**Clinical Librarian Service Search Results**

**Request:** Comparison of gloves versus handwashing - in relation to protection from respiratory viruses

**Summary**

I have searched the databases listed at the end of this document and have found a number of evidence-based articles. I have organised the results into the following sections: [Systematic Reviews](#SystematicReviews), [Randomised Controlled Trials](#RandomisedControlledTrials) and [Other Study Types](#OtherStudyTypes).

Of particular relevance are:

A Cochrane systematic review (Jefferson et al. 2011)8 concerning ‘Physical interventions to interrupt or reduce the spread of respiratory viruses.’ The authors give the following recommendations:

*“The following effective interventions should be implemented, preferably in a combined fashion, to reduce transmission of viral respiratory disease:*

* *frequent handwashing with or without adjunct antiseptics*
* *barrier measures such as gloves, gowns and masks with filtration apparatus; and*
* *suspicion diagnosis with isolation of likely cases.*
* *Special efforts should be focused on implementing the three above interventions in order to reduce transmission from young children, who are generally the most fecund sources of respiratory viruses.”*

Jones et al. (2020)1’s systematic review, ‘A systematic risk-based strategy to select personal protective equipment for infectious diseases’ which states the following:

*“Gloves are the primary hand protection devices in health care, and serve as barriers to pathogens and pathogen-containing bodily fluids, while preserving appropriate levels of dexterity and tactility….Given the severity of SARS-CoV infection, the higher level of protection afforded by a PAPR with a loose-fitting hood may be warranted. The JHA also indicated that contamination of the torso, arms, and hands is likely. Body and hand coverings should be used because, although SARS-CoV does not infect through the dermis, contaminated clothing and skin may serve as an environmental reservoir.”*

I hope that I have interpreted your request correctly. Please let me know if you would like me to search further.

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**Accessing Articles**

Links are provided where online access to the full text is available. An OpenAthens username and password may be required for online access to articles. You can register for one here: <https://openathens.nice.org.uk/>

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**Feedback**

Once you have read this report, I would appreciate it if you would complete our online literature search feedback form at:

<https://www.smartsurvey.co.uk/s/LiteratureSearchFeedback20192020/>

This relates to this specific search and will help us to monitor and improve our service. Many Thanks.

Suzanne Toft

Training Librarian (Chartered)

[suzanne.toft@nhs.net](mailto:suzanne.toft@nhs.net)

Ext. 88148

**Current at:** 1 April 2020

**Time taken for search:** 5 hours.

**Please acknowledge this work in any resulting paper or presentation as:**

Evidence Search: Comparison of gloves versus handwashing. Suzanne Toft. (1 April 2020). Derby, UK: University Hospitals of Derby & Burton NHS Foundation Trust Library and Knowledge Service.

**Disclaimer:** Please note that the information supplied by the Library and Knowledge Service in response to a literature search is for information purposes only.  Every reasonable effort will be made to ensure that this information is accurate, up-to-date and complete. However, it is possible that it may not be representative of the whole body of evidence. No responsibility can be accepted by the Library for any action taken on the basis of this information.

Guidance or information relating to specific drug queries or procedures should be referred to Medicines Information on RDH ext. 85379 or Burton ext. 5168 or 5101. For local UHDB guidelines and policies please refer to the red button on the Trust intranet, or [**https://derby.koha-ptfs.co.uk/cgi-bin/koha/opac-main.pl**](https://derby.koha-ptfs.co.uk/cgi-bin/koha/opac-main.pl)

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**Systematic Reviews**

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1. **A systematic risk-based strategy to select personal protective equipment for infectious diseases.**

**Author(s):** Jones, Rachael M.; Bleasdale, Susan C.; Maita, Dayana; Brosseau, Lisa M.

**Source:** American Journal of Infection Control; Jan 2020; vol. 48 (no. 1); p. 46-51

**Publication Date:** Jan 2020

**Publication Type(s):** Academic Journal

Available at [American Journal of Infection Control](https://auth.elsevier.com/ShibAuth/institutionLogin?entityID=https://idp.eng.nhs.uk/openathens&appReturnURL=https%3A%2F%2Fwww.clinicalkey.com%2Fcontent%2FplayBy%2Fdoi%2F%3Fv%3D10.1016%2Fj.ajic.2019.06.023) - from ClinicalKey

Available at [American Journal of Infection Control](http://www.ajicjournal.org/article/S0196655319306546/pdf) - from Unpaywall

**Abstract:** • Selection of personal protective equipment (PPE) can be systematic and risk-based. • Potential exposures are compared with sites susceptible to infection. • Facilitates transparent decision-making about personal protective equipment. • PPE evaluation includes: donning/doffing/changing, usability, and fit for purpose. Personal protective equipment (PPE) is a primary strategy to protect health care personnel (HCP) from infectious diseases. When transmission-based PPE ensembles are not appropriate, HCP must recognize the transmission pathway of the disease and anticipate the exposures to select PPE. Because guidance for this process is extremely limited, we proposed a systematic, risk-based approach to the selection and evaluation of PPE ensembles to protect HCP against infectious diseases. The approach used in this study included the following 4 steps: (1) job hazard analysis, (2) infectious disease hazard analysis, (3) selection of PPE, and (4) evaluation of selected PPE. Selected PPE should protect HCP from exposure, be usable by HCP, and fit for purpose. The approach was demonstrated for the activity of intubation of a patient with methicillin-resistant Staphylococcus aureus or Severe Acute Respiratory Syndrome coronavirus. As expected, the approach led to the selection of different ensembles of PPE for these 2 pathogens. A systematic risk-based approach to the selection of PPE will help health care facilities and HCP select PPE when transmission-based precautions are not appropriate. Owing to the complexity of PPE ensemble selection and evaluation, a team with expertise in infectious diseases, occupational health, the health care activity, and related disciplines, such as human factors, should be engaged. Participation, documentation, and transparency are necessary to ensure the decisions can be communicated, critiqued, and understood by HCP.

**Database:** CINAHL

1. **Association between universal gloving and healthcare-associated infections: A systematic literature review and meta-analysis.**

**Author(s):** Chang, Nai-Chung N.; Schweizer, Marin L.; Reisinger, Heather Schacht; Perencevich, Eli N.; Kates, Ashley E.; Ward, Melissa A.; Kiscaden, Elizabeth J.

**Source:** Infection Control & Hospital Epidemiology; Jul 2019; vol. 40 (no. 7); p. 755-760

**Publication Date:** Jul 2019

**Publication Type(s):** Academic Journal

**Abstract:** Objective: Healthcare-associated infections (HAIs) are a significant burden on healthcare facilities. Universal gloving is a horizontal intervention to prevent transmission of pathogens that cause HAI. In this meta-analysis, we aimed to identify whether implementation of universal gloving is associated with decreased incidence of HAI in clinical settings. Methods: A systematic literature search was conducted to find all relevant publications using search terms for universal gloving and HAIs. Pooled incidence rate ratios (IRRs) and 95% confidence intervals (CIs) were calculated using random effects models. Heterogeneity was evaluated using the Woolf test and the I2 test. Results: In total, 8 studies were included. These studies were moderately to substantially heterogeneous (I2 = 59%) and had varied results. Stratified analyses showed a nonsignificant association between universal gloving and incidence of methicillin-resistant Staphylococcus aureus (MRSA; pooled IRR, 0.94; 95% CI, 0.79–1.11) and vancomycin-resistant enterococci (VRE; pooled IRR, 0.94; 95% CI, 0.69–1.28). Studies that implemented universal gloving alone showed a significant association with decreased incidence of HAI (IRR, 0.77; 95% CI, 0.67–0.89), but studies implementing universal gloving as part of intervention bundles showed no significant association with incidence of HAI (IRR, 0.95; 95% CI, 0.86–1.05). Conclusions: Universal gloving may be associated with a small protective effect against HAI. Despite limited data, universal gloving may be considered in high-risk settings, such as pediatric intensive care units. Further research should be performed to determine the effects of universal gloving on a broader range of pathogens, including gram-negative pathogens.

**Database:** CINAHL

1. **Effect of hygiene interventions on acute respiratory infections in childcare, school and domestic settings in low-and middle-income countries: A systematic review**

**Author(s):** McGuinness S.L.; Barker S.F.; O'Toole J.; Cheng A.C.; Forbes A.B.; Sinclair M.; Leder K.

**Source:** Tropical Medicine and International Health; 2018; vol. 23 (no. 8); p. 816-833

**Publication Date:** 2018

**Publication Type(s):** Review

Available at [Tropical medicine & international health: TM & IH](http://www.ingentaconnect.com/openurl?genre=article&issn=1360-2276&volume=23&issue=8&spage=816) - from IngentaConnect - Open Access

Available at [Tropical medicine & international health: TM & IH](https://onlinelibrary.wiley.com/doi/full/10.1111/tmi.13080) - from Wiley Online Library

Available at [Tropical medicine & international health: TM & IH](http://www.ingentaconnect.com/openurl?genre=article&issn=13602276&volume=23&issue=8&spage=816) - from IngentaConnect

Available at [Tropical medicine & international health: TM & IH](https://onlinelibrary.wiley.com/doi/pdfdirect/10.1111/tmi.13080) - from Unpaywall

**Abstract:** Objectives Acute respiratory infections (ARIs) disproportionately affect those living in low-and middle-income countries (LMICs). We aimed to determine whether hygiene interventions delivered in childcare, school or domestic settings in LMICs effectively prevent or reduce ARIs. methods We registered our systematic review with PROSPERO (CRD42017058239) and searched MEDLINE, EMBASE, CENTRAL, and Scopus from inception to 17 October 2017 for randomised controlled trials (RCTs) examining the impact of hygiene interventions on ARI morbidity in adults and children in community-based settings in LMICs. We stratified data into childcare, school and domestic settings and used the Grading of Recommendations Assessment, Development and Evaluation approach to assess evidence quality. results We identified 14 cluster RCTs evaluating hand-hygiene interventions in LMICs with considerable heterogeneity in setting, size, intervention delivery and duration. We found reduced ARI-related absenteeism and illness in childcare settings (low-to moderate-quality evidence). In school settings, we found reduced ARI-related absenteeism and laboratory-confirmed influenza (moderate-to high-quality evidence), but no reduction in ARI illness (low-quality evidence). In domestic settings, we found reduced ARI illness and pneumonia amongst children in urban settlements (high-quality evidence) but not in rural settlements (low-quality evidence), and no effect on secondary transmission of influenza in households (moderate-quality evidence). conclusions Evidence suggests that hand-hygiene interventions delivered in childcare, school and domestic settings can reduce ARI morbidity, but effectiveness varies according to setting, intervention target and intervention compliance. Further studies are needed to develop, deliver and evaluate targeted and sustainable hygiene interventions in LMICs. Copyright © 2018 John Wiley & Sons Ltd.

**Database:** EMCARE

1. **Effect of hand hygiene on infectious diseases in the office workplace: A systematic review**

**Author(s):** Zivich P.N.; Aiello A.E.; Gancz A.S.

**Source:** American Journal of Infection Control; Apr 2018; vol. 46 (no. 4); p. 448-455

**Publication Date:** Apr 2018

**Publication Type(s):** Review

Available at [American Journal of Infection Control](https://auth.elsevier.com/ShibAuth/institutionLogin?entityID=https://idp.eng.nhs.uk/openathens&appReturnURL=https%3A%2F%2Fwww.clinicalkey.com%2Fcontent%2FplayBy%2Fdoi%2F%3Fv%3D10.1016%2Fj.ajic.2017.10.006) - from ClinicalKey

**Abstract:** Background: Extensive data suggests that hand hygiene is a critical intervention for reducing infectious disease transmission in the clinical setting. However, it is unclear whether hand hygiene is effective at cutting down on infectious illnesses in non-clinical workplaces. The aim of this review is to assess the current literature concerning the effects of hand-washing interventions on infectious disease prevention among employees in nonclinical, office-based workplaces. Method(s): In compiling this review, PubMed, Scopus, and Business Source Premier were examined for studies published from 1960 through 2016. Result(s): Eleven studies (eight experimental, two observational, one a simulation) were identified as eligible for inclusion. Hand-hygiene interventions at various levels of rigor were shown to reduce self-reported illness symptoms. Conclusion(s): Hand hygiene is thought to be more effective against gastrointestinal illness than it is against respiratory illness, but no clear consensus has been reached on this point. Minimal hand-hygiene interventions seem to be effective at reducing the incidence of employee illness. Along with reducing infections among employees, hand-hygiene programs in the workplace may provide additional benefits to employers by reducing the number of employee health insurance claims and improving employee morale. Future research should use objective measures of hand hygiene and illness, and explore economic impacts on employers more fully. Copyright © 2018 Association for Professionals in Infection Control and Epidemiology, Inc.

**Database:** EMCARE

1. **Compliance with Hand-Washing Guidelines among Visitors from the Community to Acute Care Settings: A Scoping Review**

**Author(s):** Compton D.; Davenport T.E.

**Source:** Journal of Acute Care Physical Therapy; Jan 2018; vol. 9 (no. 1); p. 19-34

**Publication Date:** Jan 2018

**Publication Type(s):** Review

**Abstract:** Background: Health care-associated infections are widely acknowledged to be an important public health issue. Hand hygiene guidelines for health care workers are common, but remain uncommon for visitors. Purpose(s): The purpose of this systematic review is to examine the methodological quality of articles indicating the adherence and efficacy of hand hygiene compliance of community visitors to the acute care setting. Data Sources: Academic Search Complete, CINAHL, Cochrane Library, Medline, and PubMeds. Study Selection: A systematic literature search was conducted for articles describing hand-washing efficacy among visitors in an acute care setting using the following Medical Subject Headings (MeSH) terms: "clinical trial," "evaluation studies," "randomized controlled trial," "cross infection/epidemiology," "cross infection/prevention & control," "hand disinfection/standards," "intervention studies," "guideline adherence/statistics & numerical data," "risk factors," "skin care/standards," and "time factors." Primary or secondary research studies that were published in peer-reviewed journals, written in English, and involving hospital visitor hand hygiene compliance were included. The Downs and Black (D&B) checklist was used to document the methodological quality. The Cochrane Collaborative checklist was used to assess the risk of bias. Data Synthesis: Mean D&B scores were 17/27. Baseline hand hygiene compliance for visitors was 0.5% to 11% at the hospital main entrance, 9% to 35% for general and surgical units, 11% for isolation rooms, 39% in pediatric wards, 3.95% to 49.1% at bedside, and 7% to 94% for intensive care units. Posted signs, de-germer dispensers, and pandemic influenza status all increased hand hygiene compliance over baseline observations. Limitation(s): Studies were generally low quality and at high risk for bias. In addition, data could not be pooled. This was attributed to the unavailability of prospective controlled trials. Substantial heterogeneity was found in the number and types of dependent variable measures. Conclusion(s): Visitor compliance with hand hygiene guidelines is highly variable but may be amenable to public health interventions. Higher quality studies focused on health outcomes are necessary to generate best practice recommendations related to hand hygiene. Copyright © 2018 Academy of Acute Care Physical Therapy, APTA.

**Database:** EMCARE

1. **Effectiveness of hand hygiene interventions in reducing illness absence among children in educational settings: A systematic review and meta-analysis**

**Author(s):** Willmott M.; Nicholson A.; Busse H.; Macarthur G.J.; Brookes S.; Campbell R.

**Source:** Archives of Disease in Childhood; Jan 2016; vol. 101 (no. 1); p. 42-50

**Publication Date:** Jan 2016

**Publication Type(s):** Review

Available at [Archives of Disease in Childhood](https://go.openathens.net/redirector/nhs?url=https%3A%2F%2Fadc.bmj.com%2Flookup%2Fdoi%2F10.1136%2Farchdischild-2015-308875) - from BMJ Journals - NHS

Available at [Archives of Disease in Childhood](http://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=145298&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=0003-9888&volume=101&issue=1&spage=42) - from ProQuest (Health Research Premium) - NHS Version

Available at [Archives of Disease in Childhood](https://adc.bmj.com/content/archdischild/101/1/42.full.pdf) - from Unpaywall

**Abstract:** Objective: To undertake a systematic review and meta-analysis to establish the effectiveness of handwashing in reducing absence and/or the spread of respiratory tract (RT) and/or gastrointestinal (GI) infection among school-aged children and/or staff in educational settings. Design(s): Randomised-controlled trials (RCTs). Setting(s): Schools and other settings with a formal educational component in any country. Patient(s): Children aged 3-11 years, and/or staff working with them. Intervention(s): Interventions with a hand hygiene component. Main Outcome Measure(s): Incidence of RT or GI infections or symptoms related to such infections; absenteeism; laboratory results of RT and/or GI infections. Result(s): Eighteen cluster RCTs were identified; 13 school-based, 5 in child day care facilities or preschools. Studies were heterogeneous and had significant quality issues including small numbers of clusters and participants and inadequate randomisation. Individual study results suggest interventions may reduce children's absence, RT infection incidence and symptoms, and laboratory confirmed influenza-like illness. Evidence of impact on GI infection or symptoms was equivocal. Conclusion(s): Studies are generally not well executed or reported. Despite updating existing systematic reviews and identifying new studies, evidence of the effect of hand hygiene interventions on infection incidence in educational settings is mostly equivocal but they may decrease RT infection among children. These results update and add to knowledge about this crucial public health issue in key settings with a vulnerable population. More robust, well reported cluster RCTs which learn from existing studies, are required.

