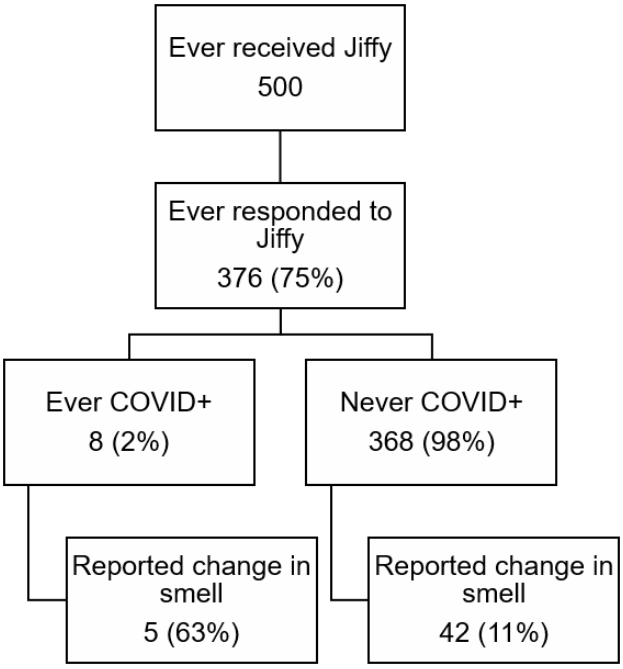
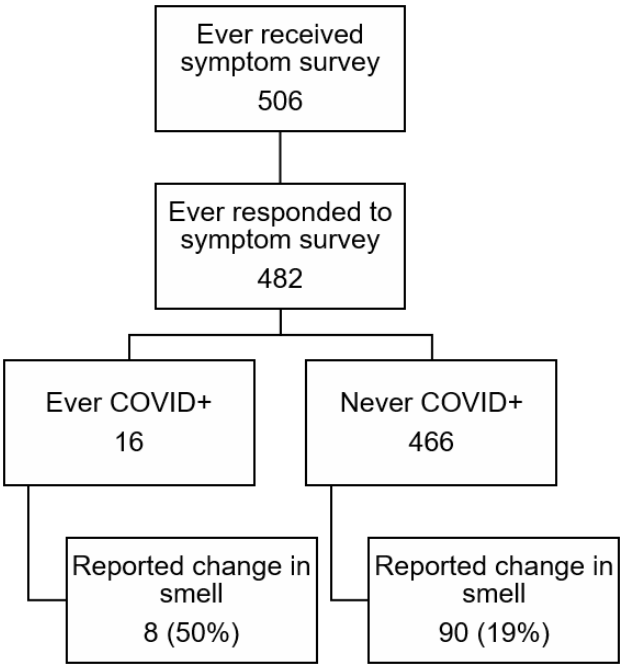
(60%), versus slight (88%) and moderate (12%) in COVID- HCW. 16/17 COVID+ HCW completed a daily symptom survey (mean 14 times/HCW), with 8/16 (50%) ever reporting parosmia versus 90/466 (19%) of COVID- HCW (OR=4.2, 95% CI: 1.3–13, *p*=.007). Overall, parosmia was the first reported symptom in 3/13 (23%) COVID+ HCW who reported symptoms.

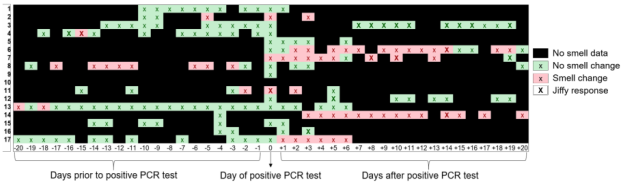
Smell Changes in COVID+ and COVID- HCW Reported in the "Jiffy" Test



Smell Changes in COVID+ and COVID- HCW Reported in Daily Symptom Questionnaire



Smell Changes among COVID+ HCW by Day, Relative to Day of Positive PCR Test



Conclusion: We conducted a prospective study of smell testing in a population at high risk for COVID-19 using two parallel approaches. Our results demonstrate the feasibility of at-home smell testing for assessing parosmia during COVID-19, in some cases even prior to a positive PCR result. Given the urgent need for widespread, low-cost, non-invasive testing for COVID-19, we are now developing an easy-to-use app to distribute this survey more widely to high-risk populations.

