

Hygiene and health saves and improves lives

Major progress has been made in improving the health of millions of people in recent decades. Still, more efforts are needed to fully eliminate a wide range of diseases and address the most pressing health issues. The COVID-19 pandemic has further demonstrated the critical importance of basic hygiene for preventing diseases. By focusing on providing improved sanitation and hygiene and increased access to health services, significant progress can be made in helping to save the lives of millions.

Sanitation and hygiene are key to preventing and managing the outbreak of many deadly infectious diseases, including cholera, diarrhea, Ebola, tropical diseases, polio and now COVID-19. Sanitation and hygiene also reduce maternal and neonatal death, curb the spread of anti-microbial resistance, and prevent severe systemic infection also known as sepsis, which now kills more people globally each year than cancer.³ Poor sanitation is responsible for more than 1.200 deaths of children under five years of age every day, which is more than the mortality of AIDS, measles and tuberculosis combined.⁴

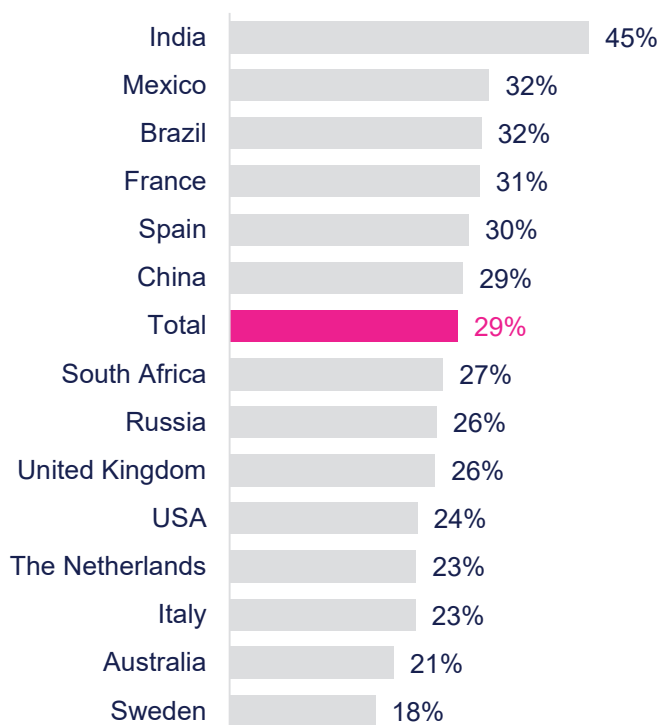
The importance of basic hygiene

The need for improved hygiene is universal. Proper hand hygiene, including both hand-washing and hand sanitizing, is ranked as one of the most effective and affordable public health interventions, and yet global progress on good hygiene practices is severely lacking.⁵

Globally, 2.4 billion people live without basic sanitation services (flush latrine or pit latrine) in developing countries, and only 27% of the world population have adequate handwashing facilities at home, according to UNICEF.⁶ People that lack handwashing facilities are therefore potentially even more vulnerable to crises such as COVID-19 and are also often left behind many public health interventions, such as access to adequate healthcare and education on good hygiene practices.

The Essity survey shows that lack of access to clean or safe toilets and washrooms is still an issue, with significant differences between countries.

Lack of access to clean or safe toilets and washrooms



Question: Have you refrained from going to school/work this last year because of any of the following reasons related to menstruation?

From the Essity Survey. Read more about the survey on page 7.

Community empowerment - building toilets for improved health

Nearly 892 million of the total world's population still practice open defecation.⁷ In September 2019, the Government of Nepal declared the country open defecation free. Continuing the people's momentum, the government announced a national campaign focusing on sustaining a country free from open defecation, addressing long-term behavioral changes and transformation of social norms.

The national campaign arrived in Sunaina Devi's village, promising to be transformational. Devi lives in Majhi, a village of 104 impoverished people in Nepal's Terai region. Working these fields is how Devi, and the majority of her neighbors, earn their living. Among their hardships has been the absence of sanitation.

Poor sanitation lead to health issues

"Previously, people did not have toilets and they did not see the necessity of having a proper place to defecate," says Raju Prajad Sah, the Chief Administrative Officer of the rural municipality of Kalikamai, where the village of Majhi is located. He describes how open defecation has been an age-old and accepted practice.

The pond across the road where the villagers raised fish and watered animals often became contaminated. Sah recalls that outbreaks of diarrhea were common in Majhi with open defecation and a lack of handwashing compromising health and well-being. "Especially vulnerable were the young, the old, and anyone compromised by factors from disability to mental illness, or even just the misfortune of living alone," he explains.