**Database:** EMCARE

1. **Glove utilization in the prevention of cross transmission: a systematic review.**

**Author(s):** Picheansanthian, Wilawan; Chotibang, Jutamas

**Source:** JBI Database of Systematic Reviews and Implementation Reports; May 2015; vol. 13 (no. 4); p. 188-230

**Publication Date:** May 2015

**Publication Type(s):** Research Support, Non-U.S. Gov't Journal Article Review Systematic Review

**PubMedID:** 26447080

Available at [JBI database of systematic reviews and implementation reports](http://pdfs.semanticscholar.org/9540/e183ecfa189c816658488cbaea83c1713186.pdf) - from Unpaywall

**Abstract:** BACKGROUND Gloves are worn to protect hands from contamination from microorganisms and to reduce the risks of transmission of microorganisms from healthcare workers to patients and vice versa. However, gloves should be changed between patient contacts and hand washing is necessary before putting on gloves and immediately after removing gloves. OBJECTIVE The objective of this review was to evaluate and synthesize the best available research evidence that investigates clinical use of gloves in the prevention of cross transmission. INCLUSION CRITERIA TYPES OF PARTICIPANTS Health care workers. Types of intervention(s): Glove use intervention. Types of outcomes: Contamination of healthcare workers' hands, transmission of infections, adherence to glove usage, inappropriate uses of gloves, and adherence to hand hygiene. Types of studies: Quasi-experimental studies and descriptive studies. SEARCH STRATEGY The search sought to find published and unpublished studies. The time period of the search covered articles published from 2000 to 2012 in English and Thai. The databases searched included: MEDLINE, CINAHL, EMBASE, The Cochrane Library, PubMed, Science Direct, Current Content Connect, Blackwell synergy, Thai Nursing Research Database, Thai thesis database, Digital Library of Thailand Research Fund, Research of National Research Council of Thailand, and Database of Office of Higher Education. METHODOLOGICAL QUALITY Studies selected for retrieval were assessed by two independent reviewers for methodological quality using the Joanna Briggs Institute Meta-Analysis of Statistics Assessment and Review Instrument software. DATA COLLECTION Data extraction was performed using the standardized data extraction tool from the Joanna Briggs Institute Meta-Analysis of Statistics Assessment and Review Instrument software. DATA SYNTHESIS A meta-synthesis was not possible due to the methodological heterogeneity of the included papers. The evidence was thus presented as a narrative summary. RESULTS Twenty-three studies were included in this review. The results indicated that contamination of a healthcare worker's gloves with bacteria during routine care activities is common. The use of gloves can protect the hands of healthcare workers from bacterial contamination, but the protection afforded by the gloves was incomplete. Adherence to glove utilization among healthcare workers was suboptimal. Gloves were overused and often misused. The major break in compliance with glove use was failure to change gloves between procedures on the same patient. Inappropriate glove use can increase the risk of cross transmission. It is unclear if modifications in glove use alter compliance with hand hygiene among healthcare workers. CONCLUSION Gloving can reduce acquisition of microorganisms on the hands. However, gloving does not completely prevent contamination of the hands. Compliance with glove use among healthcare workers is poor. Gloves were also overused and often misused. Inappropriate glove use can increase the risk of cross transmission via contaminated gloved hands. There is still not enough evidence to prove the influence of glove use on adherence to hand hygiene. IMPLICATIONS FOR PRACTICE This review strengthens the recent suggestion on the use of gloves to reduce bacterial contamination. However, gloving does not completely prevent contamination, thus emphasizing the need for hand antisepsis before and after patient contact. Intervention to improve the use of gloves and hand hygiene compliance after gloving in the healthcare settings should be implemented. IMPLICATIONS FOR RESEARCH Further studies should target poor compliers with glove use and promote strategies that can be evaluated.

**Database:** Medline

* **Glove utilization in the prevention of cross transmission: A systematic review.**

**Author(s):** Picheansathian, Wilawan; Chotibang, Jutamas

**Source:** JBI Library of Systematic Reviews; Mar 2011; vol. 9; p. 1-13

**Publication Date:** Mar 2011

**Publication Type(s):** Academic Journal

**Database:** CINAHL

1. **Physical interventions to interrupt or reduce the spread of respiratory viruses.**

**Author(s):** Jefferson T; Del Mar CB; Dooley L; Ferroni E; Al-Ansary LA; Bawazeer GA; van Driel ML; Nair S; Jones MA; Thorning S; Conly JM

**Source:** Cochrane Database of Systematic Reviews; Jan 2011

**Publication Date:** Jan 2011

**Publication Type(s):** Database

**PubMedID:** NLM21735402

Available at [Cochrane Database of Systematic Reviews: Reviews](https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD006207.pub4/full) - from Cochrane Collaboration (Wiley)

**Abstract:** Viral epidemics or pandemics of acute respiratory infections like influenza or severe acute respiratory syndrome pose a global threat. Antiviral drugs and vaccinations may be insufficient to prevent their spread. To review the effectiveness of physical interventions to interrupt or reduce the spread of respiratory viruses. We searched The Cochrane Library, the Cochrane Central Register of Controlled Trials (CENTRAL 2010, Issue 3), which includes the Acute Respiratory Infections Group's Specialised Register, MEDLINE (1966 to October 2010), OLDMEDLINE (1950 to 1965), EMBASE (1990 to October 2010), CINAHL (1982 to October 2010), LILACS (2008 to October 2010), Indian MEDLARS (2008 to October 2010) and IMSEAR (2008 to October 2010). In this update, two review authors independently applied the inclusion criteria to all identified and retrieved articles and extracted data. We scanned 3775 titles, excluded 3560 and retrieved full papers of 215 studies, to include 66 papers of 67 studies. We included physical interventions (screening at entry ports, isolation, quarantine, social distancing, barriers, personal protection, hand hygiene) to prevent respiratory virus transmission. We included randomised controlled trials (RCTs), cohorts, case-controls, before-after and time series studies. We used a standardised form to assess trial eligibility. We assessed RCTs by randomisation method, allocation generation, concealment, blinding and follow up. We assessed non-RCTs for potential confounders and classified them as low, medium and high risk of bias. We included 67 studies including randomised controlled trials and observational studies with a mixed risk of bias. A total number of participants is not included as the total would be made up of a heterogenous set of observations (participant people, observations on participants and countries (object of some studies)). The risk of bias for five RCTs and most cluster-RCTs was high. Observational studies were of mixed quality. Only case-control data were sufficiently homogeneous to allow meta-analysis. The highest quality cluster-RCTs suggest respiratory virus spread can be prevented by hygienic measures, such as handwashing, especially around younger children. Benefit from reduced transmission from children to household members is broadly supported also in other study designs where the potential for confounding is greater. Nine case-control studies suggested implementing transmission barriers, isolation and hygienic measures are effective at containing respiratory virus epidemics. Surgical masks or N95 respirators were the most consistent and comprehensive supportive measures. N95 respirators were non-inferior to simple surgical masks but more expensive, uncomfortable and irritating to skin. Adding virucidals or antiseptics to normal handwashing to decrease respiratory disease transmission remains uncertain. Global measures, such as screening at entry ports, led to a non-significant marginal delay in spread. There was limited evidence that social distancing was effective, especially if related to the risk of exposure. Simple and low-cost interventions would be useful for reducing transmission of epidemic respiratory viruses. Routine long-term implementation of some measures assessed might be difficult without the threat of an epidemic.

**Database:** CINAHL

* **Physical interventions to interrupt or reduce the spread of respiratory viruses: a Cochrane review.**

**Author(s):** Jefferson T; Del Mar C; Dooley L; Ferroni E; Al-Ansary LA; Bawazeer GA; van Driel ML; Nair S; Foxlee R; Rivetti A

**Source:** Health Technology Assessment; Jan 2010; vol. 14 (no. 55); p. 347-476

**Publication Date:** Jan 2010

**Publication Type(s):** Academic Journal

**PubMedID:** NLM20648717

**Abstract:** BACKGROUND: Viral epidemics or pandemics of acute respiratory infections like influenza or severe acute respiratory syndrome pose a world-wide threat. Antiviral drugs and vaccinations may be insufficient to prevent catastrophe. OBJECTIVES: To systematically review the effectiveness of physical interventions to interrupt or reduce the spread of respiratory viruses. SEARCH STRATEGY: We searched the Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library 2009, issue 2); MEDLINE (1966 to May 2009); OLDMEDLINE (1950 to 1965); EMBASE (1990 to May 2009); and CINAHL (1982 to May 2009). SELECTION CRITERIA: We scanned 2958 titles, excluded 2790 and retrieved the full papers of 168 trials, to include 59 papers of 60 studies. We included any physical interventions (isolation, quarantine, social distancing, barriers, personal protection and hygiene) to prevent transmission of respiratory viruses. We included the following study designs: randomised controlled trials (RCTs), cohorts, case controls, cross-over, before-after, and time series studies. DATA COLLECTION AND ANALYSIS: We used a standardised form to assess trial eligibility. RCTs were assessed by: randomisation method; allocation generation; concealment; blinding; and follow up. Non-RCTs were assessed for the presence of potential confounders, and classified into low, medium, and high risks of bias. MAIN RESULTS: The risk of bias for the four RCTs, and most cluster RCTs, was high. The observational studies were of mixed quality. Only case-control data were sufficiently homogeneous to allow meta-analysis. The highest quality cluster RCTs suggest respiratory virus spread can be prevented by hygienic measures, such as handwashing, especially around younger children. Additional benefit from reduced transmission from children to other household members is broadly supported in results of other study designs, where the potential for confounding is greater. Six case-control studies suggested that implementing barriers to transmission, isolation, and hygienic measures are effective at containing respiratory virus epidemics. We found limited evidence that N95 respirators were superior to simple surgical masks, but were more expensive, uncomfortable, and caused skin irritation. The incremental effect of adding virucidals or antiseptics to normal handwashing to decrease respiratory disease remains uncertain. Global measures, such as screening at entry ports, were not properly evaluated. There was limited evidence that social distancing was effective especially if related to the risk of Physical interventions to interrupt or reduce the spread of respiratory viruses exposure. AUTHORS' CONCLUSIONS: Many simple and probably low-cost interventions would be useful for reducing the transmission of epidemic respiratory viruses. Routine long-term implementation of some of the measures assessed might be difficult without the threat of a looming epidemic.

**Database:** CINAHL

* **Physical interventions to interrupt or reduce the spread of respiratory viruses: systematic review.**

**Author(s):** Jefferson T; Foxlee R; Del Mar C; Dooley L; Ferroni E; Hewak B; Prabhala A; Nair S; Rivetti A

**Source:** BMJ: British Medical Journal (International Edition); Jan 2008; vol. 336 (no. 7635); p. 77-80

**Publication Date:** Jan 2008

**Publication Type(s):** Academic Journal

**PubMedID:** NLM18042961

Available at [BMJ](https://go.openathens.net/redirector/nhs?url=https%3A%2F%2Fwww.bmj.com%2Flookup%2Fdoi%2F10.1136%2Fbmj.39393.510347.BE) - from BMJ Journals - NHS

Available at [BMJ](http://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=145298&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=0959-8138&volume=336&issue=7635&spage=77) - from ProQuest (Health Research Premium) - NHS Version

Available at [BMJ](https://www.bmj.com/content/336/7635/77.full.pdf) - from Unpaywall

**Abstract:** Objective To systematically review evidence for the effectiveness of physical interventions to interrupt or reduce the spread of respiratory viruses. Data extraction Search strategy of the Cochrane Library, Medline, OldMedline, Embase, and CINAHL, without language restriction, for any intervention to prevent transmission of respiratory viruses (isolation, quarantine, social distancing, barriers, personal protection, and hygiene). Study designs were randomised trials, cohort studies, case-control studies, and controlled before and after studies. Data synthesis Of 2300 titles scanned 138 full papers were retrieved, including 49 papers of 51 studies. Study quality was poor for the three randomised controlled trials and most of the cluster randomised controlled trials; the observational studies were of mixed quality. Heterogeneity precluded meta-analysis of most data except that from six case-control studies. The highest quality cluster randomised trials suggest that the spread of respiratory viruses into the community can be prevented by intervening with hygienic measures aimed at younger children. Meta-analysis of six case-control studies suggests that physical measures are highly effective in preventing the spread of SARS: handwashing more than 10 times daily (odds ratio 0.45, 95% confidence interval 0.36 to 0.57; number needed to treat=4, 95% confidence interval 3.65 to 5.52); wearing masks (0.32, 0.25 to 0.40; NNT=6, 4.54 to 8.03); wearing N95 masks (0.09, 0.03 to 0.30; NNT=3, 2.37 to 4.06); wearing gloves (0.43, 0.29 to 0.65; NNT=5, 4.15 to 15.41); wearing gowns (0.23, 0.14 to 0.37; NNT=5, 3.37 to 7.12); and handwashing, masks, gloves, and gowns combined (0.09, 0.02 to 0.35; NNT=3, 2.66 to 4.97). The incremental effect of adding virucidals or antiseptics to normal handwashing to decrease the spread of respiratory disease remains uncertain. The lack of proper evaluation of global measures such as screening at entry ports and social distancing prevent firm conclusions being drawn. Conclusion Routine long term implementation of some physical measures to interrupt or reduce the spread of respiratory viruses might be difficult but many simple and low-cost interventions could be useful in reducing the spread.

**Database:** CINAHL

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**Randomised Controlled Trials**

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1. **Impact of a large-scale handwashing intervention on reported respiratory illness: Findings from a cluster-randomized controlled trial**

**Author(s):** Najnin N.; Unicomb L.; Nizame F.A.; Arman S.; Begum F.; Biswas S.; Cravioto A.; Luby S.P.; Leder K.; Forbes A.; Winch P.J.; Ram P.K.

**Source:** American Journal of Tropical Medicine and Hygiene; 2019; vol. 100 (no. 3); p. 742-749

**Publication Date:** 2019

**Publication Type(s):** Article

Available at [The American Journal of Tropical Medicine and Hygiene](http://europepmc.org/search?query=(DOI:10.4269/ajtmh.18-0644)) - from Europe PubMed Central - Open Access

Available at [The American Journal of Tropical Medicine and Hygiene](http://www.ajtmh.org/content/journals/10.4269/ajtmh.18-0644) - from HighWire - Free Full Text

Available at [The American Journal of Tropical Medicine and Hygiene](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=30608050) - from EBSCO (MEDLINE Complete)

Available at [The American Journal of Tropical Medicine and Hygiene](http://www.ajtmh.org/deliver/fulltext/14761645/100/3/tpmd180644.pdf?itemId=%2Fcontent%2Fjournals%2F10.4269%2Fajtmh.18-0644&mimeType=pdf&containerItemId=content/journals/14761645) - from Unpaywall

**Abstract:** We assessed the impact of handwashing promotion on reported respiratory illness as a secondary outcome from among > 60,000 low-income households enrolled in a cluster-randomized trial conducted in Bangladesh. Ninety geographic clusters were randomly allocated into three groups: cholera-vaccine-only; vaccine-plus-behavior-change (handwashing promotion and drinking water chlorination); and control. Data on respiratory illness (fever plus either cough or nasal congestion or breathing difficulty within previous 2 days) and intervention uptake (presence of soap and water at handwashing station) were collected through monthly surveys conducted among a different subset of randomly selected households during the intervention period. We determined respiratory illness prevalence across groups and used log-binomial regression to examine the association between respiratory illness and presence of soap and water in the handwashing station. Results were adjusted for age, gender, wealth, and cluster-randomized design. The vaccine-plus-behavior-change group had more handwashing stations with soap and water present than controls (45% versus 25%; P < 0.001). Reported respiratory illness prevalence was similar across groups (vaccine-plus-behavior-change versus control: 2.8% versus 2.9%; 95% confidence interval [CI]: -0.008, 0.006; P = 0.6; cholera-vaccine-only versus control: 3.0% versus 2.9%; 95% CI: -0.006, 0.009; P = 0.4). Irrespective of intervention assignment, respiratory illness was lower among people who had soap and water present in the handwashing station than among those who did not (risk ratioadjusted: 0.82; 95% CI: 0.69-0.98). With modest uptake of the handwashing intervention, we found no impact of this large-scale intervention on respiratory illness. However, those who actually had a handwashing station with soap and water had less illness. This suggests improving the effectiveness of handwashing promotion in achieving sustained behavior change could result in health benefits. Copyright © 2019 by The American Society of Tropical Medicine and Hygiene.

