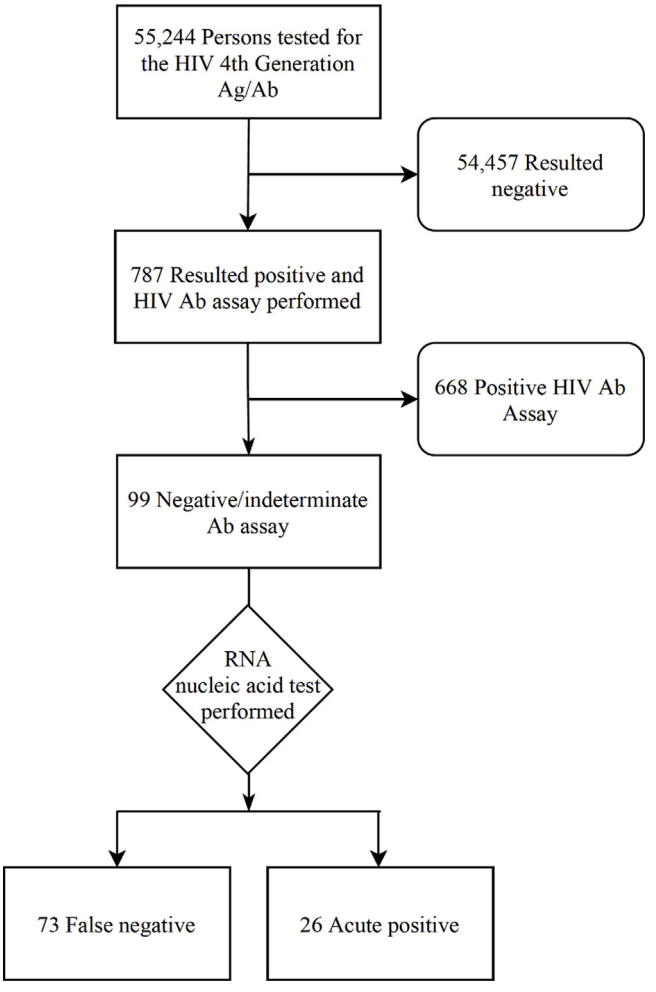
Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

HIV screening and further describe those patients who presented to the ED during acute seroconversion (acute +) compared to the clinical characteristics of patients who were ultimately found to have false + initial screening results.

Methods: We analyzed 4 years of HIV testing data (2016-2020) and determined the number of patients who had a Ab/Ag + screen. Patients with Ab/Ag + but a non-equivocal HIV+ lab signature (Ab/Ag +, Ab +, viral load > 0) were removed. Then we determined the remaining number with an equivocal laboratory signature (Ab/Ag +, Ab -). We separated those patients into 2 groups: false + (Ab/Ag +, Ab -, viral load 0) and acute + (Ab/Ag +, Ab -, viral load > 0). We conducted chart review on all patients with an equivocal laboratory signature and the clinical presentation was considered to detail patterns in false + compared to acute + patients presenting to the ED.

Results: We screened approximately 55,224 patients for HIV (16% volume) in 4 years. 787 patients had a Ab/Ag + result (1.4%) and, of those, 688 had non-equivocal positive HIV results (87.4% of Ab/Ag +, 1.2% of tested). 99 (12.5% of Ab/Ag +, 0.13% tested) were Ab/Ag +, Ab -. Of those 99, 73 had no detectable HIV RNA (false +, 9.3% of Ab/Ag +, 0.13% tested). 26 of the 99 with equivocal results had viral load > 0 (acute +, 3.3% of Ab/Ag +, 0.05% tested). Qualitative review of equivocal patient charts during the Ab/Ag reactive screening encounter showed statistically significance for acute positive results in younger male patients who have sex with men.



Conclusion: 787 patients had a reactive screening test but 99 had an equivocal laboratory signature (12.5% of Ab/Ag+), making the information difficult to interpret during an ED encounter in high prevalence populations and challenging the ability to scale up ED based HIV screening, especially given the long turn around time for HIV RNA testing via PCR. ED based screening is an important strategy to help reach the WHO goal of eliminating HIV as a public health threat by 2030. However, the current algorithm and existing testing technology may not be best designed for acute clinical encounters and false + encounters are higher than previously reported. The results of this study detail characteristics of patients with equivocal test results that may improve clinical decision making in patients with false + compared to acute + laboratory signatures and suggest that young men who have sex with men and have a reactive HIV screening test in the ED should be considered HIV positive.

200 Implementation of a COVID-19 Cohort Area Resulted in No Surface or Air Contamination in Surrounding Areas in One Academic Emergency Department

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Study Objectives: Over 90,000 health care workers worldwide have been infected with SARS-CoV-2. In response to the COVID-19 pandemic, emergency departments (EDs) implemented new measures to minimize the spread of the disease within their patient care areas. The primary objective of this study was to determine if SARS-CoV-2 viral particles were present on surfaces or in the air, in a designated COVID-19 cohort area, or 'hot zone.' Secondary analysis involved testing for viral particles in others areas of the ED outside of the 'hot zone.'

Methods: This study took place in the ED of a tertiary academic medical center, with approximately 64,000 annual visits. We designated a pod of 8 rooms for known COVID-19 infection or individuals with high suspicion for infection. The area consisted of a single entry (Personal protective equipment donning area) and exit (PPE doffing area). Health workers would change gowns and gloves between patients, but maintain their N-95 mask and face shield, after cleaning with a germicidal wipe. Fifteen surface samples and four air samples were taken in the ED to evaluate SARS-CoV-2 contamination levels and the effectiveness of infection control practices. Samples were collected outside of patient rooms in 3 primary areas, the reception area, the primary nurses station, inside the cohort area, and the PPE donning and doffing areas immediately adjacent. The 15 surface samples were collected using 3x3 sterile gauze pads pre-wetted with 3 mL of phosphate buffered saline (PBS), over an approximately 100 cm^2 area by wiping in an "S" pattern in 2 directions. Stationary air samples were collected using a Sartorius Airport MD8 air sampler operating at 30 liters per minute for 30 minutes onto an 80mm gelatin filter. All samples were recovered in sterile PBS, had RNA extracted and were analyzed for the presence of SARS-CoV-2 by RT-PCR targeting the E gene of SARS-CoV-2.

Results: SARS-CoV-2 was not detected on any surface samples collected in the ED. All air samples outside the COVID-19 hot zone were also negative for SARS-CoV-2. The air samples from inside the cohort area had a low level of viral contamination, but no surface samples in or around the cohort area showed any indication of viral contamination. These data suggest that despite having a large influx of COVID-19 patients on the day of sampling, the infection control practices were sufficient to either prevent or eliminate surface contamination. The positive air sample from the cohort area suggests that respiratory protection with an N-95 respirator inside the cohort area, even outside of patient rooms is warranted to adequately protect health care providers.

Conclusion: A designated COVID-19 cohort area resulted in no air or surface contamination outside of the hot zone, and only minimal air, but no surface contamination, within the hot zone.