

Title: The role of children in the transmission of SARS-CoV-2

Abstract

Objective: To determine whether children play a role in the transmission of SARS-CoV-2 to other children and adults; and gain insight into symptomatic and asymptomatic infections in children.

Design: Analysis of national COVID-19 notifications and prospective observational study in families with children.

Method: Information about COVID-19 patients and their contacts was obtained from the registration systems used by the public health services. In an ongoing study, patients with COVID-19 were asked to participate if they have a family with children. On two occasions nose-/throat swabs and blood were taken for PCR analysis and determination of antibodies against SARS-CoV-2.

Results: The notifications suggest that transmission finds place mainly between adults and to a lesser extent between parents and children. For the family study data are available from 54 households with a total of 227 participants. In families of a confirmed COVID-19 patient, children between 1 and 11 years were less often positive in PCR and serology than older children and adults.

Conclusion: The study gives no indications that children play an important role in the transmission of SARS-CoV-2. Children can indeed become infected, but transmission mainly takes place between adult peers and from adult family members to children. Transmission among children or from children to adults, as is known in influenza, appears to be less common. Ongoing studies should provide important information for further decision-making on control measures, such as closure of schools.