When the patient is the user; measuring the impact of medical devices on patient's everyday life

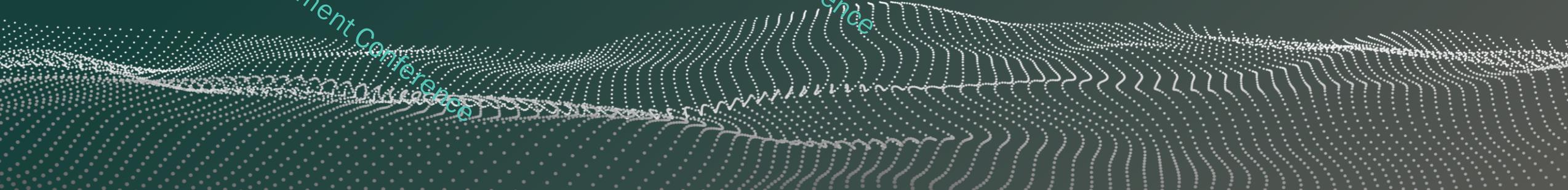Ingela Björholt, PhD
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MedTech20®

Competition law reminder
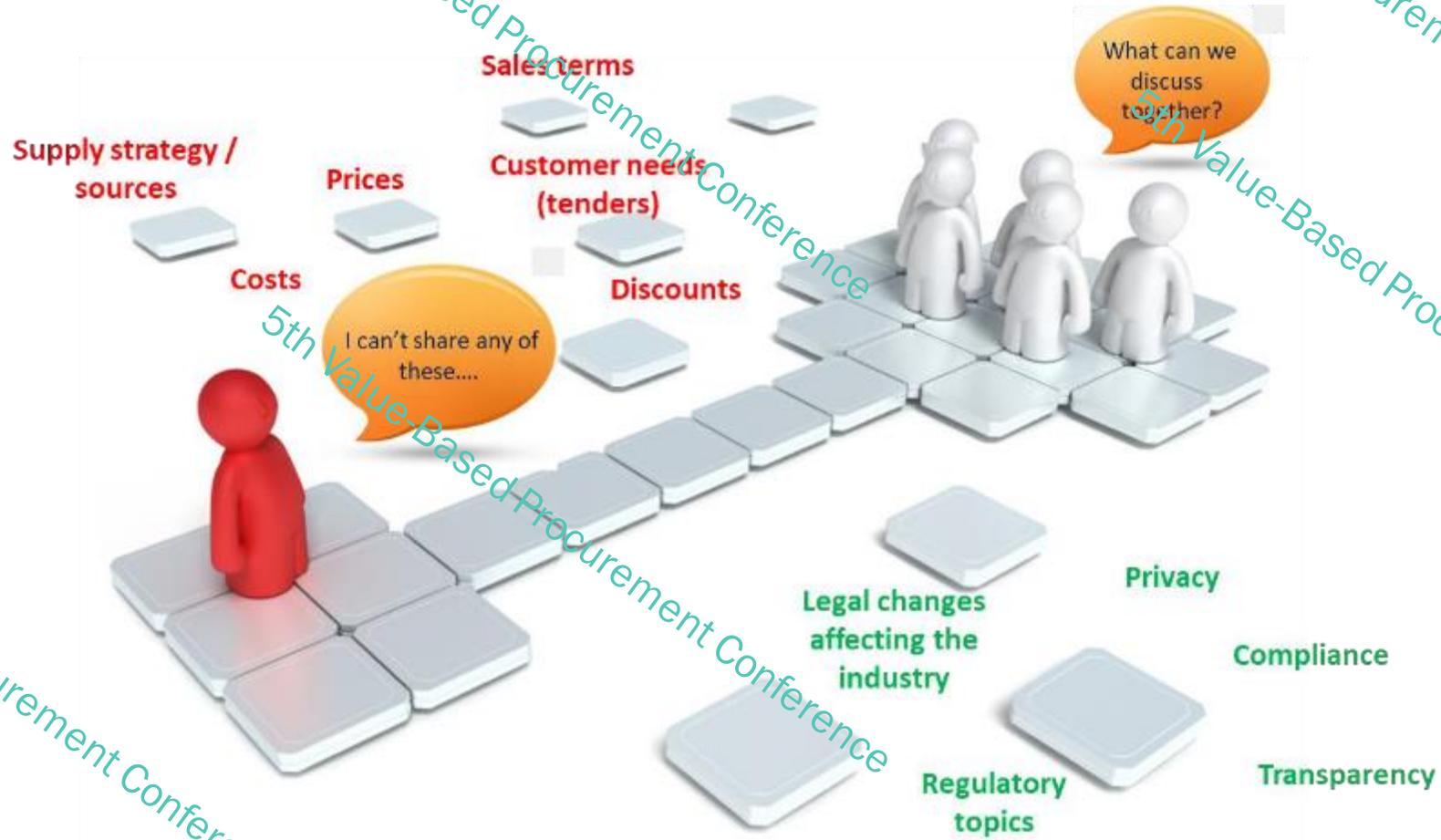
Perceived patient benefits