Empowering communities to construct their own toilets

After three intense months of discussing the health benefits of using a toilet, every household in Majhi decided to construct its own toilet. "Now they are all using toilets and obviously the difference is that there will be the reduction of diseases and the living standard will be, I think, uplifted," says Sah.

Devi leads the way through her house and out the back to show her new latrine. "I built it myself by taking a loan. I have not paid it back but I will within one year by cutting rice paddies," she says.



Improved sanitation in Nepal has raised living standards for people all around the country, like Sunaina Devi from Majhi village.

Education on menstrual health and hygiene in Mexican schools

It is key to develop adequate spaces for health, WASH (Water, Sanitation and Hygiene) and menstrual hygiene in schools. One example how this can be done is through a collaboration between UNICEF in Mexico and Essity.

Following the initiative, the National Institute of Physical Educative Infrastructure (INIFED), which is responsible for issuing standards and technical specifications, as well as managing resources for the educational infrastructure, including WASH services in schools - established of a federal-level strategy

focused on WASH in schools. This was framed within the 2030 Agenda, integrating aspects of behavior change, improvement of infrastructure and strengthening of the environment conducive to the articulation of public policies and sectoral programs. Moreover, in this collaboration Essity and UNICEF developed educational Manuals on Menstrual Health and Hygiene, aimed at primary and secondary school teachers, parents and children of those educational levels. These manuals were launched together with the Ministry of Education, underlining the importance of menstrual health.



SDG Target 6.2: By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.



SDG Target 3: Ensure healthy lives and promote well-being for all at all ages.

Access to handwashing facilities and hygiene product.

Universal access to handwashing facilities with soap and water is already part of the Sustainable Development Agenda. We can do more. The COVID-19 pandemic underlines the importance of what is most needed to save lives today and in the future. As this pandemic has shown, together we can succeed, says the WHO report Hand Hygiene for All.⁸

The Essity survey shows that a lack of soap or hygienic soap dispensers and no or inadequate access to handwashing facilities in public spaces (e.g. restaurants and shops) are the top reasons why people do not wash their hands more often since the outbreak of the pandemic. No or inadequate access to proper handwashing facilities at work or school and hot/jet air dryers instead of paper towels also play a part. Only 41% say they wash their hands often enough.

around **1/3**

of respondents don't wash their hands more often during the COVID-19 pandemic because of lacking facilities or hygiene products. (Essity Survey)

Early start to nurture kids' lifelong hand hygiene habits

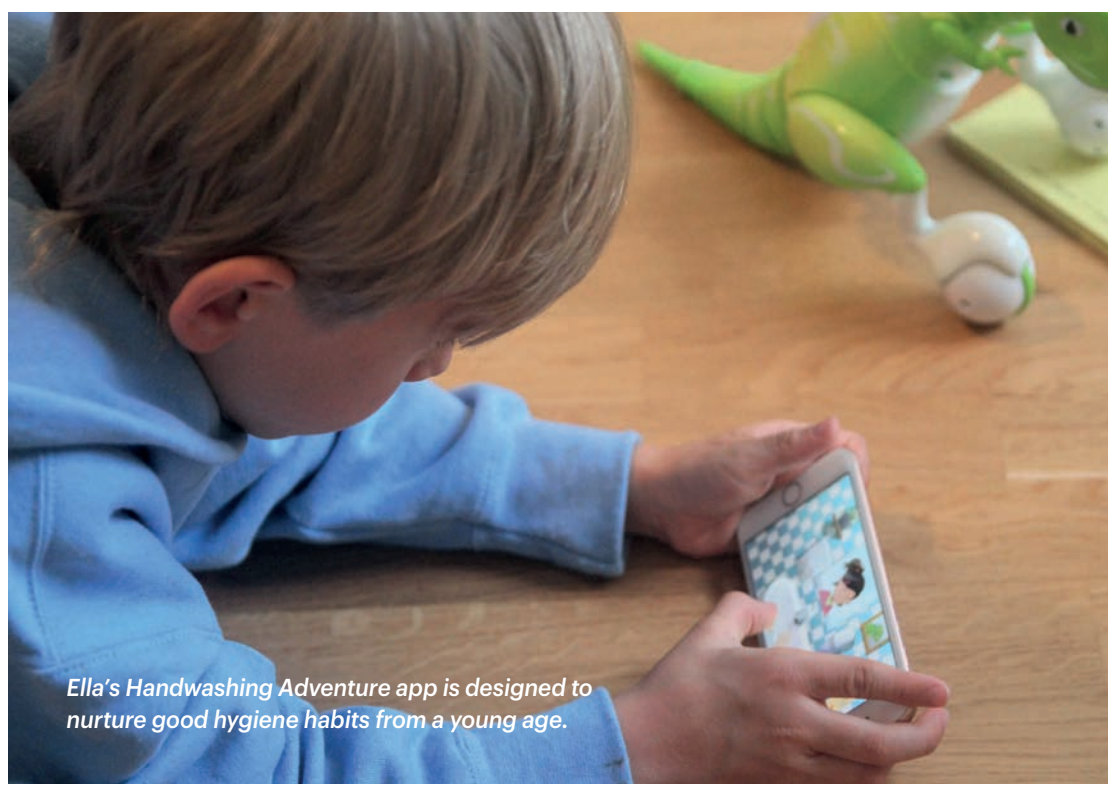
The Ella's Handwashing Adventure app is designed to make handwashing a little more fun for kids – to promote good hygiene practices from an early age.

