

Better Together: Collaborative Approaches to Prevent Nursing Home Infections

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Overview

- Why nursing homes?
- What is Orange County, CA doing to prevent infections in nursing homes?
- How can we learn from this?

Nursing Homes by the Numbers

- The U.S. Centers for Disease Control (CDC) estimates that:
 - 1.3 million Americans live in nursing homes
 - 1 to 3 million serious infections occur in nursing homes each year

COVID-19

By Brian E. McGarry, David C. Grabowski, and Michael L. Barnett

Severe Staffing And Personal Protective Equipment Shortages Faced By Nursing Homes During The COVID-19 Pandemic

Perspective



The NEW ENGLAND JOURNAL of MEDICINE

Long-Term Care Policy after Covid-19 — Solving the Nursing Home Crisis

Rachel M. Werner, M.D., Ph.D., Allison K. Hoffman, J.D., and Norma B. Coe, Ph.D.

Viewpoint | COVID-19: Beyond Tomorrow

May 22, 2020

JAMA®

Nursing Home Care in Crisis in the Wake of COVID-19

David C. Grabowski, PhD¹; Vincent Mor, PhD^{2,3}

The New York Times | <https://nyti.ms/31mkr1B>

More Than One-Third of U.S. Coronavirus Deaths Are Linked to Nursing Homes

By The New York Times Updated Feb. 2, 2021

34%

OF ALL U.S. DEATHS
152,000+

5%

OF ALL U.S. CASES
1,234,000+



Rates of COVID-19 Among Residents and Staff Members in Nursing Homes — United States, May 25–November 22, 2020

Coordinated Infection Prevention

- Germs spread between patients and across healthcare facilities
- **Working together is vital!**

More patients get infections when facilities do not work together.

SOURCE: CDC Vital Signs, August 2015.

Facilities work together to protect patients.

Common Approach (*Not enough*)

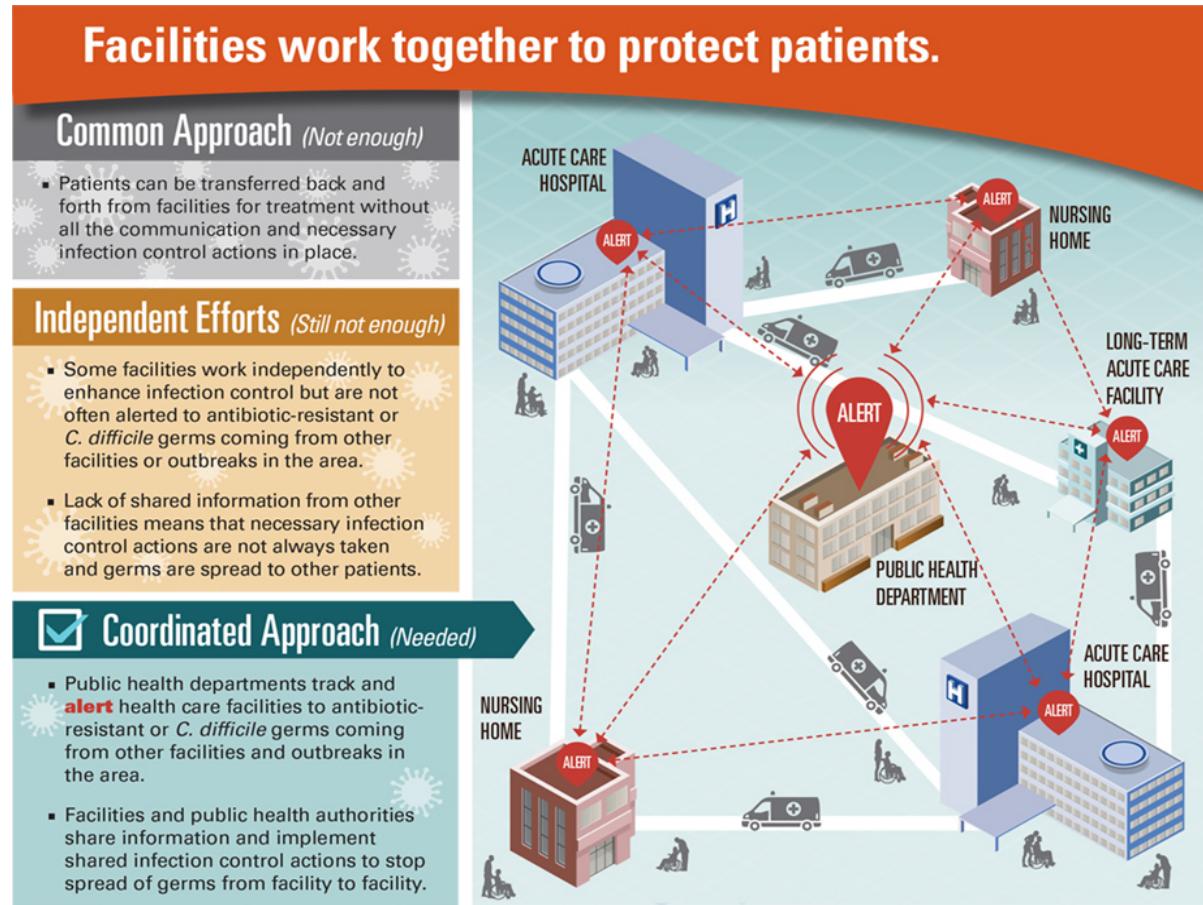
- Patients can be transferred back and forth from facilities for treatment without all the communication and necessary infection control actions in place.

