

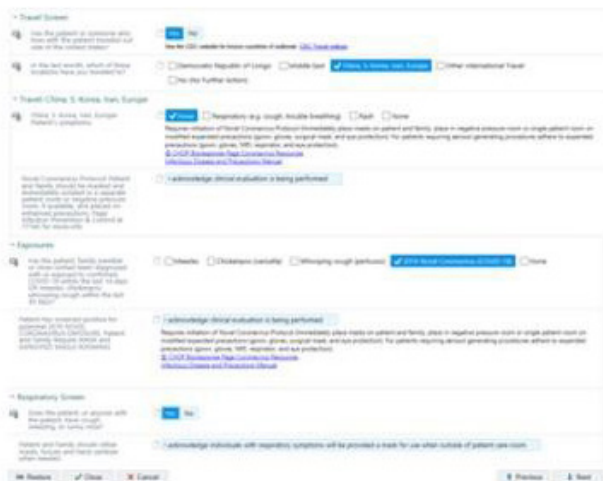
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Session: P-17. COVID-19 Infection Prevention

Background: Screening for communicable diseases at entry to any healthcare setting due to a patient's travel or exposure history is an important tenet of reducing transmission of pathogens among patients and healthcare providers. We identified multiple screening tools across our enterprise leading to inconsistent documentation by staff and inability to rapidly change screening questions. We aimed to develop a customized screening tool within our electronic health record to address these challenges and provide real-time screening data to our Department of Infection Prevention.

Methods: Stakeholders from all clinical areas as well as family consultants and registration staff provided input on needs for an optimized screening tool. Process mapping across clinical areas of prior screening tools identified variation in decision support and screening questions for both countries and diseases, and demonstrated lack of clear communication between registration staff and clinical teams. Questions and decision support needed to identify communicable diseases in a waiting room setting were identified with stakeholders. Our informatics team reviewed multiple tool options available in the EHR including a built-in travel module with print groups and best practice alerts, a smartform, and flowsheets.

Results: Our informatics team designed a universal flowsheet with cascading rows that included clinical decision support with travel, exposure, and symptom screening. During the period of peak COVID-19 transmission in our region, an average of 1644 patients were screened daily. Of those, 2.8% screened positive for travel to an area of increased transmission with 14.9% of those who traveled reporting respiratory symptoms. An additional 4.1% of total patients screened positive for exposure to COVID-19, while 7.7% reported respiratory symptoms. Nine real-time updates to locations of increased disease transmission and symptoms have been made. Customized travel and exposure screening flowsheet cascade



Conclusion: Utilizing a custom-built flowsheet model in our EHR permitted real time changes to screening to support appropriate use of infection prevention measures. Customizable travel and exposure screening is critical for identification of patients with concern for COVID-19 and other emerging pathogens.

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498. Impact of COVID-19 on UK Foundation Doctors: Education and Safety

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Session: P-17. COVID-19 Infection Prevention

Background: Transmission of a novel coronavirus (SARS-CoV2) from China has caused a global pandemic, resulting in an unprecedented burden on healthcare systems worldwide.

Frontline healthcare workers face considerable risk due to the potential for repeated exposure to infected individuals, many of whom may be asymptomatic given the lengthy incubation period of 5-10 days. With rising incidence, prevalence, and mortality rates, appropriate training and support is paramount in safeguarding the well-being of NHS staff and patients. Foundation doctors are among frontline staff being redeployed to areas of need. They are a vital resource within the NHS; and are uniquely positioned to support and staff medical teams.

Methods: A 24 question digital survey with a mix of open-ended, multiple-choice, and rating-scale questions was distributed to the 18 UK Foundation Schools. Questions established trainee demographics and the quantity of COVID-19 training received; with focused questions relating to personal safety and support for vulnerable individuals.