Teaching good hygiene can be a challenge, but is critical in reducing the spread of colds, flu and viruses. COVID-19 has proven that hand hygiene has never been more important.

To nurture kids' life-long hygiene habits, Essity has advanced the knowledge in day care centers providing toolkits since 2007 and the 'Ella's Hand Washing School' package was launched already in 2013. The package includes a Handwashing Adventure app for smartphones and

tablets, pedagogical material as well as activities to help make handwashing a little more fun. The app has already been downloaded more than 70.000 times globally and is being used in pre-schools and kindergartens around the world.

As shown in the previous Hygiene and Health Report, preschools that have gone through hygiene programs show improved absence rates of between 7-13%⁹ - leading to fewer doctors visits and prescriptions for antibiotics, as well as less work days missed by parents.¹⁰ The Ella's Handwashing Adventure app is therefore a valuable tool to teach young children the importance of hand hygiene that creates shared value throughout society.



Ella's Handwashing Adventure app is designed to nurture good hygiene habits from a young age.

Prevention agenda in hospitals and healthcare

The need for hand hygiene and prevention is universal all around the world. Even patients in the most high-tech hospitals are at risk from infections while receiving healthcare. Illnesses caused by healthcare-associated infections (HAIs) result in illnesses and long-term health impacts for hundreds of millions of patients around the world.¹¹ They occur in all countries but are several times higher in low and middle-income countries than in high-income ones.

According to the WHO¹², HAIs are directly attributable to 99.000 deaths annually in the US and 37.000 deaths in Europe. In high-income countries, 30% of intensive care unit patients are affected by at least one HAI.

In England, HAIs are estimated to annually cost the National Health Service (NHS) around GBP 2.7 billion by taking up 7.1 million bed days each year.¹³ To put this into perspective, HAIs bears about the same cost to the NHS as smoking. Furthermore, the number of beds HAIs take up equates to 21% of NHS bed capacity, which is equivalent to 38 average size hospitals in the UK.¹⁴

Hand hygiene is the first line of defense

“Hand hygiene is the patient’s first line of defense because if we can prevent bacteria getting into the patient’s body in the first place, then we don’t need to deal with infections,” explains Dinah Gould, Professor of Nursing at London City University. “It is also affordable compared with other interventions and it is something that anyone can do.”

On the World Hand Hygiene Day in 2020, the WHO designated 2020 as the “Year of the Nurse and Midwife”. The importance of hand hygiene for nurses, midwives, as well as all front-line healthcare staff is an integrated part of their everyday work. However, studies have shown that healthcare professionals non-compliance with hand hygiene routines is a major problem in a hospital setting, often due to stressful situations or lack of hand sanitizer products nearby.

Help is available to empower and support healthcare staff. Actionable recommendations and guidelines can contribute to elevating overall hygiene, such as tool-kits that include proper handwashing, hand sanitizing procedures and downloadable instructions.¹⁵

What is a healthcare-associated infection?

Healthcare-associated infection (HAI), also referred to as ‘nosocomial’ or ‘hospital’ infection, is an infection occurring in a patient during the process of care in a hospital or other health-care facility that was not present or incubating at the time of admission. Patients may also be infected in nursing homes, elderly facilities or doctor’s offices.

Dinah Gould

Dinah is Professor of Nursing at London City University, London, UK. She has specialized in the role of hand hygiene in preventing infections since the 1980s. Her work has been important in raising the profile of hand hygiene as an essential solution to prevent infections – both in the UK and beyond.