Pharmaceuticals
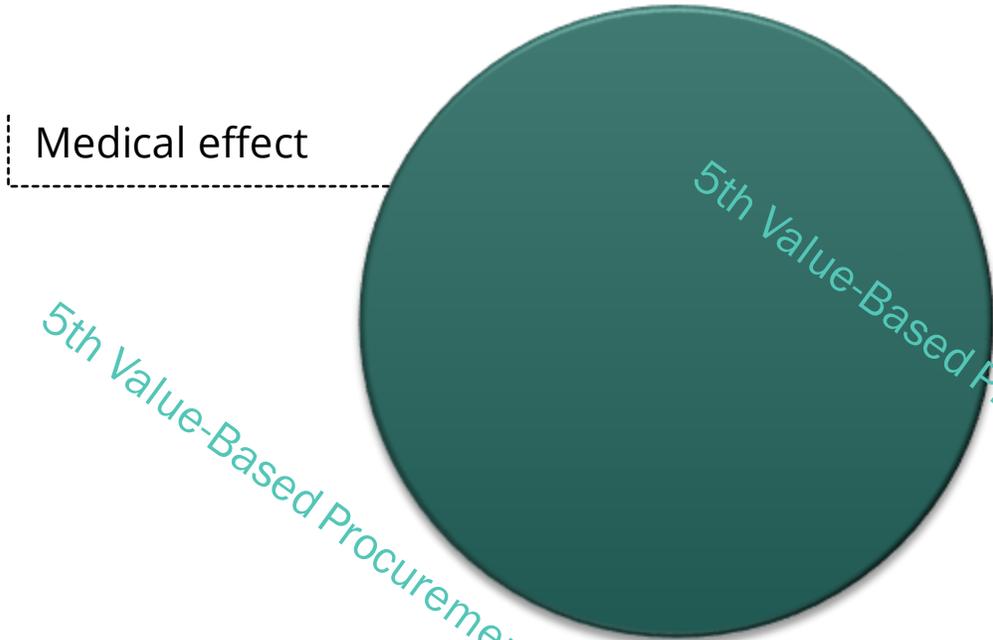
Medical devices
(used by the patients themselves)
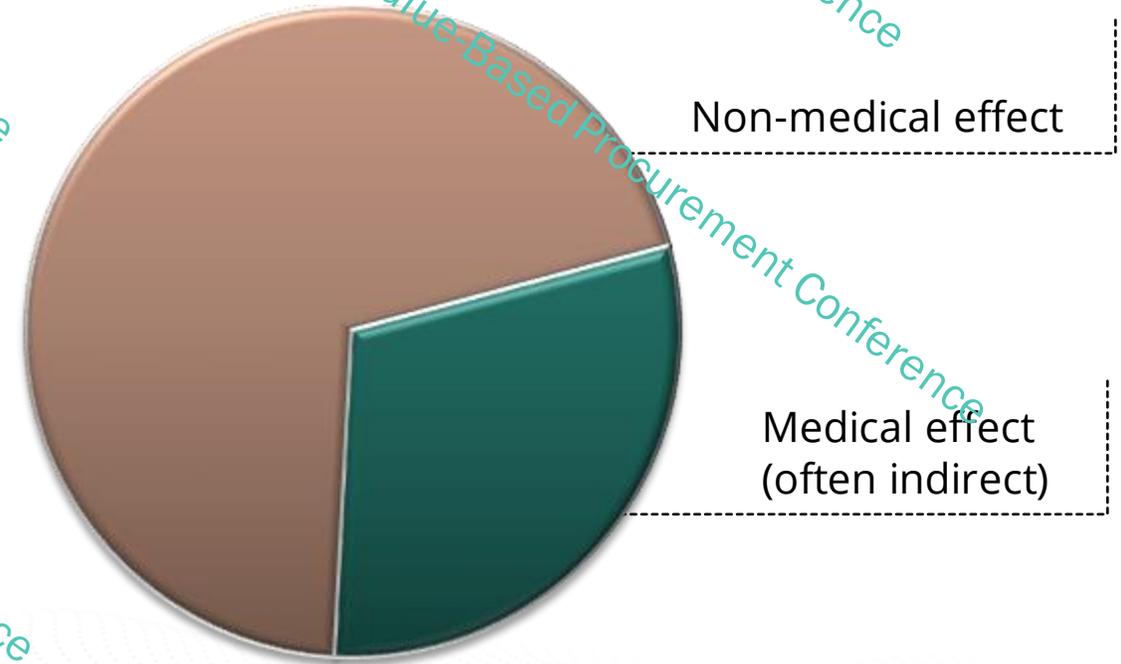
Medical effect

