

# Reducing contamination of computer keyboards on hospital wards

<b>Submission date</b> 01/05/2012	<b>Recruitment status</b> Stopped	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 15/05/2012	<b>Overall study status</b> Stopped	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 14/10/2015	<b>Condition category</b> Infections and Infestations	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

Computer keyboards in hospital wards are a potential source of cross infection between staff and patients. We helped design and introduce flat keyboards to wards with a cleaning alarm but over time the alarm is neglected. Therefore additional measures to reduce keyboard contamination are needed. This study aims to determine if a moving box on the screen to remind users to clean the keyboard is more effective than the present flashing light or whether a light-activated coating on the keyboard to kill bacteria is effective without any further prompts to cleaning.

### Who can participate?

Participants will be the users of the keyboards i.e. medical, nursing and paramedical staff.

### What does the study involve?

Patients are not involved. Ten keyboards will have software loaded that gives a moving box on the computer screening when cleaning has not been performed for 12 hours. This can only be turned off by cleaning the keyboards. Another ten keyboards will have a coating that kills bacteria in visible light. All will be measured daily for bacterial counts against control keyboards.

### What are the possible benefits and risks of participating?

The possible benefits are reduced keyboard contamination and potentially less transmission to patients. The disadvantage would be having to clean the keyboard in order to use the computer.

### Where is the study run from?

The study is run from Microbiology department at University College London Hospitals (UCLH).

### When is study starting and how long is it expected to run for?

The study will start on 5th May 2012 and run for up to 3 months.

### Who is funding the study?

The study is funded by the Academic Health Sciences Centre and University College London Business (UCLB).

Who is the main contact?  
Dr APR Wilson  
peter.wilson@uclh.nhs.uk

## Contact information

**Type(s)**  
Scientific

**Contact name**  
Dr Peter Wilson

**Contact details**  
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## Additional identifiers

**Protocol serial number**  
v3 9/2/12

## Study information

**Scientific Title**  
Testing software compliance management of Esterline® Medigenic® Keyboard and assessment of the microbiological efficacy of photolytic keyboards in the clinical ward environment: randomised comparisons with routine manual cleaning

**Study objectives**  
Using of software to prompt cleaning of the keyboard or addition of a bactericidal coating reduces contamination with hospital pathogens

**Ethics approval required**  
Old ethics approval format

**Ethics approval(s)**  
Not provided at time of registration

**Study design**  
Prospective randomised trial

**Primary study design**  
Interventional

**Study type(s)**

Prevention

**Health condition(s) or problem(s) studied**

Hospital-acquired infection

**Interventions**

Software installed that shows a box on the screen when keyboard not cleaned for 12 hours and photolytic coating applied to other keyboards that reduces contamination when exposed to standard artificial light. All keyboards will be measured daily for bacterial counts against control keyboards.

**Intervention Type**

Other

**Phase**

Not Applicable

**Primary outcome(s)**

Total viable count of bacteria on keyboard surface at fixed time each day during trial

**Key secondary outcome(s)**

Number of hospital pathogens [Methicillin-resistant Staphylococcus aureus (MRSA), coliforms, enterococci]

**Completion date**

15/07/2012

**Reason abandoned (if study stopped)**

Lack of staff/facilities/resources

**Eligibility****Key inclusion criteria**

1. No patients
2. Flat Medigenic keyboards on a general surgical ward and critical care unit are included if in the patient area

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Adult

**Sex**

All

**Key exclusion criteria**

Standard raised key keyboards

**Date of first enrolment**

05/05/2012

**Date of final enrolment**

15/07/2012

**Locations****Countries of recruitment**

United Kingdom

England

**Study participating centre**

**Department of Microbiology & Virology**

London

United Kingdom

W1T 4EU

**Sponsor information****Organisation**

University College London Hospitals Foundation Trust (UK)

**ROR**

<https://ror.org/042fqyp44>

**Funder(s)****Funder type**

Hospital/treatment centre

**Funder Name**

Academic Health Science Centre - Imperial College London (UK)

**Funder Name**

University College London Business (UCLB) (UK)

# Results and Publications

## Individual participant data (IPD) sharing plan

IPD sharing plan summary  
Not provided at time of registration

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Participant information sheet</a>	Participant information sheet	11/11/2025	11/11/2025	No	Yes