Results: 714 doctors completed the survey; 55% in FY2, 43% in FY1, and 2% above FY2 level. 74% of respondents reported receiving no formal training on COVID-19. Mean confidence was 84% in diagnosing COVID-19, and 56% in

managing it. 75% did not receive formal training on the requisite safety precautions for suspected COVID-19 cases. 67% had not been fit tested and 75% of those who failed their fit test were not provided with alternative equipment. 30 doctors reported being pregnant and none had received additional support regarding protective measures. 47 doctors reported being immunocompromised and 42 of them had received no additional support in view of their increased risk. 93% of doctors had not received definitive guidance regarding the impact of this on their ARCP sign-off and progression of training.

Conclusion: Alarming proportions of Foundation trainees are not currently being provided with formal training or support for their personal safety during the COVID-19 outbreak. This is remediable through the urgent implementation of formal COVID-19 training, standardised across NHS trusts to ensure a consistent standard of care for the protection of trainees and patients.

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499. Infection with Coronavirus Disease 19 (COVID-19) in Healthcare Personnel with Exposure to COVID-19

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Background: As of June 2, 2020, 67,113 cases and 321 deaths due to Coronavirus Disease 19 (COVID-19) have been reported in healthcare personnel (HCP) in the United States. Given the close contact of HCP with individuals with COVID-19, it is important to quantify the risk of acquiring COVID-19 in the healthcare setting.

Methods: We conducted a retrospective cohort study of HCP exposed to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) at our academic medical center from March 15, 2020 to May 16, 2020. Exposure during the study period was defined as having contact with patients or other HCP with COVID-19 within 6 feet of distance for at least 90 seconds when HCP's eyes, nose, or mouth were not covered. HCP with exposures were monitored for symptoms consistent with COVID-19 for 14 days from last exposure and those who developed symptoms were tested for SARS-CoV-2 using RT-PCR.

Results: We identified 33 exposure events; 19 of which were patient-to-HCP exposures and 14 of which were HCP-to-HCP exposures. These 33 events resulted in 959 exposed HCP among whom 238 (25%) developed one or more symptoms of COVID-19 and required SARS-CoV-2 RT-PCR testing. Testing was performed at 7.1 ± 5.0 (mean ± SD) days from exposure. Of the 238 HCP who were tested, 82% were female and 49% were registered nurses (Table 1). Five HCP tested positive for SARS-CoV-2 by RT-PCR, but one was presumed to have acquired the disease from a household member with confirmed COVID-19. Among the four HCP who were infected due to occupational exposure, three were nurses while one was an environmental service worker (Table 1).

Table 1. Demographics and Job Titles of Healthcare Personnel Who Developed Symptoms and Were Tested for SARS-CoV-2 after a Known Occupational Exposure to Coronavirus Disease 2019

	Total (n=238)	No COVID-19 infection due to occupational exposure (n=234)	COVID-19 infection due to occupational exposure (n=4)
Age (mean ± SD)	38.7 ± 9.7	38.6 ± 9.7	40.0 ± 12.1
Female	196 (82%)	192 (82%)	4 (100%)
Job Title			
Nurses	117 (49%)	114 (49%)	3 (75%)
Physicians, NP, PA	35 (15%)	35 (15%)	0
Nursing assistants	14 (6%)	14 (6%)	0
Environmental services	11 (4%)	10 (4%)	1 (25%)
Nutrition services	28 (12%)	28 (12%)	0
Administrative	16 (7%)	16 (7%)	0
Technicians	4 (2%)	4 (2%)	0
Respiratory therapists	2 (1%)	2 (1%)	0
Other	11 (4%)	11 (5%)	0
Number of days testing was performed from exposure (mean ± SD)	7.1 ± 5.0	8.1 ± 4.9	10.5 ± 5.7

Conclusion: Despite exposures among HCP, the risk of acquiring symptomatic COVID-19 in the healthcare setting was low with less than 1% of HCP with occupational exposure subsequently diagnosed with COVID-19. With the definition of exposure now changed to at least 15 minutes of close contact without personal protective equipment, we anticipate fewer exposures at our healthcare facility and that much of COVID-19 transmission affecting HCP are due to community exposures.

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500. Novel Use of a Targeted Ultraviolet Light Device for the Decontamination of a Single-Use Filtering Facepiece Respirator

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