

Evaluating Barriers and Potential Solutions to Speaking Up About COVID-19 Symptoms: A Survey Among Nursing Home Workers

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Background

- Nursing homes (NHs) are high-risk settings for COVID-19
- Pandemic policies that restricted visitation meant that NH staff were the likely source for introducing SARS-CoV-2 from the community into a NH
- NH staff face significant economic and job-related pressures that may influence their willingness to report potential COVID-19 symptoms
- Primary Objective:** Assess COVID-19 symptom-reporting behavior and types of barriers (monetary, logistic, and emotional (stigma/fear)) affecting symptom-reporting

Study Design & Methods

- Design:** Confidential telephone survey
- Setting:** 70 NHs in Orange County, CA, 12/2020-2/2022
- Participants:** Target sample of 120 COVID+ NH staff
 - ✓ Inclusion criteria: ≥18 y, COVID+ within past 8 wks
- Survey Measures (40-Items):**
 - ✓ Participant demographics and course of illness
 - ✓ Perceptions about COVID-19 and vaccines
 - ✓ Actual symptom-reporting behavior
 - ✓ 8 constructs measuring factors related to symptom-reporting using 5-point Likert Scales
- Analytic Approach:**
 - ✓ Summary statistics
 - ✓ Reliability of survey constructs using Cronbach's α
 - ✓ Discriminant validity using t-tests comparing responses among participant subgroups

Table 1. Participant Characteristics (N=120)

Characteristic	N (%) or Mean
Time of Test	
2020-2021 Winter Wave, "Wave 1"	59 (49%)
Combined Delta and Omicron Waves, "Wave 2"	61 (51%)
Job Category	
Certified Nurse Assistant (CNA)	44 (37%)
Nurse (LVN/RN)	44 (37%)
Non-Frontline	32 (27%)
Female	80 (67%)
Mean Age in Years	39.6
Mean # of Current NH Jobs	1.3
Mean # of Years in Current Job	6.3
Mean # of Years Working in Any NH	9.3
Mean Household Size	4.2
Mean # of Weeks since Positive Test	2.9
Mean Health Rating (1-5 Scale) ^a	4.0
Reason for Testing	
Mandatory Weekly Testing	85 (71%)
≥1 Symptom Prior to Test	52 (61%)
Known Close Contact COVID Exposure	8 (7%)
≥1 Symptom Prior to Test	1 (13%)
Symptom-Based Testing (Reported to Supervisor)	27 (23%)
Frequency of Participation in COVID-19 Exposing Activities (0-100 Scale) ^b	26.6
Likelihood of Seeking Care When Ill (0-100 Scale) ^b	60.5
Trust in COVID-19 Vaccines (0-100 Scale) ^c	58.1

Higher score indicates ^a better self-reported health, ^b more likely to engage in activity, ^c greater level of trust

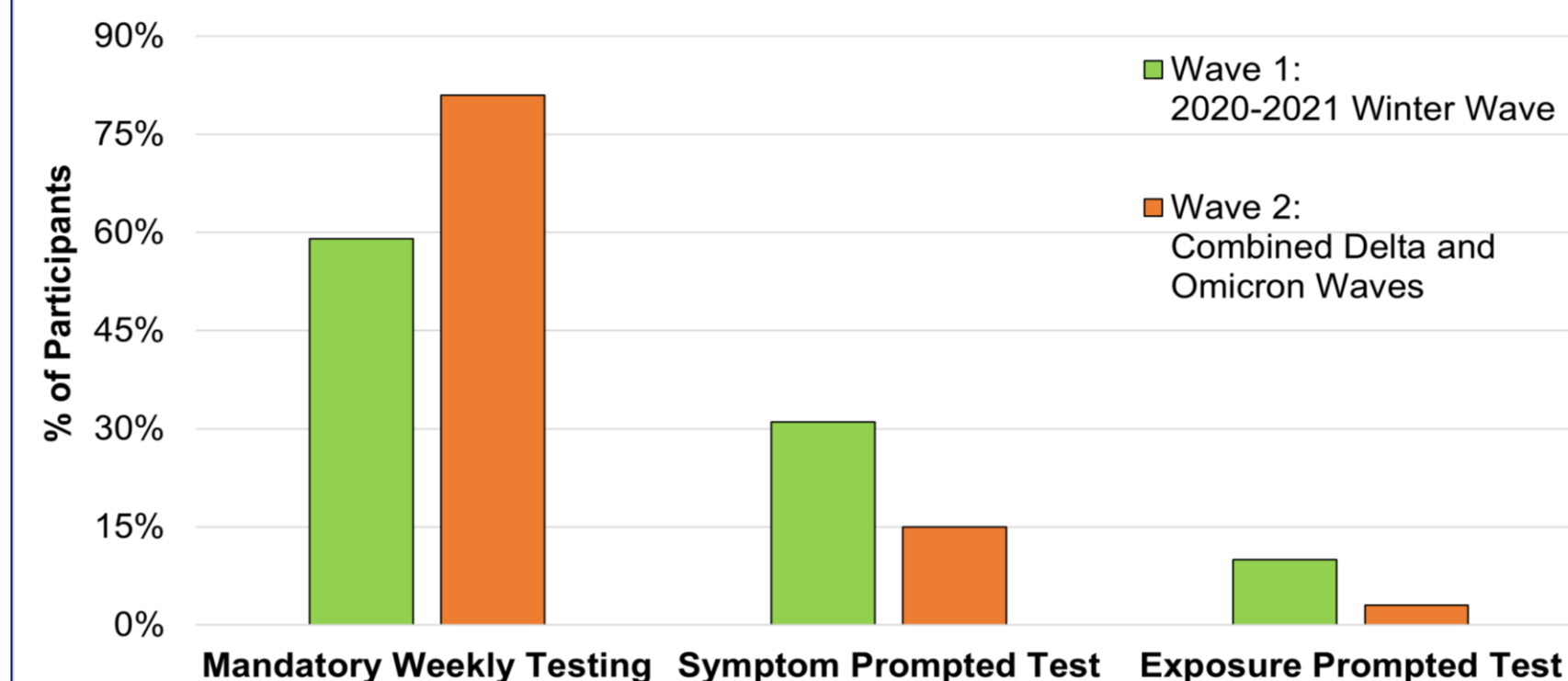
Table 3. Barriers to Symptom-Reporting^a

