

OUR NATION'S HEALTHCARE RELIES ON PLASTIC



Our nation's healthcare system relies heavily on modern plastic materials to create the tools that help protect our health, allow us to live longer lives and fight injury, disease and death.

Plastic Helps Save Lives

Innovations in health, medical and safety tools made possible by plastic help save countless lives, prevent diseases and avoid injuries so we can live safer, more productive lives. These tools also contribute to sustainability by helping reduce the social, economic, and environmental impacts of injury, disease and death.

The Toll of Injury, Disease and Death

Approximately one and a half billion years of healthy lives are lost annually due to disease and injury, such as preventable infectious diseases, according to the World Health Organization.

Injuries, disease and premature deaths not only are personally devastating – they have radical effects on every aspect of social and economic life and the environment. Instead of being productive and investing in the future, families must spend their resources on medical care and coping, often leading to poverty, while the afflicted become unproductive and unable to work.

Innovations in plastic health/medical/safety tools have helped reduce the incidence of injuries and diseases, helping save lives from children in sub-Saharan Africa to suburban American families.



Fighting the Pandemic with Plastic

Plastic is an essential material throughout the medical supply chain, including to fight the COVID-19 pandemic, used to make face masks, shields, medical gowns, syringes, sanitary packaging and wipes, respirators, transparent barriers, hand sanitizer containers and more.

Right now, our nation is providing vaccines to millions of citizens. The vaccine is delivered in a plastic syringe – that's hundreds of millions of essential, lifesaving medicine dispensing products made possible by plastic. Many of these syringes are transported in foam plastic storage containers to help keep them cold. The people injecting and receiving the vaccine are wearing masks made with plastic fibers to help prevent transmission of the virus.

In addition, the lifesaving ventilators used in intensive care units to take over breathing for people with severe COVID-19 symptoms consist of fans, sensors, tubes, connectors, and displays made with plastic, as is much of the other medical equipment in modern hospitals and doctors' offices. And COVID-19 test kits made from plastic help identify infections quickly and protect lives.

Hygiene is Key

Advances in plastic products help improve basic hygiene, which has had a profound positive impact on people's lives. Two basic health/medical advances alone – sterile plastic packaging and disposable medical items – have helped prevent countless infections, one of the world's leading causes of death. As noted above, the pandemic has made clear the need for basic hygiene tools to prevent the spread of disease.

Tools of Your Doctor's Office and Hospital

During a typical doctor's office visit or hospital stay, medical professionals may use dozens of plastic medical instruments and hygienic tools. From exam gloves to sterile syringes to intravenous tubes, plastic is ubiquitous in the medical field because it helps protect us and guard against contamination. For example, the durability of plastic used in floors, walls, chairs, tables, cabinets and many other places makes the

material especially well-suited to withstand stringent cleaning and disinfection protocols common in hospitals and healthcare centers.

While we may take them for granted, many of these innovations in plastic are fairly new, such as plastic in the operating room (blood bags, IV tubes, syringes, operating gloves, medical equipment housed in hygienic plastic). Their effectiveness has helped them become ubiquitous only in the last quarter century.

Newer innovations such as dissolvable plastic heart stents and plastic body parts (e.g., joints, prosthetics) made with 3-D printers are contributing even further to more productive lives and societal and economic sustainability.

Innovations Help Billions of People

As these innovations become more widely distributed, they help billions of people avoid disease and lead safer, more productive lives.

- Medicine delivery using sterile plastic saves countless lives.
- Drug delivery devices made from plastic dispense lifesaving and life-improving medicines through inhalers, pens and auto-injector devices.
- Plastic bandages (strips and liquid) reduce infections and pain.
- Plastic used in diagnostic devices such as continuous glucose monitors improve the quality of diabetes patients' lives.
- Plastic can help target and control release of drugs in the body, helping fight disease and reduce side effects.
- Plastic in prosthetics enables mobility.
- Plastic eye wear (glasses, contact lenses) and implanted corneas make lifelong clear vision widely accessible.
- Delivery of clean water that depends on plastic pipes/filters reduces disease and deaths.
- Plastic mosquito nets treated with insecticide prevent the spread of malaria.

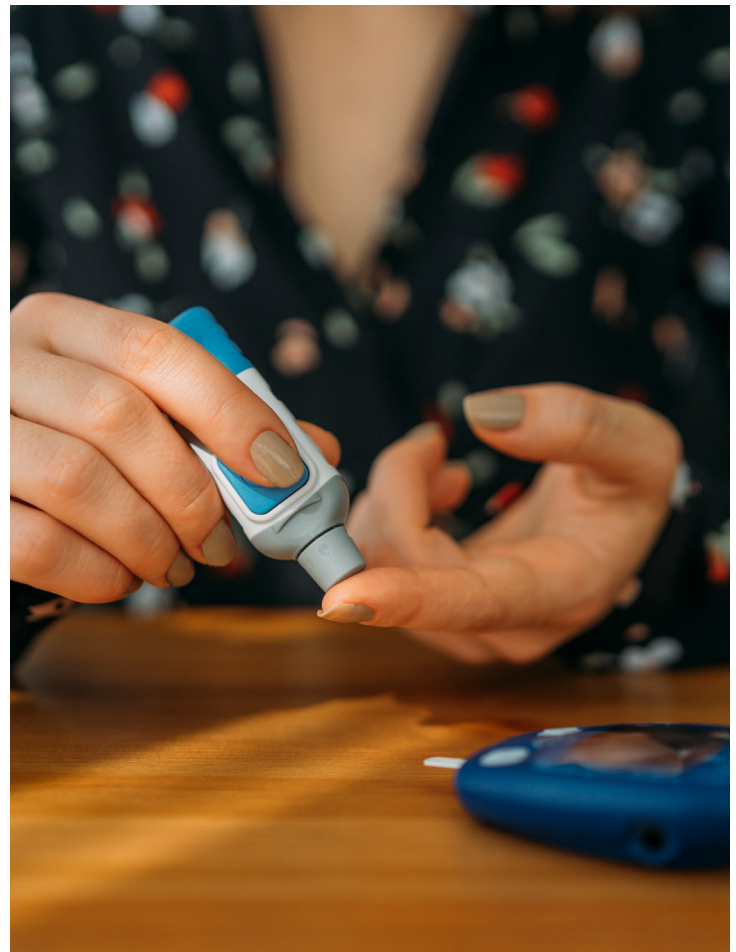
Safety

Similar to health and medical innovations, essential plastic safety tools and gear reduce debilitating injuries and deaths. Seat belts, air bags, child car seats, sports helmets and pads, recreational safety equipment, goggles, hard hats, firefighting gear, bullet proof vests, military gear – all contribute to safety and reduce injuries and deaths.

Personal Protective Equipment (PPE)

Workers throughout our nation – from healthcare to law enforcement to construction – are kept safer by personal protective equipment (PPE), nearly all of which is made with plastic.

- Goggles and face shields
- Gloves
- Hearing protection
- Respirator masks
- N95 masks
- Hard hats
- Safety shoes/boots
- Body gowns/suits/coats



May 3, 2021

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