Independent Efforts (*Still not enough*)

- Some facilities work independently to enhance infection control but are not often alerted to antibiotic-resistant or *C. difficile* germs coming from other facilities or outbreaks in the area.
- Lack of shared information from other facilities means that necessary infection control actions are not always taken and germs are spread to other patients.

Coordinated Approach (*Needed*)

- Public health departments track and **alert** health care facilities to antibiotic-resistant or *C. difficile* germs coming from other facilities and outbreaks in the area.
- Facilities and public health authorities share information and implement shared infection control actions to stop spread of germs from facility to facility.

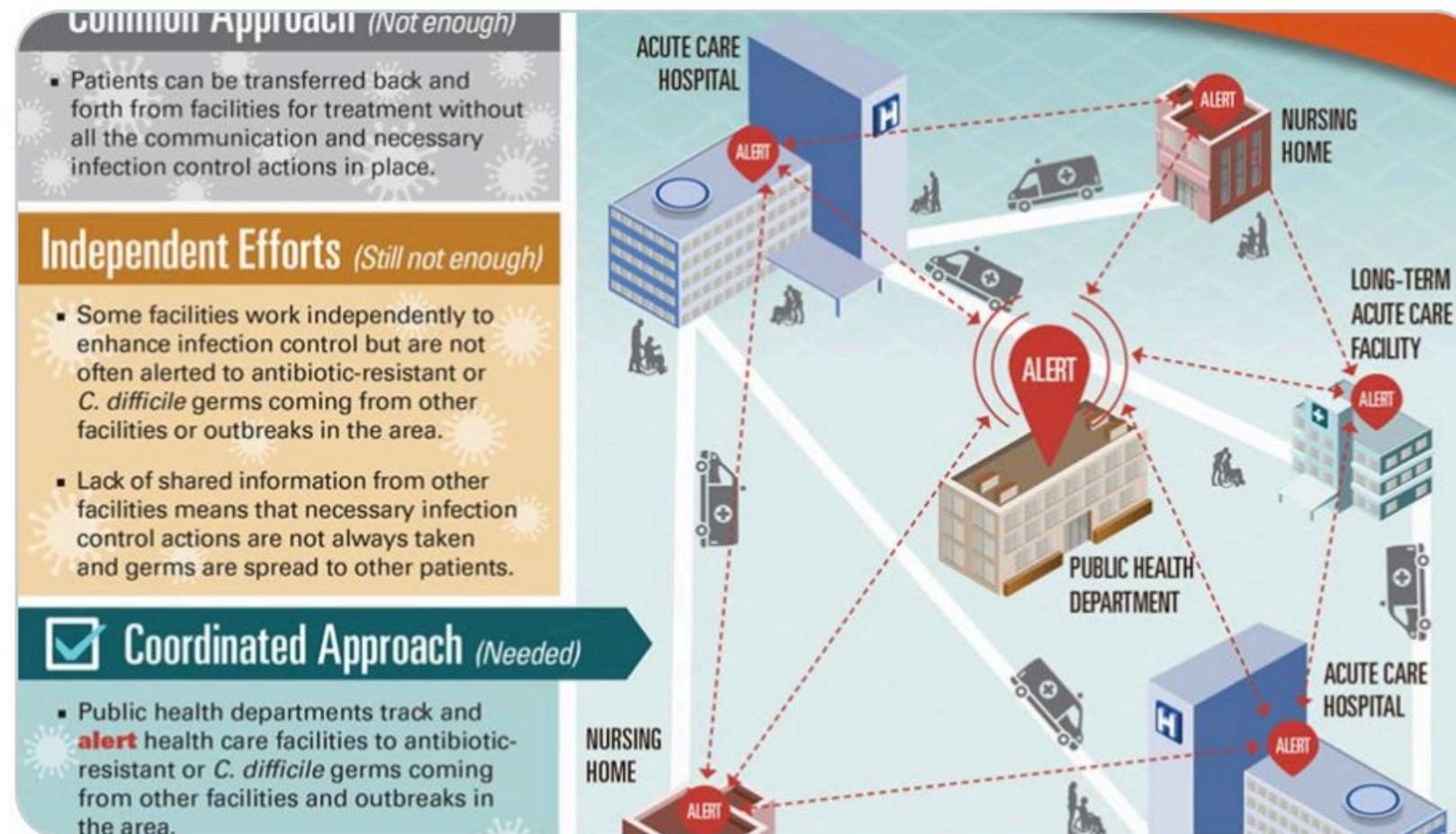




Rochelle Walensky, MD, MPH @CDCDirector · Oct 26, 2016

...

