

1 **MASSACHUSETTS MEDICAL SOCIETY HOUSE OF DELEGATES**
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4 Item #: 13
5 Code: Resolution A-26 A-109
6 Title: Raising Clinician and Public Awareness of the Negative Impact of
7 Plastics and Microplastics on Human Health
8 Sponsors: Christine Kannler, MD
9 Regina LaRocque, MD
10 Bridget Lee, MD
11 Brita Lundberg, MD
12 Caren Solomon, MD
13 Donna Staton, MD
14
15 Referred to: Reference Committee A
16 Hailey Greenstone, Chair
17

18 Whereas, An MMS strategic imperative is to Drive Change with Impactful Advocacy; this proposal
19 will advance this imperative by advocating for stronger controls on and alternative solutions to
20 plastic production and pollution, and education to increase physician and patient awareness
21 around prevention and medical sequelae of plastic production and exposure, which will benefit
22 health, improve social determinants of health, and lessen health disparities; and
23

24 Whereas, The MMS has the following related existing policy on this issue (D):
25

26 **Air Quality**

27 *The Massachusetts Medical Society (MMS) acknowledges that medical waste incineration*
28 *results in pollution with the risk of hazardous effects on human health. (HP)*
29

30 *The MMS will request that medical facilities eliminate nonessential incineration of medical waste*
31 *and phase out PVC plastic and mercury product usage to decrease environmental pollution from*
32 *health care waste. (D)*

33 *MMS House of Delegates, 11/17/01*
34 *Reaffirmed MMS House of Delegates, 5/9/08*
35 *(Item 3 of Original: Sunset)*
36 *Reaffirmed MMS House of Delegates, 5/2/15*
37 *Reaffirmed MMS House of Delegates, 5/21/22*
38

39 **Fossil Fuels**

40 *That in order to promote public health and safety for current and future generations, the MMS will*
41 *encourage education about the health impacts of fossil fuel usage and advocacy to reduce the*
42 *use of fossil fuels and increase healthier and safer*
43 *energy sources. (D)*
44

45 *MMS House of Delegates, 11/15/08*
46 *Reaffirmed MMS House of Delegates, 5/2/15*
(Amended and Reaffirmed MMS House of Delegates, 5/21/22)

1 **Gas-Powered Leaf Blowers/Noise and Pollution**

2 *The MMS urges the maximum feasible reduction of all forms of air pollution, including*
3 *particulates, gases, toxicants, irritants, smog formers, and other biologically and chemically*
4 *active pollutants. (HP)*

5 *MMS House of Delegates, 4/29/17*
6 *Reaffirmed MMS House of Delegates, 5/11/24*

7
8 ; and

9
10 The AMA has adopted (2025) the following policy on microplastics:

11 *Addressing the Health Consequences of Microplastics in Humans H-135.901; (Res. 429, A-25*
12 *Appended: Res. 418, A-25)*

- 13 1. *Our AMA recognizes the potential health risks associated with microplastics exposure*
14 *and encourages increased research to better understand the human health effects of*
15 *microplastics.*
- 16 2. *Our AMA supports the respective specialty medical societies with subject matter*
17 *expertise and federal and state public health agencies, including the Centers for Disease*
18 *Control and Prevention (CDC) and the Environmental Protection Agency (EPA), to*
19 *develop evidence-based guidelines for monitoring and mitigating microplastic exposure in*
20 *water, food, air, and other consumer products.*
- 21 3. *Our AMA will collaborate with relevant stakeholders to promote public education about*
22 *microplastics, their sources, potential health risks, and possible strategies for reducing*
23 *exposure.*
- 24 4. *Our AMA will study and report back with policy recommendations on ways to reduce*
25 *plastic pollution and its impact on climate change and health, including but not limited to*
26 *federal, state, and local taxes and limitations on the use of single-use plastic consumer*
27 *products and other types of plastic, interventions to reduce microplastics, and alternatives*
28 *to plastic; and*

29
30 Whereas, Over 98% of plastics and microplastics are derived from coal, oil and gas, whose
31 petrochemical components, like the known carcinogen benzene, and endocrine disruptors such
32 as PFAS, phthalates and bisphenols, leach out during day to day use and at every point in the
33 production cycle from manufacture to waste disposal¹; and

