

# Coatings in health care

Gepubliceerd: 24-02-2017 Laatste bijgewerkt: 18-08-2022

The implementation of antimicrobial coatings in health care results in an improved hygienic environment to support patient recovery and lowers the risk of a health care associated infection.

<b>Ethische beoordeling</b>	Positief advies
<b>Status</b>	Anders
<b>Type aandoening</b>	-
<b>Onderzoekstype</b>	Observationeel onderzoek, zonder invasieve metingen

## Samenvatting

### ID

NL-OMON28956

### Bron

NTR

### Verkorte titel

-

### Aandoening

This study does not investigate the condition of the patient or intervention in patient treatment.

This study does investigate the area surrounding the patient and the microbiological presence on contact surfaces.

## Ondersteuning

### Primaire sponsor:

Zuyd Hogeschool  
Zuyderland Medical Center Geleen  
Zuyderland Medical Center Heerlen  
VieCuri Medical Center Venlo

### Overige ondersteuning:

SIA (Stichting Innovatie Alliantie)  
Zuyd Hogeschool  
Zuyderland Medical Center Geleen  
Zuyderland Medical Center Heerlen  
VieCuri Medical Center Venlo

## Onderzoeksproduct en/of interventie

### Uitkomstmaten

#### Primaire uitkomstmaten

A reduction in presence of pathogenic micro-organisms in the room of the patient

## Toelichting onderzoek

### Achtergrond van het onderzoek

Annually over 4 million patients acquire an infection while being admitted in healthcare, for about 1% of these patients this infection is the direct cause of death. Combined with the increase in antimicrobial resistance of microorganisms over the last decades, these healthcare associated infections pose a general threat for our healthcare system with substantial financial consequences.

The implementation of antimicrobial coatings as a preventive measure for bacterial colonisation and migration in a healthcare setting is proposed to be the solution for hospital wide outbreaks caused by organisms like *Pseudomonas* spp., *Klebsiella* spp., MRSA and VRE. This study focusses on the implementation of a photocatalytic TiO<sub>2</sub> coating on surfaces surrounding the patient in the patient ward of a Medical Centre with a general focus on the antimicrobial efficacy of the coating in a real-life situation.

### Doel van het onderzoek

The implementation of antimicrobial coatings in health care results in an improved hygienic environment to support patient recovery and lowers the risk of a health care associated infection.

### Onderzoeksopzet

1, 3, 6, 12 and 18 months after coating

### Onderzoeksproduct en/of interventie

In every hospital 2 rooms will be treated with an TiO<sub>2</sub>-based coating system to prevent microbiological colonisation of contact surfaces.

Two rooms will receive a sham-coating without TiO<sub>2</sub>, a placebo like approach.

Rooms are located on the same department next to each other.

Patients are placed in patient rooms at random, since coating is regarded as safe and no intervention in patient treatment is introduced.

## Contactpersonen

### Publiek

Zuyd Hogeschool

Francy R.L. Crijns  
PO Box 550

Heerlen 6400 AN  
The Netherlands

### Wetenschappelijk

Zuyd Hogeschool

Francy R.L. Crijns  
PO Box 550

Heerlen 6400 AN  
The Netherlands

## Deelname eisen

### Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

None

### Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

None

## Onderzoeksopzet

### Opzet

Type:	Observationeel onderzoek, zonder invasieve metingen
Onderzoeksmodel:	Factorieel
Toewijzing:	N.v.t. / één studie arm
Blinding:	Dubbelblind
Controle:	Placebo

### Deelname

Nederland	
Status:	Anders
(Verwachte) startdatum:	28-02-2017
Aantal proefpersonen:	0
Type:	Onbekend

## Ethische beoordeling

Positief advies	
Datum:	24-02-2017
Soort:	Eerste indiening

## Registraties

### Opgevolgd door onderstaande (mogelijk meer actuele) registratie

Geen registraties gevonden.

### Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

## In overige registers

<b>Register</b>	<b>ID</b>
NTR-new	NL6125
NTR-old	NTR6264
Ander register	: 16-N-178

## Resultaten

### **Samenvatting resultaten**

Comparative performance of a panel of commercially available antimicrobial nanocoatings in Europe.

DOI: 10.2147/NSA.S70782