Digital Connectivity during COVID-19:
Access to vital information for every child

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OVERVIEW

Children's digital access – or lack thereof – during the COVID-19 pandemic has significantly determined whether children can continue their education, seek information, stay in touch with friends and family, and enjoy digital entertainment. With over 1.5 billion children across 190 countries confined to their homes, active video games or dance videos may also be their best chance to exercise.

The rationale for closing digital divides has never been starker or more urgent.

During the COVID-19 pandemic, access to accurate health information is particularly important, especially for children living in resource-poor communities where access to health care and services may be limited. For these and other reasons, global efforts are under way to expand and support children's digital access and engagement, both during and after the COVID-19 pandemic.

ACCESS TO QUALITY HEALTH INFORMATION

In addition to expanding access, a greater focus is required on the *quality* of accessible information and whether children are able to *use* the information they find.

A flood of health-related misinformation was already at the fingertips of children and adults before the pandemic – and that remains the case. Even for adults, misinformation is difficult to recognize. At a time when everyone needs access to high-quality information –

about health; hygiene and sanitation practices; common symptoms; and ways to avoid spreading the virus – being able to verify the truth of online information is vital.

To help children find and use high-quality health information online, the following are required:

Affordable internet access for all: Ideally, internet connectivity in the home and in private, or at a minimum, through devices shared within the family or in community spaces. All children have the right to privacy, and this can be especially important when searching for information on sensitive topics such as health.

Availability and promotion of reliable health information: Children need to know that high-quality health information is available online and where and how to access it.

Ability to navigate misinformation: Children need to know how to recognize possible misinformation, to ensure that they neither use nor share information that may be incorrect or harmful.

Following these themes, this research brief responds to three questions:

Q1: How much do we know about children's basic access to the internet across the globe?

Q2: Do children regularly use the internet to access health information?

Q3: Are children able to verify the truth of online information?

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To explore the first research question, data from the International Telecommunication Union (ITU) World Telecommunication/ICT Indicators database are used.

For the second and third research questions, we analyse survey data collected from individual children in their households, generated by the collective work of the EU Kids Online and Global Kids Online research networks.[1] The data used in this brief were collected *before the pandemic*, from approximately 22,000 internet-using children aged 12–16 years (and their parents/caregivers) living in 28 countries across 4 continents.[2]

Q1: Is every child connected?

Even though the internet has been considered a critical medium for the better part of two decades, detailed statistics on children's internet access around the world remain scarce. The best available source of global data is the ITU World Telecommunication/ICT Indicators database, which contains data on internet access for children under 15 years of age from 39 countries collected between 2015 and 2019 (*see Figure 1*).[3]

Country wealth is a clear key indicator of children's internet access around the world. Wealthy countries such as Germany, Singapore and Japan report much higher proportions of children online than less affluent nations like Indonesia, Jamaica or Peru, for example. But the statistics also suggest inequalities within countries. For example, large inequalities in access may explain why a wealthy country such as the United States of America is positioned midway.[4]

While these data are valuable, they cover only about one fifth of countries globally. Critically, detailed statistics are unavailable for most countries in Africa, where a large proportion of the world's children live.

