

1 Pre-Procedural Surveillance Testing for SARS-CoV-2 in an Asymptomatic Population in the
2 Seattle Region Shows Low Rates of Positivity

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21 **To the Editor:**

22 Seattle region hospitals have been impacted for several months by community spread of the
23 coronavirus disease of 2019 (COVID-19). (1, 2) Although testing was initially focused on the
24 diagnosis of symptomatic patients, this effort has now expanded to include surveillance of
25 asymptomatic patients in order to protect health care workers and prevent nosocomial infections.
26 There is an urgent need to understand best practices for the delivery of routine medical care
27 during an ongoing outbreak. (3) Here we report rates of SARS-CoV-2 infection in asymptomatic
28 patients screened prior to admission or a surgical or aerosol-generating procedure.

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30 On April 13, 2020 our hospital system began universal surveillance screening of asymptomatic
31 patients prior to admission (n = 1,269, 43.6% female, median age 55 years, SD = 20.2) and
32 surgeries and aerosol-generating procedures (n = 787, 38% female, median age 55 years, SD =
33 19.0). The testing indication was stated at the time of order. PCR testing was performed on
34 nasopharyngeal swabs using the Washington state emergency use authorized University of
35 Washington CDC-based laboratory-developed test (n = 176) or FDA-authorized DiaSorin
36 Simplexa SARS-CoV-2 (n = 1241), Hologic Panther Fusion SARS-CoV-2 (n = 2591), or Roche
37 cobas SARS-CoV-2 tests (n = 423). (4) This study was approved by the Institutional Review
38 Board of University of Washington Medical Center under a consent waiver (STUDY00009734).

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40 For patients undergoing procedures, 5 of 787 patients (0.6%) were positive for SARS-CoV-2.
41 For patients who were asymptomatic and tested at the time of admission, 4 of 1,269 patients
42 (0.3%) were positive and 2 of 1,269 (0.2%) were inconclusive; inconclusive results were treated
43 as low-level positives and retested until negative. Among these patients, 4/9 positive and 1/2

44 inconclusive patients were intubated, sedated, intoxicated, or cognitively impaired at time of
45 assessment. By comparison, among inpatients with concerning symptoms (n = 1336, 38.6%
46 female, median age 53, SD = 18.7), 137 of 1336 patients (10.3%) were positive and 1 of 1336
47 (0.07%) was inconclusive. Among asymptomatic patients tested for any other reason (e.g.
48 exposure risk), 32 of 425 (7.5%) were positive and 1 of 425 (0.2%) was inconclusive. During
49 this time the outpatient prevalence of SARS-CoV-2 active infection in our region was 2-5%. (5)
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51 The application in our region of universal testing for SARS-CoV-2 prior to surgery or
52 aerosolizing procedures and hospital admissions shows that the positivity rate for SARS-CoV-2
53 is low (<1%) in asymptomatic patients without known exposure risk factors. This measure is
54 notably lower than reported measurements during an outbreak in New York City that found a
55 positivity rate of 13.7% in asymptomatic pregnant women. (6) The rate of sub-clinical infection
56 likely varies with the scale of the community outbreak.

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58 Even during a community-wide outbreak in Seattle, our data show low prevalence of COVID-19
59 infection in the pre-procedural setting. These data provide an assessment of exposure risk around
60 the time of admission in a population that uses medical services. The Greater Seattle Coronavirus
61 Assessment Network (SCAN) also published results from 18 days of home-based testing and
62 reported no positive tests in 1392 patients reporting no COVID-19-like illness. (7) Although
63 other studies support a large proportion of asymptomatic infections, data from this metropolitan
64 outbreak suggest a different pattern. Importantly, this universal surveillance testing decreased the
65 use of PPE, identified appropriate precautions for patients, and reduced the risk of nosocomial
66 infection in cases where infection was not suspected.

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