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have been amenable to prescribed local control therapy. In some respects, one can argue that this approach is more emblematic of real-world management. However, the substantially higher rate of local tumour recurrence in NRSTS 2005 than in ARST0332<sup>8</sup> suggests that a standardised approach to local tumour control might be an important consideration for future studies.

Much has been learned through these tireless efforts to make sense of paediatric non-rhabdomyosarcoma soft tissue sarcomas that will inform future studies. Further pooled analyses of treatments and outcomes for specific patient subgroups from both European and North American clinical trials might yield additional insights. In the end, however, the challenges of studying such rare sarcomas remain. Only by working together will we be able to answer many of the most important questions. Through international collaborations such as INSTRuCT,9 efforts to harmonise data from multiple cooperative clinical trial groups around the world are underway. Ultimately, expanding international partnerships will be crucial to gaining further insights into these diseases and facilitating histology-specific or biology-specific clinical trials. These two landmark studies are the perfect foundation from which to build future plans.

We declare no competing interests.

## \*Aaron R Weiss, Sheri L Spunt weissa2@mmc.org

Department of Pediatrics, Maine Medical Center, Portland, ME 04102, USA (ARW); Department of Pediatrics, Stanford University School of Medicine, Stanford, CA, USA (SLS)

- Erdmann F, Frederiksen LE, Bonaventure A, et al. Childhood cancer: survival, treatment modalities, late effects and improvements over time. Cancer Epidemiol 2021; 71: 101733.
- 2 WHO Classification of Tumours Editorial Board, eds. Soft tissue and bone tumours. WHO classification of tumours series, 5th edn, vol 3. Lyon: International Agency for Research on Cancer, 2020.
- 3 Ries LAG, Smith MA, Gurney JG, Linet M, Tamra T, Young JL, Bunin GR, eds. Cancer incidence and survival among children and adolescents: United States SEER Program 1975–1995. NIH Pub. No. 99-4649. Bethesda, MD: National Cancer Institute, SEER Program, 1999.
- Ferrari A, van Noesel MM, Brennan B, et al. Paediatric non-rhabdomyosarcoma soft tissue sarcomas: the prospective NRSTS 2005 study by the European Pediatric Soft Tissue Sarcoma Study Group (EpSSG). Lancet Child Adolesc Health 2021; published online June 29. https://doi.org/S2352-4642(21)00159-0.
- 5 Spunt SL, Million L, Chi YY, et al. A risk-based treatment strategy for non-rhabdomyosarcoma soft-tissue sarcomas in patients younger than 30 years (ARST0332): a Children's Oncology Group prospective study. Lancet Oncol 2020; 21: 145–61.
- 6 Parham DM, Webber BL, Jenkins JJ, Cantor AB, Maurer HM. Nonrhabdomyosarcomatous soft tissue sarcomas of childhood: formulation of a simplified system for grading. *Mod Pathol* 1995; 8: 705–10.
- 7 Coindre JM, Trojani M, Contesso G, et al. Reproducibility of a histopathologic grading system for adult soft tissue sarcoma. Cancer 1986; 58: 306–09.
- 8 Million L, Hayes-Jordan A, Chi YY, et al. Local control for high-grade nonrhabdomyosarcoma soft tissue sarcoma assigned to radiation therapy on ARST0332: a report from the Children's Oncology Group. Int J Radiat Oncol Biol Phys 2021; published online Feb 3. https://doi. org/10.1016/j.ijrobp.2021.01.051.
- 9 Hawkins DS, Bisogno G, Koscielniak E. Introducing INSTRuCT: an international effort to promote cooperation and data sharing. Pediatr Blood Cancer 2020; published online Sept 12. https://doi.org/10.1002/pbc.28701.

## Social vulnerability as a risk factor for death due to severe paediatric COVID-19



Despite its enduring omnipresence, the COVID-19 pandemic has so far failed to bring sufficient attention to how inequity permeates all aspects of health and disease within our societies.¹ The first year of the pandemic has had formidable and multifaceted social costs that have been disproportionately concentrated on segments of the population at greater social disadvantage, including substantial excess mortality among the most vulnerable members of society² and stark inequalities in vaccination rates between and within countries.³

