Transmission-Based Precautions

Last Updated 2018

Basics of Infection Prevention
Healthcare-Associated Infections Program
Center for Health Care Quality
California Department of Public Health

Objectives

- Describe Transmission-based (isolation) precautions
- Discuss Enhanced Standard precautions used in California skilled nursing facilities
- Review adherence monitoring results and tools for Transmission-based precautions care practices

What are Transmission-based Precautions?

- Isolation guidance based on modes of disease transmission
- Updated by CDC, 2007
  - Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings
- Describes care precautions for infected/colonized patients/residents
- CMS requires all hospitals **and skilled nursing facilities** to implement Transmission-based precautions if needed
  - **Hospitals -** Part 42 Subpart C - Basic Hospital Functions Section § 482.42
  - **SNF** - Part 43 Subpart B - Long Term Care Facilities Section § 483.65

Transmission-based Precautions Training

- Hospitals and SNF expected to train staff on
  - Disease mode of transmission
  - Correct use of Transmission-based Precautions and PPE
- Train staff upon hire and at least annually
- Training should include assessment of competency

Types of Transmission-based Precautions

1. **Contact** precautions
   - Mode of transmission is direct contact with patient or contaminated environment
   - Examples of use: C. difficile, scabies
2. **Droplet** precautions
   - Mode of transmission is respiratory droplets
   - Examples of use: Influenza, pertussis
3. **Airborne** precautions
   - Mode of transmission is small aerosolized particles
   - Examples of use: Tuberculosis, measles

Why are Transmission-based Precautions Important?

Using proper Transmission-based precautions prevents the spread of infection from

- Patient/resident to HCP
- Patient/resident to HCP to patient/resident
- Patient/resident to patient/resident

How to Implement Transmission-Based Precautions

- Implement transmission-based precautions
  - Based on the patient's clinical presentation and **likely** infection diagnoses (e.g., syndromes suggestive of transmissible infections such as diarrhea, meningitis, fever and rash, respiratory infection)
  - As soon as possible after the patient enters the healthcare facility (including reception or triage areas in emergency departments, ambulatory clinics or physicians' offices)

How to Implement Transmission-Based Precautions - 2

- To the extent possible, place patients who may need transmission-based precautions into a single-patient room while awaiting clinical assessment
- Notify accepting facilities and the transporting agency about suspected infections and the need for transmission-based precautions when patients are transferred
- Adjust or discontinue precautions when more clinical information becomes available (e.g., laboratory results)

Contact Precautions

- Intended to prevent transmission of infectious agents via contact with a patient or contaminated environment
- Examples:
  - C. difficile, MDRO colonized wound, scabies
- Used for epidemiologically important microorganisms
- Places a barrier between the HCP and infectious agent
- Used in addition to Standard precautions

Contact Precautions - 2

Includes

- Gown and gloves donned prior to entry into room and discarded prior to exit
  - Hand hygiene prior to donning gloves and after removing gloves
- Single room preferred
  - Alternatives include spatial separation or cohorting

Droplet Precautions

- Intended to prevent transmission of pathogens via respiratory or mucous membrane contact with respiratory secretions
- Examples
  - Influenza, pertussis, mumps, Meningococcal disease
- No special air handling or ventilation required
- Used in addition to Standard precautions

Droplet Precautions - 2

Includes:

- Surgical or procedure mask donned prior to entry into room and discarded prior to exit
- Single room preferred
- Transporting patient in a surgical mask

Airborne Precautions

- Intended to prevent transmission by inhalation of infectious agents that can remain suspended in the air
- Examples:
  - Herpes zoster, varicella zoster, tuberculosis
- Requirements include
  - Increased ventilation rate
  - Air exhausted directly to the outside or through HEPA filtration
  - Facility respiratory protection program: education, fit-testing
- Use in addition to Standard precautions

Airborne Precautions - 2

Includes:

- Respirator (N-95 or PAPR) donned prior to entry into room and removed after exit
- Single room
- Transport patient in a surgical mask

Enhanced Standard Precautions for California Skilled Nursing Facilities

- Developed by CDPH and the California Association of Health Facilities (CAHF), 2010
- Created to simplify precautions for preventing transmission in SNF
  - Use in addition to Standard precautions when Standard precautions may be insufficient to prevent transmission
  - Incorporates aspects of contact, droplet, and airborne precautions
- Intended to facilitate communication for patients on contact precautions transferring between acute care hospitals and SNF

Revision Coming in 2018!

California Department of PublicHealth

State of California—Health and Human Services Agency
California Department of Public Health

MARK B HORTON, MD, MSPH
Director

ARNOLD SCHWARZENEGGER
Governor

September 7, 2010

AFL 10-27

TO: Long-Term Care Facilities and General Acute Care Hospitals

SUBJECT: Enhanced Standard Precautions (ESP) for Long-Term Care Facilities

The purpose of this All Facility Letter is to distribute the accompanying "Enhanced Standard Precautions for California Long-Term Care Facilities, 2010." This guideline is provided jointly by the California Department of Public Health and the California Association of Health Facilities.

This guideline is intended to be advisory only and has been developed to assist long-term care facility infection control programs in the development of a rational approach to reducing the potential for transmission of pathogens among California long-term care facility residents. It replaces the 1996 "Guideline Prevention and Control of Antibiotic Resistant Microorganisms California Long-Term Care Facilities." It is also intended to

Why Inter-facility Communication is Important

- **Provides information to receiving facility so proper room placement and Transmission-based precautions can be implemented**
- Provides important information about a resident's current clinical status
- Gives both the transferring and receiving facility a way to share the resident's history of infection and vaccination
- Relays information about devices such as urinary catheters and central lines

Interfacility Communication Transfer Tool -1

INFECTION CONTROL TRANSFER FORM

This form should be sent with the patient/resident upon transfer. It is NOT meant to be used as criteria for admission, only to foster the continuum of care once admission has been accepted.

