

Author's Proof

Before checking your proof, please read the instructions below. Carefully read the entire proof and mark all corrections in the appropriate place, using the Adobe Reader commenting tools (**Adobe Help**).

Provide your corrections in one single PDF file or post your comments in the Production forum making sure to reference the relevant query/line number, and to upload or post all your corrections directly in the Production forum, to avoid any comments being missed. **We do not accept corrections in the form of edited manuscripts nor via email.**

Before you submit your corrections, please make sure that you have checked your proof carefully as once you approve it, you won't be able to make any further corrections.

Submitting your corrections is a 2-step process. First, you need to upload your file(s). Second, you will need to approve your proof or request a new one.

In order to ensure the timely publication of your article, please submit the corrections within 48 hours. After submitting, do not email or query asking for confirmation of receipt.

If you have any additional questions, contact pediatrics.production.office@frontiersin.org.

Quick Check-List

- Author names Complete, accurate and consistent with your previous publications.
- Affiliations Complete and accurate. Follow this style when applicable: Department, Institute, University, City, Country.
- Tables Make sure our formatting style did not change the meaning/alignment of your Tables.
- Figures Make sure we are using the latest versions.
- Funding and Acknowledgments List all relevant funders and acknowledgments.
- Conflict of Interest Ensure any relevant conflicts are declared.
- **Supplementary files** Ensure the latest files are published and that no line numbers and tracked changes are visible. Also, the supplementary files should be cited in the article body text.
- Queries Reply to all typesetters queries below.
- Content Read all content carefully and ensure any necessary corrections are made.

Author Queries Form

Query No.	Details Required	Author's Response
Q1	The citation and surnames of all of the authors have been highlighted. Check that they are correct and consistent with the authors' previous publications, and correct if need be. Please note that this may affect the indexing of your article in repositories such as PubMed.	
Q2	Please ask the following authors to register with Frontiers (at https:// www.frontiersin.org/Registration/Register.aspx) if they would like their names on the article abstract page and PDF to be linked to a Frontiers profile. Please ensure to provide us with the profile link(s) when submitting the proof corrections. Non-registered authors will have the default profile image displayed. "Roberto Scendoni."	

Query No.	Details Required	Author's Response
Q3	Confirm that all author affiliations are correctly listed. Note that affiliations are listed sequentially as per journal style and requests for non-sequential listing will not be applied.	
Q4	Confirm that the email address in your correspondence section is accurate.	
Q5	Verify that all the equations and special characters are displayed correctly.	
Q6	Confirm that the Data Availability statement is accurate. Note that we have used the statement provided at Submission. If this is not the latest version, please let us know.	
Q7	Confirm that the details in the "Author Contributions" section are correct.	
Q8	Ensure to add all grant numbers and funding information, as after publication this will no longer be possible. All funders should be credited and all grant numbers should be correctly included in this section.	
Q9	Confirm whether the insertion of the article title is correct.	
Q10	Confirm that the keywords are correct and keep them to a maximum of eight and a minimum of five. (Note: a keyword can be comprised of one or more words.) Note that we have used the keywords provided at Submission. If this is not the latest version, please let us know.	
Q11	Check if the section headers (i.e., section leveling) were correctly captured.	
Q12	Confirm that the short running title is correct, making sure to keep it to a maximum of five words.	
Q13	Please confirm whether the included corresponding authors are fine.	
Q14	Provide the volume number, page range, and doi for "(2)."	
Q15	Provide the city name for "(11)."	

Query No.	Details Required	Author's Response
Q16	Provide the doi for the following references. "(13, 14, 22)."	
Q17	Provide the volume number for "(27)."	
Q18	Provide the complete details for the following references. "(32, 34)."	
Q19	Provide the publication year for "(37)."	
Q20	Provide the journal title, volume number, and page range for "(45)."	
Q21	Provide the volume number and page range for "(47)."	
Q22	Frontiers guidelines require listing the first 6 authors + et al. for articles with more than 6 authors. Please provide the names of the other X authors.	



