Call for written submissions – Proposed response template on the potential options for elements towards an international legally binding instrument

On 9 December 2022, the Executive Secretary of the INC Plastic Pollution Secretariat sent a notification inviting written submissions from members of the committee and from observers. The template below is intended to provide guidance to members of the committee and observers in structuring the written submissions.

As requested by INC-1, written submissions will inform the secretariat in the preparation of a document with potential options for elements towards an international legally binding instrument, for consideration at the second session of the INC, without in any way prejudging what the committee might decide regarding the structure and provisions of the instrument. The document is to be based on a comprehensive approach that addresses the full life cycle of plastics as called for by UNEA resolution 5/14, including identifying the objective, substantive provisions including core obligations, control measures, and voluntary approaches, implementation measures, and means of implementation.

The template below is meant to assist Members and Observers to prepare their written submission as a guide. A number of documents prepared for INC-1 are of relevance, notably UNEP/PP/INC.1/5 on ‘Potential elements, based on provisions in paragraphs 3 and 4 of United Nations Environment Assembly resolution 5/14, including key concepts, procedures and mechanisms of legally binding multilateral agreements that may be relevant to furthering implementation and compliance under the future international legally binding instrument on plastic pollution, including in the marine environment’.

The template is divided into three sections:

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I. Substantive elements
II. Implementation elements
III. Additional input

All written submissions must be sent to unep-incplastic.secretariat@un.org. The statements received will be compiled and made available the INC webpage.

Please note that it is not required for all fields to be answered in the template for submission.

Deadline for submissions:

• 6 January 2023 for written submissions from observers.
• 10 February 2023 for written submissions from Members of the Committee.
I. Substantive elements

1. Objective(s)

   a) What objective(s) could be set out in the instrument?

   Proposed Objective:
   To address the triple problem of asthma inhaler devices worldwide. The plastic outside, the steel/aluminum cannister and the HFA gas that is X1000 more powerful than CO2 in the cannister. To have a unified collection system and also safe disposal. Pressure on manufacturers to have counters to ensure complete emptying of the gas. Reuse of the outside polystyrene packaging.

   Explanatory Text: SEE ‘ADDITIONAL INPUT’ AT THE END

   Just in the UK 75m devices are used annually – equivalent carbon footprint of a Golf car going round the world 89000 times. Even in the UK 90% of inhaler devices reach landfills – eventually releasing the residual gas in addition to the polystyrene leaching and affecting land and marine animals. This is a doable. Less use of Ventolin which is used as a reliever – with better medical education more preventers could be used to decrease the amount of propellant gas release. To encourage globally Salmol which has a lower volume of propellant and ban Ventolin which has a higher amount of HFC.
2. Core obligations, control measures and voluntary approaches

a) What core obligations, control measures and voluntary approaches would provide a comprehensive approach to addressing plastic pollution, including in the marine environment, throughout the full life cycle in line with the future objective(s) of the instrument?

Companies that make these devices should have counters by law so none is wasted. Also policy change to ensuring cannister refills rather than dispensing a new compact device which includes the plastic container. A policy to only dispense a device when one is returned. In this way the propylene plastic packaging could be reused many times.

A change to powder devices which have no propellant gas would be better.

II. Implementation elements

1. Implementation measures

a) How to ensure implementation of the instrument at the national level (eg. role national action plans contribute to meeting the objectives and obligations of the instrument?)

b) How to ensure effectiveness of the instrument and have efficient national reporting?

c) Please provide any other relevant proposals or priorities here on implementation measures (for example for scientific and technical cooperation and coordination as well as compliance).

The bodies such as the General Medical Council in the UK, medical schools and hospitals could implement all this through education which includes the public, and enforced new laws. The manufacturers such as GSK should sponsor the recycling of these devices through eg Terracycle etc. They did have a recycling scheme which was abandoned in 2019 after 6 years.

2. Means of Implementation
With respect to means of implementation, document UNEP/PP/INC.1/5 covers the following elements: capacity-building, technical assistance, technology transfer on mutually agreed terms and financial assistance.

a) What measures will be required to support the implementation of the instrument?

Governments need to support all the transitions mentioned above and make disposal of these devices into waste bins an offence – once the infrastructure is built up.

III. Additional input

Please provide any other relevant proposals or priorities here (for example introductory elements; awareness-raising, education and exchange of information; research; stakeholder engagement; institutional arrangements and final provisions).

This has been published on line:

Guest Editorial

The Last Puff

Abdul Gatrad. Jennifer Carless*

Professor of Paediatrics, Manor Hospital Walsall, West Midlands, England, United Kingdom

Jennifer Carless – Student at Hull University – Bio Medical Sciences.

*Corresponding Author: Abdul Gatrad, Professor of Paediatrics, Manor Hospital Walsall, West Midlands, England, United Kingdom.

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The NHS has set a goal of becoming the world’s first health system to commit to net zero by 2040. In order to achieve this, we all have a part to play and can start by picking low hanging fruits— for example decreasing and stopping the use of desflurane and nitrous oxide in anaesthesia and rethinking asthma inhalers.

GSK estimate that the total carbon footprint of the 73m inhalers used annually in the UK is equivalent to a VW
Golf going round the earth 89000 times!

The asthma puffer (pMDI-propellant multidose inhaler) was introduced in the 1950’s and arguably has saved millions of lives, but in the context of its impact on climate change it is a mixed blessing and we need to refocus. An average 70% of inhaler use in the UK are pMDIs and Ventolin use is top of the list.

