MedTech Europe
from diagnosis to cure

Medical Devices Regulation 745/2017 ('MDR')

Framework for benefit-risk assessment of endocrine disruptors

Health Care Without Harm Workshop: Endocrine Disrupting Chemicals in Healthcare

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Oliver Bisazza, Director Regulations & Industrial Policy, MedTech Europe

About MedTech Europe

The European trade association for the medical technology industry including diagnostics, medical devices and digital health.

MedTech Europe
from diagnosis to cure

OUR MEMBERS

130+ multinational corporations*

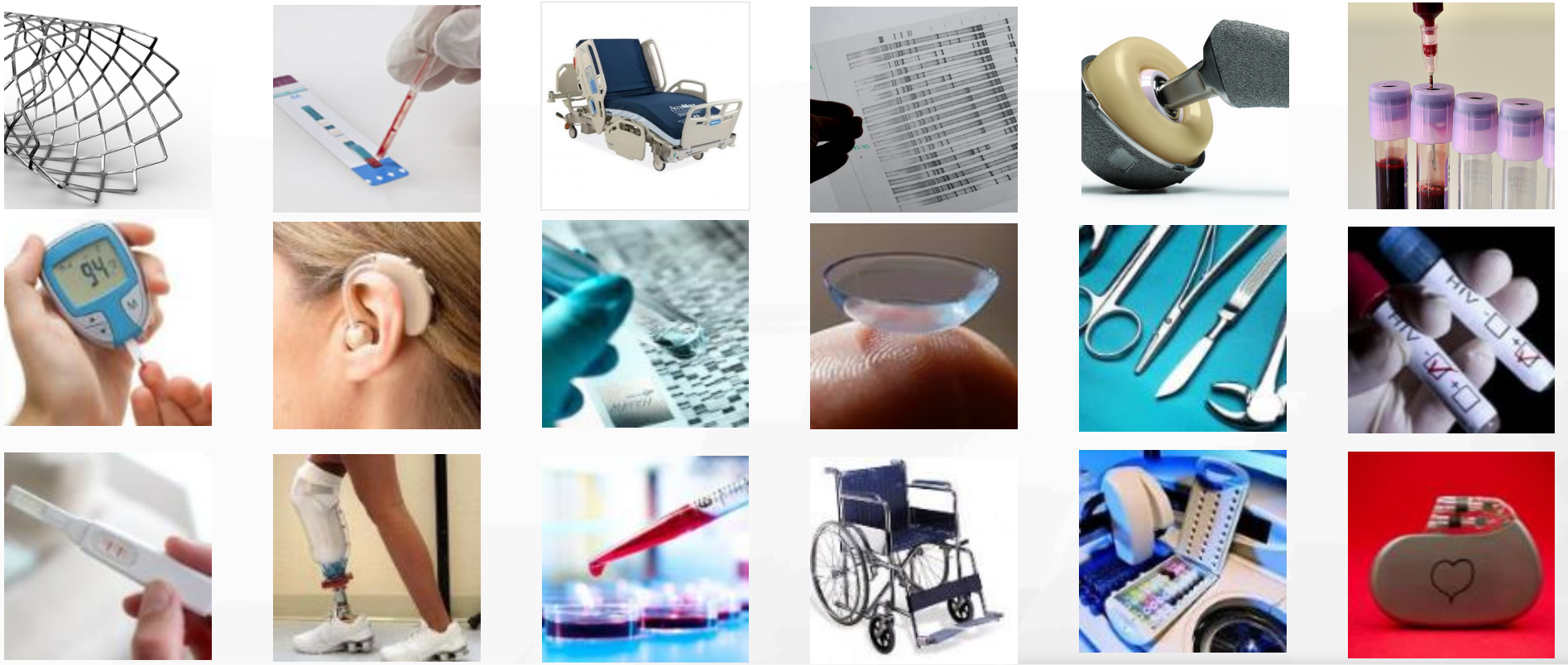
50+ medical technology associations

*medical devices, diagnostics and digital health

About medical technology

Medical technology is any technology used to **save** and **improve** lives of individuals suffering from a wide range of conditions.

