Why medical products must not be excluded from the Global Plastics Treaty

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"These plastics save lives." In April, 2024, posters bearing this slogan without any organisation or company logo were displayed inside hotels in Ottawa, Canada (figure) and on billboard trucks around the main venue of the Fourth Intergovernmental Negotiating Committee (INC-4) to develop a legally binding instrument on plastic pollution. These negotiations on a Global Plastics Treaty, expected to be finalised at INC-5 in Busan, South Korea from Nov 25 to Dec 1, 2024, include a proposed blanket exemption of plastic products for medical and health uses and responses to public health emergencies from all proposed binding provisions in the Treaty. The draft document states: "[The instrument* does not apply to the following applications and[/or] substances: a. [Medical and health use;] b. [Emergency response to public health incidents and natural disasters;]]".[1]

Over the past 60 years, health-care systems globally have become increasingly dependent on the material virtues of single-use plastic products: mouldable, flexible, sterilisable, and disposable.[2] Mouldability lent itself to mass manufacture, generating new economic efficiencies. The versatility of plastics allowed the development of more precise, miniaturised, and multifunctional devices. Manufacturers created demand for disposables through advertising and offered convenience for staff and administrators alike.[3] But conflating the normalisation of disposable plastics in health care with their necessity overlooks growing evidence that, for many devices, single use does not improve hygiene, while obscuring risks plastics pose to human health.[4–6] Plastics include additives, including carcinogens, neurotoxicants, and endocrine disruptors, that can have harmful effects on human health and the environment.[4,7] There is some emerging evidence that plastics in medical devices might fragment into microparticles and nanoparticles that could enter the bloodstream and organs through infusion therapies, surgery, or implants.[8–11] Evidence about the impacts of microplastics on human health is nascent and there is an urgent need for robust research on the potential risks posed by microplastics from medical devices.[12–15] Discarded plastics from medical devices contaminate soil and waterways, or produce toxic fumes when burned.[16,17] Risks of exposure to chemicals and toxins during the production and discard stages of the plastic lifecycle disproportionately affect low-income and disadvantaged communities globally.[18] Plastic related to medical products is not a minor part of the plastics pollution problem. The global medical plastics market is projected to reach US$41·2 billion by 2028.[19] Health care contributes considerably to plastic waste while shoring up the case for continued production of single-use products, in many cases without any evidence of benefits for patient safety.[6]

More research on the complex connections between plastic and health across the lifecycle of the material is needed,[20,21] but this should not be used to delay action. The precautionary principle has been embedded in environmental regulations since the 1992 Rio Declaration on Environment and Development and should be a guiding principle of the Global Plastics Treaty, including medical plastic products.[22] Yet the proposed exemption of medical products from Treaty provisions creates an inconsistent message on plastics and health. This inconsistency runs throughout the draft text,[1] in which sporadic references to potential health risks from plastics jostle for space with repetition of its essential role in both human health and health care. The current preamble lists the

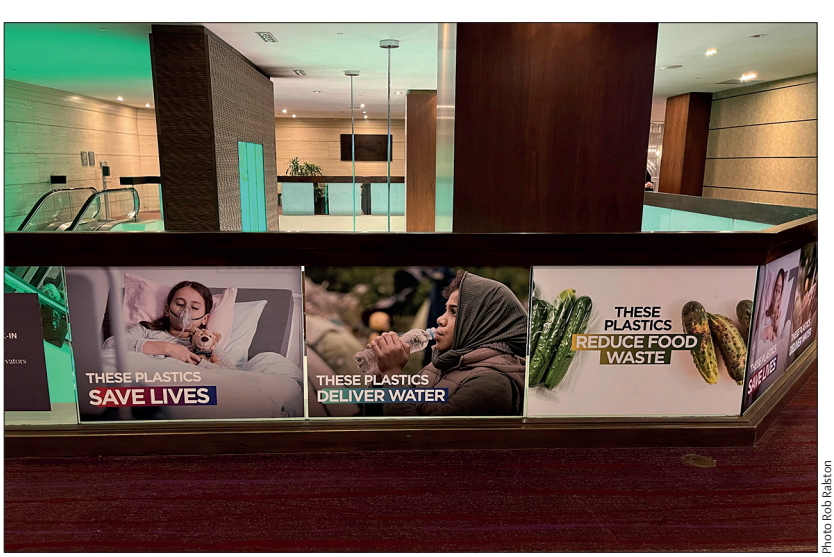

Photo Rob Ralston

Figure: **Posters promoting plastics at a hotel near the venue in Ottawa, Canada, of the Fourth Intergovernmental Negotiating Committee meeting in April, 2024**