Two puffs of Ventolin are equivalent to 9 miles in an average car or just one device when prescribed is equivalent to a carbon footprint of a family car being driven for 200 miles.

NHS is responsible for 5.6% of total greenhouse gas emissions and inhalers contribute up to 4% of these. This issue is so important that NICE has produced guidelines on the use of inhalers with climate change in mind. As there is a deluge of types of inhalers, I will concentrate on sharing knowledge with a view to changing behaviour.

Doctors need to understand the impact of inhalers on the environment for them engage and act. In the process they also need to continually educate the public about not wasting any medication, and safely disposing the devices. Seven out of ten inhalers are disposed through household waste, often not completely empty, and reach landfills where HFC (Hydrofluorocarbon) a potent greenhouse gas (GHG), is released into the atmosphere.

HFC is the primary propellant in pMDIs. Two types of HFC are used as propellants - HFA 227ea (hydrofluoroalkane) and HFA 134a (lower volume of propellant) - the latter should be a preference. This gas is X1300 more potent than CO₂ - Methane on the other hand is a mere x80 more powerful, relatively speaking.

All inhalers including nebulisers have a carbon footprint but not all have the propellant HFC which contributes hugely to the carbon footprint of a single inhaler. Inhalers have 3 components - the plastic outside (usually made of polypropylene, not easy to recycle but can be), the cannister made out of stainless steel/aluminium (can be recycled) and the gas that it contains.

There is evidence to suggest that there is an excessive and unnecessary use of relievers, such as Ventolin. This often implies poor control and a need for improved education. As long as patient care is not compromised, with
better education, salbutamol (Ventolin) use can be decreased with more emphasis on preventors.

DPIs (Dry Powder Inhalers) have a twenty- five times lower carbon footprint compared to pMDIs (20 gms CO₂ equivalent per 2 puff doses compared to a similar dose of MDIs which is 500g CO₂ equivalent). So, a change to powdered inhalers e.g. Ventolin accuhaler or a type of Respimat (soft mist inhaler) should be considered more and more, appreciating the fact that in less than 5-year-olds, powders may not be appropriate as children may not breathe quickly and deeply over 2 - 3 seconds through their mouths. Respimat type of inhalers (not commonly used in the UK) can be used with up to six refills cartridges that are replaced each time the medication runs out. This would save money and also be environmentally friendly. There is no reason why cartridge refills could not be considered for the plastic device that could be reused – once the issue of infection etc is sorted. Therefore efforts should also be made to create such a closed loop recycling economy whereby the same plastic container is reused for use in further devices.

Where possible, giving a larger dose of e.g. salbutamol 200 micrograms per puff compared to 100 micrograms would decrease release of the propellant gas. Indeed, a complete change to Salmol which has a small volume propellant compared to Ventolin would decrease carbon footprint three times. Salmol is a brand name for Salbutamol. Ventolin and Salmol both contain 200 doses and have the same amount of salbutamol, the active drug in each puff and is equally effective.

The short message is to increase the use of powdered devices and decrease the use of pMDIs with a view to eventually stopping them, until a much safer propellant is discovered. Where possible, a combination inhaler may be a better option.

In addition, pressure should be put to bear on manufacturers on incorporating counters into all inhalers to decrease wastage, although some devices do already have them. The force needed to activate the valve must result in delivery, otherwise there could possibly be a situation where the cannister is empty and wrong information is recorded. Companies presently are reluctant as this would increase the cost.

To have an impact on the contribution of HFC to global GHG emissions, manufacturers, in addition, urgently need to produce inhalers with an end- of-life type of plastic in mind i.e. that which can be recycled or even a plant based plastic. The companies that produce these devices could sponsor recycling by Terracycle which for example supports Walkers Crisps. All health services around the world, certainly in the NHS in the UK should be looking at only dispensing the devices once one is returned – this will need a huge culture change.

Furthermore, health care professionals, including pharmacists, should educate the public on safe disposal and signpost them to a government supported ‘Recycle Now’ website. In the meantime, universally, a strategy should be worked out by various trusts and other health care organisations for collection of inhalers and their safe disposal through thermal incineration which degrades HFC. Of the five NHS Trusts presently allowed to incinerate Wolverhampton NHS Trust is the only one in the UK that has a license to fully incinerate these devices safely and the energy produced in the process is put to good use in other areas of the hospital.

A scheme in Leicester for returning used devices by post was abandoned because of costs involved. Talks are at an advanced stage for a company in the UK to accept all the asthma devices from Walsall and Wolverhampton, separate the canisters from the plastic – then recycle the plastic and send the cannister to another company for removal of gas and recycling. A lot of bureaucracy will need to be overcome to do this safely from the NHS perspective. In these discussions representatives from GSK have been present.

Asthma is a very common condition that globally is dealt with largely by the use of inhalers. The UK National Institute for Health and Care Excellence (NICE) published a Patient Decision Aid on asthma inhalers in 2019.
that emphasizes carbon footprint as a criterion in the choice of inhaler, thereby favouring a switch to DPIs or re-
usable SMIs. Furthermore, the UK Government’s Environmental Audit Committee has set the UK National Health Service (NHS) the challenge of reducing the GWP impact from inhaler use by 50% before 2028. https://www.sduhealth.org.uk/nhs%20long%20term%20 plan/carbon-reduction/anaesthetics-and-inhalers.aspx.