Figure 1. Proportion (%) of children under 15 years of age who are internet users, by country
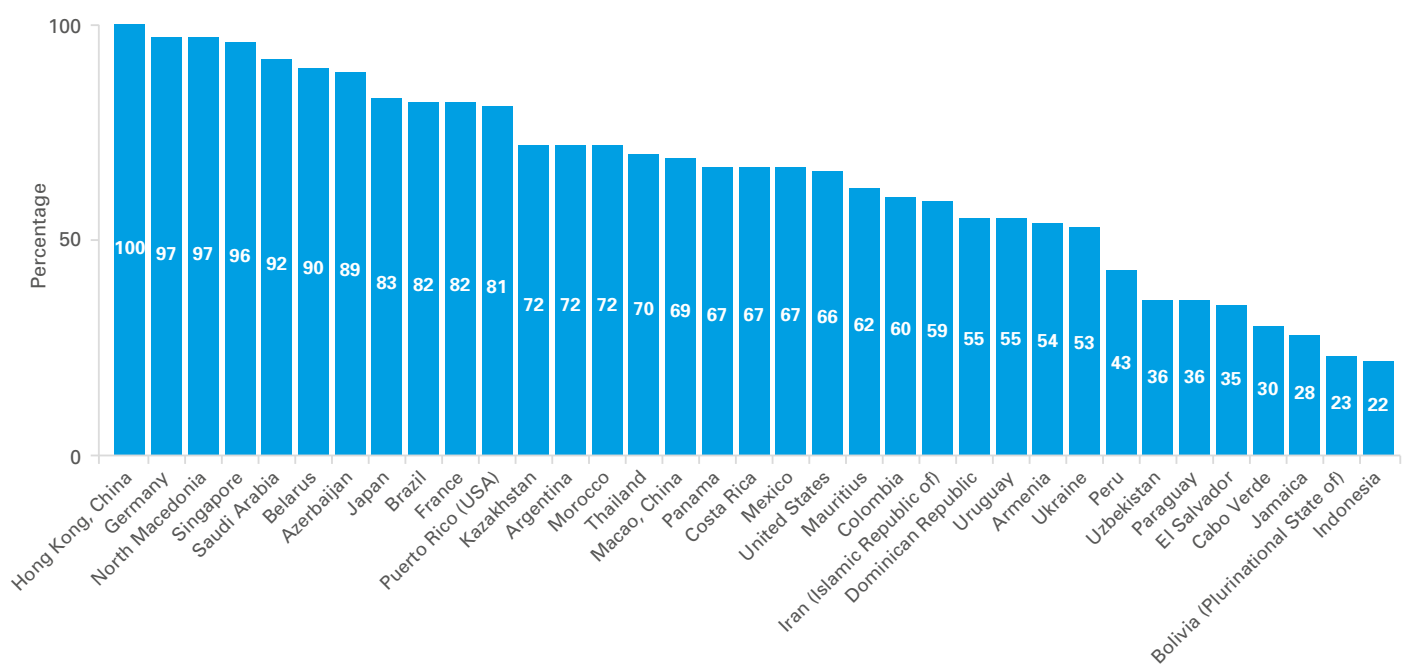
Source: ITU World Telecommunication/ICT Indicators database.

1   London School of Economics and Political Science, 'EU Kids Online', LSE, London, 2020, <www.eukidsonline.net>, accessed 28 May 2020; London School of Economics and Political Science, 'Global Kids Online', LSE, London, 2020, <www.globalkidsonline.net>, accessed 28 May 2020.

2   Reports with details about methodology and findings have been published elsewhere. See, for example: Smahel, D, et al., *EU Kids Online 2020: Survey results from 19 countries*, EU Kids Online, 2020, available at: <www.lse.ac.uk/media-and-communications/research/research-projects/eu-kids-online/eu-kids-online-2020>, accessed 28 May 2020; Livingstone, Sonia, Daniel Kardefelt-Winther and Marium Saeed, *Global Kids Online: Comparative report*, United Nations Children's Fund, 2019, available at: <www.unicef-irc.org/publications/1059-global-kids-online-comparative-report.html>, accessed 28 May 2020.

3   The ITU World Telecommunication/ICT Indicators database includes data from more countries for youth aged 15–24 years. Data are collected nationally by ITU member states. Data collection dates and the populations covered vary by country. Most countries included collect data from children aged 6+ or 10+, with some including children aged 5+ or 3+. The age of the study population was not strongly correlated with access rates.

4   Note that data from Armenia, Cabo Verde, Cambodia, Jamaica, Kenya, Pakistan and the United States are from 2015–2016, which means that access rates are likely somewhat higher today.

Nonetheless, ITU has noted elsewhere that Africa is falling behind the world average in terms of internet penetration rates for adults, which likely makes it more difficult for children to gain internet access.[5]

Even if internet connectivity exists in a household, it should not be taken for granted that children can access it. Considerable gender disparities exist in many countries, especially in parts of Africa and South Asia, where women and girls have less access than men and boys.[6] While infrastructure and cost are sometimes causes of limited or unequal internet access, parental attitudes and reservations about technology use (especially for girls) are also a common barrier to access for children in some countries.[7]

Q2: Do children look for health information online?

During the COVID-19 pandemic, many people are going online to search for health information. A simple Google Trends analysis shows that the popularity of search terms related to COVID-19 has increased dramatically across the globe since March 2020.

We would expect children, as avid users of the internet, to search for health information regularly. EU Kids Online and Global Kids Online data confirm this: In most surveyed countries, more than half of children aged 12–16 years with access to the internet look for health information online at least monthly. The proportion of children seeking health information online varies greatly by country, however – from 72 per cent in Serbia to 30 per cent in Italy (*see Figure 2*).

