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| **Table A: Transmission Rates in Different Network / Community Types, as Reported in the Literature** | | | |
| **Community Type** | **Transmission rate** | **Notes** | **Data Source** |
| Household | Secondary infection rate[[1]](#footnote-1) = 53% (95% CI:  46–60%)  \*\* see table 2 for detailed breakdown of transmission by different factors (age, sex, race, household size) | Design: Prospective household study conducted in Tennessee and Wisconsin, April – September 2020; After enrollment, index patients (initial person who tested positive via RT-PCR test) and household members completed symptom diaries and obtained self-collected specimens (nasal swabs only or nasal swabs and saliva samples), daily for 14 days; specimens from the first 7 days were tested for SARS-CoV-2  Endpoint: 7-day secondary infection rate  Results: 191 enrolled household contacts of 101 index patients reported having no symptoms on the day of the associated index patient’s illness onset; among these 191 contacts, 102 had SARS-CoV-2 detected in either nasal or saliva specimens during follow-up, for a secondary infection rate of 53% (95% confidence interval [CI] = 46%–60%). Among fourteen households in which the index patient was aged <18 years, the secondary infection rate from index patients aged <12 years was 53% (95% CI = 31%–74%) and from index patients aged 12–17 years was 38% (95% CI = 23%–56%). | Grijalva CG, Rolfes MA, Zhu Y, et al. Transmission of SARS-COV-2 Infections in Households — Tennessee and Wisconsin, April–September 2020. MMWR Morb Mortal Wkly Rep 2020;69:1631–1634. DOI: <http://dx.doi.org/10.15585/mmwr.mm6944e1>  https://www.cdc.gov/mmwr/volumes/69/wr/mm6944e1.htm |
| Choral Rehearsal (singing) | secondary infection attack rate range: 32/60 to 52/60, or 53%‐87%. | Case study of a choral group that met on March 10, 2020. At the time of the rehearsal, there were no known COVID‐19 cases in Skagit County. Among the 61 attendees at the rehearsal, 53 cases in total were subsequently identified including the index case, with 33 confirmed through positive COVID‐19 tests and 20 unconfirmed but probable secondary cases based on symptoms and timing. | Miller, SL, Nazaroff, WW, Jimenez, JL, et al. Transmission of SARS‐CoV‐2 by inhalation of respiratory aerosol in the Skagit Valley Chorale superspreading event. *Indoor Air*. 2020; 00: 1– 10. <https://doi.org/10.1111/ina.12751>  https://onlinelibrary.wiley.com/doi/10.1111/ina.12751 |
| Gym |  | In scenario B, the infection affects two subjects, both oral breathing during a sports activity in a 300 m3 gym. | Buonnano, 2020  https://www.sciencedirect.com/science/article/pii/S0160412020320675?via%3Dihub |
| Office |  | Scenario C concerns two subjects (infected and healthy) in light activity while speaking in a generic 300 m3 office (bank, post office, supermarket, shop, etc.). | Buonnano, 2020  https://www.sciencedirect.com/science/article/pii/S0160412020320675?via%3Dihub |
| Restaurant | documented probability of infection, i.e. attack rate, of 45% | Based on case study: January 2020, Guangzhou restaurant | Buonnano, 2020 |

Additional resource that might be useful for Table A:

"J.L. Jimenez, COVID-19 Aerosol Transmission Estimator, <https://tinyurl.com/covid-estimator>, accessed 1-Jul-2020" for scientific documents, or just the link for online documents should be sufficient. I do intend to keep the document online indefinitely. For scientific documents you should also cite the papers in which it is based (Miller et al., Buonnano et al. 1 & 2, Riley et al.)

<https://docs.google.com/spreadsheets/d/16K1OQkLD4BjgBdO8ePj6ytf-RpPMlJ6aXFg3PrIQBbQ/edit#gid=1425126572>

\*see Peng, Jimenez 2020 paper

\*\*this estimator assumes that air is well-mixed and that people observe physical distancing (no droplet transmission; accounts for airborne transmission only)

http://cires1.colorado.edu/jimenez/

https://www.nationalgeographic.com/science/2020/08/how-to-measure-risk-airborne-coronavirus-your-office-classroom-bus-ride-cvd/#close

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| **Table B: Individual Risk of COVID by Occupation and Other Personal Characteristics** | | | |
| Characteristic | Risk | Notes | Data Source |
| In-person worker (non critical infrastructure sector) vs. teleworker | aOR = 2.1, 95% CI = 1.3–3.6 | Among the 175 participants who reported telework status and some form of employment during the 2 weeks before illness onset, case-patients were more likely to have reported exclusively going to an office (aOR = 2.1, 95% CI = 1.3–3.6) | Fisher KA, Olson SM, Tenforde MW, et al. Telework Before Illness Onset Among Symptomatic Adults Aged ≥18 Years With and Without COVID-19 in 11 Outpatient Health Care Facilities — United States, July 2020. MMWR Morb Mortal Wkly Rep 2020;69:1648–1653. DOI: [http://dx.doi.org/10.15585/mmwr.mm6944a4external icon](http://dx.doi.org/10.15585/mmwr.mm6944a4)  https://www.cdc.gov/mmwr/volumes/69/wr/mm6944a4.htm?s\_cid=mm6944a4\_w |
| Health care workers (patient facing and non patient facing combined) vs. non-health care workers | aOR = 1.17 (0.99, 1.38) |  | Hebert 2020. “Impact of the COVID-19 pandemic on healthcare workers risk of infection and outcomes in a large integrated health system.” |
| Patient Facing Health care workers vs. non-patient facing health care workers | aOR = 1.60 (1.08 – 3.66) |  | Hebert 2020. “Impact of the COVID-19 pandemic on healthcare workers risk of infection and outcomes in a large integrated health system.” |
| Age |  | Incidence of COVID by age group has changed significantly over the course of the pandemic: early in pandemic, incidence was highest in older adults. Toward Fall, highest incidence shifted to young adults | *COVID-19 Stats:* COVID-19 Incidence, by Age Group — United States, March 1–November 14, 2020. MMWR Morb Mortal Wkly Rep 2021;69:1664. DOI: [http://dx.doi.org/10.15585/mmwr.mm695152a8external icon](http://dx.doi.org/10.15585/mmwr.mm695152a8)  Boehmer TK, DeVies J, Caruso E, et al. Changing Age Distribution of the COVID-19 Pandemic — United States, May–August 2020. MMWR Morb Mortal Wkly Rep 2020;69:1404–1409. DOI: <http://dx.doi.org/10.15585/mmwr.mm6939e1> |

**Prevalence of COVID:**

* Differs significantly over time and by region, good current estimates by U.S. county: <https://www.descarteslabs.com/resources/covid-19-now>
* U.S. and global estimates here: <https://covid19-projections.com/>

1. Secondary attack rate: the probability that an infected individual will transmit the disease to a susceptible individual [↑](#footnote-ref-1)