**Database:** EMCARE

1. **Impact of a multicomponent hand hygiene-related intervention on the infectious risk in nursing homes: A cluster randomized trial**

**Author(s):** Temime L.; Ait-Bouziad K.; Dab W.; Hocine M.N.; Cohen N.; Denormandie P.

**Source:** American Journal of Infection Control; Feb 2018; vol. 46 (no. 2); p. 173-179

**Publication Date:** Feb 2018

**Publication Type(s):** Article

Available at [American Journal of Infection Control](https://auth.elsevier.com/ShibAuth/institutionLogin?entityID=https://idp.eng.nhs.uk/openathens&appReturnURL=https%3A%2F%2Fwww.clinicalkey.com%2Fcontent%2FplayBy%2Fdoi%2F%3Fv%3D10.1016%2Fj.ajic.2017.08.030) - from ClinicalKey

**Abstract:** Background: The aim of this study was to assess the impact of a multifaceted hand hygiene (HH) program on the infectious risk in nursing homes (NHs). Method(s): This was a 2-arm cluster randomized trial; French NHs were allocated randomly to the intervention (13 NHs) or control (13 NHs) groups. The intervention consisted of implementing a bundle of HH-related measures over 1 year, including increased availability of alcohol-based handrub, HH promotion, staff education, and local work groups. The primary end point was the incidence rate of acute respiratory infections and gastroenteritis reported in the context of clustered cases episodes. Secondary end points were mortality, hospitalization, and antibiotic prescription rates. Result(s): Baseline characteristics did not differ between groups. The overall handrub consumption was higher in the intervention group over the 1-year intervention period. Because of underreporting, data on the primary end points were of insufficient quality for analysis. Hospitalizations did not differ between the 2 groups. However, the intervention group showed significantly lower mortality (2.10 vs 2.65 per 100 residents per month, respectively; P =.003) and antibiotic prescriptions (5.0 vs 5.8 defined daily doses per 100 resident days, respectively; P <.001). These results were confirmed by the longitudinal multivariate analysis adjusted for NH and resident characteristics and for seasonality (mortality rate ratio, 0.76). Conclusion(s): A multifaceted HH intervention may have a short-term impact on mortality in NHs. Nevertheless, other strategies may remain necessary to reduce morbidity. Copyright © 2018 Association for Professionals in Infection Control and Epidemiology, Inc.

**Database:** EMCARE

1. **Implementing a Pilot Trial of an Infection Control Program in Nursing Homes: Results of a Matched Cluster Randomized Trial**

**Author(s):** McConeghy K.W.; Baier R.; Mor V.; McGrath K.P.; Baer C.J.

**Source:** Journal of the American Medical Directors Association; Aug 2017; vol. 18 (no. 8); p. 707-712

**Publication Date:** Aug 2017

**Publication Type(s):** Article

Available at [Journal of the American Medical Directors Association](https://auth.elsevier.com/ShibAuth/institutionLogin?entityID=https://idp.eng.nhs.uk/openathens&appReturnURL=https%3A%2F%2Fwww.clinicalkey.com%2Fcontent%2FplayBy%2Fdoi%2F%3Fv%3D10.1016%2Fj.jamda.2017.03.003) - from ClinicalKey

**Abstract:** Background Hand hygiene is the single-most important nursing home (NH) infection control measure. We piloted a multifaceted hand-washing/surface cleaning intervention in 5 NHs. Our aims were to assess the feasibility of implementing this intervention by assessing staff participation, satisfaction, hand-washing compliance, and whether the intervention was associated with reductions in infection rates, new antimicrobial orders, or overall hospitalization rates. Methods We conducted a randomized, pair-matched pilot intervention in 10 Colorado NHs to reduce infections for all NH residents from October 1, 2015 through May 31, 2016. To evaluate process, we determined online education participation rates, recorded intervention fidelity through weekly reporting measures on microbial surface counts, hand-washing, and infection reporting, and conducted a survey of participating employees. To evaluate potential impacts on clinical outcomes, we collected information on monthly infection log data, new antibiotic orders, and hospitalizations. Results Three of 5 sites had education participation rates >90%, the other 2 were poor (13% and 23%). The majority of participation survey respondents (58%) were promoters of the intervention. Directors of nursing reported hygiene hand-washing data for 19.6/24 (81.8%) weeks and microbial surface count data for 20.4/24 (85.1%) weeks. For the first 4 weeks of the study, the bacterial counts averaged 351.4 +/- 497.5 relative light units, the mean value for the last 4 weeks was 127.7 +/- 85.1 (P value =.12). The number of hand-washing occasions per NH resident was steady over time but differed by treatment facility (P =.03). We observed nonsignificant reductions for total infections (6.7%) and lower respiratory tract infections (19.9%) vs control NHs. There were no significant differences in antimicrobial orders or hospitalization rates pre-post intervention. Conclusions This multifaceted hand-washing and surface cleaning intervention was designed to reduce infection rates among NH residents. In our 10-facility randomized, matched pair pilot study, we observed program compliance and satisfaction along with reductions in surface bacterial counts, but did not observe a statistically significant reduction in infection rates, antimicrobial use, or hospitalizations. Copyright © 2017

**Database:** EMCARE

1. **Impact of a comprehensive workplace hand hygiene program on employer health care insurance claims and costs, absenteeism, and employee perceptions and practices**

**Author(s):** Arbogast J.W.; Hughes J.; Moore-Schiltz L.; Harpster-Hagen A.; Jarvis W.R.; Parker A.

**Source:** Journal of Occupational and Environmental Medicine; Jun 2016; vol. 58 (no. 6)

**Publication Date:** Jun 2016

**Publication Type(s):** Article

Available at [Journal of occupational and environmental medicine](http://europepmc.org/articles/pmc4883643?pdf=render) - from Unpaywall

**Abstract:** Objective: The aim of this study was to determine the efficacy of a multimodal hand hygiene intervention program in reducing health care insurance claims for hygiene preventable infections (e.g. cold and influenza), absenteeism, and subjective impact on employees. Method(s): A 13.5-month prospective, randomized cluster-controlled trial was executed with alcohol-based hand sanitizer in strategic workplace locations and personal use (intervention group) and brief hand hygiene education (both groups). Four years of retrospective data were collected for all participants. Result(s): Hygiene-preventable health care claims were significantly reduced in the intervention group by over 20% (P<0.05). Absenteeism was positively impacted overall for the intervention group. Employee survey data showed significant improvements in hand hygiene behavior and perception of company concern for employee well-being. Conclusion(s): Providing a comprehensive, targeted, yet simple to execute hand hygiene program significantly reduced the incidence of health care claims and increased employee workplace satisfaction. © Copyright 2016 American College of Occupational and Environmental Medicine.

**Database:** EMCARE

1. **An internet-delivered handwashing intervention to modify influenza-like illness and respiratory infection transmission (PRIMIT): A primary care randomised trial**

**Author(s):** Little P.; Stuart B.; Moore M.; Barnett J.; Middleton K.; Kelly J.; Mullee M.; Raftery J.; Yao G.; Williamson I.; Joseph J.; Miller S.; Yardley L.; Hobbs F.D.R.; Popoola D.; Stokes-Lampard H.; Fleming D.; Carman W.

**Source:** The Lancet; Oct 2015; vol. 386 (no. 10004); p. 1631-1639

**Publication Date:** Oct 2015

**Publication Type(s):** Article

Available at [The Lancet](https://auth.elsevier.com/ShibAuth/institutionLogin?entityID=https://idp.eng.nhs.uk/openathens&appReturnURL=https%3A%2F%2Fwww.clinicalkey.com%2Fcontent%2FplayBy%2Fdoi%2F%3Fv%3D10.1016%2FS0140-6736(15)60127-1) - from ClinicalKey

Available at [The Lancet](http://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=145298&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=0140-6736&volume=386&issue=10004&spage=1631) - from ProQuest (Health Research Premium) - NHS Version

Available at [The Lancet](https://eprints.soton.ac.uk/373929/1/__soton.ac.uk_ude_personalfiles_users_ls_mydesktop_PRIMITLancetpaperrevisedfinalwithEME%2520acknowledgement1.docx) - from Unpaywall

**Abstract:** Background Handwashing to prevent transmission of respiratory tract infections (RTIs) has been widely advocated, especially during the H1N1 pandemic. However, the role of handwashing is debated, and no good randomised evidence exists among adults in non-deprived settings. We aimed to assess whether an internet-delivered intervention to modify handwashing would reduce the number of RTIs among adults and their household members. Methods We recruited individuals sharing a household by mailed invitation through general practices in England. After consent, participants were randomised online by an automated computer-generated random number programme to receive either no access or access to a bespoke automated web-based intervention that maximised handwashing intention, monitored handwashing behaviour, provided tailored feedback, reinforced helpful attitudes and norms, and addressed negative beliefs. We enrolled participants into an additional cohort (randomised to receive intervention or no intervention) to assess whether the baseline questionnaire on handwashing would affect handwashing behaviour. Participants were not masked to intervention allocation, but statistical analysis commands were constructed masked to group. The primary outcome was number of episodes of RTIs in index participants in a modified intention-to-treat population of randomly assigned participants who completed follow-up at 16 weeks. This trial is registered with the ISRCTN registry, number ISRCTN75058295. Findings Across three winters between Jan 17, 2011, and March 31, 2013, we enrolled 20 066 participants and randomly assigned them to receive intervention (n=10 040) or no intervention (n=10 026). 16 908 (84%) participants were followed up with the 16 week questionnaire (8241 index participants in intervention group and 8667 in control group). After 16 weeks, 4242 individuals (51%) in the intervention group reported one or more episodes of RTI compared with 5135 (59%) in the control group (multivariate risk ratio 0.86, 95% CI 0.83-0.89; p<0.0001). The intervention reduced transmission of RTIs (reported within 1 week of another household member) both to and from the index person. We noted a slight increase in minor self-reported skin irritation (231 [4%] of 5429 in intervention group vs 79 [1%] of 6087 in control group) and no reported serious adverse events. Interpretation In non-pandemic years, an effective internet intervention designed to increase handwashing could have an important effect in reduction of infection transmission. In view of the heightened concern during a pandemic and the likely role of the internet in access to advice, the intervention also has potential for effective implementation during a pandemic. Copyright © 2015 Elsevier Ltd.

**Database:** EMCARE

1. **Facemasks, hand hygiene, and influenza among young adults: A randomized intervention trial**

**Author(s):** Aiello A.E.; Perez V.; Coulborn R.M.; Davis B.M.; Uddin M.; Monto A.S.

**Source:** PLoS ONE; Jan 2012; vol. 7 (no. 1)

**Publication Date:** Jan 2012

**Publication Type(s):** Article

Available at [PloS one](http://europepmc.org/search?query=(DOI:10.1371/journal.pone.0029744)) - from Europe PubMed Central - Open Access

Available at [PloS one](https://dx.plos.org/10.1371/journal.pone.0029744) - from Public Library of Science (PLoS)

Available at [PloS one](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=22295066) - from EBSCO (MEDLINE Complete)

Available at [PloS one](http://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=145298&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=1932-6203&volume=7&issue=1&spage=e29744) - from ProQuest (Health Research Premium) - NHS Version

Available at [PloS one](https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0029744&type=printable) - from Unpaywall

**Abstract:** Limited vaccine availability and the potential for resistance to antiviral medications have led to calls for establishing the efficacy of non-pharmaceutical measures for mitigating pandemic influenza. Our objective was to examine if the use of face masks and hand hygiene reduced rates of influenza-like illness (ILI) and laboratory-confirmed influenza in the natural setting. A cluster-randomized intervention trial was designed involving 1,178 young adults living in 37 residence houses in 5 university residence halls during the 2007-2008 influenza season. Participants were assigned to face mask and hand hygiene, face mask only, or control group during the study. Discrete-time survival models using generalized estimating equations to estimate intervention effects on ILI and confirmed influenza A/B infection over a 6-week study period were examined. A significant reduction in the rate of ILI was observed in weeks 3 through 6 of the study, with a maximum reduction of 75% during the final study week (rate ratio [RR] = 0.25, [95% CI, 0.07 to 0.87]). Both intervention groups compared to the control showed cumulative reductions in rates of influenza over the study period, although results did not reach statistical significance. Generalizability limited to similar settings and age groups. Face masks and hand hygiene combined may reduce the rate of ILI and confirmed influenza in community settings. These non-pharmaceutical measures should be recommended in crowded settings at the start of an influenza pandemic. Trail Registration: Clinicaltrials.gov NCT00490633. © 2012 Aiello et al.

**Database:** EMCARE

1. **Clustered randomized controlled trial of a hand hygiene intervention involving pocket-sized containers of alcohol-based hand rub for the control of infections in long-term care facilities**

**Author(s):** Yeung W.K.; Wong T.W.; Wilson Tam W.S.

**Source:** Infection Control and Hospital Epidemiology; Jan 2011; vol. 32 (no. 1); p. 67-76

**Publication Date:** Jan 2011

**Publication Type(s):** Article

**Abstract:** Objective. To investigate the effectiveness of a multifaceted hand hygiene program involving the use of pocket-sized containers of antiseptic gel in long-term care facilities (LTCFs) with elderly residents. Methods. In this clustered randomized controlled trial, Hong Kong LTCFs for elderly persons were recruited via snowball sampling. Staff hand hygiene adherence was directly observed, and residents' infections necessitating hospitalization were recorded. After a 3-month preintervention period, LTCFs were randomized to receive pocket-sized containers of alcohol-based gel, reminder materials, and education for all HCWs (treatment group) or to receive basic life support education and workshops for all healthcare workers (HCWs) (control group). A 2-week intervention period (April 1-15, 2007) was followed by 7 months of postintervention observations. Results. In the 3 treatment LTCFs, adherence to hand rubbing increased from 5 (1.5%) of 333 to 233 (15.9%) of 1,465 hand hygiene opportunities (P = .001 ) and total hand hygiene adherence P = .001 increased from 86 (25.8%) of 333 to 488 (33.3%) of 1,465 opportunities (P = .01) after intervention; the 3 control LTCFs showed no significant change. In the treatment group, the incidence of serious infections decreased from 31 cases in 21,862 resident-days (1.42 cases per 1,000 resident-days) to 33 cases in 50,441 resident-days (0.65 cases per 1,000 resident-days) (P = .002), whereas in the control group, it increased from 16 cases in 32,726 resident-days (0.49 cases per 1,000 resident-days) to 85 cases in 81,177 resident-days (1.05 cases per 1,000 resident-days) (P = .004). In the treatment group, the incidence of pneumonia decreased from 0.91 to 0.28 cases per 1,000 resident-days (P = .001) and the death rate due to infection decreased from 0.37 to 0.10 deaths per 1,000 resident-days (P = .01); the control group revealed no significant change. Conclusions. A hand hygiene program involving the use of pocket-sized containers of antiseptic gel and education could effectively increase adherence to hand rubbing and reduce the incidence of serious infections in LTCFs with elderly residents. © 2010 by The Society for Healthcare Epidemiology of America.

**Database:** EMCARE

1. **Mask use, hand hygiene, and seasonal influenza-like illness among young adults: A randomized intervention trial**

**Author(s):** Aiello A.E.; Perez V.; Coulborn R.M.; Davis B.M.; Uddin M.; Monto A.S.; Murray G.F.; Shay D.K.; Waterman S.H.

