moniae was carried out using conventional polymerase chain reaction.

Results: A total of 295 patients with confirmed SARS-CoV-2 infection were enrolled during the study period. A coinfection with one or more respiratory pathogen was detected in 154 (52.20%) patients at hospital admission. The most common coinfections were *Mycoplasma pneumoniae* (28.12%), *Chlamydia pneumoniae* (8.81%) and with both bacteria (11.53%); followed by *Adenovirus* (1.70%), *Mycoplasma pneumoniae/Adenovirus* (0.71%), *Chlamydia pneumoniae/Adenovirus* (0.71%), RSV-B/*Chlamydia pneumoniae* (0.32%), *Mycoplasma pneumoniae/Chlamydia pneumoniae/Adenovirus* (0.32%). Sepsis was more frequent among coinfected patients than non coinfected (33.12% vs 20.57%, p = 0.018). Expectoration was less frequent in coinfected individuals compared to non coinfected (5.84% vs 12.77%, p = 0.045). We could highlight that the majority of patients were administered an antibiotic (69.50%). The correlation between the empirical use of macrolides in patients with *Mycoplasma pneumoniae* and *Chlamydia pneumoniae* was observed in 41% of the cases.

Conclusion: *Mycoplasma pneumoniae* and *Chlamydia pneumoniae* were the main microorganisms associated with SARS-CoV-2 coinfection at hospital admission. The presence of multiple coinfections was described in some patients. Antibiotics should be carefully prescribed, as high rates of antibiotic use was found, particularly with macrolides.

PS07.03 (146)

Mask-Wearing and Individual Risk of Respiratory Illness during the COVID-19 Pandemic

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Purpose: Ecological and laboratory studies suggest face masks are an effective non-pharmaceutical intervention for reducing spread of SARS-CoV-2. These studies cannot measure individual risk reduction or account for individual behavioral and demographic confounders. Here we present a novel longitudinal assessment of the protective role of masks in a national cohort of individuals enrolled in a syndromic surveillance tool prior to the first case of COVID-19 in the United States.

Methods & Materials: The study population consisted of a subset of participants (N=4,723 adults) enrolled in Flu Near You (FNY), a web-based longitudinal syndromic surveillance platform. Weekly self-reports of respiratory syndromes were used to assess the onset of COVID-like illness (CLI) symptoms from January to June 2020. An annual retrospective questionnaire submitted by this subset of FNY participants assessed precautionary behaviors (masking, distancing, etc.) and demographic information. We used a previously validated exposure variable (self-reported likelihood to wear masks while visiting family and friends and while grocery shopping) to measure mask wearing. A Cox proportional hazards model was used to assess the effect of mask wearing on CLI while controlling for age, gender, precautionary behavior (social distancing contacts, adoption date), county population density and time-varying county COVID-19 burden.

Results: There were 1,293 reports of respiratory symptoms over the study period. Individuals characterized as most likely to wear masks were 45% [24%-61%] less likely to report symptoms of COVID-like illness compared to individuals characterized as least likely to wear masks. Mask-wearing also demonstrated a protective effect for those characterized as somewhat likely to wear masks (HR: 0.60, 95% CI: 0.42-0.84, p=0.003) and those who were likely to wear masks in only one of the two circumstances (HR. 0.59, 95% CI: 0.42-0.83, p=0.002), compared to respondents least likely to wear masks. Sensitivity analyses with alternative broad and narrow CLI definitions produced a similar magnitude and protective effect.

Conclusion: Face masks were effective as a non-pharmaceutical intervention at preventing respiratory illness in the FNY population. The individual risk reduction was consistent with previous ecological measures of the protective effect of face masks, as well as robust to adjustment for behavioral, demographic, and environmental confounders.

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India's Second COVID Wave: How is it different from the First Wave?

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Purpose: India is witnessing the resurgence of the COVID-19 pandemic in the form of a hard-hitting second wave. We wanted to compare the clinical profile of the first wave (April-June 2020) with the second wave (March-May 2021) of the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), to help prioritize the target population group and management strategies. This will further help in the management of any upcoming third COVID wave.

Methods & Materials: We conducted a retrospective observational study and examined the demographic profile, symptoms, illness severity, baseline investigations, treatment given, comorbidities, and outcomes of the COVID-19 patients belonging to the first (W1) and the second (W2) waves of the Indian COVID pandemic.

Results: W2 had most people affected in the age group 50.5 (17.7) years compared with 37•1 (16•9) for W1. Baseline oxygen saturation was lower for W2 [84•0 (13•4) % versus(v/s) 91•9 (7•4) %] than W1. 70.2 % of the cases belonged to the severe category in W2 compared to 37.5% in W1. The level of hepatic transaminases was higher for W2 [AST, 108.3 (99.3) v/s 54.6 (69.3); ALT, 97.6 (82.3) v/s 58.7 (69.7) IU/L] than W1. CT severity score in W2 [29.5 (6.7)] was greater than W1 [23•2 (11•5)] [All P<0.05]. The standardized mortality ratio for W2 was 3.5 times that of W1. Higher proportion of patients require oxygen (81.8% v/s 11.2%), high flow nasal cannula (11.4% v/s 5.6%), non-invasive ventilation (41.2% v/s 1.5%), invasive ventilation (24.5% v/s 0.9%), and ICU admissions (56.4% v/s 12.0%) in W2 as compared with W1. We found the second wave to be stronger in terms of oxygen requirement, organ dysfunction, and mortality

Conclusion: Higher age, oxygen and ventilator requirement, ICU admissions, and organ failure are more prevalent in the second COVID wave that has hit India compared to the first wave and is associated with more deaths. India swiftly needs to scale up the prevalent ICU set up and oxygen production capacity to help accommodate the higher load.