34
35 Whereas, Microplastics and nanoplastics have recently been shown to be particularly
36 problematic since humans easily breathe or ingest these ubiquitous small particles of plastic via
37 the air, water, food and soil²; and

38
39 Whereas, Toxicological and epidemiological evidence shows that plastics and microplastics have
40 neurotoxic, carcinogenic, immune and endocrine-disrupting impacts that harm human health and
41 the global environment: the chemicals contained in plastics are associated with increased risk for
42 miscarriage, decreased birth weight, male reproductive birth defects, infertility, renal disease,
43 neurodevelopmental disorders, metabolic and endocrine diseases, obesity, hypertension and

¹ The Minderoo-Monaco Commission on Plastics and Human Health. Ann Glob Health. 2023 Mar 21;89(1):23. doi: 10.5334/aogh.4056. PMID: 36969097; PMCID: PMC10038118.

<https://pubmed.ncbi.nlm.nih.gov/36969097>

²<https://med.stanford.edu/news/insights/2025/01/microplastics-in-body-polluted-tiny-plastic-fragments.html>

1 cardiovascular disease, respiratory disease, allergies, adult reproductive disorders, and
2 cancers³; and

3
4 Whereas, The attributable disease burden and cost of plastics exposure is high⁴: in the United
5 States in 2018, the attributable cost of disease and disability from polybrominated diphenylethers
6 (PBDE), phthalates, bisphenols, and polyfluoroalkyl substances and perfluoroalkyl substances
7 (PFAS) was \$249 billion; and

8
9 Whereas, The healthcare sector plays an important role in generating plastics waste: the
10 healthcare sector generates 15 million tons of plastic waste every year, much of this in the form
11 of single-use plastics⁵; and

12
13 Whereas, The healthcare sector thereby unintentionally harms the very populations it seeks to
14 heal by exposing patients, workers, and communities to unnecessary plastic-related health risks;
15 and

16
17 Whereas, While plastics pose health risks for all, but the heaviest burden of disease, disability
18 and death falls disproportionately on low-income and/or minority populations and other
19 vulnerable populations like pregnant mothers, children, workers, ethnic minorities, and
20 Indigenous nations who live and work near sites where plastic chemicals are produced and
21 disposed of; children are especially susceptible to adverse health outcomes due to their body
22 size and immature organ systems⁶; and

23
24 Whereas, “Fenceline communities,” meaning persons who live near plastic factories and waste
25 disposal, are at increased risk for premature birth, low birth weight, asthma, childhood leukemia,
26 cardiovascular disease, chronic obstructive pulmonary disease, and lung cancer⁷; and

27
28 Whereas, The production of plastics is extremely energy-intensive⁸: fossil fuels are required at
29 every point in the production cycle of plastics, from manufacturing to packaging, transportation,
30 application, and waste disposal; and

³ **The Lancet Countdown on health and plastics.** Landrigan, Philip J et al. The Lancet, Volume 406, Issue 10507, 1044 - 1062. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(25\)01447-3/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(25)01447-3/fulltext)

⁴ Trasande L, Krithivasan R, Park K, Obsekov V, Belliveau M. Chemicals Used in Plastic Materials: An Estimate of the Attributable Disease Burden and Costs in the United States. J Endocr Soc. 2024 Jan 11;8(2):bvad163. doi: 10.1210/jendso/bvad163. Erratum in: J Endocr Soc. 2024 Feb 14;8(3):bvae019. doi: 10.1210/jendso/bvae019. PMID: 38213907; PMCID: PMC10783259.

⁵ <https://www.wma.net/news-post/for-every-patient-seven-bags-of-plastic-48-million-health-professionals-demand-no-exemptions-for-healthcare-at-global-plastics-treaty/#:~:text=%E2%80%9CThe%20health%20care%20sector%20generates%2015%20million,mission%20of%20healthcare%20to%20%20do%20no%20harm.%E2%80%9D>

⁶ The Minderoo-Monaco Commission on Plastics and Human Health. Ann Glob Health. 2023 Mar 21;89(1):23. doi: 10.5334/aogh.4056. PMID: 36969097; PMCID: PMC10038118.