**Source:** Journal of Infectious Diseases; Feb 2010; vol. 201 (no. 4); p. 491-498

**Publication Date:** Feb 2010

**Publication Type(s):** Article

Available at [The Journal of infectious diseases](https://academic.oup.com/jid/article-pdf/201/4/491/18060058/201-4-491.pdf) - from Unpaywall

**Abstract:** Background. During the influenza A(HlNl) pandemic, antiviral prescribing was limited, vaccines were not available early, and the effectiveness of nonpharmaceutical interventions (NPIs) was uncertain. Our study examined whether use of face masks and hand hygiene reduced the incidence of influenza-like illness (ILI). Methods. A randomized intervention trial involving 1437 young adults living in university residence halls during the 2006 2007 influenza season was designed. Residence halls were randomly assigned to 1 of 3 groups face mask use, face masks with hand hygiene, or control for 6 weeks. Generalized models estimated rate ratios for clinically diagnosed or survey-reported ILl weekly and cumulatively. Results. We observed significant reductions in ILl during weeks 4 6 in the mask and hand hygiene group, compared with the control group, ranging from 35% (confidence interval [CI], 9% 53%) to 51% (CI, 13% 73%), after adjusting for vaccination and other covariates. Face mask use alone showed a similar reduction in ILl compared with the control group, but adjusted estimates were not statistically significant. Neither face mask use and hand hygiene nor face mask use alone was associated with a significant reduction in the rate of ILl cumulatively. Conclusions. These findings suggest that face masks and hand hygiene may reduce respiratory illnesses in shared living settings and mitigate the impact of the influenza A(H1N1) pandemic. © 2010 by the Infectious Diseases Society of America. All rights reserved.

**Database:** EMCARE

1. **Facemasks and hand hygiene to prevent influenza transmission in households: A cluster randomized trial**

**Author(s):** Cowling B.J.; Fang V.J.; Cheng C.K.Y.; Fung R.O.P.; Wai W.; Sin J.; Leung G.M.; Chan K.-H.; Seto W.H.; Peiris J.S.M.; Yung R.; Chiu B.C.F.; Chu D.W.S.; Lee P.W.Y.; Chiu M.C.; Lee H.C.; Uyeki T.M.; Houck P.M.

**Source:** Annals of Internal Medicine; Oct 2009; vol. 151 (no. 7); p. 437-446

**Publication Date:** Oct 2009

**Publication Type(s):** Article

Available at [Annals of Internal Medicine](http://ovidsp.ovid.com/athens/ovidweb.cgi?T=JS&PAGE=fulltext&D=ovft&CSC=Y&NEWS=N&SEARCH=0003-4819.is+and+%22151%22.vo+and+%227%22.ip+and+%22437%22.pg+or+%2210.7326/0003-4819-151-7-200910060-00142%22.di) - from Ovid (Journals @ Ovid) - Remote Access

Available at [Annals of Internal Medicine](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=19652172) - from EBSCO (MEDLINE Complete)

Available at [Annals of Internal Medicine](http://annals.org/data/journals/aim/20191/0000605-200910060-00004.pdf) - from Unpaywall

**Abstract:** Background: Few data are available about the effectiveness of nonpharmaceutical interventions for preventing influenza virus transmission. Objective(s): To investigate whether hand hygiene and use of face-masks prevents household transmission of influenza. Design(s): Cluster randomized, controlled trial. Randomization was computer generated; allocation was concealed from treating physicians and clinics and implemented by study nurses at the time of the initial household visit. Participants and personnel administering the interventions were not blinded to group assignment. (Clinical-Trials.gov registration number: NCT00425893) Setting: Households in Hong Kong. Patient(s): 407 people presenting to outpatient clinics with influenza-like illness who were positive for influenza A or B virus by rapid testing (index patients) and 794 household members (contacts) in 259 households. Intervention(s): Lifestyle education (control) (134 households), hand hygiene (136 households), or surgical facemasks plus hand hygiene (137 households) for all household members. Measurements: Influenza virus infection in contacts, as confirmed by reverse-transcription polymerase chain reaction (RT-PCR) or diagnosed clinically after 7 days. Result(s): Sixty (8%) contacts in the 259 households had RT-PCR-confirmed influenza virus infection in the 7 days after intervention. Hand hygiene with or without facemasks seemed to reduce influenza transmission, but the differences compared with the control group were not significant. In 154 households in which interventions were implemented within 36 hours of symptom onset in the index patient, transmission of RT-PCR-confirmed infection seemed reduced, an effect attributable to fewer infections among participants using facemasks plus hand hygiene (adjusted odds ratio, 0.33 [95% CI, 0.13 to 0.87]). Adherence to interventions varied. Limitation(s): The delay from index patient symptom onset to intervention and variable adherence may have mitigated intervention effectiveness. Conclusion(s): Hand hygiene and facemasks seemed to prevent household transmission of influenza virus when implemented within 36 hours of index patient symptom onset. These findings suggest that nonpharmaceutical interventions are important for mitigation of pandemic and interpandemic influenza. Primary Funding Source: Centers for Disease Control and Prevention. © 2009 American College of Physicians.

**Database:** EMCARE

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**Other Study Types**

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1. **Coronavirus and preparing for the worst.**

**Author(s):** Palmer, John

**Source:** Medical Environment Update; Apr 2020; vol. 30 (no. 4); p. 1-4

**Publication Date:** Apr 2020

**Publication Type(s):** Periodical

Available at [Medical Environment Update](http://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=145298&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=1520-8222&volume=30&issue=4&spage=1) - from ProQuest (Health Research Premium) - NHS Version

**Database:** CINAHL

1. **Preventing Viral Contamination: Effects of Wipe and Spray-based Decontamination of Gloves and Gowns.**

**Author(s):** Robinson, Gwen L; Hitchcock, Stephanie; Kpadeh-Rogers, Zegbeh; Karikari, Nicole; Johnson, J Kristie; Blanco, Natalia; Morgan, Daniel J; Harris, Anthony D; Leekha, Surbhi

**Source:** Clinical Infectious Diseases; Oct 2019; vol. 69

**Publication Date:** Oct 2019

**Publication Type(s):** Academic Journal

Available at [Clinical infectious diseases: an official publication of the Infectious Diseases Society of America](https://academic.oup.com/cid/article-pdf/69/Supplement_3/S228/30055111/ciz622.pdf) - from Unpaywall

**Abstract:** We conducted a laboratory simulation to evaluate the contamination of environmental surfaces when using wipe vs spray methods of personal protective equipment (PPE) decontamination. We did not observe any environmental contamination with the bacteriophage MS-2 when bleach solution spray or wipes were used for PPE disinfection.

**Database:** CINAHL

1. **Respiratory viruses on personal protective equipment and bodies of healthcare workers.**

**Author(s):** Phan, Linh T.; Sweeney, Dagmar; Maita, Dayana; Moritz, Donna C.; Bleasdale, Susan C.; Jones, Rachael M.

**Source:** Infection Control & Hospital Epidemiology; Dec 2019; vol. 40 (no. 12); p. 1356-1360

**Publication Date:** Dec 2019

**Publication Type(s):** Academic Journal

**Abstract:** Objective: To characterize the magnitude of virus contamination on personal protective equipment (PPE), skin, and clothing of healthcare workers (HCWs) who cared for patients having acute viral infections. Design: Prospective observational study. Setting: Acute-care academic hospital. Participants: A total of 59 HCWs agreed to have their PPE, clothing, and/or skin swabbed for virus measurement. Methods: The PPE worn by HCW participants, including glove, face mask, gown, and personal stethoscope, were swabbed with Copan swabs. After PPE doffing, bodies and clothing of HCWs were sampled with Copan swabs: hand, face, and scrubs. Preamplification and quantitative polymerase chain reaction (qPCR) methods were used to quantify viral RNA copies in the swab samples. Results: Overall, 31% of glove samples, 21% of gown samples, and 12% of face mask samples were positive for virus. Among the body and clothing sites, 21% of bare hand samples, 11% of scrub samples, and 7% of face samples were positive for virus. Virus concentrations on PPE were not statistically significantly different than concentrations on skin and clothing under PPE. Virus concentrations on the personal stethoscopes and on the gowns were positively correlated with the number of torso contacts (P <.05). Virus concentrations on face masks were positively correlated with the number of face mask contacts and patient contacts (P <.05). Conclusions: Healthcare workers are routinely contaminated with respiratory viruses after patient care, indicating the need to ensure that HCWs complete hand hygiene and use other PPE to prevent dissemination of virus to other areas of the hospital. Modifying self-contact behaviors may decrease the presence of virus on HCWs.

**Database:** CINAHL

1. **A programme to cut inappropriate use of non-sterile medical gloves.**

**Author(s):** Dunn, Helen; Wilson, Nicola; Leonard, Amy

**Source:** Nursing Times; Sep 2019; vol. 115 (no. 9); p. 18-20

**Publication Date:** Sep 2019

**Publication Type(s):** Periodical

Available at [Nursing Times](http://ovidsp.ovid.com/athens/ovidweb.cgi?T=JS&PAGE=fulltext&MODE=ovid&CSC=Y&NEWS=N&D=ovft&SEARCH=0954-7762.is+and+%22115%22.vo+and+%229%22.ip+and+%2218%22.pg) - from Ovid (Journals @ Ovid) - Remote Access

**Abstract:** Healthcare workers should only use non-sterile gloves for self-protection when exposure to blood or body fluids is likely. Overuse of gloves - can have negative repercussions, including higher expenditure and waste, more skin problems and missed opportunities to decontaminate hands. At Great Ormond Street Hospital, infection control audits had shown that clinical staff were not always using non-sterile gloves appropriately or complying with hand-hygiene requirements. In April 2018, an educational awareness programme was launched to help staff risk assess the use of gloves for self-protection. Created by practice educators and infection prevention and control nurses, with input from all those affected by the changes, the programme has had good initial outcomes.

**Database:** CINAHL

1. **When to wear personal protective equipment to prevent infection.**

**Author(s):** Cochrane, Joan; Jersby, Maureen

**Source:** British Journal of Nursing; Aug 2019; vol. 28 (no. 15); p. 982-984

**Publication Date:** Aug 2019

**Publication Type(s):** Academic Journal

Available at [British journal of nursing (Mark Allen Publishing)](http://nrl.northumbria.ac.uk/38310/3/Cochrane%2C%20Jersby%20-%20WHEN%20AND%20WEAR%20AAM.pdf) - from Unpaywall

**Abstract:** The article discusses that compliance with the standard principles of infection prevention and control (IPC) is the keystone of best evidence-based practice. It mentions standard IPC precautions must be applied by healthcare practitioners for all patient care activities; and also mentions use of gloves, disposable aprons, facemasks and eye protection are the constituents of personal protective equipment (PPE).

**Database:** CINAHL

1. **Infection control 3: use of disposable gloves and aprons.**

**Author(s):** Wigglesworth, Neil

**Source:** Nursing Times; Jul 2019; vol. 115 (no. 7); p. 34-36

**Publication Date:** Jul 2019

**Publication Type(s):** Periodical

Available at [Nursing Times](http://ovidsp.ovid.com/athens/ovidweb.cgi?T=JS&PAGE=fulltext&MODE=ovid&CSC=Y&NEWS=N&D=ovft&SEARCH=0954-7762.is+and+%22115%22.vo+and+%227%22.ip+and+%2234%22.pg) - from Ovid (Journals @ Ovid) - Remote Access

**Abstract:** Disposable gloves and aprons are used to protect health professionals and patients from the risks of infection. However, it is important to use them appropriately or they may increase patients' risk of healthcare-associated infections. This article - the third part of a six-part series - discusses when and how to use them.

**Database:** CINAHL

1. **Ban the handshake in winter?**

**Author(s):** Mermel, Leonard A.

**Source:** Infection Control & Hospital Epidemiology; Jun 2019; vol. 40 (no. 6); p. 699-700

**Publication Date:** Jun 2019

**Publication Type(s):** Academic Journal

**Abstract:** Gastrointestinal and respiratory viruses are particularly common during winter months and reducing risk of transmission is challenging. Transfer of bacteria from the hands of one person to another is dramatically reduced with a fist bump compared to a handshake. If the same is true for viruses, should we recommend this change in greeting in the winter?

**Database:** CINAHL

1. **Quality Control: Hand and Glove Sanitizing in Sterile Compounding, Part 2.**

**Author(s):** Greeson, Nicole MH; Mixon, William; Huslage, Kirk; Stiegel, Matthew A; Thomann, Wayne R

**Source:** International Journal of Pharmaceutical Compounding; 2019; vol. 23 (no. 6); p. 467-471

**Publication Date:** 2019

**Publication Type(s):** Journal Article

**PubMedID:** 31751943

**Abstract:** Selecting an appropriate sanitizer (i.e. "rub") for application to hands and gloves before and, if necessary, during sterile compounding is as important as is its consistent and judicious use. Alcohols and chlorhexidine gluconate, which have long been recognized as safe and powerful biocides, are often essential ingredients in such sanitizing products. In this second article in a 2-part series on alcohol-based hand and glove sanitizers, we review the selection of and need for those rubs in sterile compounding, present considerations for their safe storage, compare the features of several appropriate sanitizing agents, and answer compounders' frequently asked questions about their use. Glove sanitizing is discussed as part of the hand-sanitizing process. In part 1 of this series, we explained, among other topics, the mechanism of action and composition of alcohol-based sanitizers and presented a protocol for their application to hands and gloves.

**Database:** Medline

1. **Quality Control: Hand and Glove Sanitizing in Sterile Compounding, Part 1.**

**Author(s):** Greeson, Nicole Mh; Mixon, William; Huslage, Kirk; Stiegel, Matthew A; Thomann, Wayne R

**Source:** International Journal of Pharmaceutical Compounding; 2019; vol. 23 (no. 5); p. 387-391

**Publication Date:** 2019

**Publication Type(s):** Journal Article Review

**PubMedID:** 31513537

**Abstract:** In pharmaceutical compounding, strict adherence to a protocol for hand hygiene and glove sanitizing is essential to ensure the purity, safety, and effectiveness of sterile preparations; reduce patient morbidity and mortality; and decrease the cost of health care. Alcohols and chlorhexidine gluconate are among the most effective bactericides, virucides, and fungicides, and acquired resistance to those agents has not been shown in clinical practice. This article, which is part 1 in a series of 2, pertains primarily to alcohol-based hand rubs that are appropriate for use in sterile compounding (glove sanitizing is discussed as part of the handsanitizing process). In a brief overview of those products, we define pertinent terminology, examine the necessity of and requirements for the use of sanitizers, review their mechanism of action and composition, consider factors pertinent to their selection, and present a protocol for their application. In part 2 of this series, the topics examined include a comparison of various alcohol-based sanitizers and answers to compounders' frequently asked questions about their use.

**Database:** Medline

1. **Hand hygiene before donning nonsterile gloves: Healthcareworkers' beliefs and practices.**

**Author(s):** Baloh, Jure; Thom, Kerri A.; Perencevich, Eli; Rock, Clare; Robinson, Gwen; Ward, Melissa; Herwaldt, Loreen; Reisinger, Heather Schacht

**Source:** American Journal of Infection Control; May 2019; vol. 47 (no. 5); p. 492-497

**Publication Date:** May 2019

**Publication Type(s):** Academic Journal

Available at [American journal of infection control](https://auth.elsevier.com/ShibAuth/institutionLogin?entityID=https://idp.eng.nhs.uk/openathens&appReturnURL=https%3A%2F%2Fwww.clinicalkey.com%2Fcontent%2FplayBy%2Fdoi%2F%3Fv%3D10.1016%2Fj.ajic.2018.11.015) - from ClinicalKey

**Abstract:** Background Understanding the perceptions and beliefs of health care workers (HCWs) regarding glove use and associated hand hygiene (HH) may be informative and ultimately improve practice. Research in this area is limited. This study examined the practices and beliefs of HCWs surrounding the use of nonsterile gloves and HH before gloving. Methods The study was conducted at 3 large academic US hospitals using a parallel convergent mixed-method design. To estimate compliance rates, the gloving and HH practices of HCWs were observed at entry to patient rooms for 6 months. Interviews were conducted with 25 providers, nurses, and nursing assistants to investigate their beliefs and perceptions of these practices. Results Observed HH compliance rates before gloving were 42%, yet in the interviews most HCWs reported 100% compliance. Observed compliance with gloving before entering contact precaution rooms was 78%, although all HCWs reported always gloving for standard and contact precautions. Most HCWs described using gloves more often than necessary. HCWs generally use gloves for their own safety and sanitize hands before gloving for patient safety. Numerous barriers to compliance with HH before gloving were discussed, including beliefs that gloves provide enough protection. Conclusions HH and glove use are highly intertwined in clinical practice and should be considered jointly in infection prevention improvement efforts.

