

Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active. emergency medicine competencies and suggests that a diverse workforce of male and female faculty may provide more comprehensive and robust trainee feedback.

Age Differences among Persons With Positive COVID-19 Molecular Testing Later Testing Negative for Antibodies to SARS-CoV-2

Pepe PE, Antevy PM, Scheppke KA, Marino MC, Nichols EM, Spencer EC, Nguyen L, Redfleld CS, Katz RS, Babinec F, Rivkees SA/Dallas County Emergency Medical Services and Public Safety, Dallas, TX; City of Coral Springs, Coral Springs, FL; Florida Department of Health, Tallahassee, FL; City of New Orleans, New Orleans, LA; Coral Springs Fire Rescue, Coral Springs, FL; City of Tallahassee, Tallahassee, FL; City of Hollywood, Hollywood, FL

Study Objectives: Controversies exist regarding both the accuracy and value of SARS CoV-2 antibody (Ab) testing, particularly when those with prior + molecular testing (PCR+) are later Ab-, or those testing Ab+ are PCR-. While PCR test timing, delays, technique and assays might (in part) explain PCR-/Ab+ (beyond simple "false+"), PCR+/Ab- explanations range from inadequate assays/techniques to transient, entirely absent, or delayed Ab responses. However, prior observations of other corona viruses (eg, MERS-CoV) have paradoxically indicated undetectable Ab among younger infected persons, particularly those with milder illness. The objective here was to determine if significant age or illness severity differences did exist among COVID-19 PCR+ persons later testing Ab negative, specifically comparing 2 different manufacturers' assays in two dissimilar U.S cities.

Methods: In step 1 of an ongoing study, 2 EMS agencies (1 fire, other 3rd service) in 2 well-distanced U.S. cities with different populations, evaluated PCR+ employees with subsequent (later date) IgM/IgG testing, each respectively using 2 different lateral flow chromatographic immunoassay (LFCIA) products. Among 70 volunteering at Site 1, 39 were selected as a reference group from the general population with no prior COVID-19 symptoms or testing (Sx-/NoPCR group). The other 31 (PCR+) principals had +nasal swab tests obtained between late March and end of April 2020 (for exposures or Sx). On May 9, all 70 received testing for IgM/IgG using a fingerstick (FS) LFCIA along with simultaneous venipuncture specimens (later demonstrating identical IgM/IgG congruence in the 140 sampling). At Site 2, using the other LFCIA product, 17 PCR+ persons also had FS IgM/IgG testing. Participants were surveyed (both sites) for pre-selected Sx categories, illness severity indicators, age, sex & date of PCR+ test or Sx onset.

Results: The Sx-/NoPCR reference group (n=39; mean age 45.51 yrs, range 26-75; 59% women) all tested negative for both IgG & IgM. For the Site 1 PCR+ group (n=31, mean age 41.5 yrs, range 21-81; 52% women), only 67.7% (n=21) were Ab+. Similar to the reference group, the PCR+/Ab+ subgroup mean age was 44.7 yrs (21-81 yrs) with 57% women (p=NS). However, among the 10 (32.3%) with prior PCR+ tests but no IgM/IgG, the mean age was 34.7 yrs (range 21-50) with only 40% women. Compared to either PCR+/Ab+ (n=21) or the reference group (also Ab-), age differences were significant (two-tailed, p=0.048 & 0.021, respectively). Strikingly similar, even using a different assay in a different population, 5 (29.4%) of the 17 PCR+ persons at Site 2 were also Ab- with mean ages 32.2 (27-39) vs. 42.75 yrs. (25-62) for the 12 Ab+ persons (p=0.048). Combining both sites, mean ages for PCR+/Ab- (n=15) vs. PCR+/Ab+ (n=33) were 33.93 vs 43.97 (p=0.0089). Comparing PCR+/Ab- age vs. the reference group, p=0.0028 (Table). At both sites, trends were evolving between Ab- and milder disease, women and shorter PCR to Ab testing intervals.

Conclusion: Using different IgM/IgG LFCIA products in different ecological settings, 30% of persons with prior COVID-19 PCR+ tests were Ab- at both locations and, in either venue, those PCR+/Ab- persons were significantly younger than PCR+/AB+ counterparts.



