The SymptomSurvey: Patient and Caretaker Perspectives on COVID-19 Symptom Severity and the Expected Impact of Antivirals and Vaccines

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**Background**

Known about the subjective impact of COVID-19 signs and symptoms on how patients perceive, act, and survive. Reported outcomes (PRO) and observational outcomes (ObsRO) are underutilized in trials of antivirals against COVID-19 and other infections. Essential to know how patients/caretakers perceive symptoms.

Developed the SymptomSurvey based on relatively established criteria for disease severity to enable patients/advocacy organizations to elicit their views on COVID-19 severity and the potential impact of antivirals and vaccines.

**Results**

- By September 6, 2020, 104 responses were available
  - 50% of participants were between 35-54 years old; 89% female, 60% from the USA, 9% from the EU.
  - Respondents took 1.25 hours on average to complete the survey.
- The top 4 most important PRO/ObsRO signs/symptoms were identical: 1. Need for ICU admission, 2. Shock/multi-organ failure (same rank), 3. Seizure, and 4. Hemoptysis.
  - For ObsRO on children, positions 1 and 2 remained the same with Altered/lack of consciousness and Hypoxia ranked as numbers 3 and 4, respectively.
- When asked which signs/symptoms they would like to treat with an antiviral, participants prioritized Fever, Headache, and Hypoxia.
  - The same group indicated that they would want a COVID vaccine to protect them from 1. Need for ICU admission, 2. Shock/multi-organ failure, and 3. LRTI.
  - The average number of symptoms listed for treatment and prevention was 6.5 out of 23 [range 2;23].

**Methods**

- A self-administered online questionnaire was distributed via member listserv and social media:
  - 221 items (multiple-choice and Likert scale) and 1 open-ended question.
  - Insight into the subjective importance of signs/symptoms to adults, children, and the elderly.
  - Respondents could skip questions or take breaks while completing the survey.
- Pilot data were analyzed using Student Z-distribution of means between normally distributed but independent populations (IBM SPSS Statistics).

**Conclusions**

- Early SymptomSurvey data indicate that patients would take antivirals to treat milder COVID-19 symptoms and patients expect vaccines to protect them from severe COVID-19 outcomes.
- Tangible improvements in individual-level disease severity will be critical for antiviral development.
- Human-centered drug and vaccine development benefit from patient and caretaker perspectives.

Contact: www.vi-vi.org | www.symptomssurvey.org