4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20 21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57



58 59

60

61

62

63

64

65

66 Q9

67

68

69 Q1

70

71

72

Legal and Ethical Issues Regarding Minors in the Italian Coronavirus Flu Emergency

Piergiorgio Fedeli¹, Nunzia Cannovo², Roberto Scendoni³ and Mariano Cingolani^{3*}

¹ School of Law, Legal Medicine, Camerino University, Camerino, Italy, ² Federico II University Ethics Committee, Naples, Italy, ³ Law Department, Legal Medicine Section, Macerata University, Macerata, Italy

On February 21, 2020, Italy became one of the countries hit by an epidemic of the new coronavirus that causes "severe acute respiratory syndrome coronavirus 2" (SARS-CoV-2). Even a month before that, however, the Italian government began issuing a series of decrees and ordinances aimed at the containment of the virus in Italy, the first of them on January 25, 2020. The COVID 19 infection has been faced as an epidemic through measures to enforce a high degree of isolation. These regulations hold for minors, as well, with consequent difficulties for this age group. While at the moment young people appear to be the least vulnerable to the severe complications of COVID 19, the psychological problems that may be brought on by pandemic-related restrictions should be taken into serious consideration.

OPEN ACCESS

Edited by:

Frederick Robert Carrick. University of Central Florida College of Medicine, United States

Reviewed by:

Wasantha Jayawardene, Indiana University Bloomington. United States Danilo Buonsenso. Catholic University of the Sacred Heart. Italv

> *Correspondence: Mariano Cingolani m.cinaolani54@gmail.com

Specialty section:

This article was submitted to Children and Health. a section of the journal Frontiers in Pediatrics

Received: 20 March 2020 Accepted: 04 January 2021 Published: xx January 2021

Citation:

Fedeli P, Cannovo N, Scendoni R and Cingolani M (2021) Legal and Ethical Issues Regarding Minors in the Italian Coronavirus Flu Emergency. Front. Pediatr. 9:544461. doi: 10.3389/fped.2021.544461

Keywords: children, COVID-19, Italian law, SARS, care

INTRODUCTION

In 2017 in Italy, researchers identified a coronavirus cluster in bats in northern Italy, with peculiar genetic characteristics (1), but no further inquiry was conducted on its virulence in the hosts. Apparently, that viral cluster differed from the one isolated in the population of the Wuhan region of China, which then spread to 17 other countries (2).

The new coronavirus causes "severe acute respiratory syndrome coronavirus 2" (SARS-CoV-2), so named because it is correlated to the coronavirus that provoked SARS (SARS-CoVs). SARS-CoV-2 is classified genetically within the Betacoronavirus Sarbecovirus subgenus. The estimate of the SARS-CoV-2 basic reproduction number (R_O), which describes the intensity of an infectious disease outbreak, varies from the WHO figure of 1.4-2.5 (3) to the University of York calculation of 6.47 (4).

The main source of contagion is sick patients or those who are in the incubation period of the virus (5). Propagation happens person-to-person through respiratory droplets transmitted when a patient sneezes or coughs (6). Currently, there is no demonstration of vertical transmission or transmission through maternal milk.

At greatest risk of grave pulmonary and cardiac complications (diffuse alveolar damage, vascular thrombosis, myocardial infarction) (7) are those with chronic diseases and low immune response (8), including the elderly, while the symptomatology in children appears to be less grave, and asymptomatic and mild cases have been reported in the range between 35 and 56% (9).

The incubation period ranges from 2 to 14 days, with the greatest frequency in a range between 3 and 7 days (10), as the virus can survive in the environment as long as 9 days. Common disinfectants (sodium hypochlorite) are effective against the virus. Transmission by asymptomatic subjects has not been excluded, and thus currently isolation is the first form of prevention (11).

122

123

124

125

Covid-19 in Minors

Q12

174

176

197

201

202

203

204

Notwithstanding this information, the infection from 115 COVID-19 has been faced as an epidemic, through measures to 116 enforce a high degree of isolation. This has entailed a complex 117 management model with individual measures, structures and 118 logistics aimed at avoiding the spread of the infection in the 119 nosocomial sphere and consequently in the community. 120

THE CLINICAL ASPECTS OF COVID 2019 IN CHILDREN

Globally, respiratory viruses are among the principal causes of 126 death and morbidity in minors (12). Early in the outbreak, 127 128 the National Respiratory Diseases Clinical Research Center and 129 Respiratory Diseases Group of the Chinese Pediatric Association began a study on the clinical features of COVID 19 in pediatric 130 patients, providing the first information on the characteristics of 131 COVID 19 flu in children (13), which currently seems to be less 132 severe than the clinical forms in adults (14). 133

