



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



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Background

Little is known about the subjective impact of COVID-19 signs and symptoms on how patients function, and survive. Patient-reported outcomes (PRO) and observer-reported outcomes (ObsRO) are under-utilized in clinical trials of antivirals against COVID-19 and other respiratory infections. It is essential to know how patients/caregivers experience symptoms. We developed the [SymptomSurvey](#) based on widely established criteria for disease severity to capture the views of patient/advocacy organizations on COVID-19 severity and the expected 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/loss 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 listservs 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 elderly.
 - Respondents could skip questions or take breaks while completing the survey
- Pilot data were analyzed using Student Z-test 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
 - 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.

