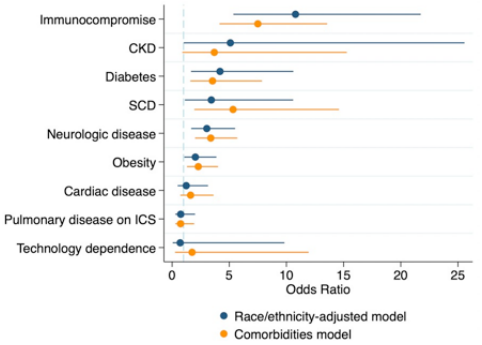

Conclusion. IS, CKD, DM, SCD, ND, and obesity were associated with increased odds of hospitalization in adolescents presenting with mild to moderate COVID-19. Adolescents with these comorbidities should be prioritized for consideration of treatment with monoclonal antibodies.

Disclosures. **Gabriella S. Lamb, MD, MPH**, Nothing to disclose

583. *SARS-CoV-2* Spike Protein S1/S2 Antibodies after Vaccination with Sinopharm in Peruvian Physicians

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Session: P-25. COVID-19 Vaccines

Background. Peru started its national vaccination campaign in February 2021 using Sinopharm vaccine, targeting healthcare personnel on its initial phase. Although the immunogenicity of this vaccine was tested in clinical trials, there are no studies that evaluated the humoral response post vaccination in Peru.

Methods. We conducted a cross sectional study, which objective was to evaluate the humoral immunogenicity triggered by the Sinopharm vaccine in Peruvian physicians. We collected demographic and epidemiologic data via an electronic. The SARS-CoV-2 spike protein S1/S2 antibodies were measured by chemiluminescense (Liaison®). A positive test was defined as >15 U/ml, which has correlation of 95% with neutralizing antibodies measured by plaque reduction neutralizing test.

Results. 92 participants were enrolled in the study. The epidemiologic characteristics are described in table 1. The mean level of antibodies measured at least 2 weeks from the second vaccine dose was 67.5 ± 70.5 U/ml. 85.7% of the study cohort had positive S1/S2 antibodies. In the univariate analysis, an imperfect negative correlation was found between the level of antibodies and participants' age (r= -0.24; regression F test 5.25; p = 0.0242). A weak negative correlation was observed between the antibody titer and the time elapsed from the second vaccine dose and the day of antibody measurement (r= -0.17). A higher antibody level post vaccine was found in individuals who worked in COVID units (105.5 U / mL vs 58.2 U / mL; p = 0.0125), and in participants with history of COVID (216.5 U / mL vs 81.2 U / mL; p = < 0.0000). Hypertension was associated with lower antibody titers (36.9 U / mL vs. 74.6; p = 0.0464). In the multivariate analysis, working in COVID units, having previous COVID infection and shorter time from second vaccine dose and day of antibody measurement were associated with higher antibody levels post vaccine (table 2).

Table 1. Epidemiological Characteristics

Age (yr; mean DS)	51,95 ± 14,35
Male gender (n [%])	46 (50%)
No comorbidity (n [%]) With comorbidity (n[%]) • One comorbidity (n[%]) • Two comorbidities (n[%]) • Three comorbidities (n[%])	47 (51,09%) 45(48,91%) 36 (39,13%) 7 (7,61%) 2 (2,17%)
Diabetes (n [%])	9 (9,8%)
Hypertension (n [%])	17 (18,48%)
Immunosuppressive treatment (n [%])	3 (3,3%)
Autoimmune disease without immunosuppression (n [%])	2 (2,17%)
Body Mass Index (Kg/m2)	26,28 ± 3,56
Work with COVID-19 (n [%])	20(22.2%)
Previous COVID-19 (n [%])	5 (5.43%)

Table 2. Multivariable linear analysis of antibody titers

	Coeficient (CI 95%)	St Error	*t*	p
Independent variables				
Age	-0.3 (-1.3 0.72)	0.52	-0.60	0.553
Diabetes	14.6 (-28.5 57.8)	21.7	0.67	0.502
Hypertension	-19.0 (-53.4 15.3)	17.2	-1.1	0.273
Time from 2th dose to Ab test	-1.2 (-2.3 -0.10)	0.55	-2.18	**0.032**
Working in COVID-19 units	44.2 (11.8 76.6)	16.3	2.72	**0.008**
Previous COVID-19 infection	85.4 (4.3 166.5)	32.3	2.1	**0.039**

Conclusion. Our study showed that the time elapsed from the second vaccine dose and the day of antibody measurement, having previous COVID-19 infection and working in COVID -19 units may help to predict higher antibody titers post vaccine. Larger studies to evaluate the humoral response post Sinopharm vaccine and its clinical implications are still needed in Peru.

