# Endotracheal suctioning: open or closed?

No registrations found.

Ethical review	Positive opinion
Status	Pending
Health condition type	-
Study type	Interventional

# **Summary**

### ID

NL-OMON22462

**Source** Nationaal Trial Register

Brief title ES-trial

#### **Health condition**

In mechanically ventilated patients, endotracheal suctioning will be performed when indicated. During two 6-month periods all ES procedures will be performed with either OSS or CSS. After 6 months, 1 month of wash out/wash in is planned, during which the system is changed.

### **Sponsors and support**

Primary sponsor: None Source(s) of monetary or material Support: ZonMw, Program Prevention, project number 6230.0037

### Intervention

### **Outcome measures**

#### **Primary outcome**

Occurrence of cross-transmission (primary endpoint), defined as acquired colonization with a genetically identical pathogen with an epidemiological linkage to a potential source patient.

#### Secondary outcome

Length of stay in ICU, antibiotic use, cardio-respiratory adverse events (hypoxemia, cardiac arrhythmia, damage to respiratory mucosa), mortality, the incidence of VAP and cost-efficacy.

# **Study description**

#### **Background summary**

Cross-transmission (patient to patient spread) of antibiotic-resistant bacteria frequently occurs in intensive care units (ICUs). Among mechanically ventilated patients the respiratory tract is a preferential site for colonization with such pathogens. For these patients, endotracheal suctioning (ES) is an essential and frequently performed procedure. Yet, disconnection of the ventilation system and endotracheal tube during ES exposes colonized airways and contaminated material to open air with ongoing ventilation, and creates an optimal situation for air-borne spread of pathogens and cross-transmission. Controlling spread of antibiotic-resistant pathogens is of utmost importance in ICUs. Nowadays, two systems are available for ES: the single use open suction system (OSS) and the 'newer' multiple use closed suction system (CSS). CSS is increasingly used due to presumed patient benefits with regard to adverse physiolgic events and outcome, though we could not confirm these claims upon a systematic review. Importantly, the effects of CSS on reducing cross-transmission have never been evaluated.

#### **Study objective**

Cross-transmission of antibiotic-resistant pathogens can be prevented by using closed suction systems (CSS) instead of open suction systems (OSS) in mechanically ventilated ICU patients.

#### Intervention

Endotracheal suctioning as indicated, according to a protocol, with either CSS or OSS.

# Contacts

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# **Eligibility criteria**

### **Inclusion criteria**

All adult ICU patients receiving MV will be included and, during 6 months, be subjected to the same ES-procedure.

## **Exclusion criteria**

No exclusion criteria. Preference of ES system is often based on assuptions, there is currently no scientific evidence available to prefer one system over the other.

# Study design

### Design

Study type:	Interventional
Intervention model:	Crossover
Masking:	Open (masking not used)
Control:	Active

#### Recruitment

NL	
Recruitment status:	Pending
Start date (anticipated):	01-12-2006
Enrollment:	500
Туре:	Anticipated

# **Ethics review**

Positive opinion Date: Application type:

18-09-2006 First submission

# **Study registrations**

# Followed up by the following (possibly more current) registration

No registrations found.

## Other (possibly less up-to-date) registrations in this register

No registrations found.

### In other registers

Register	ID
NTR-new	NL759
NTR-old	NTR770
Other	: N/A
ISRCTN	ISRCTN75875670

# **Study results**

#### **Summary results**

Jongerden IP, Rovers MM, Grypdonck MH, Bonten MJ. Open and closed endotracheal suction systems in mechanically ventilated intensive care patients: a meta analysis. Crit Care Med, accepted.