## Advancing Communication Excellence at Stanford in Emergency Medicine Residency: A Curriculum for Interns

Alvarez A, Kline MA, Passaglia J, Weimer-Elder B/Stanford University, Palo Alto, CA; Physician Partnership Program, Stanford Health Care, Palo Alto, CA; Physician Partnership Program, Stanford Health Care, Stanford, CA

Introduction: Effective communication is essential for patient safety and enhancing the patient experience in the Emergency Department. Effective communication also promotes efficiency in practice and a culture of wellness needed to attain professional fulfillment. Patient-centered care may conflict with physicians creating boundaries and

	Combined Site 1 & 2 PCR+ / Ab neg (n=15) vs.	Combined Site 1 & 2 PCR+, Ab+ (n=33)
Mean Age	33.93 yrs (range 21 to 50)	43.97 yrs (range 21 to 81)
	Two-tailed p value	= 0.008929
	Combined Site 1 & 2 PCR+ / Ab neg (n=15) vs.	Reference Group (No Sx & No Prior PCR) / Ab neg (n=39)
Mean Age	33.93 yrs (range 21 to 50)	45.51 yrs (range 26 to 75)
	Two-tailed p value	= 0.002811

their attempt to advocate for self-care and self-valuation in their roles as healers. With a strategic focus of developing a relationship-centered culture, the EM residency leadership, EM interns and the Physician Partnership Team in Patient Experience designed an innovative pilot using formative and summative evaluation to identify how best to deliver knowledge, and practice 3 relationship-centered communication (RCC) skills. A series of 4 workshops and individualized coaching observations were part of the design. We proposed a curriculum for EM interns focusing on relationship-centered care using the Advancing Communication Excellence at Stanford (ACES) initially designed for Stanford faculty. By teaching evidenced-based strategies on managing challenging interactions in the health care arena, we hope to provide our EM interns a curriculum to develop skills that will enhance the physician-patient relationship, while also addressing physician wellbeing.

Study Objectives: The primary objective was to learn how best to engage EM interns to learn and adopt the 3 foundational RCC ACES skills. The second objective was to design a reproducible EM RCC curriculum within the residency program based on time constraints and entry-level cognitive demands. Curricular Design: We developed a curriculum for EM interns, supplemented by individualized coaching and asynchronous learning using the flipped-classroom model. We used intern-driven scenarios and role-playing techniques to demonstrate and emphasize key communication skills. We used online surveys and text-messages check-ins to assess the effectiveness and further iterate this learner-centered curriculum. The first 3 sessions included a reflection, a check-in, demonstration of a skillset and small group practice with an ACES coach. Bedside clinical EM coaching was scheduled with each intern between sessions 3 and 4. Session 4 integrated all 3 skills with a standardized patient. This session was video-recorded and coded in addition to the immediate feedback and debrief after each encounter. This will be used in the final individual coaching session.

Conclusion: The ACES in EM Residency Curriculum is an effective way to teach communication skills that promote relationship-centered care. We have successfully integrated the RCC into the EM intern curriculum over 3 in-person, 60-90-minute workshop sessions and individualized clinical coaching. The impact will be assessed through a learner self-assessment and coaching assessment. We plan to scale this to the entire EM residency.

## 215 Understanding and Improving Population Health from the Emergency Department Through Medical-Legal Partnerships

Vongsachang H, Menendez T, Morrison J, Schneberk T/LAC+USC Medical Center, Los Angeles, CA; The Wellness Center, Los Angeles, CA

Background: Emergency departments (EDs) in the United States are mandated by federal law to stabilize and treat any person seeking emergency care regardless of citizenship, insurance, or socioeconomic status. Therefore, EDs serve as health care "safety net." As over 96 million low-income, uninsured, and undocumented individuals rely on the ED annually for medical care, the ED may be the only point of contact with the health care system. In fact, patients living under the 250% federal poverty level are more likely to have presented to an ED within the last month, in addition to having at least one baseline basic resource need. Thus, the ED offers a unique touch point to address social determinants of health, supporting innovative solutions such as medical-legal partnerships, to reduce barriers to care and improve outcomes for vulnerable populations.

The Wellness Center (TWC) at the Los Angeles County + University of Southern California (LAC+USC) Medical Center was established in 2014 as a "one-stop shop" where patients can obtain not only health care resources, but also assistance for basic social resources and enrollment in legal aid services offered by the Neighborhood Legal