Children 'not scared' by PPE, says study

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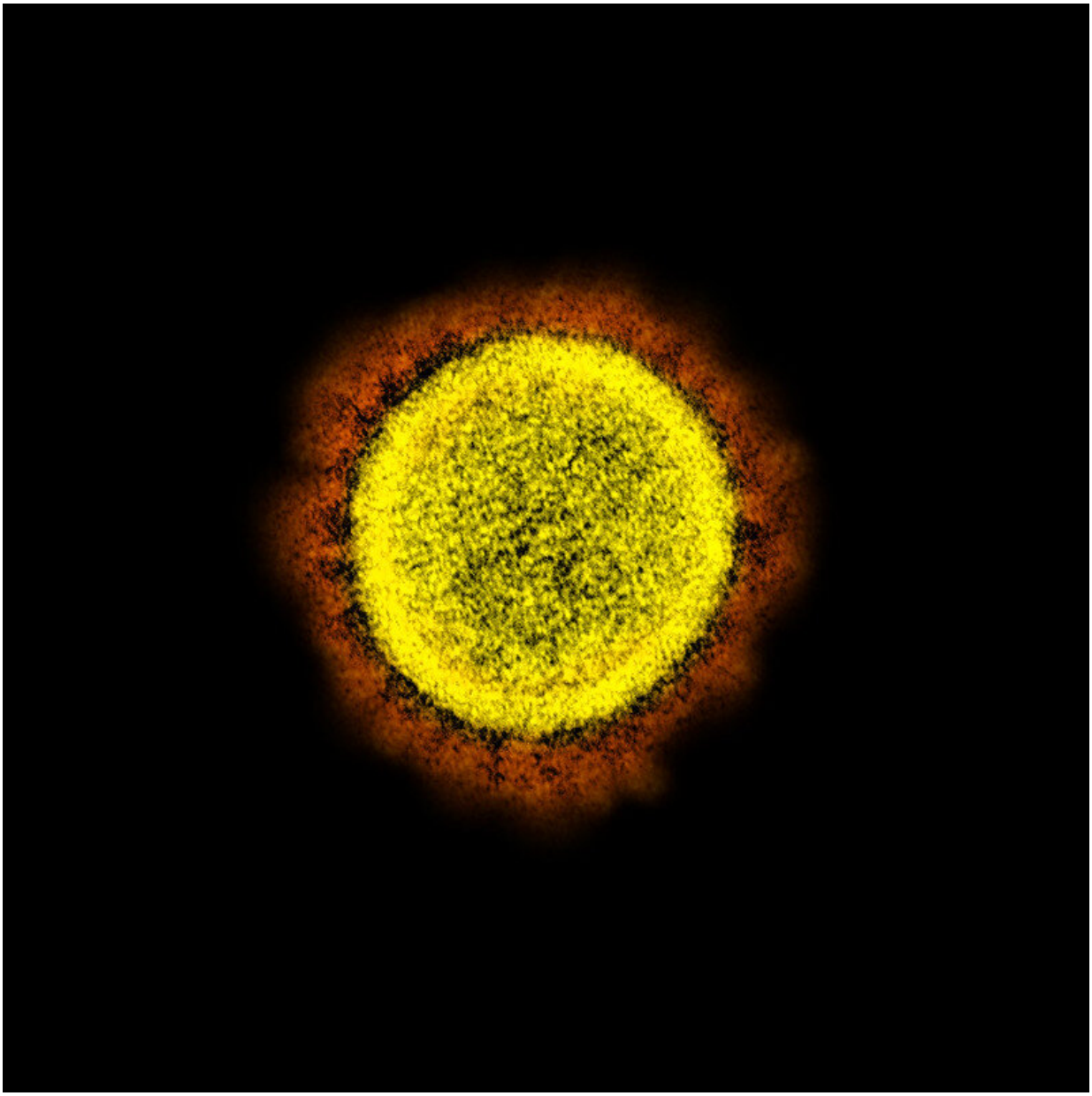

Novel Coronavirus SARS-CoV-2 Transmission electron micrograph of SARS-

CoV-2 virus particles, isolated from a patient. Image captured and color-enhanced at the NIAID Integrated Research Facility (IRF) in Fort Detrick, Maryland. Credit: National Institute of Allergy and Infectious Diseases, NIH

Since the outbreak of SARS-CoV-2, it has quickly become apparent that children are extremely unlikely to suffer severe COVID-19 illness. Nevertheless, children have had to adjust to the new world of medical staff dressed in personal protective equipment (PPE) in the same way as all other patients. A new study from one of the UK's leading children's hospitals -Alder Hey Children's Hospital in Liverpool—shows that children are not scared by PPE, and can in fact feel reassured by it.