Studies show that manual observations of hospital hand hygiene behavior can serve as a physical reminder and educational opportunity, but the fact that people tend to change their behavior when being observed makes it difficult to draw conclusions on hand washing compliance from manual observation.¹⁶

“Hand hygiene is the patient’s first line of defense to prevent bacteria getting into the patient’s body in the first place.”

Dinah Gould, Professor of Nursing at London City University

Following routines is key

Knowledge, training and culture are key to improving hand hygiene routines in a hospital environment. As in other areas of society, digital solutions can play an important role. More specifically, electronic monitoring systems (EMS) are one potential solution that can help provide more accurate monitoring of hospital hand hygiene practices.

Dinah Gould supported Essity with the development of the Tork Hand Hygiene Compliance Monitoring System and their observational studies at a hospital in UK. This involved advising on how the system should work and helping to define compliant and non-compliant hand hygiene events to ensure the right things are done by healthcare professionals at the right time.

Studies have shown that electronic monitoring systems can provide healthcare professionals with more accurate data that can be presented to staff in real time to help with awareness and improve hand hygiene compliance.

The entire care environment matters

Methods and techniques to reduce the spread of viruses and infection in hospitals and long-term care facilities do not just apply to healthcare professionals. Both patients and visitors are also important, along with cleaning staff that have a special role to play.

"It's not only about everyone working conscientiously with hand hygiene, the entire hospital environment needs to be clean too," says Gould. "Hospital cleaning staff play an essential role in infection control by keeping surfaces clean and following stringent routines, and we have seen issues arise when cleaning contractors do not adequately train their staff."

It is well known that implementing infrastructure or solutions without proper training and information can jeopardize investments. A hand hygiene compliance system takes this one step further by reassuring the return on investment. Moreover, it helps and empowers

Tork Hand Hygiene Compliance Monitoring System

Essity, together with studies and learnings from an acute medical ward in a NHS trust in London, UK and Sahlgrenska University Hospital in Sweden, has tested and developed the automatic hand hygiene monitoring system (Tork Hand Hygiene Compliance Monitoring System). The system measures individual hand hygiene compliance automatically, objectively and continuously in clinical practice in one ward. The measured results have been fed back to the nurses in real-time, both individually and as a team. The preliminary results from Sahlgrenska University Hospital in Sweden show that the compliance at the ward has more than doubled. This is a significant achievement of the ward and a strong indication that the Tork Hand Hygiene Compliance Monitoring System can inspire a ward to more than double their compliance rate.



staff in their everyday efforts to advance care and secure a safe hospital and long-term care environment, both for patients and visitors, as well as cleaning and health-care staff.

"I think hygiene will become an even more important part of the solution in the future," concludes Gould. "With COVID-19, we have recently seen that people are very interested in how the virus spreads, and people are much more aware of their own hand hygiene as a result of this – both in hospitals and in everyday life."

Hospitals should provide a safe and hygienic environment both for receivers and givers of care. Even before the world was hit by the COVID-19 pandemic, 57% of people were worried about getting sick from hospitals according to the Essity survey. These are global issues close to people's hearts and it is time to accelerate action. There are opportunities to promote more hygiene prevention measures and empower healthcare professionals – all in order to improve health-care outcomes and save lives.



Fear of infections in hospitals

57% are worried that a lack of proper hygiene practices in hospitals might expose them to multi-resistant bacteria

China, Mexico and India are the countries where people are most worried about antimicrobial resistance

47% are worried or very worried about antimicrobial resistance

From the Essity Survey. Read more about the survey on page 7.

Antimicrobial resistance and infection control

Another important factor adding to the toll of HAIs is the increase in antimicrobial resistance (AMR). More than 70% of bacteria causing HAIs are resistant to at least one of the drugs most commonly used to treat them.¹⁷ HAIs are closely linked to AMR and are often caused by an increased risk of resistant strains of bacteria found in infections. Fighting HAIs is an important, preventive measure against AMR.

AMR has become an increasingly serious threat to health care systems all over the world. It describes the ability of a pathogenic microorganisms to develop resistance to common antimicrobial medication. As a result, treatment options are limited and/or ineffective and patients suffer unnecessarily. AMR already contributes to 50.000 deaths a year in Europe.¹⁸ The UN warns that drug-resistant diseases could cause 10 million deaths each year by 2050 and inflict damage to the global economy as catastrophic as the 2008-2009 global financial crisis.¹⁹

“Antimicrobial resistance is a significant threat to humanity,” says Gould. “Here, hand hygiene can be an effective preventative measure, but it is also essential that doctors are educated not to over-prescribe antibiotics, as well as raising awareness among the public that antibiotics should not always be expected.”