Public health authorities and health care facilities can work together to protect patients from **#AntibioticResistance**. **#IDWeek2016**



2

94

84



Decolonization Prevents a Cascade of Unfortunate Events

- Shedding of pathogens  **Prevents shedding**
- Environmental contamination
- Contamination persists
- Failure to clean or disinfect
- Staff acquires
- Staff fails to remove
- Transfer to patient
- Risk for infection

**Broad solution
Benefits carriers too**

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812

JUNE 13, 2013

VOL. 368 NO. 24

Targeted versus Universal Decolonization to Prevent ICU Infection

Susan S. Huang, M.D., M.P.H., Edward Septimus, M.D., Ken Kleinman, Sc.D., Julia Moody, M.S., Jason Hickok, M.B.A., R.N., Taliser R. Avery, M.S., Julie Lankiewicz, M.P.H., Adrijana Gombosov, B.S., Leah Terpstra, B.A., Fallon Hartford, M.S., Mary K. Hayden, M.D., John A. Jernigan, M.D., Robert A. Weinstein, M.D., Victoria J. Fraser, M.D., Katherine Haffenreffer, B.S., Eric Cui, B.S., Rebecca E. Kaganov, B.A., Karen Lolans, B.S., Jonathan B. Perlin, M.D., Ph.D., and Richard Platt, M.D., for the CDC Prevention Epicenters Program and the AHRQ DECIDE Network and Healthcare-Associated Infections Program*

ABSTRACT

BACKGROUND

Both targeted decolonization and universal decolonization of patients in intensive care units (ICUs) are candidate strategies to prevent health care-associated infections, particularly those caused by methicillin-resistant *Staphylococcus aureus* (MRSA).

METHODS

We conducted a pragmatic, cluster-randomized trial. Hospitals were randomly assigned to one of three strategies, with all adult ICUs in a given hospital assigned to the same strategy. Group 1 implemented MRSA screening and isolation; group 2, targeted decolonization (i.e., screening, isolation, and decolonization of MRSA carriers); and group 3, universal decolonization (i.e., no screening, and decolonization of all patients). Proportional-hazards models were used to assess differences in infection reductions across the study groups, with clustering according to hospital.

From the University of California Irvine School of Medicine, Orange (S.S.H., A.G., L.T., E.C.); Hospital Corporation of America, Houston (E.S.) and Nashville (J.M., J.H., J.B.P.); Texas A&M Health Science Center, Houston (E.S.); Harvard Medical School and Harvard Pilgrim Health Care Institute, Boston (K.K., T.R.A., J.L., F.H., K.H., R.E.K., R.P.); Rush Medical College (M.K.H., K.L.) and John Stroger Hospital of Cook County (R.A.W.), Chicago; Centers for Disease Control and Prevention, Atlanta (J.A.J.); and Washington University in St. Louis, St. Louis (V.J.F.). Address reprint requests to Dr. Huang at the Divi-

44% reduction in
all-cause ICU
bloodstream
infection

ORIGINAL ARTICLE

Decolonization to Reduce Postdischarge Infection Risk among MRSA Carriers

S.S. Huang, R. Singh, J.A. McKinnell, S. Park, A. Gombosov, S.J. Eells, D.L. Gillen, D. Kim, S. Rashid, R. Macias-Gil, M.A. Bolaris, T. Tjoa, C. Cao, S.S. Hong, J. Lequieu, E. Cui, J. Chang, J. He, K. Evans, E. Peterson, G. Simpson, P. Robinson, C. Choi, C.C. Bailey, Jr., J.D. Leo, A. Amin, D. Goldmann, J.A. Jernigan, R. Platt, E. Septimus, R.A. Weinstein, M.K. Hayden, and L.G. Miller, for the Project CLEAR Trial