There are no obvious country patterns to the data presented in Figure 2. But the data do show that among children living in some of the world's *most* affluent countries (France, Switzerland, Norway and Germany), using the internet to look for health information is less common than in other countries. This may be because children in wealthy countries have easier access to alternative, high-quality sources of health information, including through formal life

skills or health curricula at school. At the same time, however, looking for health information is also less common for children living in the *least* affluent countries in our sample (the Philippines, South Africa, Ghana), which may be a result of poor connectivity or expensive data costs.

In almost all 28 countries included in this analysis, girls are more likely than boys to use the internet to look for health information. This could be because girls are more often tasked with caring for the health and well-being of family members, or because they may have health needs that are considered taboo or that are overlooked by their parents or school. This follows earlier research showing that women look more frequently at nutrition and eHealth websites compared with men,[8] which may extend to children's usage as well. We found that more boys than girls reported using the internet to look for health information in Chile, South Africa and Ghana, however.

During a public health crisis, it is very likely that the proportion of children using the internet to look for health information will increase substantially. Though we lack data for this, the fact that children regularly use the internet to look for health information – important under normal circumstances and critical during a pandemic – reinforces the call for all children to be provided with affordable access to the internet. Not only will a lack of access undermine children's right to information, but it may also impede their ability to protect their health and the health of those around them.

Q3: Can children verify the truth of online information?
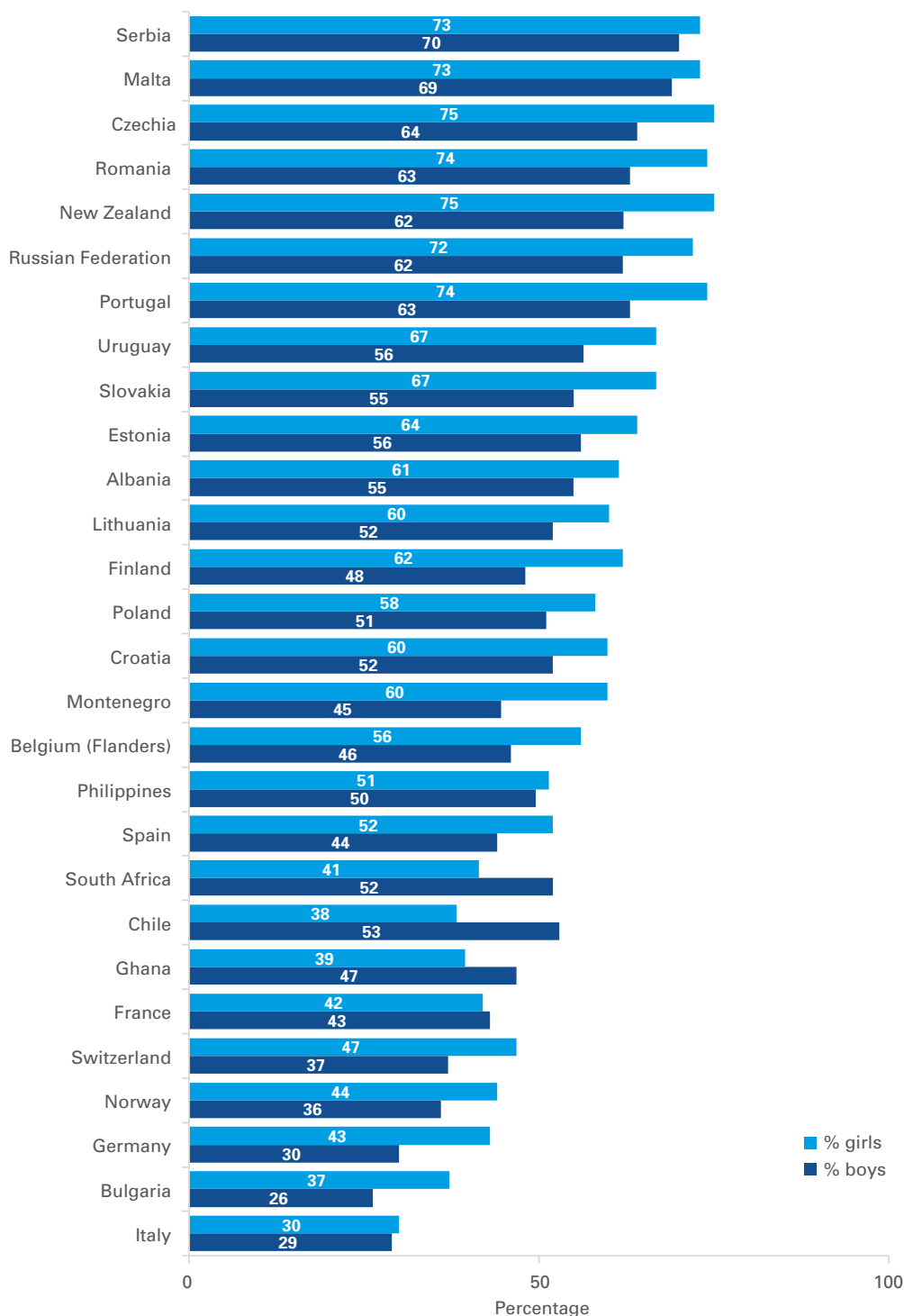
There is an important difference between accessing just any information and accessing high-quality information. On 15 February 2020, the Director-General of the World Health Organization observed: "We're not just fighting an epidemic; we're fighting an infodemic."[9] The United Nations Educational, Scientific and Cultural Organization (UNESCO) notes that mis-information has left almost no area related to