One Chinese study indicated that children are seldom attacked 134 by COVID 19 or SARS-CoV, and suggested that this was due 135 to the Chinese vaccination program for minors. In particular, 136 "the RNA-virus vaccines and the adjuvants in vaccine programs 137 may help children escape from the infection" (15). However, 138 according to other authors, the number of pediatric patients 139 suffering from COVID 19 "could rise in the future, and a lower 140 number of pediatric patients at the beginning of a pandemic 141 does not necessarily mean that children are less susceptible to the 142 infection" (16, 17). Complete understanding of the physiological 143 mechanisms underlying the lower rate of infection among 144 children could help in battling the diametrically opposite gravity 145 of the infection in adults. 146

Detailed study of the genetic characteristics of patients is 147 needed to explain the extreme variability of clinical phenotypes 148 as well as the variation in responsiveness to certain drugs (18, 19). 149

The GEFACOVID project will develop a blood test that will 150 serve to "stratify patients based on genetic traits influencing the 151 response to coronavirus infection, and, in turn, choose the most 152 suitable treatment approach" (20). 153

On the basis of experiences reported in China (5), the clinical 154 manifestations of the COVID 19 infection in children are "fever, 155 fatigue and cough, nasal congestion, runny nose, expectoration, 156 diarrhea, headache, etc." The fever is generally low or absent. 157 After about a week of infection, children may develop "dyspnea, 158 cyanosis accompanied by systemic toxic symptoms, such as 159 malaise or restlessness, poor feeding, bad appetite and less 160 activity." There can also be "abdominal discomfort, vomiting, 161 abdominal pain and diarrhea." 162

Respiratory insufficiency may arise, but can easily be corrected 163 with a few days of oxygen therapy administered by nasal catheter 164 165 or mask. In the most severe cases, "septic shock, metabolic acidosis and irreversible bleeding and coagulation dysfunction 166 may occur." "In the early phase of the disease, white blood cell 167 count is normal or decreased, or with decreased lymphocyte 168 count (21)." 169

Authors report the presence of different features of the 170 MIS-C (e.g., toxic shock syndrome, secondary hemophagocytic 171

lymphohistiocytosis, or macrophage activation syndrome) (22) 172 and Kawasaki-like disease (23). 173

Radiological signs attest the presence of viral pneumonia at the beginning, which can advance to the point of signs of lung 175 consolidation (24, 25).

Lung ultrasound abnormalities have been described, so 177 an ultrasound approach could represent an adjunct tool for 178 achieving a rapid severity assessment of COVID-19 lung 179 involvement for children population (9). 180

There has been no indication of vertical transmission from 181 mother to infant, not even through maternal milk (25). In fact, 182 the Italian Society of Neonatology has proposed that a woman 183 who has tested positive for corona virus but is asymptomatic 184 should be allowed to nurse and be close to her newborn. 185 Instead, if she shows symptoms of fever, coughing and respiratory 186 secretions, she and her newborn should be separated, if she 187 consents to this and if the logistics of the hospital permit it (26). 188

No standard treatment has been identified, and current 189 treatment plans for children are adapted from those for 190 adults (20). 191

Contact between medical personnel and patients must be kept 192 to the minimum; visitors should have limited access, and wear 193 proper protective items (5). In such a context, there is also need 194 for psychological support (25, 27). In fact, some studied have also 195 asked whether a few weeks or months of forced separation can have enduring effects, and noted that brief traumatic events can have life-long consequences (28, 29), such as posttraumatic stress 198 disorder, anxiety disorder, depression, aggression, psychosomatic 199 complaint and suicidal ideation (30, 31). 200

ITALIAN CARE FOR MINOR PATIENTS

The choice in Chinese healthcare protocols to isolate minors 205 suffering from COVID 19 and to limit their contact with 206 others seems quite problematic for an Italian setting. In general, 207 visitors who provide assistance to patients have been identified 208 as the source of various infections, including flu and SARS, 209 but no studies have been conducted on effective methods for 210 screening the health status of visitors (12). Similarly, no proof 211 has been provided for the efficacy of having visitors wear personal 212 protection devices, such as masks, gloves, protective eyewear, or 213 gowns. Further, if these barrier precautions are not used correctly, 214 those who are in very close contact with patients, supporting and 215 feeding them, could then come into contact with other patients 216 and transmit the disease to them. 217