ABSTRACT

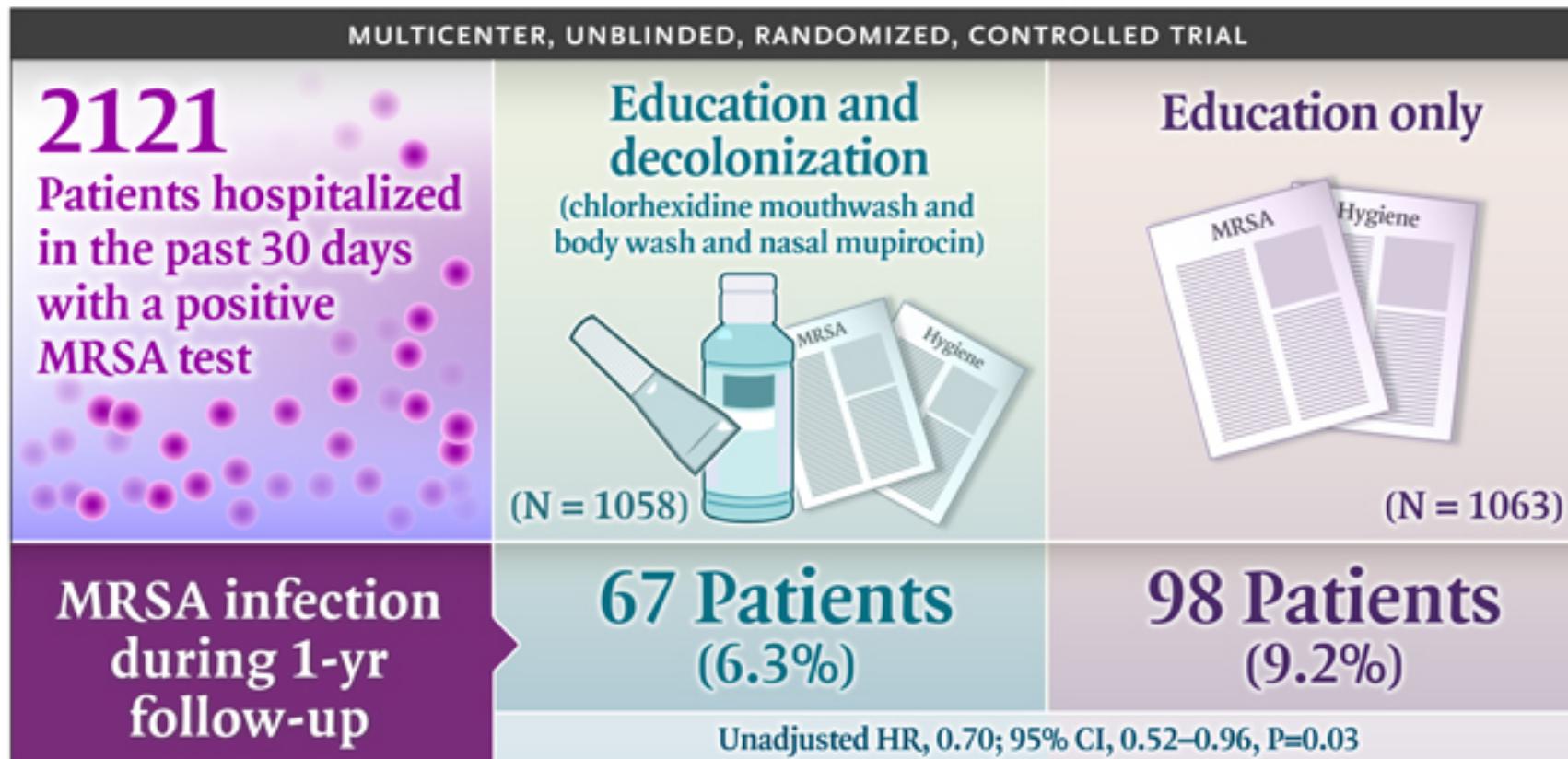
BACKGROUND

Hospitalized patients who are colonized with methicillin-resistant *Staphylococcus aureus* (MRSA) are at high risk for infection after discharge.

METHODS

We conducted a multicenter, randomized, controlled trial of postdischarge hygiene education, as compared with education plus decolonization, in patients colonized with MRSA (carriers). Decolonization involved chlorhexidine mouthwash, baths or showers with chlorhexidine, and nasal mupirocin for 5 days twice per month for 6 months. Participants were followed for 1 year. The primary outcome was MRSA infection as defined according to Centers for Disease Control and Prevention (CDC) criteria. Secondary outcomes included

