

ASPHER/EAP STATEMENT ON THE USE OF MASKS BY CHILDREN

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For an in-depth report of the state of knowledge regarding the use of masks and strategic recommendations on their use to prevent viral transmission, please see Lopes H, Middleton J, Martin-Moreno JM, et al. Strategic use of masks as an element of a non-pharmaceutical measures set for a pandemic. ASPHER (2020). DOI: [10.13140/RG.2.2.25214.13125](https://doi.org/10.13140/RG.2.2.25214.13125)

The Association of Schools of Public Health in the European Region (ASPHER) follows the principle that all action in Public Health must be based on scientific evidence, as it is the only way to guarantee the best health care to populations.

Previously, another Statement was produced by ASPHER (<https://www.aspher.org/aspher-statement-masks.html>) dedicated to the use of masks and respirators in general [1]. However, the particularities of the use of masks in children with the application of mandatory use of masks in many situations during the lockdown de-escalation period led ASPHER to take a stand given the enormous difficulties verified in its use all over the world. If the use of masks and respirators in adults has already reached a consensus in almost all countries and for situations in which they are recommended, ASPHER sees its recommendation for children with great concern even though it unequivocally recognizes advantages. However, action must be taken with the utmost urgency to provide children with the same degree of protection as adults.

The following points are highlighted:

1. **Masks can provide the same type of protection in the context of COVID-19 to a child as to an adult.** Therefore, use of masks should be considered without hesitation under the commonly adopted conditions. It should not be forgotten that, for different reasons, masks offer different levels of protection as rated by an IQR scale [2], with a degree of lesser protection in children than in adults.
2. Although there is some manufacture of masks appropriately sized for children, their **availability is rare even in hospital facilities and almost impossible to acquire**

during the pandemic. On the other hand, home-made masks or those produced by the clothing industry can address adequate sizes and adjust to supply demands.

In the hospital environment, unlike what happens with all other medical devices, only one size is available - the adult one. Having neither the consistent dimension nor the ergonomics required, it is likely that there will be loss of effectiveness, increased discomfort, decreased adherence and use compliance by the child, etc. For this reason, child sized masks must be made consistently available, considering aspects other than design. Funding is also necessary for studies measuring mask adherence and efficacy in a paediatric population.

3. Regarding the material and ergonomics of children's masks, these materials must respect some basic principles:
 - a. **Only masks with elastic bands should be used.** Masks that need to be laced turn out to be much more difficult to use and fail to adequately fit children.
 - b. **Ergonomic design is also critical.** The function of a mask is achieved if air passes only through the fabric. A mask that is too large allows air to also pass through the sides, thus reducing its safety.
 - c. **Design stamping is very important.** There is vast experience in paediatrics that children react better to materials decorated by cartoon drawings and images from the children's universe. This is also true with masks, as children react much better to social masks made with fabrics decorated with cartoon images than to typical surgical masks.
 - d. As said above in relation to the generalized size of masks, **masks that fit the size of children's heads** are lacking. This issue is particularly important due to different age groups having different head and shape dimensions.
 - e. In the few studies that exist on the subject, **children complain mainly of the heat and humidity** that the masks induce [3,4].
4. Many manufacturers have come up with child hat-shield solutions (a hat with 360° plastic protections around the child's head, covering the shoulders). It is a very interesting solution in particular for the age groups between 2 and 6 years old.

However, it should be borne in mind that it is not an exact substitute for mask use due to:

- a. The mask in the COVID-19 context essentially has a protective function in regards to other individuals during the asymptomatic phase [5,6].
 - b. The visor hat-shield might protect the child from droplets but as with adult face-shields there is no scientific evidence that it protects other individuals.
 - c. The degree of protection afforded to the direct entry of droplets is partly lost as SARS-CoV-2 infected droplets can remain deposited for hours or days on the plastic. Being within reach of the child's hands, it is an immediate surface for handling.
5. **For children, masks represent a relevant psychological dimension**, which unlike for adults must be understood in a two-fold approach (physical and psychological). It is important to consider the issues related both to the masks used by children and by the masks used by adults with which they live. The recognition of family members and other close loved ones is largely due to facial recognition. In very young children (under 4 years) fear is often verified toward the person wearing a mask. Therefore, training is needed for people wearing masks who have close contact with children. For example, it is helpful if one plays with the child by successively putting on and taking off the mask, thus turning this learning into child's play.
6. **As with adults, the adoption of a policy of mandatory use of masks by children must be accompanied by training in use and disposal** [7]. Children tend to have more physical contact between peers than do adults, tend to have more contact with surfaces, touch the face with less caution, etc. As a consequence, the risk of incorrect use of the masks can jeopardize the advantages of mask portability [8]. Note that if there is incorrect compliance in the mask use, it might not be due to a failure in the concept of wearing masks, but due to failure in the training of those responsible for providing masks to the child.
7. **Only masks should be considered for children.** Respirators (FFP2/FFP3 (N95)) should not be used by children due to the following reasons:
- a. Respirators are less comfortable, which generates lesser compliance.