The situation in which a healthy parent desires to stay 218 with a child sick with COVID 19 presents complex questions. 219 Italian guidelines on precautionary isolation contain no explicit 220 exceptions when the patient is a minor. However, in such a case, 221 even if the parent uses personal protection devices to prevent 222 contagion, allowing him or her to stay there may indicate a lack 223 of proper attention to and protection of the health of the parent. 224

Italian legislation recognizes the minor as a vulnerable subject 225 for whom specific protections should be provided by parents or 226 legal representatives, who are also required by law to care for 227 the minor's health. In the case of disagreement between parents, 228

288

a judge may assign decisional power to the parent who in the 229 particular case is deemed most suitable for pursuing the interests 230 of the child. In addition, the judge can void parental authority 231 when the parent violates or neglects responsibilities or abuses this 232 power with grave prejudice to the child (art. 330 Civil Code) (32). 233

Minors "must receive information about healthcare choices in 234 a form appropriate to their ability to understand, so that they can 235 express their wishes" (L. 219/17 art. 3). 236

Informed consent to treatment for a minor is provided 237 by parents or legal guardians (33), according to Law n. 219 238 of December 22, 2017 "Regulations on informed consent and 239 advance directives for treatment," which establishes the limits and 240 241 methods for acquiring consent (34).

242 When off label treatment is proposed, as may be the case 243 with COVID 19, the weight of the parents' informed consent is even more important (35). In these cases, if physicians fail 244 to give parents scientific evidence in support of the need for 245 such treatment, parents may oppose them. Clearly, the COVID 246 19 epidemic is a situation of emergency and experimentation. 247 Article 5 of Law n. 219 on Shared planning of treatment 248 calls for more adequate counseling and for the involvement 249 of parents, the minor, and the physician in treatment choices, 250 but this does not seems completely adequate for managing 251 situations of conflict that may arise among them, especially when 252 the treatment proposed is not backed by sufficient scientific 253 evidence. Can an emergency situation justify the administration 254 of drugs of uncertain efficacy, especially when the patient is a 255 minor? In addition, since the core issue is essentially clinical 256 257 experimentation, would it not be useful to request urgently the opinion of an Ethics Committee? Would it not be desirable to 258 receive some direction from the Health Ministry? This would be 259 valuable not only for minors, but for all gravely ill subjects who 260 are incapable of expressing their own decision. 261

Fortunately, COVID 19 has not generated dramatic clinical 262 manifestations in minors, and Italy has not had to face these 263 problematic issues in the management of pediatric patients. 264

Parri et al. believe that "the management of pediatric COVID-265 19 patients in the Emergency Department is represented by 266 the organizational burden (e.g., management of patient flow), 267 rather than any one specific clinical task," so proper allocation of 268 resources and treatment is needed, as well as strong collaboration 269 at different levels of the health care system (9). 270

Other considerations not strictly of a healthcare nature 271 concern the right to study. 272

It is evident that the restrictive regulations introduced with the 273 DPCM of March 4 2020 (36) closing all schools and universities 274 in Italy will undermine the right to study of minors, but it 275 was ordered with the intent of preventing possible COVID 19 276 infection, which in the long run may be the greater good. 277

Subsequent DPCMs confirmed the suspension of teaching in 278 279 presence until 31 July 2020.

At the same time, distance learning was activated to safeguard 280 the right to study, and special arrangements were made for 281 in-person lessons for children with disabilities (37). 282

The Ministerial Decree of 26 March 2020, n. 186 (38) 283 stipulated that, throughout the period of suspension of 284 educational activities, local authorities could assist pupils with 285

disabilities through the provision of individual household 286 benefits, aimed in particular at supporting the use of distance learning activities.

Ministerial Decree n. 39 of 26 June 2020 (39) adopted the Document for the planning of school, educational and training activities in all institutions of the national education system for the school year 2020/2021.

With Ministerial Decree n. 80 of 3 August 2020 (40), the Guideline and Guidance Document was adopted for the resumption of in presence activities at educational services and children's schools.

On August 6, 2020 (41) the Security Protocol ordered the start of the school year in compliance with safety rules provided by Ministerial Decree 39/2020 (39).

The actions outlined in these documents are based on a plausible setting for the first half of the year of the next school year (2020/2021) assuming the prolongation of the pandemic at a global level and new episodes of contagion at a local level in autumn-winter, up to a more disastrous perspective regarding a new temporary suspension of teaching activities.