Treating infected wounds

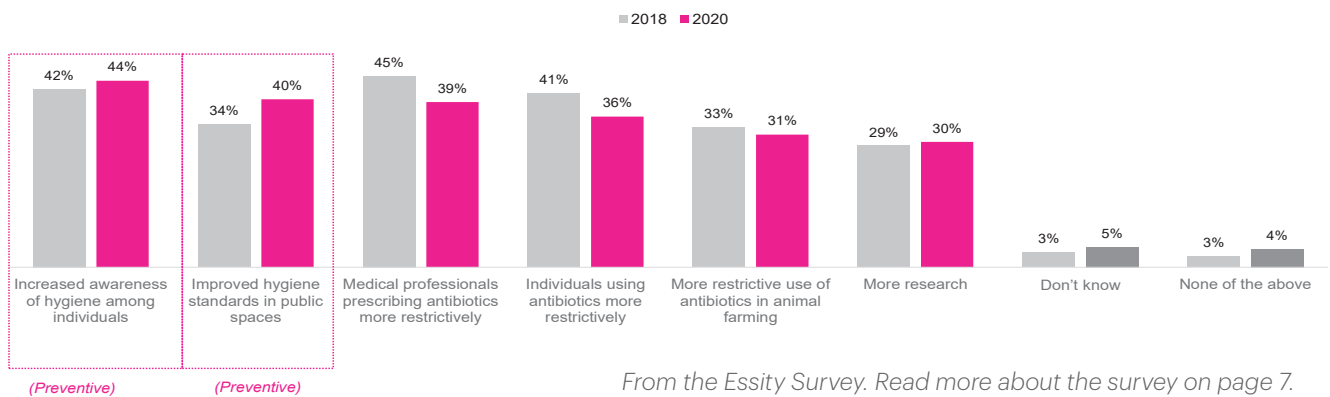
In the context of wounds, bacterial colonization and development of antimicrobial resistance can contribute to delayed healing and represents a major challenge for clinicians.

Fighting AMR starts with prevention of infections through general hygiene measures and hand hygiene of the health care professional. When it comes to the treatment of an infected wound, antibiotics should be used with care and can often rather be avoided in local application to not foster AMR. “Non-medicated dressings with bacterial binding actions to remove bacteria and fungi from a wound provide several advantages here”, says Prof. Dr Karsten Hemmrich, Vice President Health & Medical Solutions, Essity. “You can address infection prevention and infection treatment with the same measurement, without the risk for antimicrobial resistance”.

The fight against AMR will remain a joint effort between health care professionals, health care companies, medical societies, health associations and politicians alike. The awareness of the dangers of AMR and its impact, and initiated measures to limit its spread through respective treatment guidelines are first steps on this journey.

According to the Essity survey, more people required preventive measures to combat multi-resistant bacteria in 2020 than in 2018.

Preventive measures wanted to combat antimicrobial resistant



Q: What of the following do you think would make the biggest difference in helping to stop the spread of resistance to antibiotics (i.e. multi-resistant bacteria) where you live?

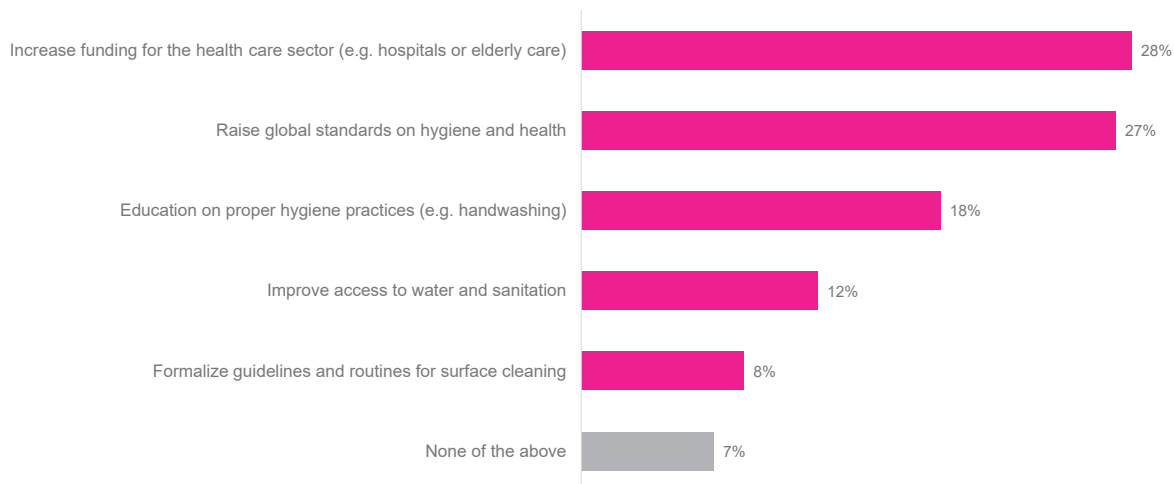
What is antimicrobial resistance?