5   International Telecommunication Union, 'Measuring Digital Development: Facts and figures 2019', ITU, Geneva, 2019, available at: <www.itu.int/en/ITU-D/Statistics/Documents/facts/FactsFigures2019.pdf>, accessed 28 May 2020.

6   Sey, Araba, and Nancy Hafkin, eds., *Taking Stock: Data and evidence on gender equality in digital access, skills, and leadership*, United Nations University Institute on Computing and Society/International Telecommunication Union, Macao, China, 2019, available at: <www.itu.int/en/action/gender-equality/Documents/EQUALS Research Report 2019.pdf>, accessed 28 May 2020.

7   Stalker, Peter, et al., *Growing Up in a Connected World*, United Nations Children's Fund, 2019, available at: <www.unicef-irc.org/publications/1060-growing-up-in-a-connected-world.html>, accessed 28 May 2020; United Nations Children's Fund, *Child Online Protection in India*, UNICEF India Country Office, n.d., available at: <www.icmec.org/wp-content/uploads/2016/09/UNICEF-Child-Protection-Online-India-pub_doc115-1.pdf>, accessed 28 May 2020.

8   Almenara, Carlos A., Hana Machackova and David Smahel, 'Sociodemographic, Attitudinal, and Behavioral Correlates of Using Nutrition, Weight Loss, and Fitness Websites: An online survey', *Journal of Medical Internet Research*, vol. 21, no. 4, 2019, e10189, available at: <https://pubmed.ncbi.nlm.nih.gov/30946018>, accessed 28 May 2020; Kontos, Emily, et al., 'Predictors of eHealth Usage: Insights on the digital divide from the Health Information National Trends Survey 2012', *Journal of Medical Internet Research*, vol. 16, no. 7, 2014, e172, available at: <https://pubmed.ncbi.nlm.nih.gov/25048379>, accessed 28 May 2020.

9   World Health Organization, WHO Director-General Speeches, 'Munich Security Conference', WHO, 15 February 2020, <www.who.int/dg/speeches/detail/munich-security-conference>, accessed 28 May 2020.

COVID-19 untouched, from the origin of the virus to unproven prevention measures and cures, with senders encompassing governments, companies, celebrities and others.[10] Social media platforms have fueled the spread of misinformation, now that anyone can curate and share 'news' that goes viral at a moment's notice. This can undermine trust in important institutions such as health authorities, which is dangerous when compliance with their guidance is a public health issue.

Figure 2. Proportion (%) of children who look for health information online at least monthly, by gender

Country	% girls	% boys
Serbia	73	70
Malta	73	69
Czechia	75	64
Romania	74	63
New Zealand	75	62
Russian Federation	72	62
Portugal	74	63
Uruguay	67	56
Slovakia	67	55
Estonia	64	56
Albania	61	55
Lithuania	60	52
Finland	62	48
Poland	58	51
Croatia	60	52
Montenegro	60	45
Belgium (Flanders)	56	46
Philippines	51	50
Spain	52	44
South Africa	41	52
Chile	38	53
Ghana	39	47
France	42	43
Switzerland	47	37
Norway	44	36
Germany	43	30
Bulgaria	37	26
Italy	30	29

Source: EU Kids Online; Global Kids Online.
Base: Children aged 12–16 years who use the internet.