Many authors have reported that minors indirectly suffered social health consequences from the restrictions established to limit the spread of pandemic, such as social distancing measures, school closures and the cessation of recreational activities, which are important for the cultural, social and psychological growth of children and adolescents (42-44).

Buonsenso et al. believe that the routine and long-lasting separation of children from their families, lengthy school closures and not being able to visit public outdoor spaces or play with other children have affected the mental health of children and are no longer ethically acceptable (27).

In fact, they believe that over prolonged periods, schools closures are more damaging to children and to society in the long term than risks of transmission of COVID-19 (45).

CONCLUSION

The current Italian legislation does not allow for concrete and active participation of minors, especially those under the age of 12, in the discussion of choices about their health, even when the minor shows good capacity of discernment (46).

The healthcare system and society should guarantee the 328 well-being of minors by reflecting upon their point of view, 329 discussing it coherently, and analyzing the various aspects 330 to reach well-thought-out solutions in the best interests of 331 the children/adolescents. 332

Since the beginning of the pandemic emergency, minors have 333 been labeled as vectors for the transmission of SARS-CoV-2, 334 and the measures of social and family isolation have turned 335 their world upside down. Even though studies have suggested 336 that children and adolescents have lower susceptibility to the 337 virus than adults and play a lesser role in transmission (47-338 49), activities that serve this age group have been the first to be 339 strongly limited. 340

Recently, the National Committee for Bioethics (NBC) urged 341 that possible measures to counter the pandemic should be 342

Frontiers in Pediatrics | www.frontiersin.org

400 Q8

401

402

403

404

405

406

407

evaluated according to the ethical and juridical criterion of the 343 best interests of minors, and those whose negative consequences 344 most affect this age group should be limited as much as 345 possible (50). 346

The NBC called for the promotion of consciousness-raising 347 about the responsibility to care for individual and public health, 348 particularly regarding needs related to the pandemic, as a 349 preferable alternative to limitation of activities dedicated to 350 minors. This effort should be part of the school curriculum and 351 should also involve extracurricular educational initiatives that 352 include family members as well. 353

The concrete risk of having an entire generation of children 354 and adolescents with psychological problems brought on by 355 pandemic-related restrictions, even when this age group shows 356 a fairly minimal clinical expression of COVID-19, should give 357 pause to institutions; they should take into consideration the 358

