potential health disparities among severe cases and deaths in different occupational groups.


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Disclosures: None

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Presentation Type: Poster Presentation - Poster Presentation

Subject Category: COVID-19

Background: Singapore General Hospital (SGH) is the largest acute tertiary-care hospital in Singapore. Healthcare workers (HCWs) are at risk of acquiring COVID-19 in both the community and workplaces. SGH has a robust exposure management process including prompt contact tracing, immediate ring fencing, lock down of affected cubicles or single room isolation for patient contacts, and home isolation orders for staff contacts of COVID-19 cases during the containment phase of the pandemic. Contacts were also placed on enhanced surveillance with PCR testing on days 1 and 4 as well as daily antigen rapid tests (ARTs) for 10 days after exposure. Here, we describe the characteristic of HCWs with COVID-19 during the third wave of the COVID-19 pandemic. Methods: This retrospective observational study included all SGH HCWs who acquired COVID-19 during the third wave (ie, the 18-week period from September 1 to December 31, 2021) of the COVID-19 pandemic. Univariate analysis was used to compare characteristics of work-associated infection (WAI) and community-acquired infection (CAI) among HCWs. Results: Among a workforce of >10,000 at SGH, 335 HCWs acquired COVID-19 during study period. CAI (exposure to known clusters or household contact) accounted for

Table 1. Descriptive Analysis of COVID-19 Patients at a Large Rural Community Hospital System, Southern California, March 1, 2020 to July 15, 2020.

<table>
<thead>
<tr>
<th>All COVID-19</th>
<th>COVID-19 Hospitalizations</th>
<th>COVID-19 Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnoses (n)</td>
<td>(n/%)</td>
<td>(n/%)</td>
</tr>
<tr>
<td>Total</td>
<td>2,132 (100)</td>
<td>1,044 (100)</td>
</tr>
</tbody>
</table>

Demographics

Gender

Female | 1,107 (51.9) | 498 (46.3) | 45 (39.4) |

Male | 1,025 (48.1) | 560 (53.6) | 66 (59.6) |

Average Age (Median)

50.6 (51.0) | 50.6 (51.0) | 75.1 (74.0) |

Age groups

0–4 | 5 (0.2) | — | — |

5–17 | 39 (1.8) | — | <5 |

18–29 | 360 (16.9) | 46 (4.4) | — |

30–39 | 506 (24.4) | 69 (6.6) | <5 |

40–49 | 306 (14.4) | 102 (9.8) | <5 |

50–64 | 534 (25.0) | 283 (27.1) | 18 (16.3) |

65–74 | 284 (13.3) | 218 (20.9) | 35 (31.3) |

75–84 | 205 (9.5) | 211 (20.2) | 22 (19.8) |

85+ | 93 (4.4) | 114 (10.9) | 34 (30.4) |

Race

American Indian/Alaska Native | 8 (0.4) | — | <5 |

Asian/Native Hawaiian or Other Pacific Islander | 34 (1.6) | 12 (1.1) | <5 |

Black or African American | 33 (1.5) | 9 (0.9) | <5 |

White | 1,313 (61.5) | 660 (63.4) | 72 (63.4) |

Other Race | 717 (33.6) | 532 (50.0) | 31 (27.7) |

Missing/Unknown | 29 (1.4) | 8 (0.8) | <5 |

Ethnicity

Hispanic or Latino | 1,167 (54.7) | 494 (47.3) | 48 (42.9) |

Non-Hispanic or Latino | 918 (42.0) | 540 (50.7) | 62 (55.4) |

Missing/Unknown | 47 (2.2) | 10 (1.0) | 2 (1.8) |

Table 2. Length of Stay and Risk Factors Associated with COVID-19 among Patients at a Large Rural Community Hospital System, Southern California, March 1, 2020 to July 15, 2020.

<table>
<thead>
<tr>
<th>All COVID-19</th>
<th>COVID-19 Hospitalizations</th>
<th>COVID-19 Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>2,132 (100)</td>
<td>1,044 (100)</td>
</tr>
</tbody>
</table>

Length of Stay

Average LOS (Standard Deviation (SD))