Decolonization to Reduce Postdischarge MRSA Infection



The NEW ENGLAND JOURNAL of MEDICINE

Huang et al. 2019

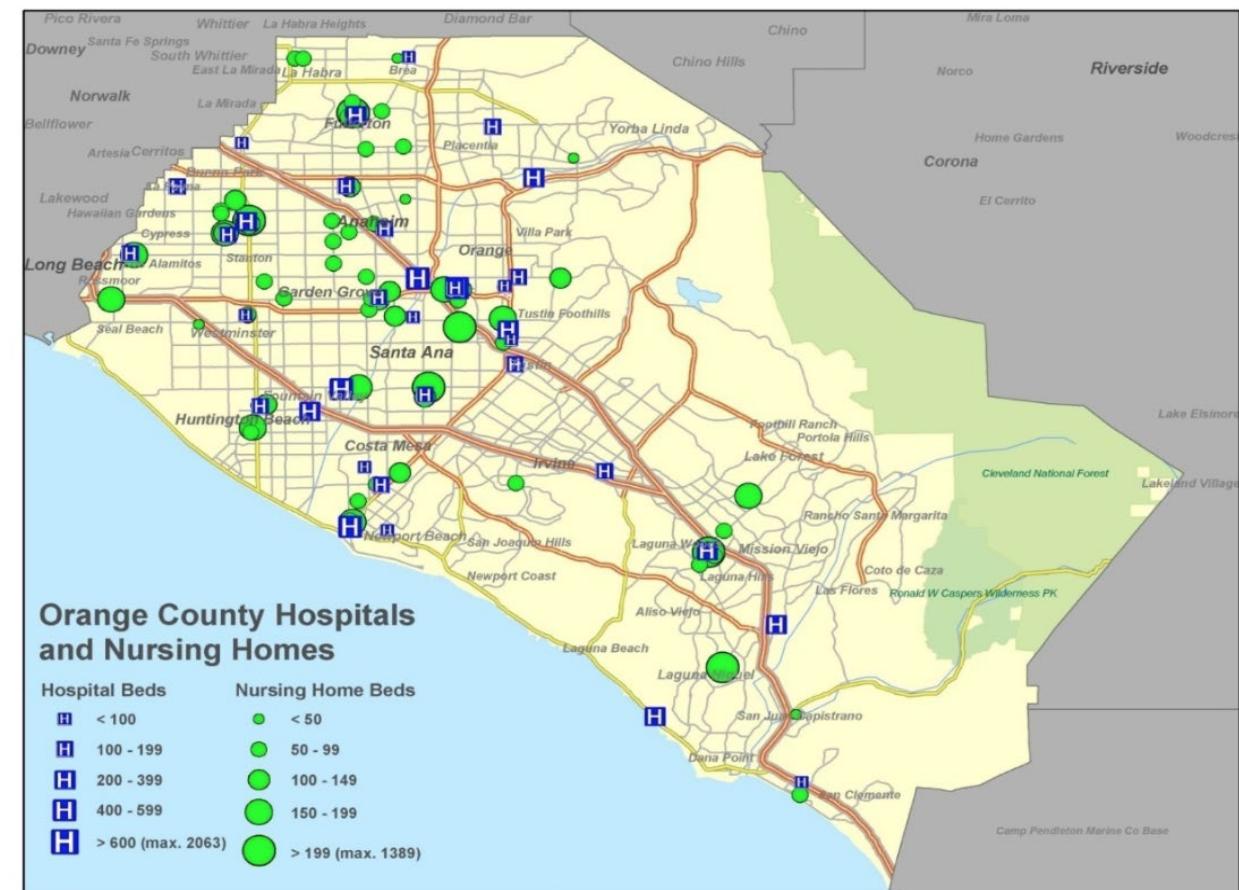
30% fewer MRSA infections
17% fewer all-cause infections

SHIELD Orange County

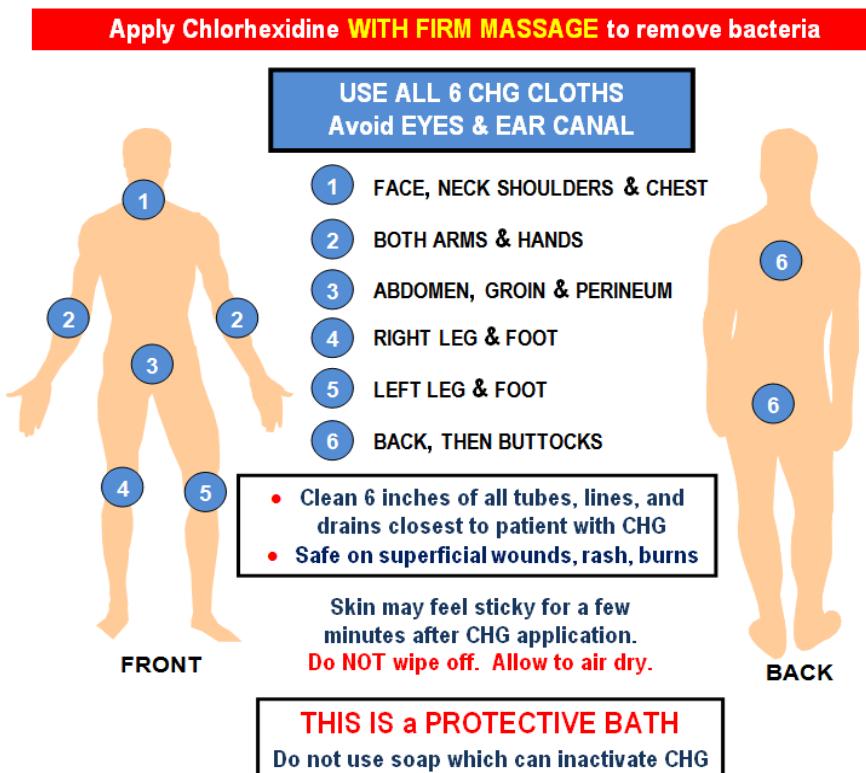
- CDC-funded public health collaboration led by UC Irvine
- Supported by California and Orange County departments of public health
- 35 hospitals, nursing homes, and long-term acute care facilities
- Enhanced bathing training with antiseptic soap and nasal products to reduce multidrug resistant organisms (MDROs)