contributions of plastic to "welfare and human health", "sustainable development", a "clean and healthy world", and "medical care".[1] An implication is that subjecting health products to the Treaty's binding requirements, such as the phase-out of chemicals and polymers of concern, would threaten the provision of safe and effective health care—and that this risk outweighs potentially harmful impacts to health across the lifecycle of those products.

Untangling necessity from convenience in modern health care's dependence on plastics entails complex material, economic, and social challenges. Yet there is no clear reason why the application of Treaty provisions such as the phase-out of harmful chemicals, polymers, and microplastics, transparent labelling, extended producer responsibility, minimum design and performance criteria for plastic products, or targets for reduction, reuse, refill, and repair cannot be applied to medical products. The proposed Treaty requirement that manufacturers fully disclose the chemical contents of their products would enable health-care purchasers to make informed decisions in cases where safer and more sustainable alternatives are available. Application of proposed extended producer responsibility provisions to the health sector would encourage medical device manufacturers to consider the full lifecycle of plastics at the design stage and ensure that they contribute to costs of disposal. These provisions are not immediate bans on plastics that would inhibit access to lifesaving products, but measures intended to stimulate innovation and shift the costs of plastic pollution to producers.

WHO's proposal for a dedicated programme of work to support implementation of the Treaty in the health sector, similar to that proposed in the draft text for other sectors such as agriculture and fisheries,[1] seems a sensible way forward.[23] Instead of an exemption for medical and health products, this could include delayed prohibitions on plastics and polymers of concern that are essential for access to affordable health services, to allow for the development and regulation of sustainable alternatives. It would also be important to include well-defined essential use criteria that can help determine which medical plastics are necessary and which are merely convenient.[24] The legally binding power of the Global Plastics Treaty needs to be harnessed to instigate collective investment in hospital infrastructures of reuse and stimulate more sustainable innovation and design in everyday medical technology, learning from existing examples.[25,26]

Arguments for the exemption of plastic health products often refer to their essential role in delivering affordable and safe health care in low-income and middle-income countries (LMICs).[23,27] A September, 2024 press release from ExxonMobil in the run up to Busan, emphasises the "untold benefits plastics deliver" and extolls single-use plastic packaging as "critical for hygiene or medicine in Africa".[28] Yet consideration also needs to be given to the environmental and human health harms and inequities that result from the widespread use and discard of single-use plastic products in under-resourced health systems, many of which do not have adequate health-care waste management.[29] In response to public health emergencies in LMICs, international donors often fund the mass import of single-use products, such as diagnostics or personal protective equipment, with little consideration for their disposal,[30] while the growing burden of plastic waste from clinical trials in African countries remains unacknowledged and poorly regulated.[31] Low-income countries need to have more say in the structures and content of the Global Plastics Treaty, and to determine which circular economy approaches meet their health-care, environmental, and economic priorities,[32] without this choice being made by others claiming to speak on their behalf.

The industries and states who would benefit most from blanket exemption of medical products from Treaty provisions, most prominently the petrochemical industry, are those pushing the "plastics saves lives" mantra hardest.[33] Efforts to undermine the precautionary principle and describe health-related harms of plastics as "not well understood"[34] should be resisted and a consistent message about the health risks from plastics included in the Treaty. Country delegations and organisations involved in the Treaty negotiations must ensure vested commercial interests do not exert influence over an important participatory summit for human and environmental health in Busan in November.[35] This means ensuring plastic products for medical and public health uses are not given a free pass in the final text of the Global Plastics Treaty.

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