- b. There are also no respirators fit for children [9] and as they are less plastic and adaptable; these materials have lesser efficiency when an ill-fitted size is used.
- c. The purpose of respirator use was designed for professionals, not for use by children in a social context.

8. When considering the use of masks by children, distinctions should be made for at least four age groups:

- a. 0-2 years old. No advantage was found in its use and despite no literature being yet published recent recommendations against mask use by this age group were made by the Japan Pediatric Society, Centers for Disease Control and Prevention (CDC) and the American Academy of Pediatrics (AAP) [10,11] due to possible risks.
 - i. There may be an exception when a child goes to a hospital with COVID-19 patients or a similar situation where they are exposed to higher contagion risk. Even in these cases, one must weigh between the potential gains and losses not only related to contagion, but also to the psychological difficulties that the child may have at first with comfort, etc. The decision to require a mask should only be taken by the Hospital Paediatric Service.
 - ii. For children who are prostrate, mask portability is much easier and their natural resistance naturally will be reduced. This condition is always a clinical sign that there may be a need to reinforce the child's protection and the decision of mask use/non-use should be defined by the assisting doctor.
 - iii. It must be noted that mask use in children of this age group includes the risk that the child will remove it and could cause breathing difficulties due to the multiple layers of fabric/tissue as noted in the recommendation for cloth face coverings from the CDC [9].
- b. 3-4 years old. Practical experience with this age group is that the child is less resistant to wearing masks but is often afraid of being approached by adults who wear this equipment, with crying being frequent in these situations.
 - i. Mask use should be recommended/imposed whenever the child goes to a hospital or other clinical setting.

- ii. The child's parents/guardians have a critical role in appeasing, deconstructing fear and training the child. The best approach to achieve this is by playing with a mask with children. Also, the design of the child's mask is very important for its acceptance. Particularly in this age group, it is essential to use masks made with elastics only.
 - c. 5-6 years old.
 - i. The approach suggested above for 3-4 year olds is identical but crying and other manifestations of fear are much less frequent. For the rational explanation of the use of masks, one can begin by providing instructions for adequate compliance, non-manipulation, etc.
 - d. Above 6 years old.
 - i. The portability of the mask is very similar to that of the adult.
 - ii. Communication about the use of mask, its placement, disposal, etc., must be adapted to the pedagogical needs of each age group, namely as to the form of the instructions (more or less dependent on graphics) and depth. The differentiation of contents is suggested by the following age groups:
 - 1. 6-10 years old.
 - 2. 11-14 years old.
 - 3. Above 14 years old.
9. **The use and correction of the use of masks by children are directly linked to the education of their parents [12].**
- a. This means that the degree of protection for each child is largely dependent on social inequalities, with differences of almost three times the compliance of mask use.
 - b. All children should have support from teachers, especially those in less educational-qualified families.
 - c. Ideally, parents should also be trained by the School, establishing a School-Parental educational partnership.
10. As in adults, **the mask should not be considered to be a panacea nor a unique solution for COVID-19 protection.** As referred to in the Statement on the use of masks in adults [1], this measure should always be included within the context of

other Non-Pharmaceutical Measures (NPMs) and be taught as part of this broader hygienic system.

11. All children are unique. Thus, **the relation of each disability to the imposition of wearing masks must be seen in each case**. Consideration must be given to the effective protection provided by the correct use of a mask against the loss of cognitive, emotional and relational, among other dimensions of the child's life and family. It must be ensured that the child has no loss of citizenship due to a limitation in health that poses a difficulty or hinders the use of masks, namely the freedom of movement on an equal basis with non-sick peers, nor being subject to sanctions for surpassing the mandatory use of mask.

12. **Particular care should be taken when deciding to put masks on children who previously have a disability** [13]. Three groups stand out:

- a. Those in which masks can limit the child's relation with the world. The most frequent case will be that of deaf children where sign language is part of their basic communication system. The use of masks can limit or hinder this essential socialization process and in a balance between avoidance of contagion and loss of communication, the effective risk that the child incurs must be carefully weighed. The risk of contagion is probabilistic and the risk of loss of communication is a certainty.
- b. Children in which health problems promote rapid mask degradation. Many syndromes promote continuous and abundant drooling, which leads to a change in the mask's permeability, a potential increase in respiratory effort and great discomfort for the child. In these cases, it is recommended that there is no imposition of mask use. Otherwise, children who are in these circumstances can easily be limited in their citizenship, such as the use of public transport, entry into stores and other spaces that require the use of masks.
- c. Those who by mental affectation do not support the use of masks. Perhaps the most frequent situation, but not the only, is that of the autistic children. Forcing the use of masks can jeopardize months or years of pedagogical support, social inclusion, loss of confidence in people who work on that child's autism, etc. It is also not acceptable for children to be penalized for this. A

possible solution could be to use visors, if possible. There may also be a negative reaction in these children regarding professionals who work with them that do not have their faces visible. Likewise, the use of a visor may be a good option [14].