Orange County, CA



SHIELD Orange County



- 25-month training program: July 2017-July 2019
- Resulted in large, meaningful reductions in MDRO prevalence, hospitalization events and costs due to infection
- Program continues with support from CalOptima, the Medicaid-Medicare insurer for Orange County

<https://www.ucihealth.org/shield>

OC Nursing Home Infection Prevention Team



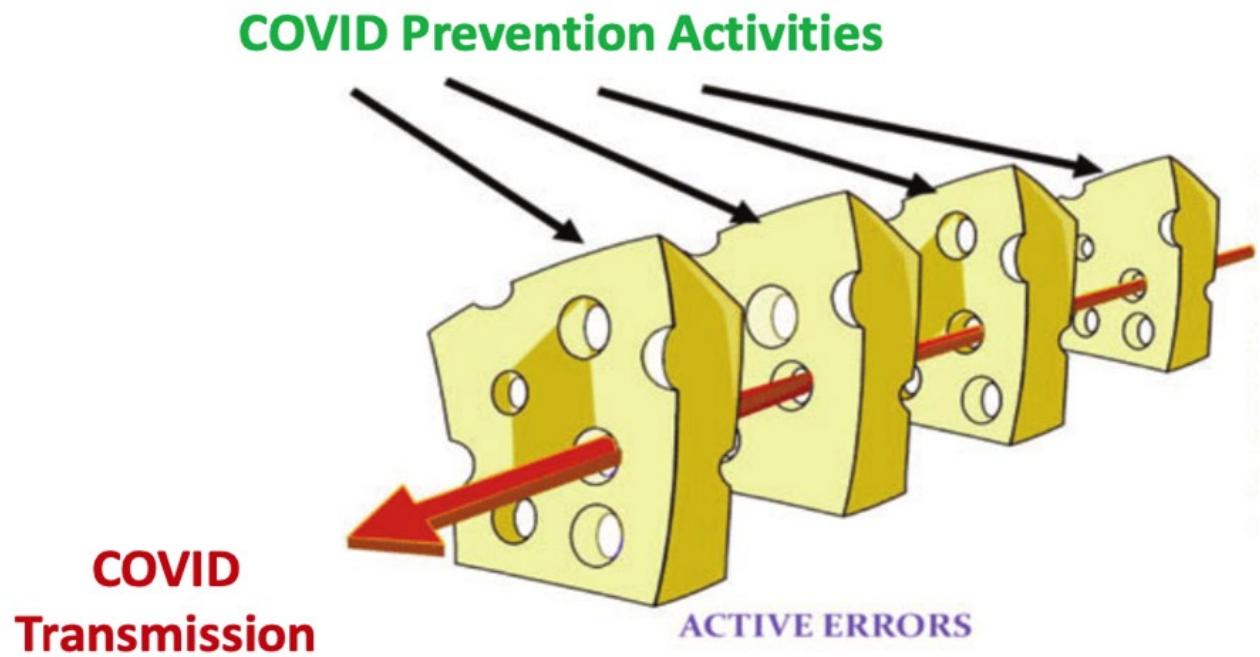
<https://www.ucihealth.org/stopcovid>

OC Nursing Home Infection Prevention Team

- Led by Dr. Susan Huang, MD MPH and team at UC Irvine
- Supported by OC public health and Medicaid agencies
- Goals:
 - Provide information, training and guidance on infection prevention
 - Develop high-fidelity practices to protect staff and residents
 - Support logistics for COVID testing and vaccines

COVID-19 Prevention Activities

- ✓ **Universal masking**
- ✓ **Hand hygiene**
- ✓ **Social distancing**
- ✓ **Breakroom safety**
- ✓ **Staying home when ill**
- ✓ **Daily symptom screening**
- ✓ **Routine COVID-19 testing**
- ✓ **COVID-19 vaccination**



Online Prevention Toolkit

UCI Health

Medical Services Find a Provider Patients & Visitors Locations News & Blog Events About Us Search... 

