CleanMed Europe 2020

Development of Sustainable Medical Textiles

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Content

- Background
- Potentials
- Prototype
- Challenges
Background

- Corona crisis – a supply crisis
- Consumption – est. 300 tons single use textiles/year in Central Denmark Region
- Dependency on unreliable global supply chains
Potentials

- Local production of multi-use protective gown?
- Development of Tech-pack?
- Competitive Business Case?
Goals for Prototype

- Production of woven multi-use protective gown of recycled polyester
- All rights to Tech-pack
- Competitive Business Case compared to single-use
- Identification of relevant Test protocol and standards
- Positive clinical test
- Reduced environmental Impact
- Efficient laundry and logistics – 100 x wash
Prototype 0.7

- Freedom of movement
- High level of security
- Assymetrical closure
- Usable inside-out
- Tagged
- Antistatic
- Breathable
- Recycled Polyester
- Level II Gown
Challenges I

- Water repellent on protective gowns based on flour-carbon does not last more than 10 times when testing against EN 13795.
- But neither does the repellant on ordinary uniforms – despite certification!
- What happens to the ‘dissapearing’ chemicals?
- Flour-carbon is part of very persistent and bioaccumultive PFAS group.
- Sub-group PFBA is under suspicion for accumulation in lungs through inhalation of textile dust and seems to be corellated with serious Covid-19 cases*

* https://www.sdu.dk/da/om_sdu/fakulteterne/sundhedsvidskab/nyt_sund/gifte_stoffer_ophobet_i_lungerne_kan_forvaerre_covid_19
Challenges II

- Testing laundry technology – with supplier
- Change of laundry chemicals supplier
- Working with less ‘dangerous’ chemicals (a.o. 2-phenoxyethanol)
- What about chemicals on single-use textiles send to incineration?
Any good ideas?

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