10 United Nations, UN News, 'During this Coronavirus Pandemic, 'Fake News' Is Putting Lives at Risk: UNESCO', 13 April 2020, <https://news.un.org/en/story/2020/04/1061592>, accessed 28 May 2020.

When asked about their aptitude for verifying the truth of online information, many children say that they are able to do this (*see Figure 3*). Our data show that internet-using children aged 12–16 years in the Philippines, Spain and Ghana are the least likely to say they can verify the truth of online information, while children in Finland, Uruguay and Lithuania are more likely to claim this. In most countries, however, between half and three quarters of children – the majority – say that they can verify if the information they find online is true. This is an encouraging finding, but the data also highlight that a considerable proportion of children in many countries say that this is something they are unable to do.[11]

While identifying misinformation is an important twenty-first century skill for all, this responsibility should not be left to children alone. UNESCO notes that "access to information from official sources is very important for credibility in this crisis."[12] News media and social messaging platforms continue to play a critical role in the fight against misinformation. The technology sector has a considerable responsibility to moderate misinformation in a manner that is responsible and culturally sensitive. But many of the larger companies have been reluctant to tackle this issue, partly out of respect for freedom of speech but also because it is a resource-intensive and technologically complex task.

CONCLUSION

It seems likely that a large proportion of the world's children are unable to access the internet as much as they want or need to. For children who rely on school or public networks for internet access, the COVID-19 lockdowns may have cut off their access entirely. This is problematic at a time when access to information, education, friends and entertainment is contingent on internet access, and more important than ever.

Our data show that, among children who usually do have internet access, a large proportion use it to search for health information at least monthly. The data also show that while a majority of children in most countries say that they are able to verify if the information they find online is true, a considerable proportion say that they are unable to do so. The proliferation of misinformation during the COVID-19 pandemic may have made this task even more difficult.

It is time for the global community to ensure that children can access reliable health information in an easy, fair and affordable way. There should be no uncertainty about where to find reliable and up-to-date health information online when so many children need it. This is a necessity that the COVID-19 pandemic has made even more apparent.

Figure 3. Proportion (%) of children who find it easy to check if the information they find online is true
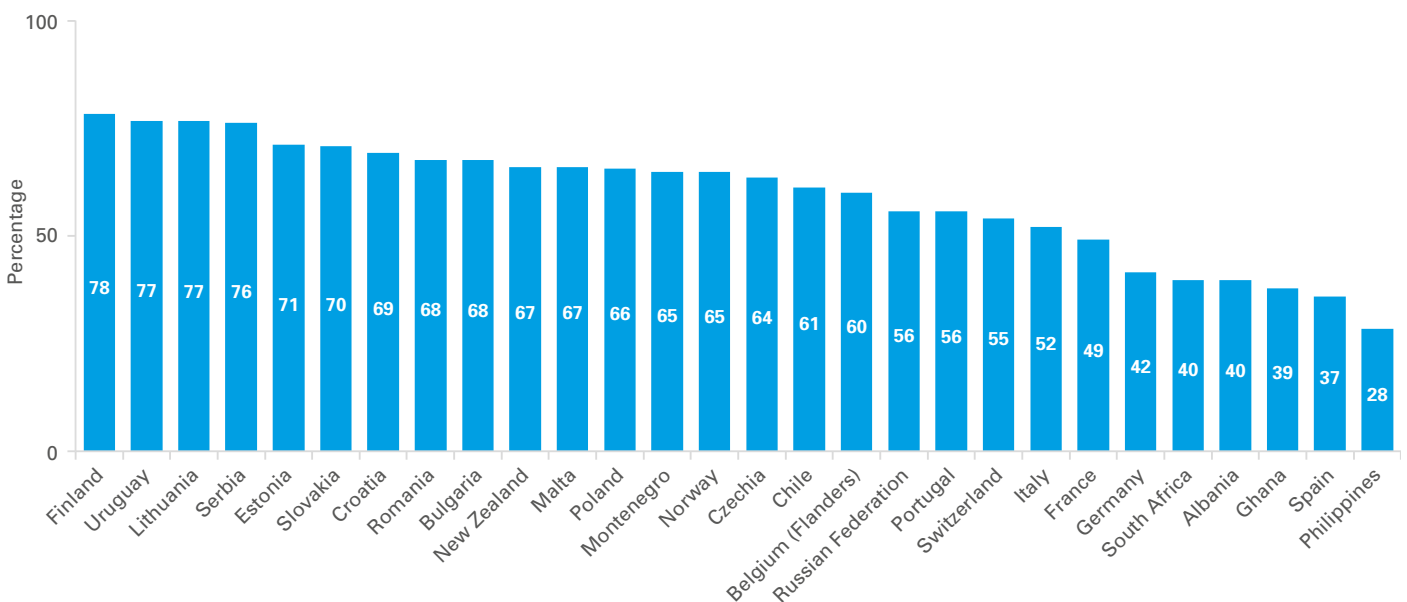
Source: EU Kids Online; Global Kids Online.
Base: Children aged 12–16 years who use the internet.