Antimicrobial resistance (AMR) occurs when micro-organisms such as bacteria, viruses, fungi and parasites change in ways that make medication ineffective. When micro-organisms become resistant to most antimicrobials they are often referred to as ‘superbugs’. As a result, the medicines become ineffective and infections persist in the body.

Hygiene and health issues high on the public agenda

Viruses and multi-resistant microbial strains put pressure on policy makers to act to protect people. The COVID-19 pandemic has further highlighted how the action – and inaction – of policy makers to protect their populations is scrutinized by their electorate.

Most wanted political measures to improve hygiene and health worldwide



Learning from the COVID-19 pandemic, what do you think is the best preventive measure governments can take to improve hygiene and health worldwide?

From the Essity Survey. Read more about the survey on page 7.

The Essity survey highlighted what people think are the best preventive measures governments can take to improve hygiene and health in a post-COVID world. In countries with a general high level of access to water and sanitation, over half of the respondents answered either to increase funding for the healthcare sector or raising the global standards on hygiene and health.



Collaboration and innovation made development of face masks possible

At the beginning of the COVID-19 pandemic, Essity saw a growing need to keep its employees and their families around the world safe from infection. A speedy innovation process switched factories that normally produce personal hygiene products to produce face mask.

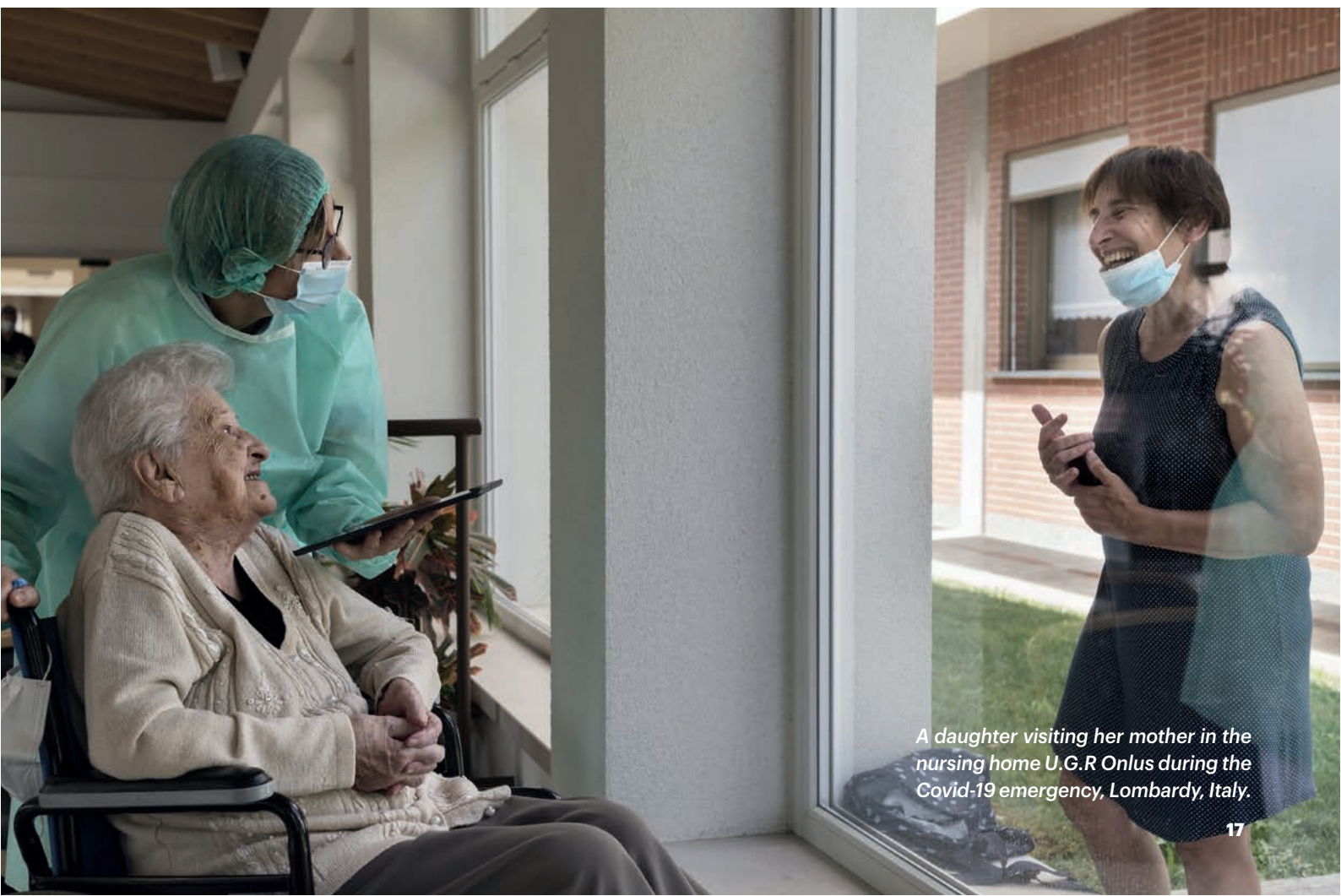
“The key priority for us was to keep our people safe while keeping our manufacturing running to be able to continue supply essential hygiene and health products to people around the globe. So, in developing the masks for internal use, we put together resources from different functions to figure out how to make them from existing assets in the shortest possible time. We worked as one team delivering something that in normal conditions would have been considered impossible. We also managed fast ways to distribute the masks in the most affected locations at the time, like Spain and Italy.” Donato Giorgio, President Global Manufacturing at Essity, recalls.