REFERENCES

359

360

361

362

363

364

365

366

367

368

369

370

371

372

373

374

375

376

377

378

379

380

381

382

383

384

385

386

387

388

389

390

391

392

393

394

395

396

397

398

399

Q16

O14

- 1. Rizzo F, Edenborough KM, Toffoli R, Culasso P, Zoppi S, Dondo A, et al. Coronavirus and paramyxovirus in bats from Northwest Italy. BMC Vet Res. (2017) 13:396. doi: 10.1186/s12917-017-1307-x
- 2. Zhangkai J, Cheng JS. 2019 Novel coronavirus: where we are and what we know. Infection. (2020).
- WHO. Statement on the Meeting of the International Health Regulations 3. 2005. Emergency Committee Regarding the Outbreak of Novel Coronavirus (2019-nCoV) (2020). Available online at: https://www.who.int/news-room/ detail/30-01-2020-statement-on-the-second-meeting-of-the-internationalhealth-regulations-(2005)-emergency-committee-regarding-the-outbreakof-novel-coronavirus-(2019-ncov)
- 4. Tang B, Wang X, Li Q, Bragazzi NL, Tang S, Xiao Y, et al. Estimation of the transmission risk of 2019-nCov and its implication for public health interventions. J Clin Med. (2020) 9:462. doi: 10.3390/jcm9020462
- 5. Chen ZM, Fu JF, Shu Q, Chen YH, Hua CZ, Li FB, et al. Diagnosis and treatment recommendations for pediatric respiratory infection caused by the 2019 novel coronavirus. World J Pediatr. (2020) 16:240-6. doi: 10.1007/s12519-020-00345-5
- 6. Chan JF, Yuan S, Kok KH, To KK, Chu H, Yang J, et al. A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating personto-person transmission: a study of a family cluster. Lancet. (2020) 395:514-23. doi: 10.1016/S0140-6736(20)30154-9
- 7. Scendoni R, Marchesani F, Cannovo N, Fedeli P, Cingolani M. Histopathology of COVID-19 pneumonia in two non-oncological, nonhospitalised cases as a reliable diagnostic benchmark. Diagn Pathol. (2020) 15:73. doi: 10.1186/s13000-020-00990-4
- Jaillon S, Berthenet K, Garlanda C. Sexual dimorphism in innate immunity. 8. Clin Rev Allergy Immunol. (2019) 56:308-21. doi: 10.1007/s12016-017-8648-x
- 9. Parri N, Lenge M, Cantoni B, Arrighini A, Romanengo M, Urbino A, et al. COVID-19 in 17 Italian Pediatric Emergency Departments. Pediatrics. (2020) 146:e20201235. doi: 10.1542/peds.2020-1235
- 10. Li Q, Guan X, Wu P, Wang X, Zhou L, Tong Y, et al. Early transmission dynamics in Wuhan, China, of novel coronavirus-infected pneumonia, N Engl J Med. (2020) 382:1199-207. doi: 10.1056/NEJMoa2001316
- 11. Cascella M, Rajnik M, Cuomo A, Dulebohn SC, Di Napoli R. Features, Evaluation and Treatment Coronavirus (COVID-19). StatPearls Publishing (2020)
- 12. Schuster JE, Williams JV. Emerging respiratory viruses in children. Infect Dis Clin N Am. (2018) 32:65-74. doi: 10.1016/j.idc.2017.10.001
- Shen KL, Yang YH. Diagnosis and treatment of 2019 novel coronavirus infection in children: a pressing issue. World I Pediatr. (2020) 16:219-21.
- 14. Wang XF, Yuan J, Zheng YJ, Chen J, Bao YM, Wang YR, et al. Clinical and epidemiological characteristics of 34 children with 2019 novel coronavirus infection in Shenzhen. Zhonghua Er Ke Za Zhi. (2020) 58:E008.

bioethical issues that are inevitably interwoven with political, economic, social and healthcare ones.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author/s.

AUTHOR CONTRIBUTIONS

RS and MC: substantial contributions to the conception or design of the work or the acquisition of information. PF and NC: drafting the work or revising it critically for important intellectual content. All authors read and approved the final manuscript.

- 15. Zhang L, Liu Y. Potential interventions for novel coronavirus in China: a systematic review. J Med Virol. (2020) 92:479-90. doi: 10.1002/jmv.25707
- 16. Lee PI, Hu YL, Chen PY, Huang YC, Hsueh PR. Are children less susceptible to COVID-19? J Microbiol Immunol Infect. (2020) 53:371-2. doi: 10.1016/j.jmii.2020.02.011
- 17. Cao Q, Chen Y-C, Chen C-L, Chiu C-H. SARS-CoV-2 infection in children: transmission dynamics and clinical characteristics. J Formos Med Assoc. (2020) 119:670-3. doi: 10.1016/j.jfma.2020.02.009
- 18. Abdo AE. Anti-HCV, nucleotide inhibitors, repurposing against COVID-19. Life Sci. (2020) 248:117477. doi: 10.1016/j.lfs.2020.117477
- 19. Cannovo N, Cingolani M, Guarino R, Fedeli P. Regulation of biobanks in Italy. Front Pediatr. (2020) 8:415. doi: 10.3389/fped.2020. 00415
- 20. Bioscience Institute. Bioscience Genomics Involved in a Genetic Study on COVID-19. (2020) Available online at: https://bioinst.com/en/biosciencegenomics-involved-in-a-genetic-study-on-covid-19/ (accessed April 10, 2020).
- 21. Shen K, Yang Y, Wang T, Zhao D, Jiang Y, Jin R, et al. Diagnosis, treatment, and prevention of 2019 novel coronavirus infection in children: experts' consensus statement. World J Pediatr. (2020) 16:223-31. doi: 10.1007/s12519-020-00344-6
- 22. Feldstein LR, Rose EB, Horwitz SM, Collins JP, Newhams MM, Son MBF, et al. Multisystem inflammatory syndrome in U.S. children and adolescents. N Engl I Med. (2020) 383:334-46.
- 23. Verdoni L, Mazza A, Gervasoni A, Martelli L, Ruggeri M, Ciuffreda M, 439 et al. An outbreak of severe Kawasaki-like disease at the Italian epicentre 440 of the SARS-CoV-2 epidemic: an observational cohort study. Lancet. (2020) 395:1771-8. doi: 10.1016/S0140-6736(20)31103-X
- 24. Dong Y, Mo X, Hu Y, Qi X, Jiang F, Jiang Z, et al. Epidemiology 442 of COVID-19 among children in China. Pediatrics. (2020)443 145:e20200702. doi: 10.1542/peds.2020-0702 444
- 25. Lu Q, Shi Y. Coronavirus disease (COVID-19) and neonate: what neonatologist need to know. J Med Virol. (2020) 92:564-7. doi: 10.1002/jmv.25740
- 26. Repubblica. Available online at: https://www.repubblica.it/salute/medicinae-ricerca/2020/03/01/news/coronavirus_allattamento_al_seno-249941021/ (accessed March 15, 2018).
- Buonsenso D, De Rose C, Mariotti P. Children experienced new or worsening 27. tic issues when they were separated from their parents during the Italian COVID-19 lockdown. Acta Paediatr. (2020) 1-3. doi: 10.1111/apa.15684
- 28. MacKenzie MJ, Bosk E, Zeanah CH. Separating families at the border consequences for children's health and well-being. N Engl J Med. (2017) 376:2314-15. doi: 10.1056/NEIMp1703375
- 29. Shonkoff JP, Garner AS, Committee on Psychosocial Aspects of Child and Family Health; Committee on Early Childhood, Adoption, and Dependent 455 Care; Section on Developmental and Behavioral Pediatrics. Lifelong effects 456