There are more than **500,000 products**, **services and solutions** currently available



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The MedTech Industry in Europe

€ 115
billion
market

675,000+
employees

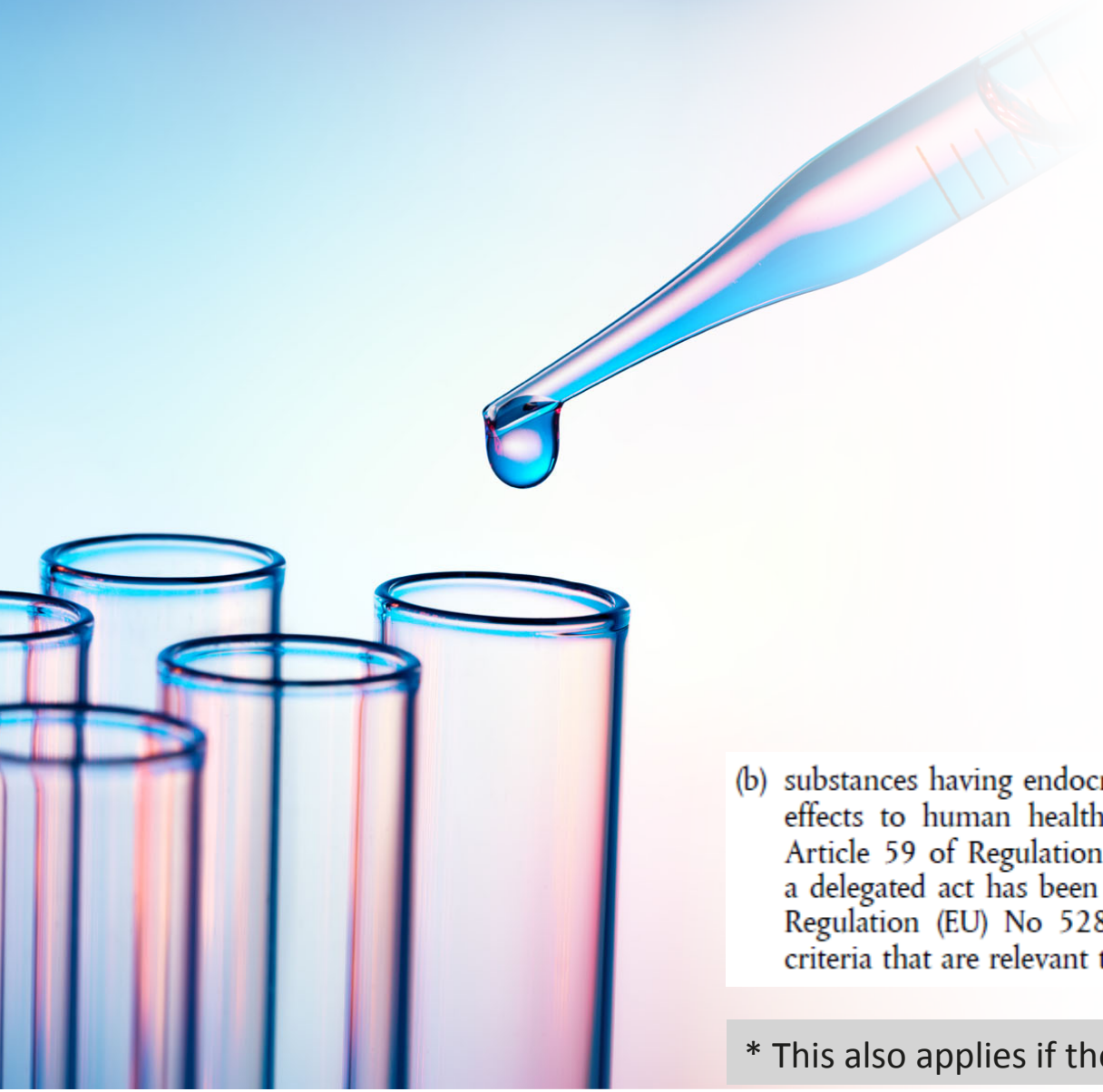
50,000+
In vitro diagnostic tests

500,000+
medical
devices

27,000+
companies of which
95% are SMEs

#1
In filing patent applications **12%** more than computer technology industries and **double** the pharmaceutical industry

Medical Devices Regulation 745/2017 (the ‘MDR’)



MDR Annex I, Section 10.4.1.