Non-medical effect

Medical effect
(often indirect)
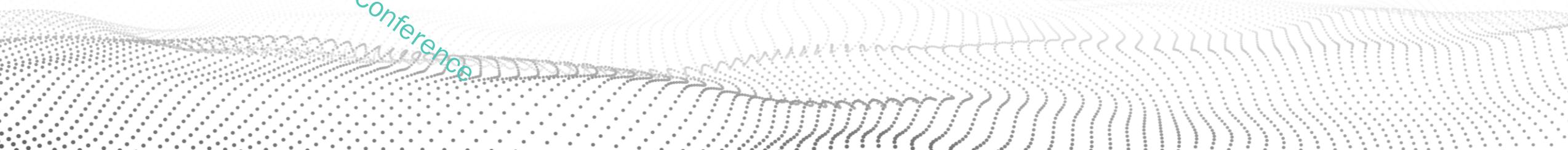
The development – Part 1

Face-to-face interviews with health-care professionals

(≈ 45000 patient-contacts)

Tests
- No. of respondents = 119
- No. of respondents = 260

Reference groups
- Health-care sector
- Companies
- Patientorganisations

Cognitive interviews

We received input from the Swedish Benefits Board (TLV) during the development process

MedTech20® Questionnaire

- 4 areas
  - 20 scientifically validated product features
  - How well does it correspond to the product you use?
  - Results in a product profile

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SENSE OF SECURITY

INTEGRITY

MEDICAL DEVICE

SOCIAL PARTICIPATION

CONVENIENCE
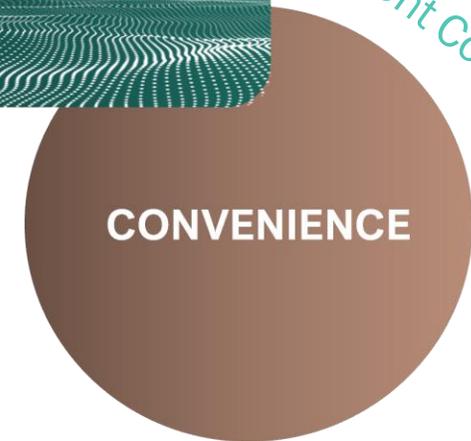
MedTech20® does not measure health effects

- It DOESN'T ask how the PATIENT is feeling

- It asks "How does your MEDICAL DEVICE affect your everyday life"?

- Not a replacement, it's a complement
  - Health effects do not provide the full picture–the impact is multidimentional
  - The design and function of the medical device→ Possibility and willingness to use the device
    - Do you understand it?
    - Does it create unwanted attention?
    - Does it affect your sleep, leisure activities or any other area?

Part 2:
Ranking of the product properties – a population study

Mapping the public's preferences

**Population study in Sweden**

- Invited: 15,000 individuals ≥ 18 years or older,

- Response rate: 37% (n=5,546)

- N= 3,802 after adjustment for age, gender & region

Statistical analysis

- Calculation of how the product properties are valued in relation to each other

- The result was a relative weight for each product property

MedTech20® Index

Patients' responses from MedTech20®Questionnaire are given numeric values and combined with the relative weights of the product properties from the population study.
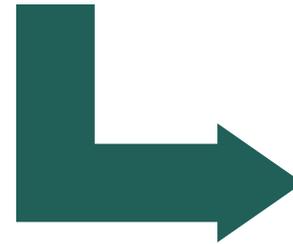
**MedTech20® Index
a value between 0 and 1**

- An estimate of the impact of the device on everyday life
- A point of reference for comparison between products

Some characteristics of the study population*)

Characteristics of respondents	Yes n (%)	No n (%)	Missing, n
Personal experience from a long-lasting disease	1,169 (31.6)	2,535 (68.4)	98
Personal experience from a long-lasting disability	744 (19.9)	2,995 (80.1)	63
Personal experience from use of a medical device	1,227 (33.3)	2,462 (66.7)	113

*After adjustment for Age, gender and residential region

Difference in preferences between subgroups (p<0,01)

Women > Men	❏ Young (18-59) > Old (60-95)	❏ Old (60-95) > Young (18-59)
❏ Facilitation of personal hygiene	❏ Reduced sense of being ill/having a disability	❏ Facilitation of personal hygiene
❏ Adaptability to personal needs	❏ Facilitation of closeness or intimacy	❏ Adaptability to personal needs
	❏ Reduced sense of comprised integrity	❏ Aid to remember tasks
	❏ Reduction of unwanted attention from others	❏ Feedback on correct/incorrect use
	❏ Facilitation of leisure activities	
	❏ No discomfort during usage	