436 Q16 437

430

431

432

433

434

435

438

441

445

446

447

448

449 450 Q17



519

520

521

522

Q20

022

Q21

457

458

Q18

Q18

Q19

495

496

497

498

499

500

501

502

503

504

505

506

507

508

509

510

511

512

513

- of early childhood adversity and toxic stress. *Pediatrics*. (2012) 129:e232-46. doi: 10.1542/peds.2011-2663
- 30. Orben A, Tomova L, Blakemore SJ. The effects of social deprivation on adolescent 488 development and mental health. *Lancet Child Adolesc Health*. (2020) 4:634–40.489. doi: 10.1016/S2352-4642(20)30186-3
- 461 31. Townsend E. Debate: the impact of school closures and lockdown on mental
 462 health in 481 young people. *Child Adolesc Ment Health.* (2020) 25:265–
 463 6. doi: 10.1111/camh.12428
- 32. Legislative Decree 10th May 2019, n. 49, Titolo IX Della responsabilità genitoriale e dei diritti e doveri del figlio.
 465 20 Legislative Decree 2010 101 Legislative Legislative Decree 2010 101 Legislative Decr
- 465 33. Legislative Decree 28th December 2013, n. 154 Revisione delle Disposizioni
 466 Vigenti in Materia di Filiazione, a Norma Dell'articolo 2 della Legge n. 219
 467 (2012, 10 December) Official Gazzette n.5 del 08-01-2014.
- 468 34. Law 22 December 2017, n. 219 "Norme in Materia di Consenso Informato e di Disposizioni Anticipate di Trattamento". Official n.12 of the January 16, 2018.
- 409 35. Conti A, Capasso E, Casella C, Fedeli P, Salzano FA, Policino F, et al. Blood transfusion in children: the refusal of Jehovah's Witness parents. *Open Med.* 471 (2018) 13:101–4. doi: 10.1515/med-2018-0016
- 36. DPCM. Ulteriori disposizioni attuative del decreto-legge 23 febbraio 2020, n. 6, recante misure urgenti in materia di contenimento e gestione dell'emergenza epidemiologica da COVID-19, applicabili sull'intero territorio nazionale.
 Official Gazzette n. 55 of the March 5, 2020 (2020).
- 475 37. Law 24 April 2020, n. 27 "Conversione in legge, con modificazioni, del decretolegge 17 marzo 2020, n. 18, recante misure di potenziamento del Servizio sanitario nazionale e di sostegno economico per famiglie, lavoratori e imprese connesse all'emergenza epidemiologica da COVID-19. Proroga dei termini per l'adozione di decreti legislative". Official Gazzette n.110 del 29-04-2020 - Suppl.
 479 Ordinario n. 16.
- 38. Ministerial Decree n. 186 of the 26 March 2020. Decreto Contenente i Criteri di Riparto delle Risorse Finalizzate alla Pulizia Straordinaria degli Ambienti Scolastici ai Sensi Dell'art. 77 del Decreto-legge n.18 del 17 Marzo 2020. Available online at: https://www.miur.gov.it/web/guest/-/ decreto-ministeriale-n-187-del-26-marzo-2020 (accessed August 24, 2020).
- 484
 39. Ministerial Decree n.39 of the 26 June 2020. Adozione del Documento per la Pianificazione delle Attività Scolastiche, Educative e Formative in Tutte le Istituzioni del Sistema Nazionale di Istruzione per l'anno Scolastico 2020/2021. Available online at: https://www.icmorodalmine.edu.it/wp-content/uploads/ 2020/06/decreto-ministeriale-39-del-26-giugno-2020-piano-scuola-2020-2021-linee-guida-per-settembre.pdf (accessed August 24, 2020).
- 489 40. Ministerial Decree n. 80 of the 3 August 2020. Documento di Indirizzo e Orientamento per la Ripresa delle Attività in Presenza dei Servizi Educativi e delle Scuole Dell'infanzia. Documento di Indirizzo e Orientamento per la Ripresa delle Attività in Presenza dei Servizi Educativi e delle Scuole Dell'infanzia. Available online at: https://www.miur.gov.it/documents/20182/ 0/doc02426720200803184633.pdf/95304f45-f961-bffc-5c6a-8eed6b60fc92?t= 1596533993277 (accessed August 24, 2020).

