ISRCTN43599478 https://doi.org/10.1186/ISRCTN43599478

Patient participation and optimised performance feedback to improve hand hygiene compliance amongst healthcare workers and reduce nosocomial infections

Submission date
27/03/2012

Recruitment status
No longer recruiting

Registration date
30/04/2012

Overall study status
Completed

Last Edited
08/09/2016

Condition category
Infections and Infestations

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
Healthcare-associated infections (HAIs) represent the leading preventable adverse event amongst hospitalised patients. Hand hygiene is considered the single most important measure to prevent HAIs.
Previous studies have shown that campaigns to promote hand hygiene must contain multiple elements (multimodal), but the relative importance of each component remains unclear. In addition, to achieve further improvement, new strategies might be required given that sustained improvement has rarely been achieved. Another important issue is the extent to which hand hygiene can prevent HAIs. In this study, we aim to assess the effectiveness of two different strategies (enhanced performance feedback and patient participation) to produce a sustained improvement in healthcare worker hand hygiene. In addition, we aim to test the impact of increased hand hygiene compliance on HAIs and refine the understanding of factors associated with hand hygiene behaviour.

Who can participate?
This study will take place at the University of Geneva Hospitals. All healthcare workers working in and patients admitted to wards in which the study is active will participate in the study.

What does the study involve?
After an initial baseline period, the intervention phase will continue for two years. Wards will be randomly allocated to one of three groups: 1) standard multimodal hand hygiene promotion, 2) standard hand hygiene promotion with additional enhanced performance feedback, or 3) standard hand hygiene promotion with additional enhanced performance feedback and patient participation.

What are the possible benefits and risks of participating?
The major benefit is the possibility of improved hand hygiene and therefore a lower risk of hospital-associated infection.

Where is the study run from?
The study will be conducted at the University of Geneva Hospitals, Geneva, Switzerland.

When is the study starting and how long is it expected to run for?
The active intervention phase of the study will run for two years from July 2010.

Who is funding the study?
This study in funded by a grant from the Swiss National Science Foundation.

Who is the main contact?
Dr Hugo Sax, hugo.sax@hcuge.ch
Professor Didier Pittet, didier.pittet@hcuge.ch

Contact information

Type(s)
Scientific

Contact name
Prof Didier Pittet

Contact details
Service Prévention et Contrôle de l'Infection
Hôpitaux Universitaires de Genève
Rue Gabrielle-Perret-Gentil 4
Genève
Switzerland
1211

Additional identifiers

Protocol serial number
3200B0122324/1

Study information

Scientific Title
Effectiveness of enhanced performance feedback and patient participation to improve hand hygiene amongst healthcare workers and reduce healthcare-associated infections: a cluster randomised controlled trial

Study objectives
A statistically significant increase in hand hygiene compliance will occur in each of the interventional study arms, and that the increase will be greater in the arm receiving both interventions. We also hypothesise that the increase in hand hygiene compliance will lead to a decreased incidence of healthcare-associated infections (HAIs) and in a reduced transmission of multiresistant bacteria.

Ethics approval required

Old ethics approval format

Ethics approval(s)
Internal Medicine Ethics Committee (Comité départemental d'éthique de médecime interne et médecine départementale), 27/01/2010, ref: 09-299

Primary study design
Interventional

Study design
Single-centre cluster-randomized controlled trial

Study type(s)
Prevention

Health condition(s) or problem(s) studied
Healthcare-associated infections

Interventions
The intervention phase will continue for 24 months. The intervention phase is preceded by a 15-month baseline phase. The level of randomization is the hospital ward.

Wards will be randomly allocated to one of three groups:
1. Standard multimodal hand hygiene promotion
2. Standard hand hygiene promotion with additional enhanced performance feedback
3. Standard hand hygiene promotion with additional enhanced performance feedback and patient participation

Enhanced performance feedback: comprised of immediate and systematic components. Following each observation session, hand hygiene observers provide immediate verbal and written feedback to the healthcare workers observed during that session. Systematic feedback is provided by emails and posters distributed at the end of each quarter of the intervention phase.

Patient participation: On admission, patients are informed about the indications for their own and for healthcare worker (HCW) hand hygiene, with particular emphasis on hand hygiene 'before patient contact'. They are provided with a 'welcome kit' consisting of a brochure and bottle of alcohol-based hand rub (ABHR). Finally, they are invited to ask HCWs that do not perform hand hygiene in front of them to do so, just as HCWs would remind them, the patient, to perform hand hygiene when indicated.

Intervention Type
Behavioural

Primary outcome(s)
Overall hand hygiene compliance amongst healthcare workers measured by direct observation according to the WHO 'My 5 moments for hand hygiene' methodology.

Key secondary outcome(s)
1. Hand hygiene compliance before patient contact measured by direct observation according to the WHO My 5 Moments methodology

2. ABHR consumption
3. New methicillin-resistant Staphylococcus aureus (MRSA) colonization rate
4. New MRSA colonization incidence rate
5. MRSA clinical isolates
6. New colonization with extended-spectrum beta-lactamse (ESBL) producing bacteria
7. ESBL-producing clinical isolates
8. Clostridium difficile associated diarhoea (CDAD)
9. Primary bloodstream infection (BSI) incidence rate
10. Secondary blood stream infections (BSI) incidence rate
11. Prevalence of HAI

Completion date
30/06/2012

Eligibility

Key inclusion criteria
1. For primary outcome and first secondary outcome: all healthcare workers in study wards
2. For other secondary outcomes: all patients admitted to study wards

Healthy volunteers allowed
No

Age group
Adult

Sex
All

Key exclusion criteria
Does not meet inclusion criteria

Date of first enrolment
01/04/2009

Date of final enrolment
30/06/2012

Locations

Countries of recruitment
Switzerland

Study participating centre
Hôpitaux Universitaires de Genève
Genève
Switzerland
1211

Sponsor information

Organisation
University of Geneva Hospitals and Faculty of Medicine (Switzerland)

ROR
https://ror.org/01m1pv723

Funder(s)

Funder type
Government

Funder Name
Swiss National Science Foundation (Switzerland) (3200B0122324/1)

Alternative Name(s)
Schweizerischer Nationalfonds, Swiss National Science Foundation, Fonds National Suisse de la Recherche Scientifique, Fondo Nazionale Svizzero per la Ricerca Scientifica, Fonds National Suisse, Fondo Nazionale Svizzero, Schweizerische Nationalfonds, The Swiss National Science Foundation (SNSF), SNF, SNSF, FNS

Funding Body Type
Private sector organisation

Funding Body Subtype
Trusts, charities, foundations (both public and private)

Location
Switzerland

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	01/12/2016		Yes	No