11 This information was reported by children themselves, rather than from an objective performance test. The true proportion of children who know how to verify the truth of online information may be lower.

12 United Nations, UN News, 'During this Coronavirus Pandemic, 'Fake News' Is Putting Lives at Risk: UNESCO', 13 April 2020, <https://news.un.org/en/story/2020/04/1061592>, accessed 28 May 2020.

Although limited in scope, existing research suggests that children place value on the anonymity of digital health information, resources and support services.[13] Other key features cited by children as important for digital health information are easily comprehensible wording, a clear layout and a reliable publisher.[14] All such features should be accommodated when developing these much-needed resources.

We propose three actions to key stakeholders to ensure that children's health information needs are better supported during the COVID-19 pandemic and beyond:

1. **For the United Nations**: Work with national governments to create and make freely available an online repository of reliable health information, in as many languages as possible. The repository should be light in terms of data usage, and materials should be produced in a way that is easily understandable for all children, irrespective of literacy levels.

   Equally, children need to be able to search for health information in a safe and private way without risk of identification or being subjected to excessive data collection. The United Nations should work with partners to help define global standards to uphold children's right to privacy in a digital age in which data protection is particularly important.

2. **For governments**: Urgently develop plans to roll out affordable internet access to all children. The ongoing pandemic has made it clear that the internet is not a luxury but a necessity. Ensuring comprehensive infrastructure, affordable devices and manageable data costs is the responsibility of governments; enabling and supporting access for all those who live within the household is the responsibility of parents. This requires a mix of hard and soft solutions – infrastructure is crucial, but it is not enough on its own. Parents need better information to recognize the value of the internet to their children; to remove social or cultural barriers to access, especially for girls; and to be able to support children who go online.

3. **For the technology industry**: Increase efforts to tackle the spread of misinformation on digital platforms. The COVID-19 pandemic has renewed the focus on the culpability of social media platforms in disseminating misinformation, which in the long term may undermine children's trust in the internet as a source of useful and reliable information. The technology industry is resourceful and many companies have already taken steps in the right direction in this regard, but other companies can and should do more.

The technology industry should also partner with reputable organizations to deliver reliable health information to children through the organizations' own digital communications channels. This would increase the likelihood that children receive such information on a more regular basis, through platforms that they enjoy spending time on. This could be particularly useful during a pandemic such as COVID-19, where community transmission is high and the need to rapidly share information with a large part of the population is urgent. Some companies are already engaging in such efforts and it will be important to measure whether this form of outreach is effective.

The global community must not wait for the next emergency to ensure that children's right to information is realized. We should address the challenges of providing children with accurate health information that the COVID-19 pandemic has made apparent, so that next time we face a global health crisis, children know where to find reliable health information and are able to access it online. Access to this life-saving information should be easily available, at no cost, to all children, regardless of the circumstances in which they live.

13 Best, Paul, Roger Manktelow and Brian J. Taylor, 'Social Work and Social Media: Online help-seeking and the mental well-being of adolescent males', *The British Journal of Social Work*, vol. 46, no. 1, 2016, pp. 257–276, available at: <https://doi.org/10.1093/bjsw/bcu130>, accessed 28 May 2020.

14 von Rosen, Antonella J., et al., 'Sexual Health and the Internet: Cross-sectional study of online preferences among adolescents', *Journal of Medical Internet Research*, vol. 19, no. 11, 2017, e379, available at: <https://pubmed.ncbi.nlm.nih.gov/29117927>, accessed 28 May 2020.

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