Disclosures. **All Authors**: No reported disclosures

584. Phase 1 Placebo-Controlled Trial of COVI-VAC™, an Intranasal, Live Attenuated COVID-19 Vaccine

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Session: P-25. COVID-19 Vaccines

Background. COVI-VAC™ is an intra-nasal live-attenuated SARS-COV-2 synthetic viral vaccine being developed for the prevention of COVID-19. COVI-VAC is attenuated through deletion of the furin cleavage site and introduction of 283 silent deoptimizing mutations that maintain viral amino acid sequence but result in significant attenuation due to slow translation in the human host cell. Notably, COVI-VAC includes all viral antigens and is not limited to spike. COVI-VAC has demonstrated attenuation, immunogenicity and single dose protection in both Syrian golden hamster and non-human primate models.

Methods. 48 healthy young adults were enrolled in an inpatient quarantine setting to one of 3 dose escalating cohorts and randomized to COVI-VAC or saline placebo given as nose drops, as a single 0.5mL dose or 2 doses 28 days apart. Endpoints included solicited and unsolicited adverse events, serum cytokines, viral shedding and sequence stability, mucosal and serum antibody responses and IFN ELISpot. Subjects will be followed for 1 year for late safety events and durability of immune response.

Results. Dosing is complete. There has been no trend in solicited reactogenicity events, and all unsolicited adverse events reported to date have been mild. There have been no SAEs or Grade 3 or 4 events. Vaccine virus from anonymized subjects was shed at levels lower than that likely to result in onward transmission, and the deoptimized sequence of the shed virus remained unchanged compared to the original vaccine sequence. Unblinded data including immunogenicity will be available prior to the IDWeek meeting.

Conclusion. COVI-VAC appears safe and well tolerated in healthy young adults. Vaccination resulted in minimal viral shedding without sequence instability. Safety and shedding data supports continued development in a wider Phase 2/3 population.

Disclosures. **Sybil Tasker, MD, MPH, FIDSA**, **Codagenix Inc** (Employee, Shareholder) **Daryl Bendel, MD**, **Codagenix Inc** (Scientific Research Study Investigator) **Melissa Bevan, MD**, **Codagenix Inc** (Scientific Research Study Investigator) **Steffen Mueller, PhD**, **Codagenix Inc** (Board Member, Employee, Shareholder) **Anna Kushnir, PHD**, **Codagenix Inc** (Employee) **Brandon Londt, PhD**, **Codagenix Inc** (Other Financial or Material Support, contracted lab services) **J. Robert Coleman, PhD**, **Codagenix Inc.** (Board Member, Employee, Shareholder)

585. Safety of Pfizer-BioNtech COVID-19 Vaccine in Healthcare Workers, Singapore

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Session: P-25. COVID-19 Vaccines

Background. On 14 December 2020, the Pfizer-BioNTech coronavirus disease 2019 (COVID-19) vaccine was granted emergency use authorization in Singapore. Healthcare workers (HCW) were prioritized to receive the vaccine. We aim to investigate the side effects and risk factors for allergic reactions in our institution.

Methods. All HCW vaccinations were recorded in an electronic centralized database. All reactions occurring within a 30-minute observation period post vaccination were recorded. Staff were required to report any vaccine-related medical consult including hospitalization occurring within 14 days after vaccination. Moderate/severe reactions were assessed by a medical team and determined if the reactions were probable allergic reactions with consultation with an Allergist. We extracted data from 8 Jan 2021 to 30 April 2021.

Results. 5030 and 159 HCW completed 2 doses and 1 dose of the vaccine respectively. There were 1056 HCWs (20.3%) with self-reported pre-existing allergy. There were 114 (1.1%) reactions occurring without the 30-minute observation period, and 64 (56.1%) were related to first dose of vaccine. The most common side effect experienced was aches or pain on any part of the body (n=46, 40.4%) followed by fatigue and/or giddiness (n=45, 39.5%), palpitations and/or shortness of breath (n=22, 19.3%), systemic rash and/or angioedema (n=12, 10.5%) and nausea and/or vomiting (n=12,