Disclosures: **Julian J. Weiss, BA**, Nothing to disclose

457. Low Rates of COVID-19 in a Vulnerable Population: Learning from Early and Decisive Public Health Policies

Mira Donaldson, BSc[1]; Nazde Edeer, BSc[1]; Gurjeet Bhangu, BKin[1]; Jesse Greiner, BSc Hon., MSc, MD, FRCPC, MBA[2]; Melanie Murray, MD, PhD[3]; [1]Faculty of Medicine, University of British Columbia, Vancouver, British Columbia, Canada; [2]General Internal Medicine, St. Paul's Hospital, Vancouver, British Columbia, Canada; [3]Women's Health Research Institute, BC Women's Hospital, Vancouver, BC, Canada

St. Paul's Hospital COVID-19 Research Group

Session: P-14. COVID-19 Epidemiology and Screening

Background: Disasters, including pandemics, disproportionately affect vulnerable populations. The Downtown Eastside (DTES) neighborhood of Vancouver has high prevalence of mental illness, substance use, infectious disease and homelessness. While studies have described clinical characteristics of COVID-19 patients in other centres worldwide, data is lacking on marginalized groups. We describe the clinical characteristics and outcomes of COVID-19 patients seen at two urban hospitals who care for the vulnerable population in the DTES of Vancouver, British Columbia (BC), Canada.

Methods: A retrospective chart review was conducted on all COVID-19 patients ≥19 years seen at either centre from January 1 to June 10, 2020. Descriptive statistics assessed demographics, comorbidities, presenting symptoms, laboratory values and outcomes, and were compared between subjects managed as inpatients (died vs. discharged) and outpatients.

Results: Of 71 COVID-19 subjects, mean age was 57y (SD 20); 36 (51%) were male. Time to presentation, symptoms and laboratory values were similar to other reports. 58 (82%) presented from the community, 3 (4%) from long-term care/rehabilitation centres, and 8 (11%) had no fixed address (NFA) or lived in the DTES. 45 (64%) had a known exposure, 20 (28%) were healthcare workers, 85% involved in direct patient care; 0/20 were admitted to hospital. Of the 8 NFA/DTES subjects, mean age was 46y (SD 13), 50% were male, 5 (63%) were admitted to hospital and all survived.

Admitted subjects (n=34) were older (mean age 69 vs 46y, p< 0.001), 62% were male, and had more comorbidities (mean [SD] 3 [3] vs. 1 [2], p< 0.001). Eight (24%) died, 26 (76%) were discharged, 29% developed acute respiratory distress syndrome, 21% secondary infection, 18% renal failure, and 15% cardiac dysfunction. Of patients admitted to intensive care, 5/10 died.

Conclusion: Our results concur with other studies showing older age and comorbidities contribute to more severe COVID-19 disease. 64% of subjects had a known exposure, and only 11% had NFA/DTES residence. Given that there is no financial barrier to access healthcare in Canada and these hospitals serve our most vulnerable populations, our results may indicate that BC Public Health has done an effective job of tracking and limiting community spread of COVID-19.