Thanks to many fast and bold decisions from top management, paired with the commitment of employees to work in new ways and around the clock, Essity managed to develop face masks that were approved within weeks. The internal need was covered for the time being.

Shortly after, the Swedish Government made a request to the national industry for help with providing protective equipment such as face masks at a time when Swedish healthcare and elderly care was experiencing a face mask shortage.

“All of us at Essity are part of a community, and therefore, it was natural that we wanted to help if we could. Through a clear and open dialogue with the authorities on the need and requirements we could, together with RISE, a Swedish research institute, ensure that our face masks met the specific requirements for the healthcare sector,” says Giorgio. “Within weeks, we were able to respond to the request. We donate one million face masks to the healthcare sector on top of the two million that were procured.”

After the start of the pandemic during spring 2020, the production of face masks was scaled up with investments in new machines and processes in Europe and Latin America. Thanks to an extremely rapid adaption and development, Essity can now provide face masks to millions of people.



A daughter visiting her mother in the nursing home U.G.R Onlus during the Covid-19 emergency, Lombardy, Italy.



Farmer Janeth Sitilenie teaches her daughter to use a tippy tap handwashing station next to their latrine in Botoret village, Kenya.

The added value of investing in hygiene and health

There are considerable economic benefits from investing in water and sanitation. According to the WHO, these include an overall estimated gain of 1.5% of global GDP.²⁰

The economic benefits of investing in hygiene and health, should be measured in terms of return on investment (ROI), as such investments decrease healthcare costs and increase productivity.²¹ The WHO estimates that every dollar invested in sanitation provides a return on investment for society of US\$ 5.50 due to lower health costs, more productivity, and fewer premature deaths.²² As shown in earlier reports²³, handwashing stands out in comparison with other public health interventions. Research has found that a national handwashing behavioral change program would provide a 35-fold return on investment in China, and a 92-fold return in India.²⁴

Stepping up financing

To reach the SDG 6.2 target of safely managed sanitation, there is an urgent need to globally prioritize sanitation, hygiene and menstrual health. Therefore, WSSCC is evolving into the Sanitation and Hygiene Fund (SHF) by 2021.

Today, 1 in 3 people in the world do not have basic handwashing facilities at home, and 70% of health workers are not able to routinely wash their hands at work. “We know now, more than ever, that this is unacceptable and a serious risk to everyone’s health. We have the opportunity now to make a difference and protect everyone’s health and well-being,” says O’Neill. In 2019, less than 15% of countries surveyed had policies, costed plans or adequate

financial and human resources to address their rural or urban sanitation gaps. To reach national urban and rural sanitation targets, countries face funding gaps of 74% and 59% respectively²⁵.