- 41. Protocollo D'intesa per Garantire L'avvio Dell'anno Scolastico nel Rispetto
 514

 delle Regole di Sicurezza per il Contenimento della Diffusione di COVID 19.
 515

 Available online at: https://www.miur.gov.it/documents/20182/2467413/
 516

 Protocollo_sicurezza.pdf/292ee17f-75cd-3f43-82e0-373d69ece80f?t=
 517

 1596709448986 (accessed August 24, 2020).
 517
- Cardenas MC, Bustos SS, Chakraborty R. A 'parallel pandemic': the psychosocial burden of COVID-19 in children and adolescents. *Acta Paediatr.* (2020) 109:2187–8. doi: 10.1111/apa.15536
- Alfvén T. What will the long-lasting effect of the COVID-19 pandemic be on children's health and wellbeing? *Acta Paediatr.* (2020) 109:1924– 5. doi: 10.1111/apa.15513
- Lee J. Mental health effects of school closures during COVID-19. Lancet Child Adolesc Health. (2020) 4:421. doi: 10.1016/S2352-4642(20)30109-7
- Buonsenso D, Roland D, De Rose C, Vásquez-Hoyos P, Ramly B, Chakakala-Chaziya JN, et al. Schools closures during the covid-19 pandemic: a catastrophic global situation. (2020). doi: 10.20944/preprints202012.0199.v2
- Fedeli P, Giorgetti S, Cannovo N. The will of young minors in the terminal stage of sickness: a case report. Open Med. (2020) 15:513– 19. doi: 10.1515/med-2020-0152
- Zhu Y, Bloxham CJ, Hulme KD, et al. Children are unlikely to have been the primary source of household SARS-CoV-2 infections. SSRN Electr J. (2020) doi: 10.1101/2020.03.26.20044826
- Macartney K, Quinn HE, Pillsbury AJ, Koirala A, Deng L, Winkler N, et al. Transmission of SARS-CoV-2 in Australian educational settings: a prospective cohort study. *Lancet Child Adolesc Health*. (2020) 4:807– 16. doi: 10.1016/S2352-4642(20)30251-0
- Isphording IE, Lipfert M, Pestel N. School re-openings after summer breaks in Germany did not increase SARS-CoV-2 cases. *Discussion Paper Series. dp13790*. IZA Institute of Labor Economics (2020). Available online at: http:// ftp.iza.org/dp13790.pdf (accessed December 27, 2020).
- Comitato Nazionale per la Bioetica. COVID-19 e Bambini: Dalla nascita all'età Scolare. Parere del 23 Ottobre (2020). Available online at: http://bioetica. governo.it/italiano/documenti/pareri-e-risposte/covid-19-e-bambini-dallanascita-all-eta-scolare/ (accessed December 27, 2020).

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2021 Fedeli, Cannovo, Scendoni and Cingolani. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.

570