Disclosures: **All Authors**: No reported disclosures

458. Molecular SARS-CoV-2 Testing During the COVID-19 Outbreak: Experiences of a Hospital in Southeast Michigan, USA

Trini A. Mathew, MD;MPH Jonathan Hopkins, MBA, M(ASCP)CM[1]; Diane Kamerer, n/a[1]; Shagufta N. Ali, MD, FACP[1]; Daniel Ortiz, PhD, D(ABMM)[2]; Paul Johnson, MD[3]; Paul Chittick, MD[1]; Christopher F. Carpenter, MD, MHSA[4]; [1]Beaumont Hospital – Royal Oak, Royal Oak, Michigan; [2]Beaumont Health, Royal Oak, Michigan; [3]Beaumont Health Systems, Royal Oak, Michigan; [4]Beaumont Hospital, Royal Oak, Michigan

Session: P-14. COVID-19 Epidemiology and Screening

Background: The novel Coronavirus SARS CoV-2 (COVID-19) outbreak was complicated by the lack of diagnostic testing kits. In early March 2020, leadership at Beaumont Hospital, Royal Oak Michigan (Beaumont) identified the need to develop high capacity testing modalities with appropriate sensitivity and specificity and rapid turnaround time. We describe the molecular diagnostic testing experience since initial rollout on March 16, 2020 at Beaumont, and results of repeat testing during the peak of the COVID-19 pandemic in MI.

Methods: Beaumont is an 1100 bed hospital in Southeast MI. In March, testing was initially performed with the EUA Luminex NxTAG CoV Extended Panel until March 28, 2020 when testing was converted to the EUA Cepheid Xpert Xpress SARS-CoV-2 for quicker turnaround times. Each assay was validated with a combination of patient samples and contrived specimens.

Results: During the initial week of testing there was > 20 % specimen positivity. As the prevalence grew the positivity rate reached 68% by the end of March (Figure 1). Many state and hospital initiatives were implemented during the outbreak, including social distancing and screening of asymptomatic patients to increase case-finding and prevent transmission. We also adopted a process for clinical review of symptomatic patients who initially tested negative for SARS-CoV-2 by a group of infectious disease physicians (Figure 2). This process was expanded to include other trained clinicians

who were redeployed from other departments in the hospital. Repeat testing was performed to allow consideration of discontinuation of isolation precautions. During the surge of community cases from March 16 to April 30, 2020, we identified patients with negative PCR tests who subsequently had repeat testing based on clinical evaluation, with 7.1% (39/551) returning positive for SARS- CoV2. Of the patients who expired due to COVID-19 during this period, 4.3% (9/206) initially tested negative before ultimately testing positive.

Figure 1 BH RO testing Epicurve

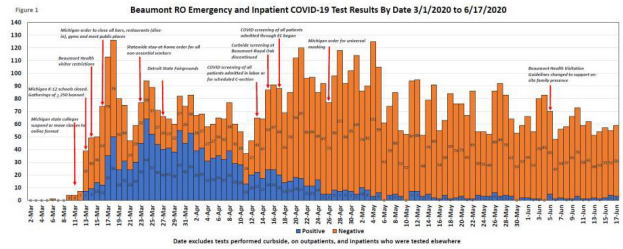


Figure 2: Screening tool for repeat COVID19 testing and precautions

Epidemiology COVID-19 Isolation Removal Screening
Admission Date: @admitdt@

Yes	No	
☐	☐	1. Does the patient have an abnormal chest x-ray, compared to prior, without an alternative explanation (such as CHF)?
☐	☐	2. Are the patient's LFTs abnormal without alternative explanation (such as cholecystitis)?
☐	☐	3. Is the patient's renal function abnormal without alternative explanation (such as CHF, CKD, chronic dialysis)?
☐	☐	4. Does the patient have a non-chronic low lymphocyte (*not total WBC*) count?
☐	☐	5. Has the patient had a fever of 100.3 F or greater within the past 72 hours that does not have an alternative explanation (such as post-op fever, cellulitis, abscess, etc)?
☐	☐	6. Does the patient have any non-improving hypoxia that does not have an alternative explanation or normal for baseline (such as COPD, CHF, asthma)?
☐	☐	7. Did the patient already have a positive rapid influenza/RSV NAAT, respiratory viral panel, atypical respiratory bacterial NAAT panel, Legionella urine antigen, or Streptococcus pneumoniae antigen which would explain illness?

