Case Report – Possible Manufacturing Workplace Transmission of COVID-19

John H. Murphy

Dalla Lana School of Public Health, University of Toronto, Toronto, ON, Canada

ABSTRACT

A COVID-19 cluster was identified in an industrial manufacturing workforce soon after being recalled to the workplace following a furlough period. All cases in the cluster (21/85) were male, worked on one side of the plant, and took breaks and lunch together. All non-cases worked on the opposite side of the plant and similarly took breaks and lunch together. Review of the timing of return from furlough determined that workplace transmission was possible. However, a high percentage of the cases lived in apartment settings where high neighbourhood incidence rates were observed, whereas that was not the case for non-cases. The investigation illustrates the difficulties of distinguishing potential occupational from community transmission.

KEYWORDS

COVID-19, SARS CoV-2, Outbreak, Manufacturing, Occupational
cases from side B of the plant with subsequent infection of several co-workers during breaks and lunch periods represents a plausible occupational transmission scenario.

However, the case over-representation among apartment dwellers and the elevated attack rates for neighbourhoods of half the cases points to community transmission and detection as a result of workplace-initiated testing as an equally plausible scenario. Outside of health, long-term care and workplace outbreak settings, it is not common for an entire workforce to be screened, and there are no other published reports to date describing the results of workforce-wide SARS CoV-2 screening other than in care settings. The 25% attack rate identified by workforce screening at the subject workplace may or may not be unusual, given the absence of comparators, and findings from serological surveys in major urban centres showing demographic subgroup prevalence rates as high as 30% [9,10].

As of June 9, 2020, approximately 2.5% of all swab PCR test results reported by Public Health Ontario were positive [11]. The attack rate revealed by workforce-wide testing in this case adds to the growing body of evidence that the prevalence of asymptomatic infection among working age persons may be considerably higher than suggested by data from swab PCR screening of selected target groups. From an occupational health perspective, the case may indicate that even with generally good workplace infection prevention and control measures and high rates of dilution ventilation, brief opportunities for close proximity and prolonged interpersonal contact may permit interpersonal exchange of respiratory aerosols to an extent sufficient to induce asymptomatic or mild infection by SARS CoV-2.

REFERENCES


