To: 5.1.2e)[5.1.2e @minvws.nl]
From: 5.1.2e)
Sent: Mon 11/2/2020 2:46:51 PM
Subject: RE: Verzoek tot akkoord om in onderstaand artikel als Co-auteur testaan
Received: Mon 11/2/2020 2:46:51 PM

Hoi 5.1.2e , ik zie geen reden om niet genoemd te worden als co-auteur. Ik heb het artikel snel gescand en zoals ik het heb gelezen gaat het om een onderzoek de bevindingen en de mogelijkheden die dat bied voor keuze in de zorg. VWS wordt niet als partij genoemd of aangesproken op een actie. Als dat zo blijft zie ik geen reden om dit artikel expliciet aan 5.1.2e voor te leggen. Ik kan mij wel voorstellen dat zij dit interessant vind ook vanuit haar rol als DGCZ. Ik hoor dan ook graag wanneer dit artikel wordt gepubliceerd.

Vr.gr. 5.1.2e

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Green Deal

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Van: 5.1.2e) < 5.1.2e @minvws.nl>
Verzonden: donderdag 29 oktober 2020 15:14
Aan: 5.1.2e) < 5.1.2e @minvws.nl>
Onderwerp: Verzoek tot akkoord om in onderstaand artikel als Co-auteur te staan

Beste 5.1.2e

Mijn navraag over deze publicatie levert op dat jij mag beslissen of ik hierop als Co-auteur mag staan. Als jij je twijfels hebt kan je het voorleggen aan de DG.

NB het besluit gaat alleen over of ik wel of niet als co-auteur genoemd mag worden. Niet over de inhoud van het artikel.

Het is daarnaast netjes als we GMT informeren dat dit artikel gepubliceerd wordt en dat zal ik doen, door het aan te kondigen bij 5.1.2e en 5.1.2e

Als jij denkt dat we het aan 5.1.2e moeten voorleggen, wil ik de mail daarvoor wel maken. Ik wil de vraag ook wel rechtstreeks aan haar stellen als jij daarmee akkoord bent.

Hieronder de abstract van t artikel. NB dit is confidentieel en mag niet gedeeld worden.

Life cycle assessment of face masks; a study investigating environmental impact in relation to shortages of medical devices due to Covid-19

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ABSTRACT

Introduction/background The Covid-19 pandemic led to threatening shortages in healthcare of medical products as face masks. In the period starting at 17 March 2020, several methods were investigated for reprocessing of face masks. The Covid-19 period seemed to provide a basis to further investigate the effectivity of reprocessing of medical devices from a circular economy perspective. Moreover, it is an exceptional opportunity to study the possibilities of local reprocessing of medical devices and to validate procedures that secure the required quality of the product. The effects of CO_2 footprint and water consumption are compared between reprocessed products against new and imported face masks.

Aim

The aim of this study is to assess the difference in environmental impact of reprocessed medical devices as compared to using new by conducting a Life Cycle Assessment (LCA) and to compare the financial implications.

Methods We steam sterilized 18.166 face masks obtained between March and July 2020. A comparison was made between new and reprocessed medical FFP2 face masks. The data included Green House Gas (GHG) emissions as measured in kg CO_2 eq as well as the water consumption during the production, transport, sterilisation and end-of-life processes. A model was made to determine the environmental impact of new versus reprocessed face masks at all stages of its life cycle.

Results The Life Cycle Assessment (LCA) demonstrates that reprocessed face masks from a circular economy perspective have a significant lower environmental impact on global warming and water usage than new disposable face masks. The outcomes, measured in kg CO_2 eq, and m^3 water are respectively 46% and 52% lower for reprocessed face masks versus new face masks. The cost price of a reprocessed mask was €1.40 against €7,- for a new, imported disposable mask during the peak time of shortages in the hospitals.

Discussion Based on the results of this study, the European Green Deal is rightly supports EU's recovery strategy by stimulating a circular economy. Local manufacturing with sustainable technology and materials combined with reprocessing of medical devices may contribute to solve the climate crisis by aiming for zero greenhouse gas (GHG) emissions by 2050. Legal changes and provisions are advised to be made within the Medical Device Regulation (MDR) as well as local guidelines within European national standardization organisations to facilitate circular reprocessing of medical devices.

Conclusion These results demonstrate a clear benefit of reprocessing medical devices, in particular face masks. The LCA demonstrated a significant lower environmental impact for reprocessed medical face masks compared to new without compromising to the qualifications (reliability). Furthermore, a reprocessing results in lower costs. A circular economy for medical devices not only provides environmental but also financial benefits. As increasingly more disposables are used, these type of studies are needed to investigate how medical devices should be designed or processed to facilitate reuse. The goals of the Green Deal may be realized when using this circular model as a blue print for investigating the sustainability potential of other medical devices.

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