Scale 0 to 100 for Importance (Higher = More Important)		
Fear of Known or Unknown Consequences of COVID-19	80.5	• More important during Wave 1 vs Wave 2 (P<0.001) • No difference across job categories
Lack of Knowledge About COVID-19 Symptoms/Spread	74.1	• More important during Wave 1 vs Wave 2 (P=0.004) • More important for frontline vs non-frontline workers (P=0.004)
Monetary (e.g., sick days, doctor co-pay)	69.0	• Less important during Wave 1 vs Wave 2 (P<0.001) • No difference across job categories
Logistics (e.g., access to a test, doctor)	56.5	• No difference across waves • No difference between job categories

^a Responses were consistent across survey constructs (Cronbach's α >0.7)

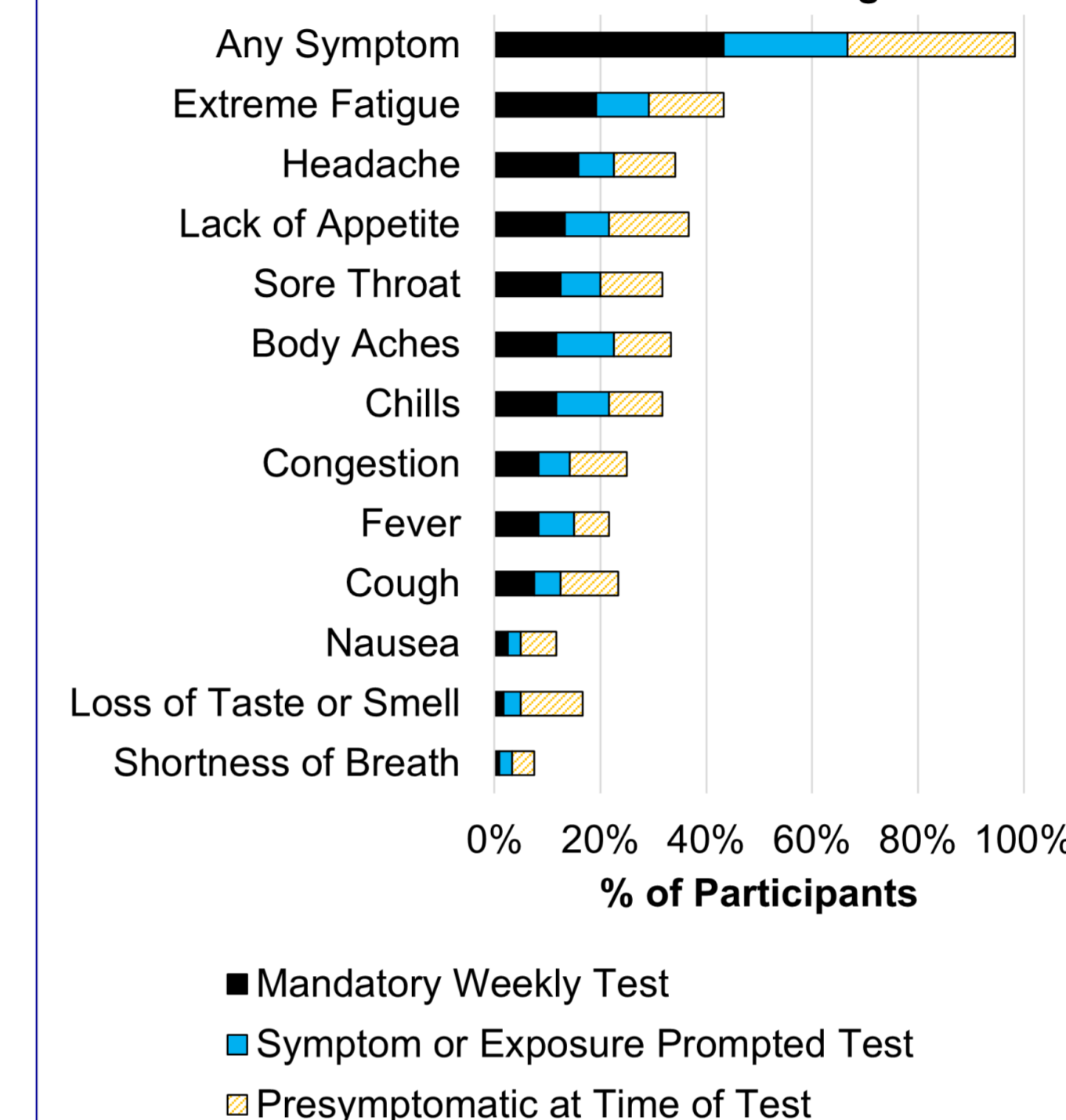
Results

Figure 1 Reason for COVID-19 Testing: Wave 1 versus Wave 2



- 71% of COVID-19 cases among NH staff detected during mandatory weekly test
- 67% of staff had ≥1 symptom prior to test
- Among staff with symptoms prior to test, only 34% disclosed their symptom(s) to a supervisor**
- More cases detected by symptom-based testing during Wave 1 vs Wave 2 (P=0.04)
- Fewer cases detected by mandatory testing during Wave 1 vs Wave 2 (P=0.006)

Figure 2 Actual Symptoms Present at the Time of COVID-19 Testing



Bars sorted by symptoms present at the time of mandatory weekly test (black bar). 118 participants shown in the graph. 2 participants never developed symptoms.

- Likelihood of reporting hypothetical symptoms exceeded actual reporting
- Likelihood of reporting hypothetical symptoms was greater during Wave 1 vs Wave 2 (mean score 4.0 vs 3.4, P=0.01), similar across job categories

Table 2. Likelihood of Reporting Hypothetical Symptoms to a Supervisor

Scale 1 to 5 for Likelihood to Report (Higher = More Likely)	