**Database:** CINAHL

1. **Use of personal protective equipment in nursing practice.**

**Author(s):** Brown, Louise

**Source:** Nursing Standard; May 2019; vol. 34 (no. 5); p. 59-66

**Publication Date:** May 2019

**Publication Type(s):** Trade Publication

**Abstract:** A comprehensive understanding of infection prevention and control is essential for nurses when seeking to protect themselves, patients, colleagues and the general public from the transmission of infection. Personal protective equipment (PPE) -- such as gloves, aprons and/or gowns, and eye protection -- is an important aspect of infection prevention and control for all healthcare staff, including nurses. Its use requires effective assessment, an understanding of the suitability of various types of PPE in various clinical scenarios, and appropriate application. Understanding the role of PPE will enable nurses to use it appropriately and reduce unnecessary cost, while ensuring that the nurse-patient relationship remains central to care. This article defines PPE and its components, outlines when it should be used and details its optimal application.

**Database:** CINAHL

1. **Infection control influence of Middle East respiratory syndrome coronavirus: A hospital-based analysis.**

**Author(s):** Al-Tawfiq, Jaffar A.; Abdrabalnabi, Rana; Taher, Alla; Mathew, Shantymole; Rahman, Kamal Abdul

**Source:** American Journal of Infection Control; Apr 2019; vol. 47 (no. 4); p. 431-434

**Publication Date:** Apr 2019

**Publication Type(s):** Academic Journal

Available at [American Journal of Infection Control](https://auth.elsevier.com/ShibAuth/institutionLogin?entityID=https://idp.eng.nhs.uk/openathens&appReturnURL=https%3A%2F%2Fwww.clinicalkey.com%2Fcontent%2FplayBy%2Fdoi%2F%3Fv%3D10.1016%2Fj.ajic.2018.09.015) - from ClinicalKey

Available at [American Journal of Infection Control](http://www.ajicjournal.org/article/S0196655318309441/pdf) - from Unpaywall

**Abstract:** Background Middle East respiratory syndrome coronavirus (MERS-CoV) caused multiple outbreaks. Such outbreaks increase economic and infection control burdens. We studied the infection control influence of MERS-CoV using a hospital-based analysis. Methods Our hospital had 17 positive and 82 negative cases of MERS-CoV between April 1, 2013, and June 3, 2013. The study evaluated the impact of these cases on the use of gloves, surgical masks, N95 respirators, alcohol-based hand sanitizer, and soap, as well as hand hygiene compliance rates. Results During the study, the use of personal protective equipment during MERS-CoV compared with the period before MERS-CoV increased dramatically from 2,947.4 to 10,283.9 per 1,000 patient-days (P <.0000001) for surgical masks and from 22 to 232 per 1,000 patient-days (P <.0000001) for N95 masks. The use of alcohol-based hand sanitizer and soap showed a significant increase in utilized amount (P <.0000001). Hand hygiene compliance rates increased from 73% just before the occurrence of the first MERS case to 88% during MERS cases (P =.0001). The monthly added cost was $16,400 for included infection control items. Conclusions There was a significant increase in the utilization of surgical masks, respirators, soap and alcohol-based hand sanitizers. Such an increase is a challenge and adds cost to the healthcare system.

**Database:** CINAHL

1. **Flawed self-assessment in hand hygiene: A major contributor to infections in clinical practice?**

**Author(s):** Kelcikova, Simona; Mazuchova, Lucia; Bielena, Lubica; Filova, Lenka

**Source:** Journal of Clinical Nursing (John Wiley & Sons, Inc.); Jun 2019; vol. 28 (no. 11/12); p. 2265-2275

**Publication Date:** Jun 2019

**Publication Type(s):** Academic Journal

Available at [Journal of Clinical Nursing](https://go.openathens.net/redirector/nhs?url=https%3A%2F%2Fonlinelibrary.wiley.com%2Fdoi%2Ffull%2F10.1111%2Fjocn.14823) - from Wiley Online Library Medicine and Nursing Collection 2019 - NHS

Available at [Journal of Clinical Nursing](https://doi.org/10.1111/jocn.14823) - from Unpaywall

**Abstract:** Aim: To assess the quality of self-assessment and the attitude of healthcare workers (HCWs) to hand hygiene (HH) as possible factors of unsatisfactory HH compliance in clinical practice. Background: Noncompliance of HH causes healthcare-acquired infections (HAI) in patients. It is assumed that HH-related infections make up approximately 80% of all infections in clinical practice. Our observations suggest that self-assessment and attitude might be surprisingly important factors. Design and method: The cross-sectional approach using questionnaire and direct observation was applied. We followed STROBE guidelines. In total, questionnaires of 639 HCWs of surgical departments were included in the study, and 127 HCWs had been also directly observed. Results: High self-assessment regarding HH compliance and its knowledge was reported by 74% and 83% of HCWs, respectively. At the same time, only 51% of HCWs positively evaluated their colleagues with respect to HH. Similar to previous studies, we have found significant differences between physicians and nurses regarding the level of self-assessment, attitude and perception of HH. Physicians were more critical in self-assessment and considered HH less important compared to nurses. The observations revealed drawbacks in HH practices. The high level of self-overassessment might be a contributing factor to noncompliance with HH. Conclusions: It is necessary to establish systematic professional training and education of HCWs in relation to their HH, and to continuously monitor and evaluate the level of self-assessment in clinical practice, mainly in surgery. Relevance to clinical practice: A reasonable objective level of self-assessment and attitude to HH are the most important conditions for preventing of HAI in patients.

**Database:** CINAHL

1. **Beyond entry and exit: Hand hygiene at the bedside.**

**Author(s):** Woodard, Jennifer A.; Leekha, Surbhi; Jackson, Sarah S.; Thom, Kerri A.

**Source:** American Journal of Infection Control; May 2019; vol. 47 (no. 5); p. 487-491

**Publication Date:** May 2019

**Publication Type(s):** Academic Journal

Available at [American Journal of Infection Control](https://auth.elsevier.com/ShibAuth/institutionLogin?entityID=https://idp.eng.nhs.uk/openathens&appReturnURL=https%3A%2F%2Fwww.clinicalkey.com%2Fcontent%2FplayBy%2Fdoi%2F%3Fv%3D10.1016%2Fj.ajic.2018.10.026) - from ClinicalKey

**Abstract:** Highlights • Opportunities for hand hygiene are frequent at the bedside. • Compliance with WHO 5 moments of hand hygiene in ICUs was poor, 35%. • Few healthcare workers recall the WHO 5 moments. Background We aimed to assess compliance, knowledge, and attitudes regarding the World Health Organization (WHO) 5 moments for hand hygiene (HH). Methods We assessed HH compliance from July-August 2016, using a modified WHO HH observation form. A 26-question survey was used to assess health care personnel (HCP) knowledge, opinions, and barriers to HH. A subgroup of HCPs participated in a 2-round focused survey to assign priority to the moments. Results Three hundred two HH opportunities were observed in 104 unique HCP-patient interactions. HH was performed at 106 (35%) opportunities, 37% (25 of 68) before touching a patient, 9% (6 of 70) before aseptic procedures, 5% (1 of 22) after body fluid exposure or risk, 63% (55 of 88) after touching a patient, and 35% (19 of 54) after touching patient surroundings. Two hundred eighteen HCPs completed the survey; 63 (29%) were familiar with the WHO 5 moments but only 13 (21%) were able to recall all 5 moments. In the focused surveys, 46% (6 of 13) ranked "before aseptic procedure" as the most important HH moment, and 86% (11 of 13) identified "after touching patient surroundings" as the least important. Conclusions We found frequent opportunities for HH with infrequent compliance. Lack of recognition of opportunities at the bedside and frequent glove use may contribute to lower compliance.

**Database:** CINAHL

1. **Are Contact Precautions ethically justifiable in contemporary hospital care?**

**Author(s):** Harris, Joanna; Walsh, Kenneth; Dodds, Susan

**Source:** Nursing Ethics; Mar 2019; vol. 26 (no. 2); p. 611-624

**Publication Date:** Mar 2019

**Publication Type(s):** Academic Journal

**Abstract:** Hospital infection control practices known as Contact Precautions are recommended for the management of people with pathogens such as methicillin-resistant Staphylococcus aureus or vancomycin-resistant Enterococci. Background: The patient is isolated, and staff are required to wear gloves, and a gown or apron when providing care. A notice is displayed to remind staff of these requirements and an 'alert' message is placed in the patient's medical record. Objective: The aim of this article is to discuss and explore whether practices used in hospitals to reduce the transmission of endemic antibiotic-resistant organisms are ethically justified in today's healthcare environment in the developed world. In order to do this, the history of the development of these practices is summarised, and the evidence base for their effectiveness is reviewed. Key bioethics principles are then discussed and contextualised from the perspective of hospital infection prevention and control, and an ethically superior model for the prevention and control of healthcare associated infection is proposed.

**Database:** CINAHL

1. **Mixed-methods analysis of glove use as a barrier to hand hygiene.**

**Author(s):** Acquarulo, Blake A.; Sullivan, Linda; Gentile, Anthony L.; Boyce, John M.; Martinello, Richard A.

**Source:** Infection Control & Hospital Epidemiology; Jan 2019; vol. 40 (no. 1); p. 103-105

**Publication Date:** Jan 2019

**Publication Type(s):** Academic Journal

**Abstract:** Examination gloves have been previously noted as a possible barrier to hand hygiene. We performed a prospective quantitative and qualitative study to investigate. Glove usage was found to be a potential barrier to hand hygiene; this was driven by desire for personal safety and potentially learned during professional training.

**Database:** CINAHL

1. **You Know What's Living on Your Doorknob? Keep Clients (and Yourself Safe from Common Viruses.**

**Author(s):** Novgrod, Nate

**Source:** Massage Magazine; Nov 2019 (no. 282); p. 48-50

**Publication Date:** Nov 2019

**Publication Type(s):** Periodical

**Abstract:** The article discusses massage therapists' need to keep themselves and their clients safe from common viruses in the work area. Topics covered include the contagious rhinovirus that survives on a massage table, countertop, and doorknob in and near the treatment room, and such measures as hand washing, the use of hand and tool sanitizers, and cleaning the face cradle to check the spread of infectious illnesses. Also noted is the use of a nitrile glove for protection and comfort.

**Database:** CINAHL

1. **Practice of hand hygiene and use of protective gloves: Differences in the perception between patients and medical staff.**

**Author(s):** Wałaszek, Marta; Kołpa, Małgorzata; Różańska, Anna; Wolak, Zdzisław; Bulanda, Małgorzata; Wójkowska-Mach, Jadwiga

**Source:** American Journal of Infection Control; Sep 2018; vol. 46 (no. 9); p. 1074-1076

**Publication Date:** Sep 2018

**Publication Type(s):** Academic Journal

Available at [American Journal of Infection Control](https://auth.elsevier.com/ShibAuth/institutionLogin?entityID=https://idp.eng.nhs.uk/openathens&appReturnURL=https%3A%2F%2Fwww.clinicalkey.com%2Fcontent%2FplayBy%2Fdoi%2F%3Fv%3D10.1016%2Fj.ajic.2018.01.025) - from ClinicalKey

**Abstract:** This study investigated differences in perceptions of hand hygiene and protective glove use among patients and health care workers (HCWs) in Poland. We conducted a survey using an original questionnaire among 462 respondents, including 173 (37.4%) patients and 289 (62.6%) HCWs; HCWs demonstrated poor familiarity with the My 5 Moments for Hand Hygiene. The role of protective gloves in preventing health care–associated infection was overestimated by both patients and HCWs.

**Database:** CINAHL

1. **Efficacy of ethanol against viruses in hand disinfection**

**Author(s):** Kampf G.

**Source:** Journal of Hospital Infection; Apr 2018; vol. 98 (no. 4); p. 331-338

**Publication Date:** Apr 2018

**Publication Type(s):** Review

Available at [Journal of Hospital Infection](https://auth.elsevier.com/ShibAuth/institutionLogin?entityID=https://idp.eng.nhs.uk/openathens&appReturnURL=https%3A%2F%2Fwww.clinicalkey.com%2Fcontent%2FplayBy%2Fdoi%2F%3Fv%3D10.1016%2Fj.jhin.2017.08.025) - from ClinicalKey

**Abstract:** Ethanol is used worldwide in healthcare facilities for hand rubbing. It has been reported to have a stronger and broader virucidal activity compared with propanols. The aim of this review was to describe the spectrum of virucidal activity of ethanol in solution or as commercially available products. A systematic search was conducted. Studies were selected when they contained original data on reduction of viral infectivity from suspension tests (49 studies) and contaminated hands (17 studies). Ethanol at 80% was highly effective against all 21 tested, enveloped viruses within 30 s. Murine norovirus and adenovirus type 5 are usually inactivated by ethanol between 70% and 90% in 30 s whereas poliovirus type 1 was often found to be too resistant except for ethanol at 95% (all test viruses of EN 14476). Ethanol at 80% is unlikely to be sufficiently effective against poliovirus, calicivirus (FCV), polyomavirus, hepatitis A virus (HAV) and foot-and-mouth disease virus (FMDV). The spectrum of virucidal activity of ethanol at 95%, however, covers the majority of clinically relevant viruses. Additional acids can substantially improve the virucidal activity of ethanol at lower concentrations against, e.g. poliovirus, FCV, polyomavirus and FMDV although selected viruses such as HAV may still be too resistant. The selection of a suitable virucidal hand rub should be based on the viruses most prevalent in a unit and on the user acceptability of the product under frequent-use conditions. Copyright © 2017 The Healthcare Infection Society

**Database:** EMCARE

1. **Hand hygiene adherence in relation to influenza season during 6 consecutive years**

**Author(s):** Fulchini R.; Kohler P.; Kahlert C.R.; Albrich W.C.; Kuhn R.; Hoffmann M.; Schlegel M.

**Source:** American Journal of Infection Control; Nov 2018; vol. 46 (no. 11); p. 1311-1314

**Publication Date:** Nov 2018

**Publication Type(s):** Article

Available at [American Journal of Infection Control](https://auth.elsevier.com/ShibAuth/institutionLogin?entityID=https://idp.eng.nhs.uk/openathens&appReturnURL=https%3A%2F%2Fwww.clinicalkey.com%2Fcontent%2FplayBy%2Fdoi%2F%3Fv%3D10.1016%2Fj.ajic.2018.04.203) - from ClinicalKey

**Abstract:** Hand hygiene (HH) is the single most important measure in reducing the burden of healthcare-acquired infections. Based on 12,740 HH opportunities observed during 6 consecutive years at our tertiary care center, HH adherence among healthcare workers (HCWs) was significantly better during influenza season compared to non-influenza periods, after controlling for important covariables (odds ratio = 1.17, 95% confidence interval 1.05-1.30). This finding suggests that HH awareness is increased during influenza periods, which could have implications for HCW education. Copyright © 2018 Association for Professionals in Infection Control and Epidemiology, Inc.

**Database:** EMCARE

1. **Nursing Management of Influenza.**

**Author(s):** Cannon, Emily

**Source:** MEDSURG Nursing; Mar 2018; vol. 27 (no. 2); p. 83-85

**Publication Date:** Mar 2018

**Publication Type(s):** Academic Journal

Available at [MEDSURG Nursing](http://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=145298&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=1092-0811&volume=27&issue=2&spage=83) - from ProQuest (Health Research Premium) - NHS Version

**Abstract:** Influenza is a respiratory virus that can cause mild-to-severe illness. The most serious complications are pneumonia, myocarditis, myositis, encephalitis, sepsis, and respiratory and kidney failure. Nurses can use education effectively to prevent people from developing the flu and help reduce morbidity among those who may be exposed to the flu.