☐ **Patient REMOVED from COVID-19 isolation precautions. First six responses are no OR seventh response is yes, patient discussed with primary attending and/or ID physician and the bedside nurse, and no lingering concerns for COVID-19 reported. (May need to maintain in droplet isolation)**

☐ **COVID-19 isolation precautions CONTINUED and repeat testing ordered if appropriate. At least one of first six response is yes AND seventh response is no, or the attending, ID physician or bedside nurse have lingering COVID-19 concerns.**

☐ **Please see comments below:**

Conclusion: Many state and hospital initiatives helped us flatten the curve for COVID-19. Our hospital testing experience indicate that repeat testing may be warranted for those patients with clinical features suggestive of COVID-19. We will further analyze these cases and clinical features that prompted repeat testing.

Disclosures: **All Authors**: No reported disclosures

459. Outcomes and Factors Associated with a SARS-CoV-2 Positive Test in Asymptomatic and Symptomatic Healthcare Workers of a Mexican Hospital Converted to Treat COVID-19 Patients

Sandra Rajme-López, MD[1]; Patricia E. Leal-Morán, MD[1]; Fernanda Gonzalez-Lara, MD, MSc[2]; Abril T. Vargas-Fernández, MD[1]; Eric Ochoa-Hein, MD, MSc[1]; Fernanda Alberto-Hernández, MD[1]; Lirio N. Valverde-Ramos, MD[2]; Daniel E. Bustos-Román, MD[1]; Alfredo Ponce De León-Garduño, MD[1]; Arturo Galindo-Fraga, MD, MSc[1]; Jose Sifuentes-Osornio, MD[2]; [1]Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán, Mexico City, Distrito Federal, Mexico; [2]Instituto Nacional de Ciencias Medicas y Nutricion Salvador Zubiran, Mexico City, Distrito Federal, Mexico

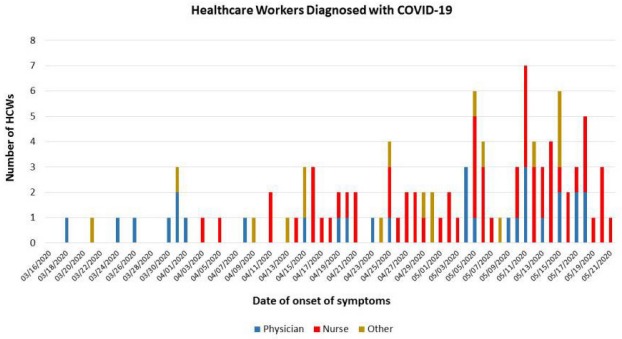
Session: P-14. COVID-19 Epidemiology and Screening

Background: Starting on 03/16/2020, the hospital was converted to attend only patients with COVID-19. A surveillance program for healthcare workers (HCWs) that included free in-site medical consultation and RT-PCR for detection of SARS-CoV-2 was initiated. On 04/28/2020, screening of HCWs was started to detect asymptomatic carriers. We report the results of such programs updated to 05/21/2020.

Methods: Sex, worker category, working area, use of personal protective equipment, date of screening, date of onset of symptoms and home address were retrieved from electronic databases. Logistic regression was done to identify factors associated with being a COVID-19 case or carrier, with $p < 0.05$ being significant. Odds ratios and incidence densities were calculated.

Results: Of 2566 HCWs in the hospital, 976 (38.0%) underwent screening and 41 (4.2%) were positive for SARS-CoV-2 (7.4 carriers x 10,000 person-days; median follow-up of 55.5 days); none of the latter were diagnosed with COVID-19 after completing a 14-day follow-up. Of HCWs with negative screen results, 6 (0.6%) ultimately developed COVID-19 after a median of 10 days (1.1 cases x 10,000 person-days). Of 232 symptomatic HCWs that did not undergo basal screening, 131 (56.5%) were diagnosed with COVID-19 (8.8 cases x 10,000 person-days). Ten COVID-19 cases (7.6%) were hospitalized and all were discharged without complications after a median hospital stay of 9 days. Factors associated with COVID-19 were working in a non-clinical area (OR=9.3, 95% CI=1.1–78.6) and being a nurse (OR=1.9, 95% CI=1.1–3.4). Factors associated with being a carrier were living in the State of Mexico (OR=3.7, 95% CI=1.8–8.0) and being a hospital cook (OR=3.7, 95% CI=1.7–8.5). Being a physician was associated with not being a carrier (OR=0.07, 95% CI=0.01–0.5). Wearing a face mask at all times tended to be associated with not being a carrier. Hospital epidemic curves closely ressembled those of the community (Mexico City).