Respondents without personal experience from a long lasting disease perceived that compromised integrity (someone getting to close) was more important than respondent with such experience
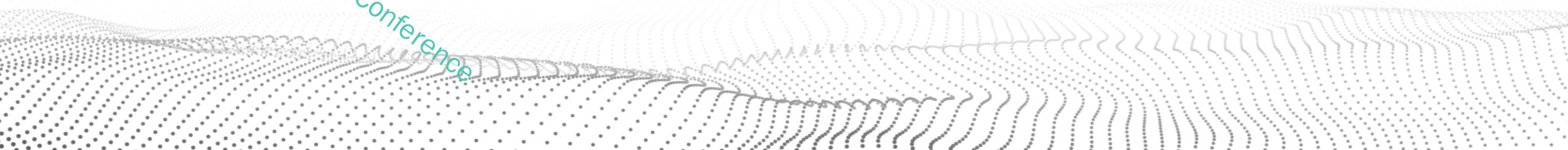
Summary

MedTech20® is a standardised tool for evaluating patients' value in everyday life of medical devices, services and solutions.

Can support companies and health-care decision- makers in understanding patients' needs beyond direct medical effects.

Lesén E, Björholt I, Ingelgård A, Olson F. Intl J Technol Assessment in Health care. Exploration and preferential ranking of patient benefits of medical devices: A new and generic instrument for health economic assessments 2017;33(4): 463–471.

Perceived patient benefits of medical devices

Used by the patients themselves

Non-medical effect

Direct medical effect

Indirect medical effect

MedTech20
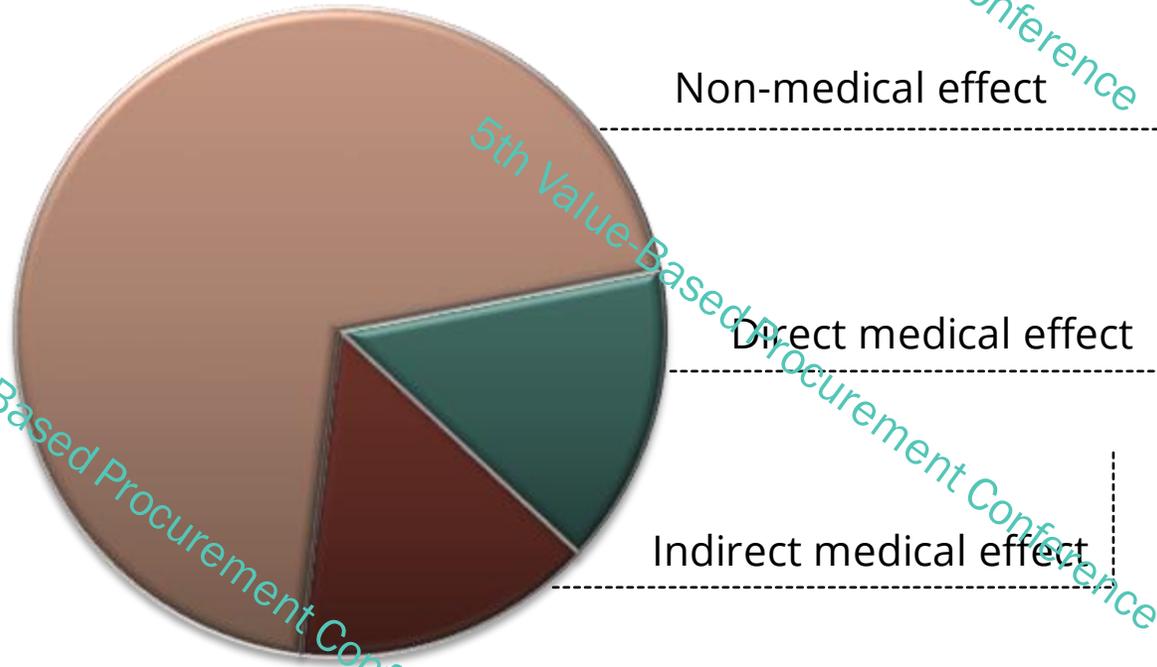
Group work

- How are **indirect medical effects** evaluated in the procurement of medical devices?

  - What additional value could patients' experiences of using such products have in Value Based Procurement?

- Are **non-medical effects** considered in the procurement of medical devices? If yes, how?

  - What additional value could patients' experiences of such effects have in Value Based Procurement?

Indirect medical effect: e.g. monitoring of blood sugar levels, blood pressure etc. Medical effect occur if relevant action is taken by the patient.

Non-medical effect: impact on patient's everyday life

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