Average LOS among Patients (SD) | 6.46 (6.59) | — | — |

Average LOS among Patients (SD) | 6.63 (6.82) | — | — |

Average LOS among Patients (SD) | 6.76 (6.38) | — | — |

Alcohol use

No/Never/Not currently | 746 (35.0) | 629 (60.2) | 64 (57.1) |

Yes | 814 (38.4) | 537 (52.3) | 30 (26.8) |

Blank/Not Asked/Def | 772 (36.2) | 75 (7.5) | 15 (13.5) |

Smoking Status

Current smoker | 54 (2.5) | 25 (2.4) | <5 |

Former smoker | 364 (17.1) | 221 (21.2) | 40 (36.8) |

Never Smoker | 824 (38.6) | 444 (42.5) | 61 (54.3) |

Unknown/Blank | 344 (16.4) | 28 (2.7) | 15 (13.8) |

Passive smoke exposure – Never smoker | 6 (0.3) | — | <5 |

BMI

Underweight (<18.5) | 35 (1.6) | 37 (3.5) | <5 |

Normal/Healthy Weight (18.5–24.9) | 407 (19.2) | 249 (23.9) | 35 (31.3) |

Overweight (25.0–29.9) | 582 (27.5) | 294 (27.8) | 25 (22.3) |

Obese (>30.0) | 739 (34.7) | 485 (44.3) | 47 (42.0) |

Blank/Missing | 369 (17.3) | 5 (0.5) | 1 (0.9) |


<table>
<thead>
<tr>
<th>Occupation Group</th>
<th>Overall (n/%)</th>
<th>Hospitalizations (n/%)</th>
<th>Deaths (n/%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>682 (100)</td>
<td>292 (100)</td>
<td>54 (100)</td>
</tr>
</tbody>
</table>

Occupation (n=682)1

Management | 99 (14.9) | 40 (11.7) | <5 |

Business and financial operations | 21 (3.1) | 10 (3.4) | <5 |

Computer and mathematical science | 6 (0.9) | <5 | <5 |

Architecture and Engineering | 9 (1.3) | 7 (2.4) | — |

Life, physical, and social science | <5 | 2 (0.7) | <5 |

Community and social service | 9 (1.3) | 5 (1.7) | <5 |

Legal | 5 (0.7) | <5 | <5 |

Education, training and library | 25 (3.7) | 14 (4.8) | 5 (9.3) |

Arts, design, entertainment, sports, and media | 18 (2.6) | 9 (3.1) | <5 |

Healthcare practitioner and technical | 83 (12.2) | 25 (8.6) | <5 |

Healthcare support | 35 (5.1) | 10 (3.4) | <5 |

Protective service | 17 (2.5) | 9 (3.1) | <5 |

Food preparation and serving related | 36 (5.5) | 12 (4.1) | <5 |

Building and grounds cleaning and maintenance | 54 (7.9) | 24 (8.2) | 7 (12.0) |

Personal care and service | 28 (4.1) | 6 (2.7) | <5 |

Sales and related | 72 (10.6) | 29 (9.9) | 6 (11.0) |

Office and administrative support | 69 (10.1) | 26 (8.9) | <5 |

Farming, fishing, and forestry | 12 (1.8) | 10 (3.4) | <5 |

Construction and extraction | 23 (3.4) | 11 (3.5) | <5 |

Installation, maintenance and repair | 16 (2.3) | 12 (4.1) | <5 |

Production | 6 (1.2) | <5 | <5 |

Transportation and material moving | 34 (5.0) | 20 (6.8) | <5 |

Armed forces | <5 | <5 | <5 |

1 A total of n=105 were excluded from the occupational analysis: 48/homemaker; 10/unemployed/retired; 6/student/other; 9/declined; 3/unknown/blank; 5/insufficient information.

Figure 1: Epidemiology curve of SGH HCW COVID-19 infection

Figure 2: Epidemiology curve of new weekly COVID-19 cases in Singapore

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111 HCW infections (33.1%). Also, 48 HCWs (14.3%) had a WAI (ie, acquired at their workplaces where there was no patient contact). Among WAsI, only 5 HCWs had hospital-acquired infection (confirmed by phylogenetic analysis). The sources of exposure for the remaining 176 HCWs were unknown. Weekly incidence of COVID-19 among HCWs was comparable to the epidemiology curve of all cases in Singapore (Fig. 1 and 2). The mean age of HCWs with COVID-19 was 39.6 years, and most were women. At the time of positive SARS-CoV-2 PCR test, 223 HCWs were symptomatic, and 67 (20.0%) of them had comorbidities. Only 16 HCWs (4.8%) required hospitalization, and all recovered fully with no mortality (Table 1). Being female was associated with community COVID-19 acquisition (OR, 4.6, P < 0.001). Age (in years), but neither race or ethnicity nor CCI, was independently associated with all-cause 30-day mortality (OR, 1.07; 95% CI, 1.05–1.09) in CLC residents with COVID-19.

Conclusions: Among VA CLC residents with a positive COVID-19 test, minority CLC residents did not have worse outcomes than white residents, suggesting that users of the VA healthcare system may enjoy abrogation of some aspects of health disparities.

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Presentation Type:
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Subject Category: COVID-19

Absence of racial and ethnic disparities in COVID-19 survival among residents of US Veterans’ Affairs community living centers

Mayyadah Alabdely; Sonya Kothadia; Taissa Bej; Brigid Wilson; Sunah Song; Ukwen Akpoji; Federico Perez and Robin Jump

Background: COVID-19 has had a disproportionate effect on nursing home residents as well as people from racial and ethnic minorities.