“It is only with sustained and well targeted investments in countries, that we will see a tangible shift in attitudes and practices. I am proud to say that the Fund is ready to step up as a financing mechanism to fill the void in international response to sanitation and hygiene where it matters most – in schools, healthcare facilities and homes,” concludes O’Neill.

The Sanitation and Hygiene Fund

The Sanitation and Hygiene Fund is a global financing organization designed to raise, catalyze and invest resources to accelerate delivery of sustainable sanitation, hygiene and menstrual health services for all. The Fund will invest in countries where the sanitation and hygiene needs are greatest and yet are least able to respond. Read more on page 5.



Dominic O'Neill, Executive Director of the Sanitation and Hygiene Fund

Engaging with the ministers of finance



Catarina de Albuquerque is the CEO of the Sanitation and Water for All global partnership.

Sanitation and Water for All (SWA) is a global partnership of governments, donors, civil society organizations and other development partners working together to coordinate high-level action, improve accountability and use scarce resources more effectively.

Catarina de Albuquerque welcomes the Hygiene and Health Report, and its call to the prioritization of hygiene and health for all.

"In 12 years working in this sector, I have never seen hygiene so high on the political and media agenda. It may have unfortunately taken a global pandemic to raise the world's awareness of its importance, but Sanitation and Water for All partners are committed to making the best of a bad situation, working to use this interest to push the sector forward in the longer term," says de Albuquerque.

As COVID-19 demonstrates, we are only as healthy as the most vulnerable members of society. The economic argument for investment needs to go hand in hand with ensuring the elimination of inequalities. Women in particular suffer from inadequate access to water, sanitation and hygiene due to their traditional caring roles, preventing them from using their time more productively. Barriers that keep women from improving

their lives need to be broken, no matter if the barriers are related to legislation, policies, strategies or cultural norms. Sanitation and Water for All are doing this by using advocacy for the prioritization and financing of services for the people who are left behind.

"Currently, we are increasing our engagement with the ministers of finance. The objective is to effectively integrate water, sanitation and hygiene into the economic and health programs needed to manage and recover from the COVID-19 pandemic and prevent future health crises. The message is clear – investment in water, sanitation and hygiene is among the most cost effective, considering the reduction in costs for healthcare and prevented loss of education and productivity," says de Albuquerque.

"Resilience to future crises depends on action taken now, so let us ensure this is not a missed opportunity to achieve our vision of water, sanitation and hygiene for all, always and everywhere," de Albuquerque concludes.



Calls for action to save and improve lives

The situations where hygiene and health can save and improve lives are numerous, but so are the global challenges. In this chapter, we have chosen to focus on global hygiene and health issues where there is a lack of progress, but also where WSSCC and Essity have experience, knowledge and can share solutions. We can all contribute, drive change and accelerate action, but we especially ask policy makers to consider the following calls for action:

- **Put people first.** The needs of the individual should always be at the center of public policy to secure the human right for basic hygiene and health for everyone. In healthcare, the needs of the individual must be reflected to empower both the receiver and giver of care.
- **Establish a prevention agenda.** Every country should establish actions to improve hygiene, health and sanitation as a fundamental prevention agenda. Investment in preventive actions such as handwashing can reduce additional healthcare costs, improve productivity and save lives. Access to clean water, safe, clean and private hygiene and sanitation facilities, and essential sanitary products for all is key, supported by information and training.
- **Invest in hygiene and health.** Prioritize and adequately fund hygiene and health policies – especially supporting people at different stages of life or those in vulnerable situations. These investments create shared value in terms of the individual, care provider and societal gains. Tenders should allow for innovation and digital solutions to enable technological evolution and optimize the use of resources. Supporting and funding research in these areas is also important to understand where the gaps or areas for improvement are. Research has found that, for example, a national handwashing behavioral change program would provide a 35-fold return on investment in China, and a 92-fold return in India.
- **Secure ownership.** Often hygiene issues are everyone's and yet nobody's business. Clear ownership is needed, as well as accountability. Prioritization and appropriate financing are key to improve global hygiene. Ownership from policy makers is required to realize the true societal value.
- **Improve hygiene and health standards.** Stakeholders at local, national and global level, should work together to establish and implement hygiene and health practices, guidelines and standards. These must be supported by education and training for users, caretakers etc. Innovation and digitalization within the sector provide disruptive opportunities for progress.



SUSTAINABLE DEVELOPMENT GOALS

