SARS-CoV-2 Vaccine Rollout with Sex Workers in India

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Background

- From January 3, 2020, to July 9, 2021, there have been 30,752,950 confirmed cases of COVID-19 and 405,939 deaths reported. (See Figure 1)
- As of July 7, 2021, 21.3% (291,184,757) of the population has received at least 1 COVID-19 vaccination dose and only 4.9% (66,886,006) of the population is fully vaccinated. (See Figure 2)
- At least 70% of a population needs some immunity from prior infection or vaccination to achieve herd immunity against COVID-19.
- The Delta (B.1.617.2) variant arose in India and dominated the deadly second wave, " … spreading 50% faster than Alpha, which was 50% more contagious than the original strain."
- Vaccines currently available in India:
  - **Covishield** (AstraZeneca's vaccine manufactured by Serum Institute of India)
    - Viral Vector-based Technology
  - **Covaxin** (manufactured by Bharat Biotech Limited)
    - Whole-virion Inactivated Coronavirus Vaccine
  - **Sputnik V**
    - Uses a heterologous recombinant adenovirus
- Vaccine Rollout Barriers in India:
  - **Low supply**
    - Interval between doses increased to 12-16 weeks
    - Only 50% of vaccines reserved for the government to distribute free through public health facilities
  - **Inequities in distribution**
    - Requirement of online registration, photo ID, and mobile number
    - Access to vaccination sites (e.g. rural areas)
  - **Potential hesitancy/concerns –** Only one study published to date on SARS-CoV-2 vaccine concerns among medical students in India (See Figure 3)

Objectives

- The goals of this study are to assess the impacts of COVID-19 on sex workers and their families in Kolkata and West Bengal, India through a collaboration with the Durbar organization
  - Changes in income; job stability; autonomy in client negotiations
  - Access to healthcare needs (STI testing, medications, condoms, PrEP knowledge)
  - **Views on COVID-19 vaccinations, hesitancies, and potential barriers**
  - Intimate partner violence
  - Mental and physical health status
  - Substance use

Figures

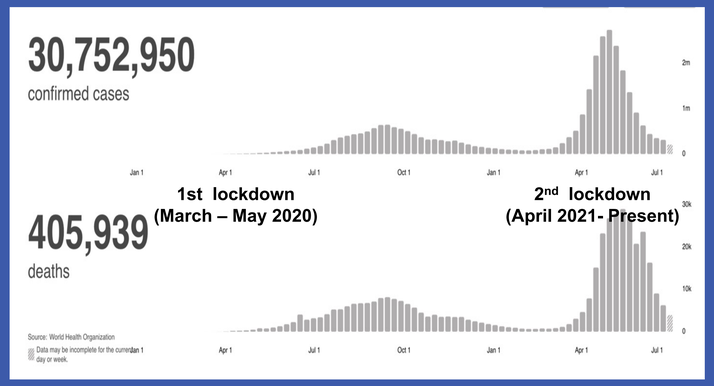

Figure 1: confirmed COVID-19 cases and deaths in India from April 2020 – July 2021

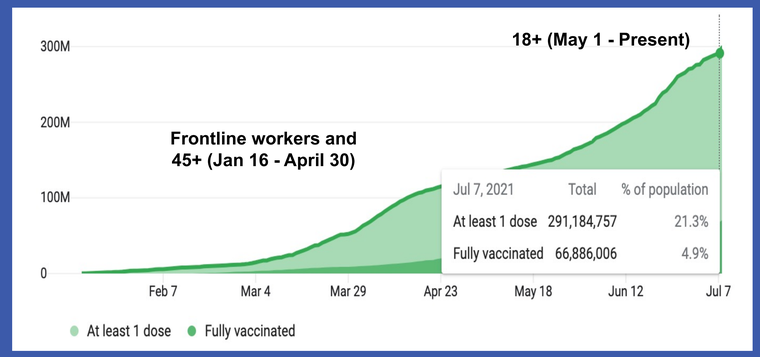

Figure 2: Vaccination rates in India

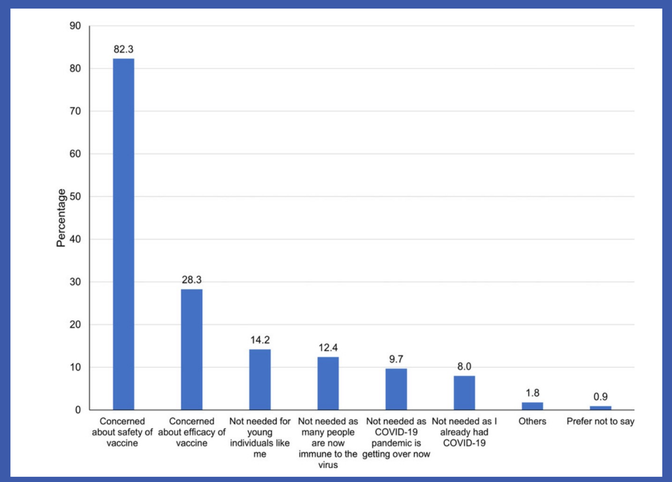

Figure 3: Reasons for COVID-19 vaccine hesitancy among medical students (February 2 - March 7, 2021)

Methods

- Develop in-depth interviews and questionnaires addressing the impacts of COVID-19 on sex workers and their families
- Literature reviews and publication support
- Edit and review the research protocol to submit to the UCLA IRB and Durbar Ethical Review Board for approval
- Data collection over the phone and in person following COVID-19 health guidelines to ensure safety of all participants
- Translations of transcripts
- Qualitative data analyses of one-on-one interviews using Dedoose, a web-based qualitative and mixed-methods research application
- Quantitative data management and statistical analysis

Discussion/Results

- Based on literature reviews, when creating the survey to analyze vaccine hesitancy it was important to emphasize the following
  - Contextual influences
    - Historical, religion/culture/ gender/socioeconomic, political, geographic barriers, pharmaceutical industry
  - Individual and group influences
    - Experience with past vaccination, beliefs, attitudes about health and prevention, knowledge awareness, trust and personal experience in healthcare, perceived risk/benefit
  - COVID-19 vaccine specific issues
- A study on COVID-19 vaccine hesitancy among medical students in India suggested the main reasons for hesitancy included:
  - Lack of awareness regarding vaccination eligibility
  - Concern regarding adverse events and efficacy of the vaccine
  - Lack of trust in government were independently predictive of vaccine hesitancy

- High priority groups considered "super spreaders"
  - COVID-19 volunteers
  - Taxi/auto drivers, rickshaw pullers
  - Sex workers
  - Transgender people
- Vaccination rollout for sex workers and other vulnerable groups without identity cards
  - District Task Force may identify specific groups in respective districts who don't have valid identification
  - Information regarding the identified groups and the # of beneficiaries to be covered, must be collated at the state level
  - Key facilitator for each group (valid ID and mobile number)
  - District Immunization Officer responsible for organization of vaccination sessions at identified Covid vaccination centers
  - Facilitated registration of individuals through Co-WIN portal

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