

Research Projects for Medical Students

Date posted: May 2022

Early lactation outcomes among patients with chronic kidney disease: a retrospective cohort study

Co-Principal Investigators: Nandakishor Kapa, MD (Nephrology) and Anna Sadovnikova, PhD, IBCLC (Lactation)

Background:

Breastfeeding is protective against maternal heart disease, hypertension, and diabetes. Given that heart disease, hypertension, and diabetes all negatively impact kidney health, it is imperative that all pregnant women who desire to breastfeed, including those with underlying kidney disease, receive lactation support in the peripartum period.

Existing literature on pregnant patients with chronic kidney disease (CKD) focuses exclusively on pregnancy-associated maternal and neonatal outcomes such as maternal morbidity, infant birth weight, infant's gestational age at birth, and subsequent maternal-infant hospitalizations. Breastfeeding has been actively discouraged in the CKD patient population primarily due to a perceived incompatibility of maternal medications with milk production or infant health. As a result, there are no data on lactation outcomes in patients with CKD. Yet, most maternal medications commonly used for CKD management are not contraindicated during lactation.

There is a need to characterize the early lactation outcomes of the patient population at the UC Davis Health System that presents during pregnancy with CKD so that we can better understand the barriers to lactation that may exist in this population.

Objectives:

The primary objective is to determine the early lactation outcomes of patients with CKD during their birth hospitalization at UC Davis. Secondary objectives include characterizing the population of pregnant women with CKD who deliver at UC Davis and describing the infant feeding experiences in this population during their birth hospitalization.

Medical student's role and responsibilities:

- Pediatric and maternal chart review
- Drafting and review of manuscript, with opportunity for co-authorship
- Gain appreciation for the multidisciplinary care coordination from internal medicine, nephrology, OBGYN, pediatrics, and lactation that is required for the maternal-infant dyad during the peripartum period
- Weekly check-in meeting with PIs

Date posted: July 1, 2021

Drs. Michael Wilkes and Mark Yarborough will be conducting research to assess, among other things, the extent to which Ethics review committees, e.g., IRBs, evaluate whether proposed clinical trials follow well-established PICO standards. The impetus for the study is a growing number of newly approved FDA drugs that rely on datasets that are not consistent with one or more PICO standards.

We will assemble a nationally representative sample of IRB review materials used by both clinical trial applicants and reviewers. Our goal is to conduct a systematic review of the materials to assess the extent of alignment with PICO criteria. We also plan to compile a smaller sample of university-based scientific review committees that review proposed clinical trials prior to IRB review so that we can compare their extent of focus on PICO with our representative IRB practices.

The Student/Resident will help compile our study samples, as well as participate in the project's analyses and dissemination efforts, e.g., publications and conference presentations.

If interested, please contact: Dr. Mark Yarborough mayarborough@ucdavis.edu

Date posted May 25, 2021

Description: The Department of Thoracic Surgery is in need of your help! We are conducting a quality improvement project on reducing operating room throughput. Specifically, reducing the "preincision" period from the time a patient enters the OR to the time of incision. The time commitment is minimal, around 3 hours a week max at the hospital for the next 3 months. We are looking for 2-3 volunteers. This is a great chance to earn co-authorship on a manuscript and present this work at the UC Davis medical school research symposium.

Contact:

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Position title: Research Associate

Contact and position oversight: Clifford Pereira (cpereira@ucdavis.edu) and Andrew Li (adrli@ucdavis.edu), Hand Surgery, Division of Plastic Surgery

Job overview: We are offering an unfunded one year research position in our basic science laboratory. Our research focuses currently on peripheral nerve regeneration and peripheral nerve growth modeling.

Responsibilities and duties: The position will involve maintenance of cell cultures, protein coating protocols, cell seeding protocols, handling of microfluidic devices, collagen matrix embedding, Small animal peripheral nerve surgeries using a microscope, as well as paraffin and cryo-sectioning of specimens. The research associate will receive training on these lab skills. Furthermore the position will also involve writing of grants and papers and attendance of weekly research and mentoring meetings.

Qualifications: Most importantly we are looking for a self-motivated and creative individual who is eager to learn. Basic laboratory skills would be highly useful, and these will include experience with cell culture and familiarity with biosafety cabinet use and protocols.