens.org/pedpod/>  
<https://elpaso.ttuhsc.edu/som/pediatrics/PedPOD/default.aspx>

#### Newspaper Articles

1. **A Newborn's Long Journey to Saturday. El Paso herald post. Feb 23, 2019**  
<https://elpasoheraldpost.com/a-newborns-long-journey-to-saturday/>  
<https://elpasoheraldpost.com/gallerystory-the-journey-home-an-el-paso-micro-preemie-defies-odds/>

<http://eptechview.ttuhsc.edu/tag/ajay-pratap-singh/>

2. **Doctors face challenges caring for newborns in the Borderland**  
<https://www.elpasotimes.com/story/opinion/2019/09/27/doctors-face-challenges-caring-borderland-newborns-gorla-singh/3780558002/>

### **Perinatal Gazette (Perinatal Connection)**

Effects of Diabetes on pregnancy and newborn. August 2018

### **Webpage – Peds4all.com**

### **Posters**

- Neonatal Aortic Dissection: Congenital or acquired? A Case report, San Diego AAP 2014
- Does use of non – invasive ventilation modes impact outcomes PAS and ESPR 2016
- Pneumothorax and risk factors in late preterm infants ESPR 2016
- Effects of Neonatal Caffeine on Blood Pressure, Vessel Reactivity & Systemic Stress in Adult Mice. PAS and ESPR 2017
- Effects of neonatal caffeine on neurobehavioral and neurogenesis in adult mice, PAS and ESPR 2017
- Evaluation of Feeding and Sedation Practices with Therapeutic Hypothermia for Hypoxia Ischemic Encephalopathy ESPR 2017
- Regional analgesia in neonates undergoing thoracoabdominal surgeries: a pilot study. University at buffalo symposium 2017
- Discharging preterm infants home on caffeine - A single center experience at the borderland. PAS 2019
- Role of High Sensitivity CRP (HS-CRP) in Evaluation of Early Onset Sepsis in Neonates with Maternal Chorioamnionitis– Interim Analysis. AAP, NCE conference 2018

## Conference presentations

- “Vaccinations, myths and questions from parents”. Teaching case presentation at residency conference. Driscoll Children hospital, June 2014
- A curious case of Hepatitis B. Teaching case presentation at residency conference. Driscoll Children hospital, December 2013
- “Henoch Schoenlein purpura- Etiology, epidemiology and management guidelines”. Evidence based medicine conference. Driscoll Children hospital, May 2014.
- Annual Neonatal Cardiopulmonary Biology Young Investigators' Forum", Chicago and Annual Thruway conference, Rochester, NY. 2016
- “Effects of Neonatal Caffeine on Systemic Blood Pressure & Vascular Reactivity in Adult Mice” Cardiovascular biology forum, Chicago 2016
- “Epidemiology, etiology and management of neonatal hydrops fetalis” Continued educational conference at University at buffalo, November 2014
- ‘Evidence for use of antenatal steroid during pregnancy in resource poor countries. Combined multidisciplinary conference at University at buffalo, December 2014
- “Epidemiology, etiology and management of neonatal Pleural effusions”. Continued educational conference at University at buffalo, May 2015
- “Neonatal encephalopathy and its effects on Cognition” Combined multidisciplinary conference at University at buffalo, March 2015
- “Effects of Neutropenia in preterm newborns, management and difference in opinion” Continued educational conference at University at buffalo, May 2015
- “Neonatal Ventriculomegaly- not everything is Hydrocephalus”. Joint Neonatal perinatal conference, University at buffalo, May 2015
- “Congenital diaphragmatic hernia – Epidemiology, timing of management in newborns”. Combined Multidisciplinary Conference at University at buffalo, December 2015
- “Intraventricular hemorrhage in preterm infants, strategies to prevent and best practices” Continued educational conference at University at buffalo, December 2015
- “Neonatal Hypotension – Clinical features and drugs to manage: interactive session” Continued educational conference at University at buffalo, January 2016
- “Evidence for early Post-natal Prophylactic hydrocortisone in preterm infants” Combined multidisciplinary conference at University at buffalo, March 2016.

- “Zika Virus, a new bug with neonatal effects” Joint Neonatal perinatal conference, University at buffalo, May 2016
- “A twin newborn with congenital heart defect” Continued educational conference at University at buffalo, December 2016
- “Neutrophils and Ban the bands bandwagon” Continued educational conference at University at buffalo, January 2017
- “Neonatal hearing: from fetus to newborn” Joint conference, University at buffalo February 2017
- “Where is the Line? review of literature on central line placement.” Continued educational conference at University at buffalo, May 2017
- 
- “Short bowel syndrome”. Pediatrics Surgical Conference, State University of New York at buffalo. NY December 2011
- “Perinatal Infections in newborns”. ACGME Curriculum lecture presentation. Texas Tech University Health sciences center. El Paso Texas. June 2018
- “Respiratory diseases of the newborns”. ACGME Curriculum lecture presentation. Texas Tech University Health sciences center. El Paso Texas. December 2019
- “Neonatal Resuscitation” ACGME Curriculum lecture presentation. Texas Tech University Health sciences center. El Paso Texas
- “A discussion on viability – ethical opinion” Texas Tech University Health sciences center. El Paso Texas
- “Unplanned extubation” how do we change our course. March 2019 Texas Tech University Health sciences center. El Paso Texas
- Bronchopulmonary dysplasia – Improving outcome in preterm infants. August 2019. Joint conference at El Paso Children hospital and Texas Tech University health sciences center El Paso, Texas
- “Supporting All-star moms” a breastfeeding improvement initiative. October 2019 Combined perinatal conference. University Medical center El Paso and Texas Tech University health sciences center El Paso, Texas