The statement has cited what very little literature is currently available regarding the use of masks by children to protect against infectious disease. In order to fill in the gaps of understanding and make the best possible recommendations, interviews were conducted with nurses and medical doctors working in paediatric hospital settings. The paucity of literature available on the subject makes a clear case for the need for further research and investigation.

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The Association of Schools of Public Health in the European Region (ASPHER) is the key independent European organisation dedicated to strengthening the role of public health by improving education and training of public health professionals. ASPHER's Membership is made up of more than 100 Schools and Programmes of Public Health representing over 40 countries in Europe and beyond.

The European Academy of Paediatrics (EAP) exists to promote the health of children and young people in Europe. It aims to improve standards in training, service and research and to represent the professional interests of paediatricians in the EU. It incorporates the section of paediatrics of the European Union of Medical Specialists and therefore has influence in the political arena to advocate for children and young people as well as for the profession.

THE USE OF MASKS BY CHILDREN

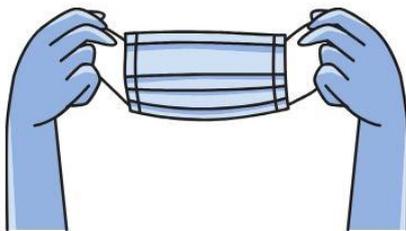


MASKS' PROTECTION FOR CHILDREN

Masks can provide the same type of protection to both children and adults if adopted under similar conditions.

MASK AVAILABILITY IN THE MARKET

Available solutions on the market that offer masks with ergonomic sizes and shapes fit for children are scarce or very difficult to acquire, which calls for the development of equipment that meet the identified needs.



MASKS' ERGONOMICS

Masks with decorative stamping are more appealing, with ergonomic design being fundamental. Only masks with elastic bands should be used by children.

The main complaints regarding mask use are heat and humidity.

HAT-SHIELD WITH 360° PLASTIC PROTECTION

Hat-shield solutions were developed as an interesting solution for the protection of children. However, it should not be a substitute for the use of masks.



PSYCHOLOGICAL DIMENSION OF MASKS

There must be a two-fold approach to mask use with children, considering the physical and psychological dimensions.

TRAINING PROGRAMMES FOR THE USE OF MASKS

As in adults, the adoption of a mandatory policy regarding the use of masks by children must be accompanied by training in its use and disposal.



THE USE OF MASKS BY CHILDREN

RESPIRATORS VS. MASKS

Only masks should be considered for children. Respirators (FFP2 and FFP3 - N95) should not be used by children.

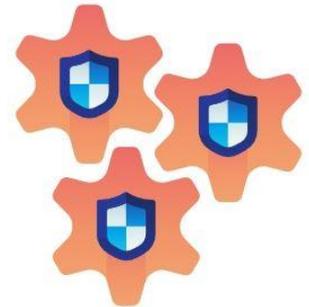


PARENTS EDUCATION FOR MASK COMPLIANCE

The correct use of masks by children is directly linked to the education of their parents, thus schools and communities should engage in training programmes for children and parents to reduce social inequalities.

MASK USE IN A SET OF NON-PHARMACEUTICAL MEASURES

As in adults, mask use should not be considered as a panacea nor a unique solution for COVID-19 protection.



USE OF MASKS AND DISABILITIES

All children are unique. The relation of each disability to the imposition of wearing masks must be seen in each case.

There must be consideration for the effective protection provided by the correct use of masks against the loss of cognitive, emotional and relational, among other aspects of the child's life and family.

PARTICULAR CARE IN MASK USE FOR SPECIFIC GROUPS

Particular care should be taken when deciding to put masks on children who previously have a disability. Three groups stand out:

- Those in which masks can limit the child's relation with the world (e.g. deafness);
- Children in which health problems promote rapid mask degradation (e.g. syndromes that promote continuous and abundant drooling);
- Those who by mental affectation do not support the use of masks (e.g. autism).



THE USE OF MASKS BY CHILDREN

THERE ARE DIFFERENT CONSIDERATIONS FOR THE USE OF MASKS BY DIFFERENT AGE GROUPS



0-2 YEARS OLD

No advantage was found in the use of masks in this age group.

The head dimensions of children in this age and the resistance they can offer may greatly limit what can be gained in protection.

3-4 YEARS OLD

Children may be less resistant to wearing masks but are often afraid of being approached by adults who wear this equipment, with crying being frequent in these situations.



5-6 YEARS OLD

The approach to masks is identical to that for 3-4 year olds, but crying and other manifestations of fear are much less frequent.

ABOVE 6 YEARS OLD

The portability of masks is very similar to that of the adult.

Communication about the use of masks must be adapted to the pedagogical needs of each age group (e.g. 6-10 years; 11-14 years; above 14 years).