Fever (>101 F)	4.8
Nausea, Vomiting, Diarrhea	4.7
Fever (99 To 101 F)	4.6
Shortness of Breath	4.6
Chills	4.4
Loss of Taste or Smell	4.3
Cough	4.2
Sore Throat	3.9
Runny Nose or Congestion	3.9
Extreme Fatigue	3.7
Body Aches	3.5
Joint Stiffness	3.3
Muscle Spasms	3.2
Abdominal Cramps	3.1
Moderate Fatigue	3.0
Headache	3.0
Lack of Appetite	3.0
Lower Back Pain	2.9
Mild Fatigue	2.5
Any Symptom	3.7

Table 4. Positive Factors to Promote Speaking Up About COVID-19 Symptoms^a

Scale 0 to 100 for Importance (Higher = More Important)		
Encouragement from Supervisors and Coworkers	89.0	• More important during Wave 1 vs Wave 2 (P=0.02) • More important for frontline vs non-frontline workers (P=0.02)
Adequate Staffing to Cover if You Cannot Work	71.0	• Less important during Wave 1 vs Wave 2 (P<0.001) • Less important for frontline vs non-frontline workers (P=0.008)
Access to a Confidential Helpline	68.2	• More important during Wave 1 vs Wave 2 (P<0.001) • No difference across job categories
Lack of Stigma from Coworkers for Having COVID-19	60.0	• Less important during Wave 1 vs Wave 2 (P<0.001) • No difference across job categories

^a Responses were consistent across survey constructs (Cronbach's α >0.7)

Summary & Policy Implications

- Mandatory COVID-19 testing for NH staff is key to identifying staff COVID-19 cases due to reluctance to speak up about existing symptoms
- In the first wave of the pandemic, fear and lack of knowledge were drivers of symptom-reporting. Helplines enabled symptom-reporting and testing.
- In later waves, adequate staffing and sick days were drivers of symptom-reporting. Encouragement from supervisors and coworkers is essential to ensuring staff symptom-reporting and testing.

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