**Database:** CINAHL

1. **Do medical students receive training in correct use of personal protective equipment?**

**Author(s):** John A.; Tomas M.E.; Wilson B.M.; Donskey C.J.; Hari A.

**Source:** Medical Education Online; 2017; vol. 22 (no. 1)

**Publication Date:** 2017

**Publication Type(s):** Article

Available at [Medical education online](http://europepmc.org/search?query=(DOI:10.1080/10872981.2017.1264125)) - from Europe PubMed Central - Open Access

Available at [Medical education online](http://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=145298&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=1087-2981&volume=22&issue=1&spage=1264125) - from ProQuest (Health Research Premium) - NHS Version

Available at [Medical education online](https://www.tandfonline.com/doi/pdf/10.1080/10872981.2017.1264125?needAccess=true) - from Unpaywall

**Abstract:** Background: Healthcare personnel often use incorrect technique for donning and doffing of personal protective equipment (PPE). Objective(s): We tested the hypothesis that medical students receive insufficient training on correct methods for donning and doffing PPE. Method(s): We conducted a cross-sectional survey of medical students on clinical rotations at two teaching hospitals to determine the type of training they received in PPE technique. The students performed simulations of contaminated PPE removal with fluorescent lotion on gloves and were assessed for correct PPE technique and skin and/or clothing contamination. To obtain additional information on PPE training during medical education, residents, fellows, and attending physicians completed written questionnaires on PPE training received during medical school and on knowledge of PPE protocols recommended by the Centers for Disease Control and Prevention. Result(s): Of 27 medical students surveyed, only 11 (41%) reported receiving PPE training, and none had received training requiring demonstration of proficiency. During simulations, 25 of 27 (92.5%) students had one or more lapses in technique and 12 (44%) contaminated their skin with fluorescent lotion. For 100 residents, fellows and attending physicians representing 67 different medical schools, only 53% reported receiving training in use of PPE and only 39% selected correct donning and doffing sequence. Conclusion(s): Our findings suggest that there is a need for development of effective strategies to train medical students in correct use of PPE. Abbreviations: PPE: Personal protective equipment; MRSA: Methicillin-resistant Staphylococcus aureus; SARS: Severe acute respiratory syndrome; MERS: Middle East respiratory syndrome; WHO: World Health Organization; CDC: Centers for Disease Control and Prevention; OSCE: Objective structured clinical examination

**Database:** EMCARE

1. **Preventing Respiratory Viral Transmission in Long-Term Care: Knowledge, Attitudes, and Practices of Healthcare Personnel.**

**Author(s):** O'neil, Caroline A.; Kim, Lindsay; Prill, Mila M.; Stone, Nimalie D.; Garg, Shikha; Talbot, H. Keipp; Babcock, Hilary M.

**Source:** Infection Control & Hospital Epidemiology; Dec 2017; vol. 38 (no. 12); p. 1449-1456

**Publication Date:** Dec 2017

**Publication Type(s):** Academic Journal

Available at [Infection Control & Hospital Epidemiology](https://digitalcommons.wustl.edu/cgi/viewcontent.cgi?article=7477&context=open_access_pubs) - from Unpaywall

**Abstract:** OBJECTIVE To examine knowledge and attitudes about influenza vaccination and infection prevention practices among healthcare personnel (HCP) in a long-term-care (LTC) setting. DESIGN Knowledge, attitudes, and practices (KAP) survey. SETTING An LTC facility in St Louis, Missouri. PARTICIPANTS All HCP working at the LTC facility were eligible to participate, regardless of department or position. Of 170 full- and part-time HCP working at the facility, 73 completed the survey, a 42.9% response rate. RESULTS Most HCP agreed that respiratory viral infections were serious and that hand hygiene and face mask use were protective. However, only 46% could describe the correct transmission-based precautions for an influenza patient. Correctly answering infection prevention knowledge questions did not vary by years of experience but did vary for HCP with more direct patient contact versus less patient contact. Furthermore, 42% of respondents reported working while sick, and 56% reported that their coworkers did. In addition, 54% reported that facility policies made staying home while ill difficult. Some respondents expressed concerns about the safety (22%) and effectiveness (27%) of the influenza vaccine, and 28% of respondents stated that they would not get the influenza vaccine if it was not required. CONCLUSIONS This survey of staff in an LTC facility identified several areas for policy improvement, particularly sick leave, as well as potential targets for interventions to improve infection prevention knowledge and to address HCP concerns about influenza vaccination to improve HCP vaccination rates in LTCs. Infect Control Hosp Epidemiol 2017;38:1449–1456

**Database:** CINAHL

1. **Hand hygiene compliance in a universal gloving setting**

**Author(s):** Kuruno N.; Kasahara K.; Mikasa K.

**Source:** American Journal of Infection Control; Aug 2017; vol. 45 (no. 8); p. 830-834

**Publication Date:** Aug 2017

**Publication Type(s):** Article

Available at [American journal of infection control](https://auth.elsevier.com/ShibAuth/institutionLogin?entityID=https://idp.eng.nhs.uk/openathens&appReturnURL=https%3A%2F%2Fwww.clinicalkey.com%2Fcontent%2FplayBy%2Fdoi%2F%3Fv%3D10.1016%2Fj.ajic.2017.02.024) - from ClinicalKey

**Abstract:** Background The use of gloves for every patient contact (i.e. universal gloving) has been suggested as an infection prevention adjunct and alternative to contact precautions. However, gloves may carry organisms unless they are changed properly. In addition, hand hygiene is required before donning and after removing gloves, and there are scarce data regarding glove changing and hand hygiene in a universal gloving setting. Methods This nonrandomized observational before-after study evaluated the effect of education and feedback regarding hand hygiene. Compliance with hand hygiene and glove use was directly observed in a universal gloving setting at a 10-bed intensive care unit in a Japanese tertiary care university teaching hospital. Results A total of 6,050 hand hygiene opportunities were identified. Overall, hand hygiene compliance steadily increased from study period 1 (16.1%) to period 5 (56.8%), although there were indication-specific differences in the baseline compliance, the degree of improvement, and the reasons for noncompliance. There were decreases in the compliance with universal gloving and the incidence of methicillin-resistant Staphylococcus aureus. Conclusion It is difficult to properly perform glove use and hand hygiene in a universal gloving setting, given its complexity. Direct observation with specific feedback and education may be effective in improving compliance. Copyright © 2017 Association for Professionals in Infection Control and Epidemiology, Inc.

**Database:** EMCARE

* **Journal Club: Hand hygiene compliance in a universal gloving setting**

**Author(s):** Landers T.; Harris J.

**Source:** American Journal of Infection Control; Aug 2017; vol. 45 (no. 8); p. 820-821

**Publication Date:** Aug 2017

**Publication Type(s):** Note

Available at [American Journal of Infection Control](https://auth.elsevier.com/ShibAuth/institutionLogin?entityID=https://idp.eng.nhs.uk/openathens&appReturnURL=https%3A%2F%2Fwww.clinicalkey.com%2Fcontent%2FplayBy%2Fdoi%2F%3Fv%3D10.1016%2Fj.ajic.2017.03.030) - from ClinicalKey

**Database:** EMCARE

1. **Identification of low, high, and super gelers and barriers to hand hygiene among intensive care unit nurses**

**Author(s):** Kurtz S.L.

**Source:** American Journal of Infection Control; Aug 2017; vol. 45 (no. 8); p. 839-843

**Publication Date:** Aug 2017

**Publication Type(s):** Article

Available at [American journal of infection control](https://auth.elsevier.com/ShibAuth/institutionLogin?entityID=https://idp.eng.nhs.uk/openathens&appReturnURL=https%3A%2F%2Fwww.clinicalkey.com%2Fcontent%2FplayBy%2Fdoi%2F%3Fv%3D10.1016%2Fj.ajic.2017.04.004) - from ClinicalKey

**Abstract:** Background The purpose of this article was to provide information identified during hand hygiene (HH) surveillance periods at 5 intensive care units (ICUs) (4 hospitals) in Texas. Methods Using room entry and room exit, overt observation periods were 8 consecutive hours for 3-5 days on 64 ICU nurses. Results A total of 3,620 HH opportunities were recorded during 18 days of observation (144 hours). The average hand hygiene compliance (HHC) rate was 64%, with 19% of the nurses participating in HH in the 60%-69% range. Male nurses had a rate of 67%, whereas female nurses had a rate of 62%. Having a HHC rate of <29%, 6% of the nurses were identified as low gelers, whereas 14% were identified as high gelers (HHC rate 80%-89%), and 13% were classified as super gelers (HHC rate 90%-100%). Four barriers to HHC were identified: carrying something in their hands, talking on mobile phones, donning gloves or personal protective equipment, and pushing or pulling the workstation on wheels; all were statistically significant. Accounting for 18% noncompliance, barriers identified present teaching opportunities to increase compliance. Conclusions Average HHC rates recorded during 10- to 20-minute periods with random sampling may not show the complete picture of HHC. Barriers to HHC were identified that can be used as teaching interventions. Copyright © 2017 Association for Professionals in Infection Control and Epidemiology, Inc.

**Database:** EMCARE

1. **A simplified prevention bundle with dual hand hygiene audit reduces early-onset ventilator-associated pneumonia in cardiovascular surgery units: An interrupted time-series analysis**

**Author(s):** Su K.-C.; Lin F.-C.; Wu C.-H.; Feng J.-Y.; Yang K.-Y.; Chang S.-C.; Kou Y.R.; Huang S.-F.; Shiung T.-F.; Chung K.-C.; Tung Y.-H.

**Source:** PLoS ONE; Aug 2017; vol. 12 (no. 8)

**Publication Date:** Aug 2017

**Publication Type(s):** Article

Available at [PloS one](http://europepmc.org/search?query=(DOI:10.1371/journal.pone.0182252)) - from Europe PubMed Central - Open Access

Available at [PloS one](https://dx.plos.org/10.1371/journal.pone.0182252) - from Public Library of Science (PLoS)

Available at [PloS one](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=28767690) - from EBSCO (MEDLINE Complete)

Available at [PloS one](http://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=145298&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=1932-6203&volume=12&issue=8&spage=e0182252) - from ProQuest (Health Research Premium) - NHS Version

Available at [PloS one](https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0182252&type=printable) - from Unpaywall

**Abstract:** Background: To investigate the effect of a simplified prevention bundle with alcohol-based, dual hand hygiene (HH) audit on the incidence of early-onset ventilation-associated pneumonia (VAP). Method(s): This 3-year, quasi-experimental study with interrupted time-series analysis was conducted in two cardiovascular surgery intensive care units in a medical center. Unaware external HH audit (eHH) performed by non-unit-based observers was a routine task before and after bundle implementation. Based on the realistic ICU settings, we implemented a 3-component bundle, which included: a compulsory education program, a knowing internal HH audit (iHH) performed by unit-based observers, and a standardized oral care (OC) protocol with 0.1% chlorhexidine gluconate. The study periods comprised 4 phases: 12-month pre-implementation phase 1 (eHH+/education-/iHH-/OC-), 3-month run-in phase 2 (eHH+/education+/iHH +/OC+), 15-month implementation phase 3 (eHH+/education+/iHH+/OC+), and 6-month post-implementation phase 4 (eHH+/education-/iHH+/OC-). Result(s): A total of 2553 ventilator-days were observed. VAP incidences (events/1000 ventilator days) in phase 1-4 were 39.1, 40.5, 15.9, and 20.4, respectively. VAP was significantly reduced by 59% in phase 3 (vs. phase 1, incidence rate ratio [IRR] 0.41, P = 0.002), but rebounded in phase 4. Moreover, VAP incidence was inversely correlated to compliance of OC (r2 = 0.531, P = 0.001) and eHH (r2 = 0.878, P < 0.001), but not applied for iHH, despite iHH compliance was higher than eHH compliance during phase 2 to 4. Compared to eHH, iHH provided more efficient and faster improvements for standard HH practice. The minimal compliances required for significant VAP reduction were 85% and 75% for OC and eHH (both P < 0.05, IRR 0.28 and 0.42, respectively). Conclusion(s): This simplified prevention bundle effectively reduces early-onset VAP incidence. An unaware HH compliance correlates with VAP incidence. A knowing HH audit provides better improvement in HH practice. Accordingly, we suggest dual HH audit and consistent bundle performance does matter in quality-of-care VAP prevention. Copyright © 2017 Su et al. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

**Database:** EMCARE

1. **Virucidal Activity of World Health Organization-Recommended Formulations Against Enveloped Viruses, Including Zika, Ebola, and Emerging Coronaviruses.**

**Author(s):** Siddharta, Anindya; Pfaender, Stephanie; Vielle, Nathalie Jane; Dijkman, Ronald; Friesland, Martina; Becker, Britta; Jaewon Yang; Engelmann, Michael; Todt, Daniel; Windisch, Marc P.; Brill, Florian H.; Steinmann, Joerg; Steinmann, Jochen; Becker, Stephan; Alves, Marco P.; Pietschmann, Thomas; Eickmann, Markus; Thiel, Volker; Steinmann, Eike; Yang, Jaewon

**Source:** Journal of Infectious Diseases; Mar 2017; vol. 215 (no. 6); p. 902-906

**Publication Date:** Mar 2017

**Publication Type(s):** Academic Journal

**PubMedID:** NLM28453839

Available at [The Journal of infectious diseases](https://academic.oup.com/jid/article-pdf/215/6/902/17412882/jix046.pdf) - from Unpaywall

**Abstract:** The World Health Organization (WHO) published 2 alcohol-based formulations to be used in healthcare settings and for outbreak-associated infections, but inactivation efficacies of these products have not been determined against (re-)emerging viruses. In this study, we evaluated the virucidal activity of these WHO products in a comparative analysis. Zika virus (ZIKV), Ebola virus (EBOV), severe acute respiratory syndrome coronavirus (SARS-CoV), and Middle East respiratory syndrome coronavirus (MERS-CoV) as (re-)emerging viral pathogens and other enveloped viruses could be efficiently inactivated by both WHO formulations, implicating their use in healthcare systems and viral outbreak situations.

**Database:** CINAHL

1. **An adenovirus 4 outbreak amongst staff in a pediatric ward manifesting as keratoconjunctivitis—a possible failure of contact and aerosol infection control.**

**Author(s):** Hoyle, Elizabeth; Erez, Joanne C.; Kirk-Granger, Helen R.; Collins, Elizabeth; Tang, Julian W.

**Source:** American Journal of Infection Control; May 2016; vol. 44 (no. 5); p. 602-604

**Publication Date:** May 2016

**Publication Type(s):** Academic Journal

Available at [American journal of infection control](https://auth.elsevier.com/ShibAuth/institutionLogin?entityID=https://idp.eng.nhs.uk/openathens&appReturnURL=https%3A%2F%2Fwww.clinicalkey.com%2Fcontent%2FplayBy%2Fdoi%2F%3Fv%3D10.1016%2Fj.ajic.2015.11.032) - from ClinicalKey

**Abstract:** An adenovirus serotype 4 outbreak was identified on a pediatric ward involving 4 members of the health care staff. Two inpatients on the ward at the time (1 immunocompromised) were shedding this virus from their respiratory tracts and could have acted as independent index cases for the staff infections. Significantly, upon investigation, it was found that staff members were unaware that adenoviruses are not completely eliminated by alcohol gel handrubs and that soap and water handwashing is also required.

**Database:** CINAHL

1. **Effectiveness of non-pharmaceutical measures in preventing pediatric influenza: A case-control study**

**Author(s):** Torner N.; Godoy P.; Castilla J.; Dominguez A.; Soldevila N.; Garcia J.J.; Launes C.

**Source:** BMC Public Health; Dec 2015; vol. 15 (no. 1)

**Publication Date:** Dec 2015

**Publication Type(s):** Article

Available at [BMC public health](http://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-015-1890-3) - from BioMed Central

Available at [BMC public health](http://europepmc.org/search?query=(DOI:10.1186/s12889-015-1890-3)) - from Europe PubMed Central - Open Access

Available at [BMC public health](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=26055522) - from EBSCO (MEDLINE Complete)

Available at [BMC public health](http://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=145298&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=1471-2458&volume=15&issue=1&spage=543) - from ProQuest (Health Research Premium) - NHS Version

Available at [BMC public health](https://bmcpublichealth.biomedcentral.com/track/pdf/10.1186/s12889-015-1890-3) - from Unpaywall

**Abstract:** Background: Hygiene behavior plays a relevant role in infectious disease transmission. The aim of this study was to evaluate non-pharmaceutical interventions (NPI) in preventing pediatric influenza infections. Method(s): Laboratory confirmed influenza cases occurred during 2009-10 and 2010-11 seasons matched by age and date of consultation. NPI (frequency of hand washing, alcohol-based hand sanitizer use and hand washing after touching contaminated surfaces) during seven days prior to onset of symptoms were obtained from parents of cases and controls. Result(s): Cases presented higher prevalence of underlying conditions such as pneumonia [OR=3.23; 95 % CI: 1.38 - 7.58 p=0.007], asthma [OR=2.45; 95 % CI: 1.17 - 5.14 p=0.02] and having more than 1 risk factor [OR=1.67; 95 % CI: 0.99 - 2.82 p=0.05]. Hand washing more than 5 times per day [aOR=0.62; 95 % CI: 0.39 - 0.99 p=0.04] was the only statistically significant protective factor. When considering two age groups (pre-school age 0-4 yrs and school age 5-17) yrs, only the school age group showed a negative association for influenza infection for both washing more than 5 times per day [aOR=0.47; 95 % CI: 0.22 - 0.99 p=0.04] and hand washing after touching contaminated surfaces [aOR=0.19; 95 % CI: 0.04 - 0.86 p=0.03]. Conclusion(s): Frequent hand washing should be recommended to prevent influenza infection in the community setting and in special in the school age group. Copyright © 2015 Torner et al.