Orange County Nursing Home Infection Prevention Toolkit

For Orange County nursing homes only – [schedule a consultative session with the OC Infection Prevention Team](#)

1. Introduction – Preventing COVID-19 in Nursing Homes

- [Roadmap – Key Strategies for Preventing COVID-19 in Nursing Homes \(PDF\) \(DOC\)](#)
- [FAQs – Overview of COVID-19 \(PDF\) \(DOC\)](#)
- [FAQs – COVID-19 Vaccine \(PDF\) \(DOC\)](#)
- [FAQs for Staff – Concerns About COVID-19 Exposure \(PDF\) \(DOC\)](#)
- [FAQs for Staff – Monitoring Yourself for Infection Symptoms \(PDF\) \(DOC\)](#)
- [Video – What is COVID and How Does It Spread?](#)

2. Visitors

- [COVID-19 Visitor Policy for Nursing Homes \(PDF\) \(DOC\)](#)
- [FAQs – Visitor Policy \(PDF\) \(DOC\)](#)
- [No Visitor Policy –Letter to Family \(PDF\) \(DOC\)](#)

3. Social Distancing, Masking, and Shared Activities

ucihealth.org/stopcovid



Roadmap: Key Strategies for Preventing COVID-19 in Nursing Homes

What strategies should our facility use to prevent the spread of COVID-19?
All of the following strategies should be used:

- **#1 Universal Staff Screening**
Actively monitor [all staff daily](#) for fever and symptoms of COVID-19. If any staff screens positive for any fever or symptoms, they should be tested for COVID-19 and sent home to recover. See ["When You Have COVID-19 Cases in Your Nursing Home."](#) Upon entry, obtain staff temperature using a touchless thermometer. In addition, inquire about any of the following:
 - Fever $\geq 99.0^{\circ}\text{F}$
 - Loss of taste or smell
 - Headache
 - Diarrhea
 - Vomiting
 - Nausea
 - Other cold symptoms

Screening
[Identify](#) for fever and symptoms of COVID-19, as above. If any symptoms are found, the resident should be isolated from other residents and the resident should be assessed for additional medical care needs. See ["When You Have COVID-19 Cases in Your Nursing Home."](#)

Masking
Residents should wear a mask covering the nose and mouth whenever on nursing home property, including when eating while on break. Follow facility protocol for mask use. Direct contact with residents (e.g. front desk, administration, housekeeping) can wear a community cloth mask. All direct care healthcare workers should wear a disposable standard mask provided by the facility during resident care activities.

Residents who can tolerate a mask should wear a standard or cloth mask whenever in common areas and when staff are within 6 feet of the resident.

The Orange County Nursing Home Infection Prevention Team is coordinated by the University of California, Irvine Health and is jointly funded by Orange County Health Care Agency and CalOptima Last Updated: 5/26/20





6 Feet of Distance Keeps You Safe



How to Properly Wear a Mask

- ✓ **Mask should cover both your nose and mouth**
- ✓ **Clean hands before and after touching your mask**
- ✓ **Store your mask in a clean, safe place when not in use**



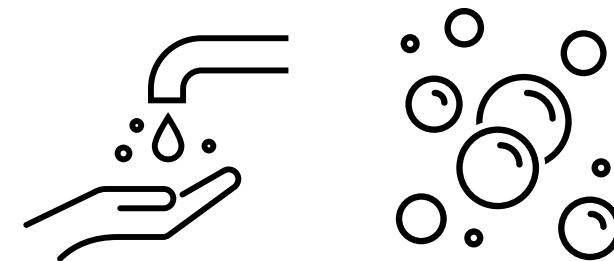
How to Clean Your Hands

✓ **Clean all surfaces:**

- Palms
- Backs of hands
- In between fingers
- Thumbs
- Wrists
- Fingertips



✓ **Wash hands with soap and water for 20 seconds**

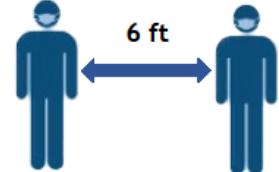


KEEP SAFE FROM COVID

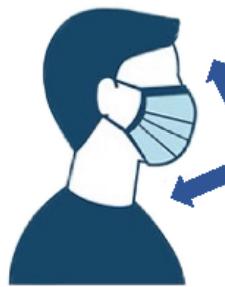
Hand hygiene every time before and after touching face or adjusting mask



