Those who test COVID-positive at UNC Respiratory Diagnostic Center (and affiliated RDCs) N = 100 index cases (COV+) and 100-400 of their household members (COV-HC)

**Telephone Enrollment Visit:**
- COV+ (>18yo)
  - Informed consent
  - **Baseline questionnaire** – illness and house household demographics
  - Instructions for daily symptom diary

- COV-HC (>1yo)
  - Informed consent
  - **Baseline questionnaire** – interactions with index case, activities in and outside home
  - Instructions for daily symptom diary

**Initial D1 Home Visit:**
- **Venous blood for serology**
- Finger prick blood for rapid antibody test
- Nurse-collected NP swab, nasal strips
- Self-collected NMT swab

**Follow up:** Serial swabs to **measure viral clearance** and viral shedding
- Week 1:
  - D7 visit: Nasal swab*
- Week 2:
  - D14 visit: Nasal swab*
- Week 3:
  - D21 visit: Nasal swab*

**Final D28 RDC visit:**
- Venous blood for serology
- Finger prick blood rapid antibody test

**Daily symptom diary (electronic)** Until sx resolution x 2 days (COV+)
- D1 visit: Nasal swab*
- Interim questionnaire

**Serial swabs to detect new COVID-19 infection**
- D7 visit: Nasal swab*
- D21 visit: Nasal swab*

Figure S1. Schematic of CO-HOST study design.
Figure S2. Number of participants and samples for LFA and venipuncture serum samples.
Figure S3. BioMedomics LFA performed on IgG antibody with the following concentrations for (A): (1) 1 µg (2) 100 ng (3) 10 ng (4) 1 ng (5) 100 pg in 20 µL of serum, and (B): (3) 10 ng (3A) 20 ng (3B) 30 ng in 20 µL of serum.
**Figure S4.** ELISA total Ig OD values for samples that were ELISA Ig+/LFA+ (median: 2.0), ELISA Ig+/LFA- (median: 0.6), and ELISA Ig-/LFA- (median: 0.2). Samples that were LFA-negative displayed a lower ELISA total Ig OD compared to samples that were both ELISA and LFA-positive (p>0.0001). The threshold of positivity was 0.376 OD. Samples tested at D1 are depicted in light blue, whereas samples tested at D28 are depicted in dark blue. Of the 52 individuals who were ELISA Ig+/LFA-, 7 had asymptomatic infection.