

A CANADIAN SOLUTION

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An Unsuspected Miscreant: The Healthcare Industry's Effect on Plastic Pollution



A photo of accumulated plastic in a landfill. (<https://www.shutterstock.com/video/clip-1021992829-landfill-plastic-pollution-aerial-view>)

Plastic pollution is one of the world's most mitigating issues. Currently, there are approximately 5.25 trillion pieces of plastic at sea. This estimate is 25% more than the original prediction. The rise of plastic products in the ocean pose a tremendous risk to the human and marine population. Plastic is especially harmful as it never completely disintegrates. Over time plastic breaks down into smaller and smaller pieces. These micro-plastics have a tendency of entering the food chain. These micro-plastics are then consumed by humans and wildlife.

In the rising heat of the international global climate, plastic has been the cause of much debate. The topic of the well-being of the environment and humanity has begun controversy. Is plastic pollution a legitimate, urgent problem?

THE UNLIKELY OFFENDERS

Scientists and environmentalists alike have been quick to scrutinize fast food, cosmetic and grocery store companies for the current state of plastic pollution. Nevertheless, there remain unsuspected miscreants proving ought to have as much of a negative influence on the ecosystem as their popular counterparts - the healthcare system. Plastics used in hospitals only contribute on average 1% to non-residential landfill waste. Despite that, numbers can be deceiving as in 6 years 8 500 000 to 9 500 000 million tonnes of ocean plastic will be from medical facilities.

Pupils at a local Brampton middle school are acknowledging the matter and are vocalising their opinions, Aminah Reza the 2nd Place Winner of the 2016 YRE Article Contest explained her viewpoint on plastics in healthcare stating “We are running out of space to make landfills, but people will always need products to aid their health. If the health industry doesn't step up their game and start using biodegradable materials, we won't have anywhere to put our waste.”

THE SOURCE OF THE PROBLEM

Plastics are transforming the health industry. Hospitals all over Ontario have a surplus of plastic products. But, there is an aspect of plastic in healthcare that is proving to have the most detrimental impacts on the environment - medicinal plastic disposables. Disposable plastic products varying from IV tubing, medication packaging, surgical gloves and gowns to blood and urine bags are some of the few examples of disposables.

20-33% of hospital waste is from single-use plastics (Healthy Debate, 2016). Hospitals are making massive amounts of plastic that are going to affect the future of Canadians.

A Toronto doctor shared her insights on plastic usage at her hospital emphasizing the responsibility medical staff have to lessen their damaging environmental contributions “If a piece of equipment breaks, I now have to open a new tray and throw out all the equipment in that tray as well,” “It’s kind of shocking the amount of garbage that’s created.”

IS IT RESPONSIBLE

Waste is not the only concern that comes with plastics in medicine. It raises the question of whether plastic medical disposables are ethically produced and whether medical facilities are socially responsible in their usage. Disposable plastics are cheap. This affordability could be compromising moral standards. Single-use plastic instruments are being produced and manufactured in “dangerous

working conditions". (The Guardian, 2008). Pakistani children starting from the age of eight are creating [plastic] medical tools for as little as \$2.11 (CAD).

Hospitals must take the necessary precautions to ensure all medical disposables are made in a humane fashion.

FURTHER ISSUES

Plastic disposables in medicine not only increases waste production but, its usage is posing unfavourable consequences on patients, notably the vulnerable population. Lethal chemicals have been found in medical plastics (Healthy Debate, 2016). These chemicals are establishing an opportunity for negative health effects especially towards the unprotected population such as premature babies, full-term babies, infants, children and the elderly. Bisphenol A (BPA), Phthalates and DEHP have been located in plastic medical supplies and are considered toxic. Neonatal and Pediatric Intensive Care Units have acknowledged this problem and are working towards plausible solutions.

WHAT THE FUTURE HAS IN STORE, A POSSIBLE SOLUTION?

Many Canadians have accepted the current state of our environment. However, the government, hospitals and Canadian individuals are coming up with innovative, straightforward solutions to tackle the problem of plastic pollution, especially in the healthcare industry.

The GreenHealth Care Organization recently implemented an experiment at Grand River Hospital in Ontario. This experiment consisted of placing extra hamper stands in ORs to collect compression sleeves. "Since, September 2017, Grand River Hospital has diverted 1,302 lbs. of garbage from landfills and reduced their waste costs by \$1,990" (Greenhealth Care, 2018).

At the Toronto Western Centre, neurosurgeons receive exposure to new information regarding the price of their disposable instruments. This new information learnt by physicians has helped the medical centre "cut their disposables costs about 30 per cent, or some \$750,000, moving from a department deficit to surplus." (National Post, 2015). The prices ranged from \$100 (CAD) for a singular stapler from a surgical staple all the way to \$6 000 (CAD) for an implantable piece of mesh (National Post, 2015).

All in all, although plastic pollution is not a problem to be solved overnight. The solutions listed above prove that sometimes the simplest things, make the largest difference. I believe the education of Canadian is where the true solution resides.