6 feet apart or as much as possible at all times



Mask at all times, snug fit over nose and mouth



Visit ucihealth.org/stopcovid for more information
Service of UCI Health

HEALTH ALERT

Inform your supervisor immediately if you have any of these symptoms at any time during your shift:

- Fever (≥ 99 F) or chills
- Cough
- Shortness of breath
- Muscle aches
- Unexpected fatigue
- Sore throat
- Loss of taste or smell
- Headache
- Diarrhea, vomiting, or nausea
- Other cold symptoms

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BREAKROOM SAFETY

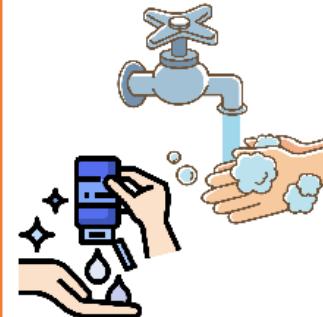
Seat 6 feet away from others and clean table before eating



Store mask in a clean bag



Clean hands before and after touching face and mask

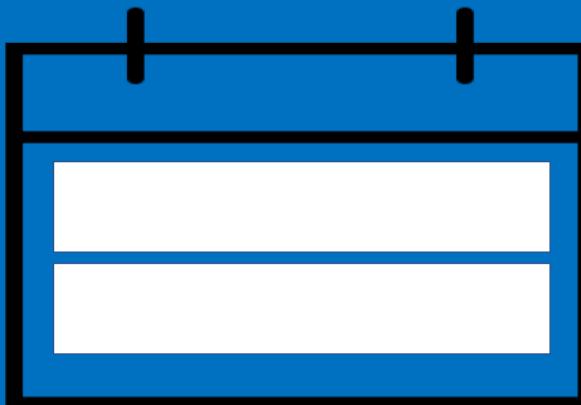


Visit ucihealth.org/stopcovid for more information
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DON'T FORGET!

OUR NEXT COVID VACCINE DATE IS:



Service of **UCI Health**



Vaccination Day KEY REMINDERS

Infection Prevention Processes

- Ensure hand hygiene performed between injections
- If gloves worn, ensure gloves changed, hands cleaned between each vaccination

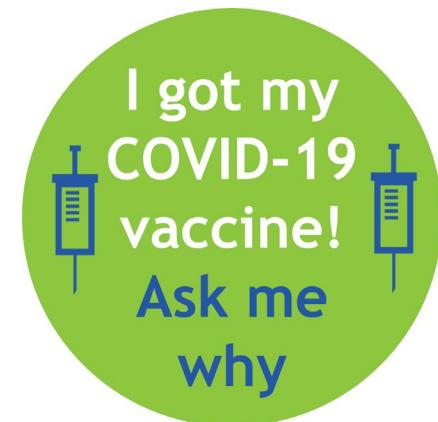
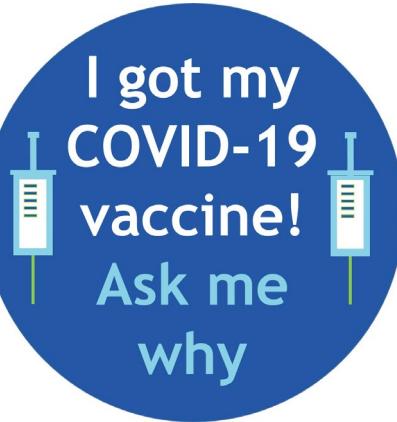
The following are **NOT** acceptable reasons to decline staff or residents for vaccination. If they are declined, ask your supervisor to speak with a pharmacy supervisor.

- Should not be declined if "not on list". Staff or residents can be added on the vaccine day with a signed consent
- Should not be declined for recent PPD placement
- Should not be declined even if another vaccination (e.g. flu) was given in the last two weeks*
- Should not be declined for being on a ventilator

Prioritize staff and residents over volunteers/vendors

Call staff to come in for vaccine if not scheduled to work!

* [cdc.gov/vaccines/covid-19/info-by-product/clinical-considerations.html](https://www.cdc.gov/vaccines/covid-19/info-by-product/clinical-considerations.html). COVID vaccine can be given within 14d of another vaccine to avoid barriers or delays to COVID-19 vaccination (e.g., long-term care facility residents or healthcare personnel)



Key Takeaways

- Nursing homes are high-risk settings for infectious disease outbreaks
- Patients are safer when facilities work together
- Training, resources needed to support nursing home infection prevention
 - Back to basics – *hygiene, cleaning, working well*
 - Creating a culture of safety
 - Monitoring and feedback to encourage high-fidelity practices

Thank you for your time!



Any questions?