Hospital Epidemic Curve, 03/16/2020 - 05/21/2020



Conclusion: This study suggests that factors present inside and outside of the hospital are associated with COVID-19 and asymptomatic carriage in HCWs. This information is of utmost importance for infection prevention and control policies. Additionally, a lower percentage of severe cases and no deaths were observed in this cohort as compared to others.

Disclosures: **All Authors**: No reported disclosures

460. Point-of-Care, In-Home SARS-CoV-2 IgG Antibody Testing to Assess Seroprevalence in At-Risk Health Care Workers

Eric G. Meissner, MD, PhD[1]; Christine Litwin, MD[1]; Tricia Crocker, n/a[1]; Elizabeth Mack, MD, MS[1]; Lauren Card, CCRC[1]; [1]Medical University of South Carolina, Charleston, South Carolina

Session: P-14. COVID-19 Epidemiology and Screening

Background: Health care workers are at significant risk for infection with the novel coronavirus SARS-CoV-2.

Methods: We utilized a point-of-care, lateral flow SARS-CoV-2 IgG immunoassay (RayBiotech) to conduct a seroprevalence study in a cohort of at-risk health care workers (n=339) and normal-risk controls (n=100) employed at an academic medical center. To minimize exposure risk while conducting the study, consents were performed electronically, tests were mailed and then self-administered at home using finger stick blood, and subjects uploaded a picture of the test result while answering an electronic questionnaire. We also validated the assay using de-identified serum samples from patients with PCR-proven SARS-CoV-2 infection.

Results: Between April 14th and May 6th 2020, 439 subjects were enrolled. Subjects were 68% female, 93% white, and most were physicians (38%) and nurses (27%). In addition, 37% had at least 1 respiratory symptom in the prior month, 34% had cared for a patient with known SARS-CoV-2 infection, 57% and 23% were worried about exposure at work or in the community, respectively, and 5 reported prior documented SARS-CoV-2 infection. On initial testing, 3 subjects had a positive IgG test, 336 had a negative test, and 87 had an inconclusive result. Of those with an inconclusive result who conducted a repeat test (85%), 96% had a negative result. All 3 positive IgG tests were in subjects reporting prior documented infection. Laboratory validation showed that of those with PCR-proven infection more than 13 days prior, 23/30 were IgG positive (76% sensitivity), whereas 1/26 with a negative prior PCR test were seropositive (95% specificity). Repeat longitudinal serologic testing every 30 days for up to 4 times is currently in progress.

Conclusion: We conducted a contact-free study in the setting of a pandemic to assess SARS-CoV-2 seroprevalence in an at-risk group of health care workers. The only subjects found to be IgG positive were those with prior documented infection, even though a substantial proportion of subjects reported significant potential occupational or community exposure and symptoms that were potentially compatible with SARS-COV-2 infection.

Disclosures: **All Authors**: No reported disclosures

461. Presentation and Demographics of Veterans Tested for COVID-19 Infection

Braden Sciarra, MD[1]; Patrick Kennedy, DO[2]; Katherine Sherman, MS[3]; Nicole M. Held, DO[2]; Nathan Gundacker, MD[4]; [1]Medical College of Wisconsin Affiliated Hospitals, Milwaukee, Wisconsin; [2]Medical College of Wisconsin, Milwaukee, Wisconsin; [3]Clement J Zablocki VAMC, Milwaukee, Wisconsin; [4]The Medical College of Wisconsin, Milwaukee, WI