According to country data reported to WHO, the burden of COVID-19 (around 163 million cases and 3.4 million deaths as of mid-May, 2021) is predominantly shared among adult populations older than 24 years. However,

on the basis of roughly a third of the total caseload with age reported, the proportion of paediatric COVID-19 cases is on the rise: from 11·8% in the week commencing April 20, 2020 (1·11% in those aged <5 years, 2·24% in those aged 5–14 years, and 8·41% in those aged 15–24 years) to 24·7% (2·29%, 8·32%, and 14·04%, respectively) in the week commencing April 19, 2021. Although part of this proportionate increase might be due to fewer cases occurring in older adults because of vaccination, COVID-19 in children is a cause for concern given their particular vulnerabilities.<sup>4</sup>

In The Lancet Child & Adolescent Health, Eduardo A Oliveira and colleagues<sup>5</sup> report on a large observational study of the clinical characteristics and risk factors for

Published Online June 10, 2021 https://doi.org/10.1016/ 52352-4642(21)00166-8 See **Articles** page 559



death based on a nationwide administrative database of hospitalised patients (aged <20 years) with laboratoryconfirmed COVID-19 in Brazil, one of the countries most affected by the ongoing pandemic.<sup>6</sup> The results showed a somewhat higher severity and increased casefatality burden than in previously reported paediatric studies, which have mostly been from high-income countries—a finding properly contextualised by the fact that their study sample included hospitalised paediatric patients only, and probably over-represented those at the severe end of the disease spectrum. Notably, the risk factors for death due to paediatric COVID-19 were assessed through a Fine and Gray hazard model for competing risks analysis, a novel approach to explore social inequalities in in-hospital deaths. Residence in the North and Northeast macroregions (the least developed in the country)7 and Indigenous ethnicity were risk factors that significantly increased the probability of death due to COVID-19, independently of age and the presence of comorbidities. Unfortunately, the hospital database used in the study-like most routine data sources-does not include information on the socioeconomic status of a patient's family, but a social gradient can be assumed to be associated with poverty. This finding would be consistent with seroprevalence results from EPICOVID-19, the nationwide population-based study done in Brazil in 2020, in which the seroprevalence of SARS-CoV-2 was 3.9% in children from the poorest quintile of families, in contrast to 1.4% in those in the wealthiest quintile (p=0.05).8

The ecosocial distribution of COVID-19 is consistent with what has so far been observed for most diseases and health problems. The adverse circumstances faced by many children and adolescents in low-income and middle-income countries lead to vulnerability and a disproportionately high risk of death due to COVID-19 in this population. Oliveira and colleagues' findings are reminiscent of the seminal study of Stringhini and colleagues<sup>10</sup> on low socioeconomic status as a determinant of premature mortality from non-communicable diseases, independently and with more attributable power than the well known clinical risk factors. Low socioeconomic status means poverty at the individual level, but also means income and social inequality at the societal and ecological levels.

It is in crises of pandemic proportions, such as the current one, that the precious commodities of human and social capital become crucial. The former (ie, the inventory of knowledge, skills, aptitudes, and other individual abilities chiefly nurtured in early life) makes it possible to manage adversity healthily. The latter (ie, the reserve of shared social resources and contextual factors based on rules of reciprocity, which generates social cohesion, credibility, and trust in institutions and general concern for the wellbeing of the others) is a measure of a good and fair government. Building back better from COVID-19 will mean focusing on a fairer, intensified nurturing of human and social capital, especially among the youngest generations.

We declare no competing interests. The authors alone are responsible for the views expressed in this publication, and they do not necessarily represent the decisions or policies of the Pan American Health Organization.

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## \*Oscar J Mujica, Cesar G Victora mujicaos@paho.org

Pan American Health Organization, Washington, DC 20037, USA (OJM); Federal University of Pelotas, Pelotas, Brazil (CGV)

- Marmot M, Allen J. COVID-19: exposing and amplifying inequalities. J Epidemiol Community Health 2020; 74: 681–82.
- 2 Pifarré I Arolas H, Acosta E, López-Casasnovas G, et al. Years of life lost to COVID-19 in 81 countries. Sci Rep 2021; 11: 3504.
- 3 Wouters OJ, Shadlen KC, Salcher-Konrad M, et al. Challenges in ensuring global access to COVID-19 vaccines: production, affordability, allocation, and deployment. *Lancet* 2021; 397: 1023–34.
- 4 Phillips T. 'This is tragic': fears from Latin America's young people as COVID accelerates. May 5, 2021. https://www.theguardian.com/world/2021/may/05/coronavirus-covid-latin-america-deaths-young-people (accessed May 11. 2021).
- Oliveira EA, Colosimo EA, Simões e Silva AC, et al. Clinical characteristics and risk factors for mortality among hospitalised children and adolescents with COVID-19 in Brazil: an analysis of a nationwide database. Lancet Child Adolesc Health 2021; published online June 10. https://doi.org/ 10.1016/S2352-4642(21)00134-6.