**Database:** EMCARE

1. **Reducing viral contamination from finger pads: handwashing is more effective than alcohol-based hand disinfectants.**

**Author(s):** Tuladhar, E; Hazeleger, W C; Koopmans, M; Zwietering, M H; Duizer, E; Beumer, R R

**Source:** Journal of Hospital Infection; Jul 2015; vol. 90 (no. 3); p. 226-234

**Publication Date:** Jul 2015

**Publication Type(s):** Academic Journal

**PubMedID:** NLM25936671

Available at [The Journal of hospital infection](https://auth.elsevier.com/ShibAuth/institutionLogin?entityID=https://idp.eng.nhs.uk/openathens&appReturnURL=https%3A%2F%2Fwww.clinicalkey.com%2Fcontent%2FplayBy%2Fdoi%2F%3Fv%3D10.1016%2Fj.jhin.2015.02.019) - from ClinicalKey

**Abstract:** Background: Hand hygiene is important for interrupting transmission of viruses through hands. Effectiveness of alcohol-based hand disinfectant has been shown for bacteria but their effectiveness in reducing transmission of viruses is ambiguous. Aim: To test efficacy of alcohol hand disinfectant against human enteric and respiratory viruses and to compare efficacy of an alcohol-based hand disinfectant and handwashing with soap and water against norovirus. Methods: Efficacies of a propanol and an ethanol-based hand disinfectant against human enteric and respiratory viruses were tested in carrier tests. Efficacy of an alcohol-based hand disinfectant and handwashing with soap and water against noroviruses GI.4, GII.4, and MNV1 were tested using finger pad tests. Findings: The alcohol-based hand disinfectant reduced the infectivity of rotavirus and influenza A virus completely within 30s whereas poliovirus Sabin 1, adenovirus type 5, parechovirus 1, and MNV1 infectivity were reduced 3.0 ± 0.4 log10) was significantly higher than treating hands with alcohol (2.8 ± 1.5 log10). Washing with soap and water for 30s removed genomic copies of MNV1 (>5 log10), noroviruses GI.4 (>6 log10), and GII.4 (4 log10) completely from all finger pads. Treating hands with propanol-based hand disinfectant showed little or no reduction to complete reduction with mean genomic copy reduction of noroviruses GI.4, GII.4, and MNV1 being >2.6, >3.3, and >1.2 log10 polymerase chain reaction units respectively .Conclusions: Washing hands with soap and water is better than using alcohol-based hand disinfectants in removing noroviruses from hands.

**Database:** CINAHL

1. **What RTs Need to Know About MERS.**

**Author(s):** Thompson, Greg

**Source:** RT: The Journal for Respiratory Care Practitioners; Jan 2015; vol. 28 (no. 1); p. 18-22

**Publication Date:** Jan 2015

**Publication Type(s):** Academic Journal

**Abstract:** The article discusses several topics related to the Middle East respiratory syndrome (MERS) which respiratory therapists (RTs) should know. It mentions that RTs should follow the U.S. Centers for Disease Control and Prevention guidance regarding MERS. It also reports that RTs should take precautionary measures such as wearing gloves and gown and keeping doors of the patient's room closed to prevent spread of the infection.

**Database:** CINAHL

1. **Hand hygiene and face touching in family medicine offices: A Cincinnati Area Research and Improvement Group (CARInG) network study**

**Author(s):** Elder N.C.; Pallerla H.; Sawyer W.; Khaja S.; Blacker M.

**Source:** Journal of the American Board of Family Medicine; 2014; vol. 27 (no. 3); p. 339-346

**Publication Date:** 2014

**Publication Type(s):** Article

Available at [Journal of the American Board of Family Medicine: JABFM](http://www.jabfm.org/cgi/doi/10.3122/jabfm.2014.03.130242) - from HighWire - Free Full Text

Available at [Journal of the American Board of Family Medicine: JABFM](https://www.jabfm.org/content/27/3/339.full.pdf) - from Unpaywall

**Abstract:** Background: Family medicine offices may play an important role in the transmission of common illnesses such as upper respiratory tract infections (URTIs). There has, however, been little study of whether physicians teach patients about URTI transmission and what their own actions are to prevent infection. The purpose of this study was to assess the quality of hand hygiene and the frequency with which family physicians and staff touch their eyes, nose, and mouth (the T-zone) as well as physician and staff self-reported behaviors and recommendations given to patients regarding URTI prevention. Method(s): We observed family physicians and staff at 7 offices of the Cincinnati Area Research and Improvement Group (CARInG) practice-based research network for the quality of hand hygiene and number of T-zone touches. After observations, participants completed surveys about personal habits and recommendations given to patients to prevent URTIs. Result(s): A total of 31 clinicians and 48 staff participated. They touched their T-zones a mean of 19 times in 2 hours (range, 0-105 times); clinicians did so significantly less often than staff (P < .001). We observed 123 episodes of hand washing and 288 uses of alcohol-based cleanser. Only 11 hand washings (9%) met Centers for Disease Control and Prevention criteria for effective hand washing. Alcohol cleansers were used more appropriately, with 243 (84%) meeting ideal use. Participants who were observed using better hand hygiene and who touched their T-zone less report the same personal habits and recommendations to patients as those with poorer URTI prevention hygiene. Conclusion(s): Clinicians and staff in family medicine offices frequently touch their T-zone and demonstrate mixed quality of hand cleansing. Participants' self-rated URTI prevention behaviors were not associated with how well they actually perform hand hygiene and how often they touch their T-zone. The relationship between self-reported and observed behaviors and URTIs in family medicine office settings needs further study.

**Database:** EMCARE

1. **The Practice of Emergency Medicine Residents Regarding the Use of Personal Protective Equipment for Protection against Infectious Diseases.**

**Author(s):** Cimilli Öztürk, Tuba; Tali, Adem; Topal, Turgut; Güneysel, Özlem

**Source:** Journal of Academic Emergency Medicine / Akademik Acil Tip Olgu Sunumlari Dergisi; Dec 2014; vol. 13 (no. 4); p. 176-180

**Publication Date:** Dec 2014

**Publication Type(s):** Academic Journal

Available at [Journal of Academic Emergency Medicine](http://pdfs.semanticscholar.org/ef4e/9427aa35ab843a07515d44ac2263d9edeae6.pdf) - from Unpaywall

**Abstract:** Objective: The aim of this study is to demonstrate the attitudes and practices regarding the use of personal protective equipment among emergency medicine residents. Material and Methods: In this cross-sectional survey study, emergency medicine residents who had attended the 6th Emergency Medicine Resident's Symposium were included. In the first part of the survey, demographic characteristics, duration of residency and medical career and the institutions were investigated. In the second part, the attitudes of using personal protective equipment and also the physical status of the emergency rooms were assessed. Results: Sixty-seven emergency medicine residents were surveyed. 83.6% of them was working at education and research hospitals and 16.4% was working at university hospitals. The question about the existence of personal protective equipment was affirmed by only 28.4% of the participants. 26.9% of the participants took lessons about protection from infectious diseases during their residency training. The statistical comparisons between the presence of isolation rooms and the type of the institution and being trained about personal protection against infectious diseases were not significant (p>0.05). Conclusion: Emergency medicine residents, who make the first medical intervention with most patients, do not use personal protective methods effectively. There are also some deficiencies in medical institutions with regard to preparing the physical conditions of the emergency rooms and resident education programs.

**Database:** CINAHL

1. **Infection control and MERS-CoV in health-care workers**

**Author(s):** Zumla A.; Hui D.S.

**Source:** The Lancet; 2014; vol. 383 (no. 9932); p. 1869-1871

**Publication Date:** 2014

**Publication Type(s):** Note

Available at [The Lancet](https://auth.elsevier.com/ShibAuth/institutionLogin?entityID=https://idp.eng.nhs.uk/openathens&appReturnURL=https%3A%2F%2Fwww.clinicalkey.com%2Fcontent%2FplayBy%2Fdoi%2F%3Fv%3D10.1016%2FS0140-6736(14)60852-7) - from ClinicalKey

Available at [The Lancet](http://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=145298&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=0140-6736&volume=383&issue=9932&spage=1869) - from ProQuest (Health Research Premium) - NHS Version

Available at [The Lancet](http://www.thelancet.com/article/S0140673614608527/pdf) - from Unpaywall

**Database:** EMCARE

1. **The Right Balance Between Hand Sanitizers and Handwashing**

**Author(s):** Carter, David

**Source:** American Journal of Nursing; Jul 2013; vol. 113 (no. 7); p. 13

**Publication Date:** Jul 2013

**Publication Type(s):** Article

Available at [The American journal of nursing](http://content.wkhealth.com/linkback/openurl?sid=WKPTLP:landingpage&an=00000446-201307000-00007) - from Lippincott Williams and Wilkins

Available at [The American journal of nursing](http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=fulltext&D=ovft&CSC=Y&NEWS=N&SEARCH=0002-936X.is+and+%22113%22.vo+and+%227%22.ip+and+%2213%22.pg+or+%2210.1097/01.NAJ.0000431898.58742.e8%22.di) - from Ovid (East Midlands Perpetual Access) [NHS] Full text access 2002(Vol 102) - 2017 ( Vol 117)

**Abstract:** The use of alcohol-based hand sanitizers (ABHSs) in health care settings has become widespread since 2002, when the CDC recommended ABHSs for patient contact except when hands are physically soiled. But ABHSs aren't effective against certain categories of pathogens, including noroviruses and Clostridium difficile. The question has therefore been raised whether overreliance on ABHSs has played a role in precipitating disease outbreaks or in creating more virulent strains of these pathogens. The CDC therefore modified its guidelines for hand hygiene, recommending that during outbreaks of norovirus and C. difficile health care workers use soap and water when in contact with patients (in addition to isolation, environmental disinfection, and gloving when treating them). Here, Carter examines organism mutations and widespread antibiotic use that may necessitate both.

**Database:** BNI

1. **Are health care workers protected? An observational study of selection and removal of personal protective equipment in Canadian acute care hospitals**

**Author(s):** Mitchell, Robyn; Roth, Virginia; Gravel, Denise; Astrakianakis, George; Bryce, Elizabeth; Forgie, Sarah; Johnston, Lynn; Taylor, Geoffrey; Vearncombe, Mary

**Source:** American Journal of Infection Control; Mar 2013; vol. 41 (no. 3); p. 240-244

**Publication Date:** Mar 2013

**Publication Type(s):** Academic Journal

Available at [American journal of infection control](https://auth.elsevier.com/ShibAuth/institutionLogin?entityID=https://idp.eng.nhs.uk/openathens&appReturnURL=https%3A%2F%2Fwww.clinicalkey.com%2Fcontent%2FplayBy%2Fdoi%2F%3Fv%3D10.1016%2Fj.ajic.2012.04.332) - from ClinicalKey

**Abstract:** Background: The proper use of personal protective equipment (PPE) by health care workers (HCWs) is vital in preventing the spread of infection and has implications for HCW safety. Methods: An observational study was performed in 11 hospitals participating in the Canadian Nosocomial Infection Surveillance Program between January 7 and March 30, 2011. Using a standardized data collection tool, observers recorded HCWs selecting and removing PPE and performing hand hygiene on entry into the rooms of febrile respiratory illness patients. Results: The majority of HCWs put on gloves (88%, n = 390), gown (83%, n = 368), and mask (88%, n = 386). Only 37% (n = 163) were observed to have put on eye protection. Working in a pediatric unit was significantly associated with not wearing eye protection (7%), gown (70%), gloves (77%), or mask (79%). Half of the observed HCWs (54%, n = 206) removed their PPE in the correct sequence. Twenty-six percent performed hand hygiene after removing their gloves, 46% after removing their gown, and 57% after removing their mask and/or eye protection. Conclusion: Overall adherence with appropriate PPE use in health care settings involving febrile respiratory illness patients was modest, particularly on pediatric units. Interventions to improve PPE use should be targeted toward the use of recommended precautions (eg, eye protection), HCWs working in pediatric units, the correct sequence of PPE removal, and performing hand hygiene.

**Database:** CINAHL



**Strategies for reducing the risk of respiratory syncytial virus infection in infants and young children: a canadian nurses' perspective.**

**Author(s):** Bracht, Marianne; Basevitz, Debbie; Cranis, Marilyn; Paulley, Rose; Paes, Bosco

**Source:** Neonatal Network; Nov 2012; vol. 31 (no. 6); p. 357-368

**Publication Date:** Nov 2012

**Publication Type(s):** Academic Journal

**PubMedID:** NLM23134643

Available at [Neonatal network: NN](http://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=145298&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=0730-0832&volume=31&issue=6&spage=357) - from ProQuest (Health Research Premium) - NHS Version

**Abstract:** Respiratory syncytial virus (RSV) infections are prevalent globally and can cause substantial morbidity in infants and young children. The virus is easily transmitted by direct hand-to-hand contact and can lead to serious respiratory disease and hospitalization, particularly in premature infants and children with certain medical conditions. Educating families with young children, especially those in remote rural regions, regarding the potential adverse health outcomes of RSV infection and measures to reduce the risk of transmitting or acquiring RSV has been a key focus of the health care system in Canada. Geographic, cultural, and socioeconomic factors present formidable challenges to the execution of this endeavor. Therefore, it is critical to develop and systematically implement effective educational programs for both families and health care providers. In Canada, nurses play a critical role in education and counseling. In this review, we share our perspectives and suggest empirical practices that may be applicable worldwide.

**Database:** CINAHL

1. **Practical resources for nurses and other health care providers involved in the care of children at risk for respiratory syncytial virus infection.**

**Author(s):** Bracht, Marianne; Basevitz, Debbie; Cranis, Marilyn; Paulley, Rose; Paes, Bosco

**Source:** Neonatal Network; Nov 2012; vol. 31 (no. 6); p. 387-400

**Publication Date:** Nov 2012

**Publication Type(s):** Academic Journal

**PubMedID:** NLM23134645

Available at [Neonatal Network](http://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=145298&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=0730-0832&volume=31&issue=6&spage=387) - from ProQuest (Health Research Premium) - NHS Version

**Abstract:** Health care staff and families with young children are often unware of the ease of respiratory syncytial virus (RSV) spread and potential clinical consequences of serious respiratory illness. Successful Canadian RSV prophylaxis (RSVP) programs (a) provide practical educational resources on RSV and respiratory disease that consider language and cultural barriers; (b) develop policies to identify all children eligible for RSVP with palivizumab; (c) emphasize compliance with RSVP, particularly during patient transfer between hospitals, community clinics, and remote outpost centers; and (d) establish collaborative networks to help ensure optimum RSVP compliance for all high-risk children. Herein, we share practical resources and key educational references for counseling of caregivers with infants or young children at risk for RSV infection, and health care providers participating in RSVP program development.

**Database:** CINAHL

1. **Effectiveness of hand hygiene and provision of information in preventing influenza cases requiring hospitalization**

**Author(s):** Godoy P.; Castilla J.; Delgado-Rodriguez M.; Martin V.; Soldevila N.; Alonso J.; Baricot M.; Canton R.; Gonzalez-Candelas F.; Quintana J.M.; Dominguez A.; Astray J.; Castro A.; Mayoral J.M.; Pumarola T.; Tamames S.; Azor E.; Carrillo J.; Moyano R.; Navarro J.A.; Vazquez M.; Zafra F.; Bueno M.A.; Gomez M.L.; Mariscal M.; Martinez B.; Quesada J.P.; Sillero M.; Carnero M.; Fernandez-Crehuet J.; del Diego Salas J.; Fuentes V.; Gallardo V.; Perez E.; Lopez R.; Maldonado J.R.; Morillo A.; Navarro J.M.; Perez M.; Ona S.; Perez M.J.; Ubago M.C.; Zarzuela M.; Blanquer J.; Morales M.; Carriedo D.; Diez F.; Fernandez I.; Fernandez S.; Sanz M.P.; Castrodeza J.J.; Perez A.; Ortiz de Lejarazu R.; Ortiz J.; Pueyo A.; Viejo J.L.; Redondo P.; Molina A.; Agusti A.; Torres A.; Trilla A.; Vilella A.; Barbe F.; Blanch L.; Navarro G.; Bonfill X.; Lopez-Contreras J.; Pomar V.; Puig M.T.; Borras E.; Martinez A.; Torner N.; Bravo C.; Moraga F.; Calafell F.; Cayla J.; Tortajada C.; Garcia I.; Ruiz J.; Garcia J.J.; Garin O.; Gea J.; Horcajada J.P.; Hayes N.; Rosell A.; Alvarez C.; Enriquez M.; Pozo F.; Baquero F.; Galan J.C.; Robustillo A.; Valdeon M.; Cordoba E.; Dominguez F.; Garcia J.; Genova R.; Gil E.; Jimenez S.; Lopaz M.A.; Lopez J.; Martin F.; Martinez M.L.; Ordobas M.; Rodriguez E.; Sanchez S.; Valdes C.; Pano J.R.; Romero M.; Martinez L.; Ruiz M.; Fanlo P.; Gil F.; Martinez-Artola V.; Ursua M.E.; Sota M.; Virto M.T.; Gamboa J.; Perez-Afonso F.; Aguirre U.; Caspelastegui A.; Espana P.P.; Garcia S.; Antonana J.M.; Astigarraga I.; Pijoan J.I.; Pocheville I.; Santiago M.; Villate J.I.; Aristegui J.; Escobar A.; Garrote M.I.; Bilbao A.; Garaizar C.; Cilla G.; Korta J.; Perez Trallero E.; Sarasqueta C.; Esteban F.; Salado C.; Lobo J.L.; Alustizac J.