⁷ Schuele H, Baum CF, Landrigan PJ, Hawkins SS. Associations between proximity to gas production activity in counties and birth outcomes across the US. Prev Med Rep 2022; 30: 102007.

⁸ The Minderoo-Monaco Commission on Plastics and Human Health. Ann Glob Health. 2023 Mar 21;89(1):23. doi: 10.5334/aogh.4056. PMID: 36969097; PMCID: PMC10038118. <https://pubmed.ncbi.nlm.nih.gov/36969097>

1 Whereas, These effects are expected to increase because the production of plastics and
2 petrochemicals is increasing dramatically, driven by efforts by the oil and gas industry to divert
3 their product into profitable plastics production⁹; and
4

5 Whereas, Fossil fuel combustion is the major source of the greenhouse gases responsible for
6 driving climate change; plastic production accounts for an estimated 3.4% of total greenhouse
7 gas emissions¹⁰; and
8

9 Whereas, Plastic recycling is a false solution: over 90% of plastic waste is not recycled: it ends
10 up in landfills or is dumped on beaches or in the ocean, where it contributes to increased ocean
11 acidification and deoxygenation; when “recycled” plastic is burned, it adds to air pollution and
12 greenhouse gases, and contributes to climate change; and
13 much of the plastic that is counted as “recycled” is, in fact, shipped overseas where it ends up
14 polluting the world’s poorest countries¹¹; and
15

16 Whereas, Just as the banning of lead in gasoline and the banning of chlorofluorocarbons in
17 propellants had immediate positive effects on human health and the environment,¹² it can be
18 hoped that the banning of unnecessary plastic use, the banning of toxic chemical additives to
19 plastics, and the requirement for companies to assume the costs of clean up will lead to similar
20 gratifying health outcomes; therefore, be it
21

- 22 **1. RESOLVED, That the MMS advocate to the state legislature for the banning of all**
23 **unnecessary plastics, including but not limited to single use plastic bottles and plastic**
24 **packaging, particularly those known to contain toxic chemicals including per- and**
25 **polyfluoroalkyl substances, bisphenols, and phthalates; and, be it further (D)**
26
- 27 **2. RESOLVED, That the MMS advocate at the state legislature for extended producer**
28 **responsibility, the requirement that companies operating in the state either buy back**
29 **their plastic products or cover the cost of plastics clean up and disposal; and, be it**
30 **further (D)**
31
- 32 **3. RESOLVED, That the MMS advocate for the independent, mandatory health testing of**
33 **new chemicals developed for use in plastics production; and, be it further (D)**
34
- 35 **4. RESOLVED, That the MMS advocate for the expeditious reduction of unnecessary**
36 **single use plastics in medical settings, including advocating for a return to supplies**
37 **that can be reused multiple times, like sterilizable reusable instruments; and, be it**
38 **further (D)**
39
- 40 **5. RESOLVED, That the MMS share existing resources with members to ensure that all**
41 **physicians and other medical providers in Massachusetts are informed of the long-**
42 **term toxicities of plastic. (D)**

⁹ The Minderoo-Monaco Commission on Plastics and Human Health. Ann Glob Health. 2023 Mar 21;89(1):23. doi: 10.5334/aogh.4056. PMID: 36969097; PMCID: PMC10038118.

¹⁰ <https://www.un.org/en/climatechange/science/climate-issues/plastics>

¹¹ **The Lancet Countdown on health and plastics.** Landrigan, Philip J et al. The Lancet, Volume 406, Issue 10507, 1044 - 1062

¹²<https://www.nrdc.org/bio/peter-lehner/getting-lead-out-how-world-solved-impossible-environmental-problem>

1 Fiscal Note:
2 (Estimated Expenses)

No Significant Impact

3
4 Estimated Staff Effort
5 to Complete Directive(s):
6

(Items 1-4) Ongoing Expense of \$10,000-\$14,000
(Item 5) One-Time Expense of \$2,500