The study was conducted by Drs Charlotte Berwick, Jacinth Tan, Ijeoma Okonkwo and their colleagues at Alder Hey. It was performed in conjunction with the Procedure Induced Anxiety Network (PIANo-UK), led by Dr. Richard Martin of Great Ormond Street Children's Hospital. This piece of work forms part of a larger multi-centre study evaluating the impact of PPE on children and young people undergoing anaesthesia.

The study results from Alder Hey were presented at the Winter Scientific Meeting of the Association of Anaesthetists, held online this year.

Anxiety before, during and after surgery in children is common and leads to complications including pain and delayed recovery. The requirement for staff to don PPE in the context of the coronavirus pandemic was thought to potentially contribute further to anxiety. The authors thus set out to investigate the true impact of PPE on fear and anxiety in children and young people.

The data collection period was from June 22 to July 5, 2020, and

included children aged between 2 and 16 years old, using validated scales to score anxiety behaviour in the anaesthetic room.

A total of 63 children with a median age of 9 years were studied: 38/63 (60%) were boys and 25/63 (40%) were girls. Half of children (31/63: 49%) scored zero for anxiety indicating perfect induction of anaesthesia. There was no significant difference in anxiety when a sedative pre-medication was given, indicating that PPE did not impact the non-sedated children any more than those children who had been given a sedative to help manage their anxiety.

The authors explain: "At the start of the pandemic, there were real fears that we would have to separate hospitalised children from their parents, prior to theatre. It was thought that we would be using massive quantities of sedatives in all our patients to enable them to come to theatre safely and minimise the potential trauma from this forced separation."

In the day surgery cohort, 45 families were surveyed, and asked to use a numerical rating scale from 0-10 in answer to the question "How scary do you find staff wearing PPE". In another question, children and young people were asked to choose one or more words from a list of descriptors about how PPE made them feel. Patients could enter free text and/or select multiple descriptors including: I don't know, happy, safe, nervous, anxious, excited, giggly, scared, confident, worried, the same or sad.

Half of the responses (23/45—50%) included responses from the child or young person undergoing surgery. A total of 42/45 (93%) families had expected staff to be wearing PPE; 15/23 (65%) children reported it made them feel happy and 15/23 (65%) safe. None of the 23 (0%) chose anxious, nervous or scared as descriptors. Parents overestimated their child's fear of PPE (see graph in link below).

The authors conclude: "This study suggests that PPE does not contribute to anxiety in children and young people who need anaesthesia and surgery. Most patients experienced extremely low levels of anxiety at induction. PPE provided reassurance and increased a child's confidence in anaesthesia. Two thirds of children reported staff PPE made them feel safe and happy, and none reported being scared by PPE."

The authors say these results were a little surprising, saying: "We did expect some children to be scared because staff were wearing PPE. There is such a mix of different masks, hoods and gowns in use at our hospital, at the very least we had thought some patients would feel anxious about being cared for by a mixture of muffled-sounding staff resembling beekeepers, graffiti artists, blacksmiths and astronauts!"

"The finding that surprised us most were the overwhelmingly positive descriptors utilised by the children to describe how staff wearing PPE made them feel with most of them stating it made them feel happy and/or safe. Not a single child chose anxious, nervous or scared to describe how PPE made them feel. We were less surprised to find that parents overestimated their child's anxiety and fear. This is a more common protective response brought about by worry and concern."

While noting their study is limited by the absence of pre-COVID-19 data, they believe their work "highlights a probable psychological shift to a 'new normal' that warrants further study. PPE will likely remain commonplace in anaesthesia, understanding its impact will allow further improvements to the quality of the patient experience."

More information: This article is based on abstract 253 of the Association of Anaesthetists (AOA) Winter Scientific Meeting, held online from January 13-14.

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