Lays down **which endocrine disruptors for human health** are in scope:

- Substances identified as endocrine disruptors for human health on the REACH Candidate list (**REACH procedure**)
- Substances identified in accordance with the criteria adopted under the Biocidal Products Regulation (**BPR procedure**)*

(b) substances having endocrine-disrupting properties for which there is scientific evidence of probable serious effects to human health and which are identified either in accordance with the procedure set out in Article 59 of Regulation (EC) No 1907/2006 of the European Parliament and of the Council ([2]) or, once a delegated act has been adopted by the Commission pursuant to the first subparagraph of Article 5(3) of Regulation (EU) No 528/2012 of the European Parliament and the Council ([3]), in accordance with the criteria that are relevant to human health amongst the criteria established therein.

* This also applies if the substance does not have a biocidal function in the medical device

Endocrine disruptors in scope of the MDR

Endocrine disruptors identified under REACH or the BPR are subject to:

- **Justification** (benefit-risk assessment) (Section 10.4.2.) and
- **Labelling** (Section 10.4.5.)

If contained above 0.1% weight by weight in a device, part or material in scope of Annex I, Section 10.4.1.:

Devices, or those parts thereof or those materials used therein that:

— are invasive and come into direct contact with the human body,

— (re)administer medicines, body liquids or other substances, including gases, to/from the body, or

— transport or store such medicines, body fluids or substances, including gases, to be (re)administered to the body,

Endocrine disruptors in scope of the MDR

- Currently, 6 substances have been identified as endocrine disruptors for human health on the REACH Candidate list
- No substances have been identified yet in accordance with the criteria established under the BPR

- Dicyclohexyl phthalate (DCHP)
- Bisphenol A (BPA)
- Diisobutyl phthalate
- Benzyl butyl phthalate (BBP)
- Bis (2-ethylhexyl)phthalate (DEHP)
- Dibutyl phthalate (DBP)

The list of endocrine disruptors in scope of the MDR will continue to grow:

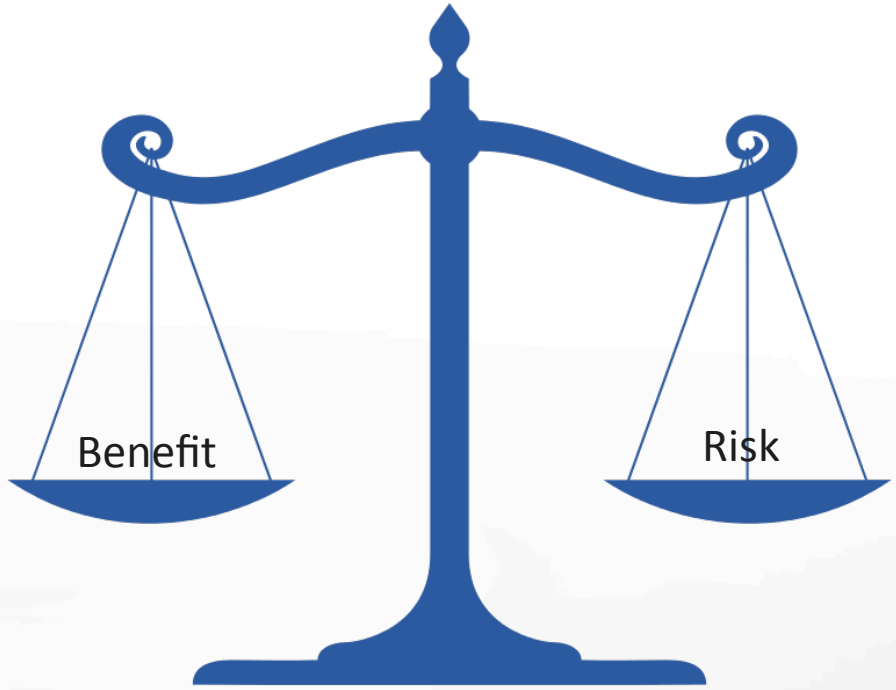
- Medical device companies need to monitor substances undergoing ED assessment under REACH and the BPR: https://echa.europa.eu/ed-assessment

Benefit-risk assessment

Benefit-risk assessment (Section 10.4.2.)

Justification for the presence of endocrine disrupting substances "***shall*** *be based upon*":

- Analysis of patient and/or user exposure
- Analysis of alternatives
- Benefit-risk determination
- The latest relevant scientific guidelines available



Hence, medical device manufacturers need to perform a benefit-risk assessment, which may result in **justification for continued use of the endocrine disruptor or its substitution.**

This justification for continued use of the substance will be part of the technical documentation for the device, **subject to review by Notified Bodies**.