**Source:** Preventive Medicine; Jun 2012; vol. 54 (no. 6); p. 434-439

**Publication Date:** Jun 2012

**Publication Type(s):** Article

Available at [Preventive medicine](https://auth.elsevier.com/ShibAuth/institutionLogin?entityID=https://idp.eng.nhs.uk/openathens&appReturnURL=https%3A%2F%2Fwww.clinicalkey.com%2Fcontent%2FplayBy%2Fdoi%2F%3Fv%3D10.1016%2Fj.ypmed.2012.04.009) - from ClinicalKey

**Abstract:** Background: The objective of the study was to investigate the effectiveness of non-pharmacological interventions in preventing cases of influenza requiring hospitalization. Method(s): We performed a multicenter case-control study in 36 hospitals, in 2010 in Spain. Hospitalized influenza cases confirmed by reverse-transcription polymerase chain reaction and three matched controls (two hospital and one community control) per case were selected. The use of non-pharmacological measures seven days before the onset of symptoms (frequency of hand washing, use of alcohol-based hand sanitizers and handwashing after touching contaminated surfaces) was collected. Result(s): We studied 813 cases hospitalized for influenza and 2274 controls. The frequency of hand washing 5-10 times (adjusted odds ratio [aOR] = 0.65) and > 10 times (aOR = 0.59) and handwashing after contact with contaminated surfaces (aOR = 0.65) were protective factors and were dose-responsive (p < 0.001). Alcohol-based hand sanitizers were associated with marginal benefits (aOR = 0.82). Conclusion(s): Frequent handwashing should be recommended to prevent influenza cases requiring hospitalization. © 2012 Elsevier Inc.

**Database:** EMCARE

1. **Development of an intervention to reduce transmission of respiratory infections and pandemic flu: Measuring and predicting hand-washing intentions**

**Author(s):** Miller S.; Yardley L.; Little P.

**Source:** Psychology, Health and Medicine; Jan 2012; vol. 17 (no. 1); p. 59-81

**Publication Date:** Jan 2012

**Publication Type(s):** Article

Available at [Psychology, Health & Medicine](http://openurl.ebscohost.com/linksvc/linking.aspx?authtype=athens&genre=article&issn=1354-8506&volume=17&issue=1&spage=59&date=2012) - from EBSCO (Psychology and Behavioral Sciences Collection)

Available at [Psychology, Health & Medicine](https://eprints.soton.ac.uk/350014/1/__soton.ac.uk_ude_PersonalFiles_Users_vjh1y07_mydocuments_Lucy_papers_lucy%2520papers_development%2520of%2520an%2520intervention%2520to%2520reduce%2520transmission.pdf) - from Unpaywall

**Abstract:** This was an exploratory pilot study forming part of a programme of work to develop and trial an effective web-based intervention to reduce the risk of transmission of respiratory infections by promoting hand washing and other preventive behaviours in pandemic and non-pandemic contexts. The main purpose of this study was to confirm that the behavioural determinants we had identified from theory were related as predicted to intentions and to establish the validity of our measures of behavioural intentions. Participants (N=84) completed a self-report web-delivered questionnaire measuring intentions to engage in hand washing and the hypothesised behavioural determinants of intentions, based on the theory of planned behaviour and protection motivation theory. In a factorial 22 design, half of the participants were first randomised to receive messages about potential negative consequences of pandemic flu (the high-threat condition) and half were assigned to receive coping messages describing the rationale and effectiveness of hand washing for reducing the risk of infection. A substantial proportion of variance in intentions was explained by measures of attitudes (instrumental and affective), social norms (descriptive and injunctive), perceived behavioural control (especially, access to hand gel) and perceived risk (in particular, the likelihood of catching pandemic flu). Our measures of intentions were sensitive to between-group differences, and although our design did not permit causal inference (particularly in view of selective dropout among those required to read most web pages), the pattern of differences was in the expected direction, that is, hand-washing intentions tended to be stronger in those receiving the high-threat message and coping messages. This study provided encouraging confirmation that our intervention development was proceeding correctly. Measures of intentions proved sensitive to group differences, and the behavioural determinants included in the study explained a substantial proportion of the variance in intentions. The study also provided useful indications that our high-threat message might increase hand-washing intentions, that providing hand gel might be beneficial and that it would be necessary to actively manage the risk of selective dropout in the intervention group. © 2012 Copyright Taylor and Francis Group, LLC.

**Database:** EMCARE

1. **Taiwan's traffic control bundle and the elimination of nosocomial severe acute respiratory syndrome among healthcare workers.**

**Author(s):** Yen MY; Lin YE; Lee CH; Ho MS; Huang FY; Chang SC; Liu YC

**Source:** Journal of Hospital Infection; Apr 2011; vol. 77 (no. 4); p. 332-337

**Publication Date:** Apr 2011

**Publication Type(s):** Academic Journal

**PubMedID:** NLM21316802

Available at [Journal of Hospital Infection](https://auth.elsevier.com/ShibAuth/institutionLogin?entityID=https://idp.eng.nhs.uk/openathens&appReturnURL=https%3A%2F%2Fwww.clinicalkey.com%2Fcontent%2FplayBy%2Fdoi%2F%3Fv%3D10.1016%2Fj.jhin.2010.12.002) - from ClinicalKey

Available at [Journal of Hospital Infection](http://www.journalofhospitalinfection.com/article/S019567011000530X/pdf) - from Unpaywall

**Abstract:** The traffic control bundle consists of procedures designed to help prevent epidemic nosocomial infection. We retrospectively studied the serial infection control measures to determine factors most effective in preventing nosocomial infections of healthcare workers (HCWs) during the 2003 Taiwanese severe acute respiratory syndrome (SARS) epidemic. Fever screening stations, triage of fever patients, separating SARS patients from other patients, separation of entrances and passageways between patients and HCWs, and increasing hand-washing facilities all demonstrated a protective effect for HCWs (univariate analysis; P<0.05). By multiple logistic regression: (i) checkpoint alcohol dispensers for glove-on hand rubbing between zones of risk, and (ii) fever screening at the fever screen station outside the emergency department, were the significant methods effectively minimising nosocomial SARS infection of HCWs (P<0.05). The traffic control bundle should be implemented in future epidemics as a tool to achieve strict infection control measures.

**Database:** CINAHL

1. **Coronavirus survival on healthcare personal protective equipment.**

**Author(s):** Casanova L; Rutala WA; Weber DJ; Sobsey MD

**Source:** Infection Control & Hospital Epidemiology; May 2010; vol. 31 (no. 5); p. 560-561

**Publication Date:** May 2010

**Publication Type(s):** Academic Journal

**PubMedID:** NLM20350196

Available at [Infection Control & Hospital Epidemiology](https://www.cambridge.org/core/services/aop-cambridge-core/content/view/C666673A5460A03D3BB996CDE5019C1B/S0195941700029283a.pdf/div-class-title-coronavirus-survival-on-healthcare-personal-protective-equipment-div.pdf) - from Unpaywall

**Database:** CINAHL

1. **Simple physical interventions such as handwashing and wearing masks can reduce spread of epidemic respiratory viruses.**

**Author(s):** Manning ML

**Source:** Evidence Based Nursing; Jan 2010; vol. 13 (no. 1); p. 13-14

**Publication Date:** Jan 2010

**Publication Type(s):** Academic Journal

**PubMedID:** NLM20179057

Available at [Evidence-Based Nursing](https://go.openathens.net/redirector/nhs?url=https%3A%2F%2Febn.bmj.com%2Flookup%2Fdoi%2F10.1136%2Febn1012) - from BMJ Journals - NHS

Available at [Evidence-Based Nursing](http://gateway.proquest.com/openurl?ctx_ver=Z39.88-2004&res_id=xri:pqm&req_dat=xri:pqil:pq_clntid=145298&rft_val_fmt=ori/fmt:kev:mtx:journal&genre=article&issn=1367-6539&volume=13&issue=1&spage=13) - from ProQuest (Health Research Premium) - NHS Version

**Database:** CINAHL

1. **Strategies for preventing respiratory syncytial virus.**

**Author(s):** Forbes M

**Source:** American Journal of Health-System Pharmacy; Dec 2008; vol. 65 (no. 23)

**Publication Date:** Dec 2008

**Publication Type(s):** Academic Journal

**PubMedID:** NLM19020197

Available at [American Journal of Health-System Pharmacy](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=19020197) - from EBSCO (MEDLINE Complete)

**Abstract:** Purpose. Prevention of respiratory syncytial virus (RSV) infection -- crucial for decreasing the burden associated with this disease -- is discussed. Summary. Predictable outbreaks of RSV occur annually throughout the U.S. During these outbreaks, RSV infection spreads readily among children through close contact with infected individuals or contact with contaminated surfaces or objects. RSV is the leading cause of infant hospitalization and is associated with life-changing and life-threatening complications. Prevention is important for reducing the associated morbidity and mortality. The American Academy of Pediatrics (AAP) has outlined ways to prevent RSV transmission. According to the AAP, frequent hand washing is the most important strategy for reducing the burden of RSV disease. Other methods for controlling nosocomial spread of RSV include the use of gloves, frequent glove changes, and isolating or cohorting patients. General prevention measures that can be undertaken by family members include smoking cessation, breastfeeding, and avoiding situations, whenever possible, where exposure to RSV cannot be controlled. Passive immunoprophylaxis with palivizumab, the only agent approved by the FDA, reduces hospitalization in high-risk children. Palivizumab is currently the only agent approved by the FDA for the prevention of RSV infections in high-risk children. Not every child is equally at risk for serious RSV disease, and immunoprophylaxis is indicated only for certain high-risk children. The AAP has issued specific guidelines for RSV immunoprophylaxis with palivizumab. Other therapies are emerging for the prevention of RSV, including a new, enhanced-potency, humanized RSV monoclonal antibody and several different types of vaccines.Conclusion. RSV causes an annual, predictable epidemic. Treatment remains exclusively supportive. Prevention remains the cornerstone of disease management. The AAP has issued guidelines to protect those at high risk.

**Database:** CINAHL

1. **Using an integrated infection control strategy during outbreak control to minimize nosocomial infection of severe acute respiratory syndrome among healthcare workers.**

**Author(s):** Yen M; Lin YE; Su I; Huang F; Ho M; Chang S; Tan K; Chen K; Chang H; Liu Y; Loh C; Wang L; Lee C

**Source:** Journal of Hospital Infection; Feb 2006; vol. 62 (no. 2); p. 195-199

**Publication Date:** Feb 2006

**Publication Type(s):** Academic Journal

**PubMedID:** NLM16153744

Available at [Journal of Hospital Infection](http://www.journalofhospitalinfection.com/article/S0195670105001258/pdf) - from Unpaywall

**Abstract:** Healthcare workers (HCWs) are at risk of acquiring severe acute respiratory syndrome (SARS) while caring for SARS patients. Personal protective equipment and negative pressure isolation rooms (NPIRs) have not been completely successful in protecting HCWs. We introduced an innovative, integrated infection control strategy involving triaging patients using barriers, zones of risk, and extensive installation of alcohol dispensers for glove-on hand rubbing. This integrated infection control approach was implemented at a SARS designated hospital ('study hospital') where NPIRs were not available. The number of HCWs who contracted SARS in the study hospital was compared with the number of HCWs who contracted SARS in 86 Taiwan hospitals that did not use the integrated infection control strategy. Two HCWs contracted SARS in the study hospital (0.03 cases/bed) compared with 93 HCWs in the other hospitals (0.13 cases/bed) during the same three-week period. Our strategy appeared to be effective in reducing the incidence of HCWs contracting SARS. The advantages included rapid implementation without NPIRs, flexibility to transfer patients, and reinforcement for HCWs to comply with infection control procedures, especially handwashing. The efficacy and low cost are major advantages, especially in countries with large populations at risk and fewer economic resources. Copyright © 2006 The Hospital Infection Society

**Database:** CINAHL

1. **Respiratory syncytial virus infection in elderly adults.**

**Author(s):** Falsey AR; Walsh EE

**Source:** Drugs & Aging; Jul 2005; vol. 22 (no. 7); p. 577-587

**Publication Date:** Jul 2005

**Publication Type(s):** Academic Journal

**PubMedID:** NLM16038573

Available at [Drugs & Aging](http://search.ebscohost.com/login.aspx?direct=true&scope=site&site=ehost-live&db=mdc&AN=16038573) - from EBSCO (MEDLINE Complete)

**Abstract:** Respiratory syncytial virus (RSV) infection is now recognised as a significant problem in elderly adults. Epidemiological evidence indicates the impact of RSV in older adults may be similar to non-pandemic influenza, both in the community and in long-term care facilities. Attack rates in nursing homes are approximately 5-10% per year with significant rates of pneumonia (10-20%) and death (2-5%). Estimates using US health care databases and viral surveillance results over a 9-year period indicate that RSV infection causes approximately 10,000 all-cause deaths annually among persons >64 years of age. In contrast, influenza A accounted for approximately 37,000 yearly deaths in the same age group. The clinical features of RSV infection may be difficult to distinguish from those of influenza but include nasal congestion, cough, wheezing and low-grade fever. Older persons with underlying heart and lung disease and immunocompromised patients are at highest risk for RSV infection-related pneumonia and death. Diagnosis of RSV infection in adults is difficult because viral culture and antigen detection are insensitive, presumably because of low viral titres. The combination of serology and reverse transcriptase polymerase chain reaction assay offers the best sensitivity and specificity for the diagnosis of RSV but unfortunately these techniques are not widely available; consequently, most adult RSV disease goes unrecognised. Although treatment of RSV infection in the elderly is largely supportive, early therapy with ribavirin and intravenous gamma-globulin improves survival in immunocompromised persons. An effective RSV vaccine has not yet been developed. Therefore, prevention of RSV is limited to standard infection control practices, such as hand washing and the use of gowns and gloves.

**Database:** CINAHL

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**Databases searched:**

* + **Evidence-Based Reviews:** The Cochrane Library.
  + **Healthcare Databases:** MEDLINE, CINAHL, EMCARE, BNI.

**Local Guidance:** Local guidance has not been searched as part of this literature search. However, local guidelines, policies and procedures are available via the red button on the intranet.

**Search Terms:**

|  |  |
| --- | --- |
| ***Subject Headings*** | ***Free Text Words*** |
| exp \*"BRONCHIAL DISEASES"/ | gloves |
| exp \*CORONAVIRUS/ | handwashing |
| GLOVE/ | resp\* infection |
| GLOVES/ | respiratory |
| exp \*HANDWASHING/ | viral |
| exp \*"INFLUENZAVIRUS A"/ | virus |
| exp \*"LARYNGEAL DISEASES"/ |  |
| exp \*"LUNG DISEASES"/ |  |
| exp \*"MIDDLE EAST RESPIRATORY SYNDROME CORONAVIRUS"/ |  |
| exp \*"PLEURAL DISEASES"/ |  |
| exp "PROTECTIVE GLOVE"/ |  |
| exp \*"RESPIRATION DISORDERS"/ |  |
| \*"RESPIRATORY SYNCYTIAL VIRUSES"/ |  |
| exp "RESPIRATORY TRACT DISEASES"/ |  |
| exp \*"RESPIRATORY TRACT INFECTIONS"/ |  |
| exp \*"SARS VIRUS"/ |  |
| \*"UPPER RESPIRATORY TRACT INFECTION"/ |  |
| exp \*"VIRUS DISEASES"/ |  |

**Search Limits:** English language; Last 15 years.

**Search Date:** 01/04/2020

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