- Rocha R, Atun R, Massuda A, et al. Effect of socioeconomic inequalities and vulnerabilities on health-system preparedness and response to COVID-19 in Brazil: a comprehensive analysis. Lancet Glob Health 2021; 9: e783-92
- Corvalan C, Duarte E, Mujica OJ, Ramalho W, Vazquez E. Atlas of sustainable development and health, Brazil: 1991 to 2010. Brasilia: Pan American Health Organization, 2015 (in Portuguese).
- Barros FC, Hartwig FP, Barros AJD, et al. COVID-19 and social distancing among children and adolescents in Brazil. Rev Saude Publica (in press).
- Antúnez-Montes OY, Escamilla MI, Figueroa-Uribe AF, et al. COVID-19 in South American children: a call for action. Pediatr Infect Dis J 2020; 39: e332-34.
- Stringhini S, Carmeli C, Jokela M, et al. Socioeconomic status and the  $25 \times 25$  risk factors as determinants of premature mortality: a multicohort study and meta-analysis of 1-7 million men and women. Lancet 2017; 389: 1229-37.
- Bhutta ZA, Victora C, Boerma T, et al. Optimising the continuum of child and adolescent health and development. Lancet 2019; 393: 1080-82.
- Elgar FJ, Stefaniak A, Wohl MJA. The trouble with trust: time-series analysis of social capital, income inequality, and COVID-19 deaths in 84 countries. Soc Sci Med 2020; 263: 113365.

## Young people's mental health during the COVID-19 pandemic (W)





https://doi.org/10.1016/

S2352-4642(21)00177-2

Published Online June 24, 2021

There has understandably been widespread concern about the impact of the COVID-19 pandemic and associated restrictions on the mental health of children and young people, with evidence of recent increases in the prevalence of mental health problems. Yet there has been relatively little evaluation of how mental health has changed over the pandemic and varied for children and young people living in a range of circumstances. One exception is the Co-SPACE study, a UK-based longitudinal online survey of parents and carers of children and adolescents aged 4-16 years, and adolescents aged 11-16 years, who have been invited to participate monthly since the fifth day of the UK's first national lockdown in March, 2020. Co-SPACE has now run for over a year, and more than 8700 families have provided data using the well validated Strengths and Difficulties Questionnaire (SDQ).2 As the study uses convenience sampling and does not have pre-pandemic data, it cannot answer how the pandemic affected the prevalence of mental health problems. Nevertheless, the collection of monthly data from a population with diverse social and demographic backgrounds provides a unique opportunity to examine how things have changed over time throughout the pandemic, and, crucially, for whom.

Between March, 2020, and March, 2021, we have seen clear increases in parent-reported symptoms of SDQ behavioural and attentional difficulties at times of peak restrictions, when most children were not physically attending school (figure).3 These symptoms increased throughout the first national lockdown (March-June, 2020), decreased and stabilised as

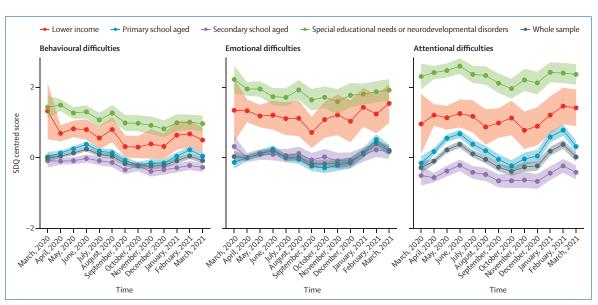


Figure: Changes in parent-reported child mental health difficulties (using the SDQ) in the UK Co-SPACE sample, from March, 2020, to March, 2021 Each SDQ subscale score is grand mean centred. The overall Co-SPACE sample consists of 8752 families (905 [10·3%] on lower income, 5443 [62·2%] with primary school aged (4-10 years) children, 3309 [37-8%] with secondary school aged (11-16 years) children, and 1547 [17-7%] with children with special educational needs or neurodevelopmental disorders). SDQ=Strengths and Difficulties Questionnaire.

For more on the Co-SPACE sample see https://cospace oxford.org/wp-content/ uploads/2021/04/Report-10\_05May2021.pdf