## **Critical Reviewer for Peer reviewed Journals**

- **Editorial Board**

- Journal of Neonatal Perinatal Medicine.
- **Critical Reviewer for**
- **Pediatric Pulmonology Journal**
- <https://onlinelibrary.wiley.com/journal/10990496>
- **Academic pediatrics**
- <https://www.academicpedsjnl.net/>
- **Journal of pediatrics**
- <https://ees.elsevier.com/jpeds/default.asp>
- **Acta Paediatrica**
- <https://onlinelibrary.wiley.com/journal/16512227>
- **Heart and Lung, Journal of acute and critical care.**
- <https://www.heartandlung.org/>
- **European Journal of Pediatrics**
- <https://link.springer.com/journal/431>
- **Children, Basel.**
- **Pediatrics Reports. MDPI.**

### **Critically reviewed articles**

“Effect of vitamin D on lung function assessed by forced oscillation technique in asthmatic children with vitamin D deficiency: A randomized double-blind placebo-controlled trial.” Pediatric Pulmonology, March 2019

“The relation between Helicobacter Pylori Infection in Women and unexplained infertility” Journal of Neonatal Perinatal medicine. April 2019.

“Body temperature and oxygenation in term and 2 preterm infants during fetal-to-neonatal transition”- Children, Basel. 2020

“COMPARITIVE STUDY OF SHORT-TERM 2 OUTCOMES OF PRETERM BABIES ≤30 WEEKS IN 3 A TERTIARY CARE HOSPITAL BETWEEN INDIA AND the U.K”, Children, Basel 2020

“Determination of Prenatal Exposure to Parabens And 2 Triclosan and Estimation of Maternal and Fetal 3 Burden”, Children, Basel 2020

### **PROFESSIONAL MEMBERSHIPS**

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2016 – Present Member, Junior Section membership of the Society for Pediatric Research  
 2018 – AAP member.  
 2018 – AAP member with TECAN.



2018 – Provisional section on minority health, equity and inclusion, AAP  
2018 – Advance section in therapeutics and technology, AAP.  
2019 – SONPM

### **Committee assignments and administrative work**

- July 2017 - BPD reduction initiative, Texas tech university El Paso.
- April 2018 – Neonatal intensive care unit **Best practice initiative chair.**  
El Paso children hospital and Infection control committee
- January 2109 – Infectious control committee El Paso children’s hospital
- March 2019 – Chair of Unplanned extubation reduction initiative.  
NICU.
- Improving human milk use at discharge in NICU – SAM
- **Member of Texas state RSV prevention task force since year 2020**

### **Certifications**

October 2014 - Board certified in pediatrics American board of pediatrics

April 2018 – Boards Certified in Neonatal-Perinatal Medicine by American boards of pediatrics

August 2017 AHA - AAP Neonatal Resuscitation program

June 2019 – Current: Instructor mentor of neonatal resuscitation program

### **Licensure**

January 2017 Texas state medical license

### ACADEMIC AWARDS

- 2013 Best research presentation during pediatrics residency:  
“Acute appendicitis, the role of CT scan vs focused ultrasound”
- 2014 Best research presentation during pediatrics residency:  
“Efficacy of 2004 AAP Perinatal Regionalization Policy within a

Single Healthcare Plan; Morbidity, Mortality & Health Care Utilization Analysis”

- 2016 The Thomas F. Frawley, MD, Residency Research Fellowship grant, university at buffalo, Buffalo NY: “Effects of regional analgesia program in a cohort of neonates undergoing thoracoabdominal surgeries”
- Invited to Judge at New York state school science congress 2016 held at buffalo.
- 2017 Pediatrics Academics society travel grant, May 2017
- Invited to judge SARP poster session at Paula Foster School of medicine September 2018
- **2018 – SARP Mini Research Grant award. \$2500**
- **2020 – Fort Bliss Spousal Association award for Breastfeeding handbook. \$3000**
- **2020 – Little Giraffe Foundation, Meal gift card award. \$1000**
- **2021 – American heart association. Breastfeeding grant. \$3000**
- **2021 – American heart association. Infant Risk center Breastfeeding app. \$2000**
- **2021- Residency program CARE excellence award.**
- **American heart association funding for breastfeeding friendly worksite improvement project.**

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## RESEARCH INTERESTS and ONGOING PROJECTS

Improving breastmilk provision in VLBW infants – SAM

Does protected breastfeeding window in preterm infants affect feeding at discharge?

My interest lies in improving breastfeeding rates and breastfeeding experience of all lactating mothers in and outside hospital setting.

Improving BPD rates in Preterm infants