SCHEER Guidelines on benefit-risk assessment of phthalates

GUIDELINES ON PHTHALATES IN MEDICAL DEVICES

Final version of the
Guidelines on the benefit-risk assessment of the presence of phthalates in certain medical devices covering phthalates, which are carcinogenic, mutagenic, toxic to reproduction (CMR) or have endocrine-disrupting (ED) properties

Following a request from the European Commission, the Scientific Committee on Health, Environmental and Emerging Risks (SCHEER) provided the final version of the Guidelines on the benefit-risk assessment of the presence, in the medical devices specified in the mandate, of phthalates which have one or more of the following properties: carcinogenic, mutagenic, toxic to reproduction or endocrine-disrupting.

- Final version of the Guidelines

Guidelines are considered mandatory for phthalates (e.g. DEHP)
They ***may*** also be applied for other CMR and endocrine disrupting substances (e.g. Bisphenol A)

Benefit-risk assessment according to the SCHEER Guidelines

a) Analysis of exposure

- Estimate and analyse **patient/user exposure**
- **Exposure estimation**: Preferably from direct measurement or estimation based on worst-case scenario or from scientific literature
- Special attention to **vulnerable patient groups** (e.g. children, pregnant or breastfeeding women)

b) Analysis of alternatives

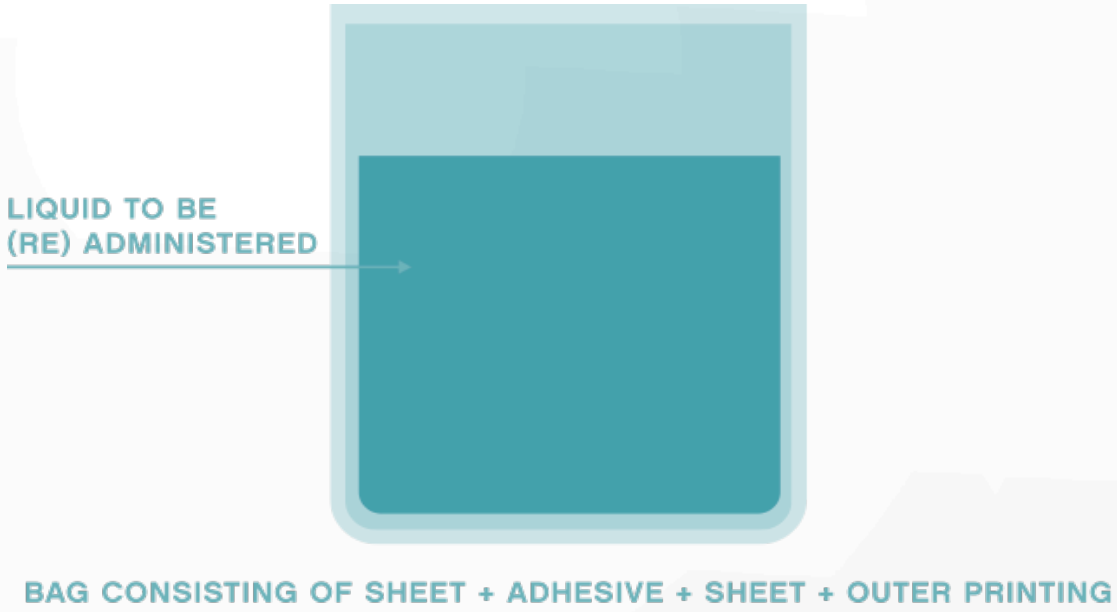
- Alternative substances, materials, designs or **medical treatments**
- Justify **how and why** alternatives are rejected for further assessment
- Manufacturers should present information on the actions undertaken to **identify alternatives**

c) Benefit-risk ratio

Putting it all together: 1 potential example

Multi-layered bag: Device which stores liquid to be (re)administered to the body

Relevant part to be assessed: inner sheet (in contact with the liquid which will be administered)



If endocrine disruptor is present above 0.1% (w/w) in relevant part(s) of the device, the manufacturer must perform a benefit risk-assessment

Such an assessment considers:

- Availability of alternative substances, materials, designs and medical treatments
- Benefit-risk ratio
- Functionality
- Performance

And will result in:

- Continued use of the substance (where justified; presence of the substance needs to be labelled), **or**
- Substitution of the substance

Thank you!

Oliver Bisazza

Director Regulations & Industrial Policy
o.bisazza@medtecheurope.org

Nathalie Buijs

Manager Regulations & Industrial Policy
n.buijs@medtecheurope.org

www.medtecheurope.org

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