Affix any patient labels here.

Demographics

Patient/Resident *(Last Name, First Name)*: ,		
Date of Birth:	**MRN:**	**Transfer Date:**
Sending Facility Name:		
Contact Name:	**Contact Phone:**	
Receiving Facility Name:		

⚠

Currently in Isolation Precautions? ☐ **Yes**
If Yes, check: ☐ Contact ☐ Droplet ☐ Airborne ☐ Other:

☐ **No** isolation precautions

Organisms

Did or does have (send documentation, e.g. culture and antimicrobial susceptibility test results with applicable dates):	Current (or previous) infection or colonization, or ruling out *
MRSA	☐
VRE	☐
Acinetobacter resistant to carbapenem antibiotics	☐
E coli, *Klebsiella* or *Enterobacter* resistant to carbapenem antibiotics (CRE)	☐
E coli or *Klebsiella* resistant to expanded-spectrum cephalosporins (ESBL)	☐
C difficile	☐
Other^: ^e.g. lice, scabies, disseminated shingles, norovirus, influenza, TB, etc.	☐ **(current or ruling out*)**
***Additional information if known:**	

☐ **No** known MDRO or communicable diseases

Interfacility Communication Transfer Tool -2

Symptoms

Check yes to any that currently apply:**

- ☐ Cough/uncontrolled respiratory secretions
- ☐ Incontinent of urine
- ☐ Vomiting
- ☐ Acute diarrhea or incontinent of stool
- ☐ Draining wounds
- ☐ Other uncontained body fluid/drainage
- ☐ Concerning rash (e.g.; vesicular)

**NOTE: Appropriate PPE required ONLY if incontinent/drainage/rash NOT contained.

☐ No symptoms / PPE not required as "contained"

PPE

PERSONAL PROTECTIVE EQUIPMENT CONSIDERATIONS

☐ ☐ ☐

CHECK ALL PPE TO BE CONSIDERED AT RECEIVING FACILITY

Answers to sections above

ANY YES

ALL NO

Person completing form:

Role: Date:

Other MDRO Risk Factors

Is the patient currently on antibiotics? ☐ **Yes** ☐ **No**

Antibiotic:	Dose, Frequency:	Treatment for:	Start date:	Stop date:

Does the patient currently have any of the following devices? ☐ **Yes** ☐ **No**

- ☐ Central line/PICC, Date inserted:
- ☐ Hemodialysis catheter
- ☐ Urinary catheter, Date inserted:
- ☐ Suprapubic catheter
- ☐ Percutaneous gastrostomy tube
- ☐ Tracheostomy
- ☐ Fecal management system

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Were immunizations received at sending facility? ☐ **Yes** ☐ **No**

If yes, specify: Date(s):

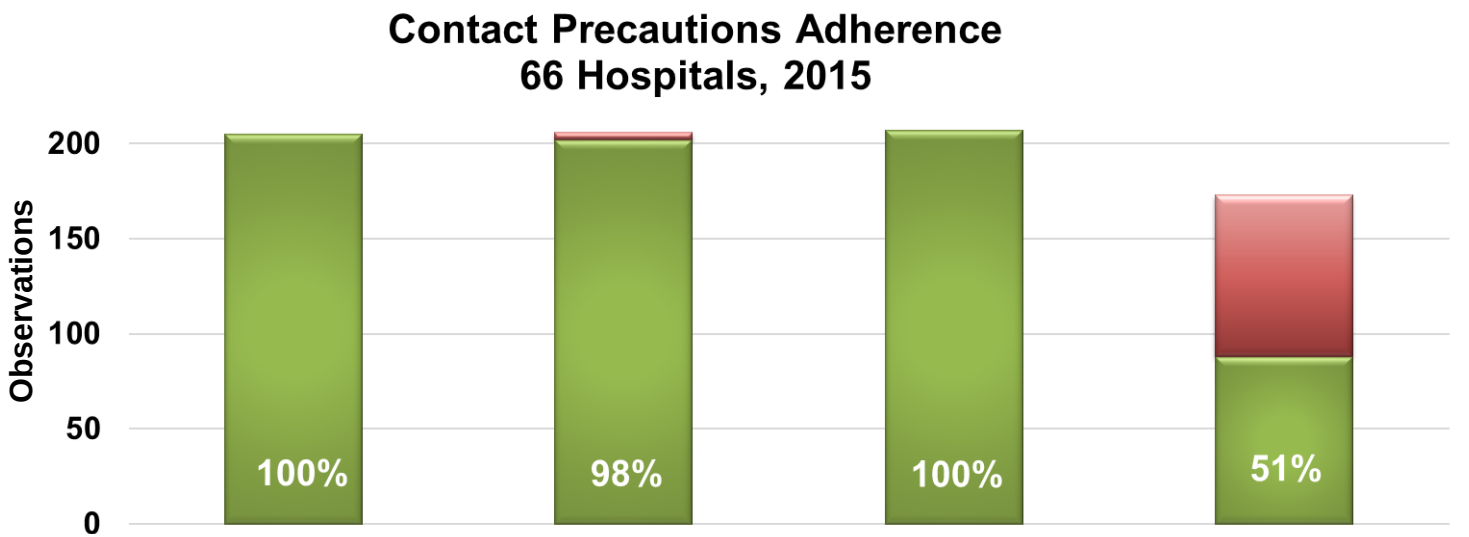
Version 2016.03.14

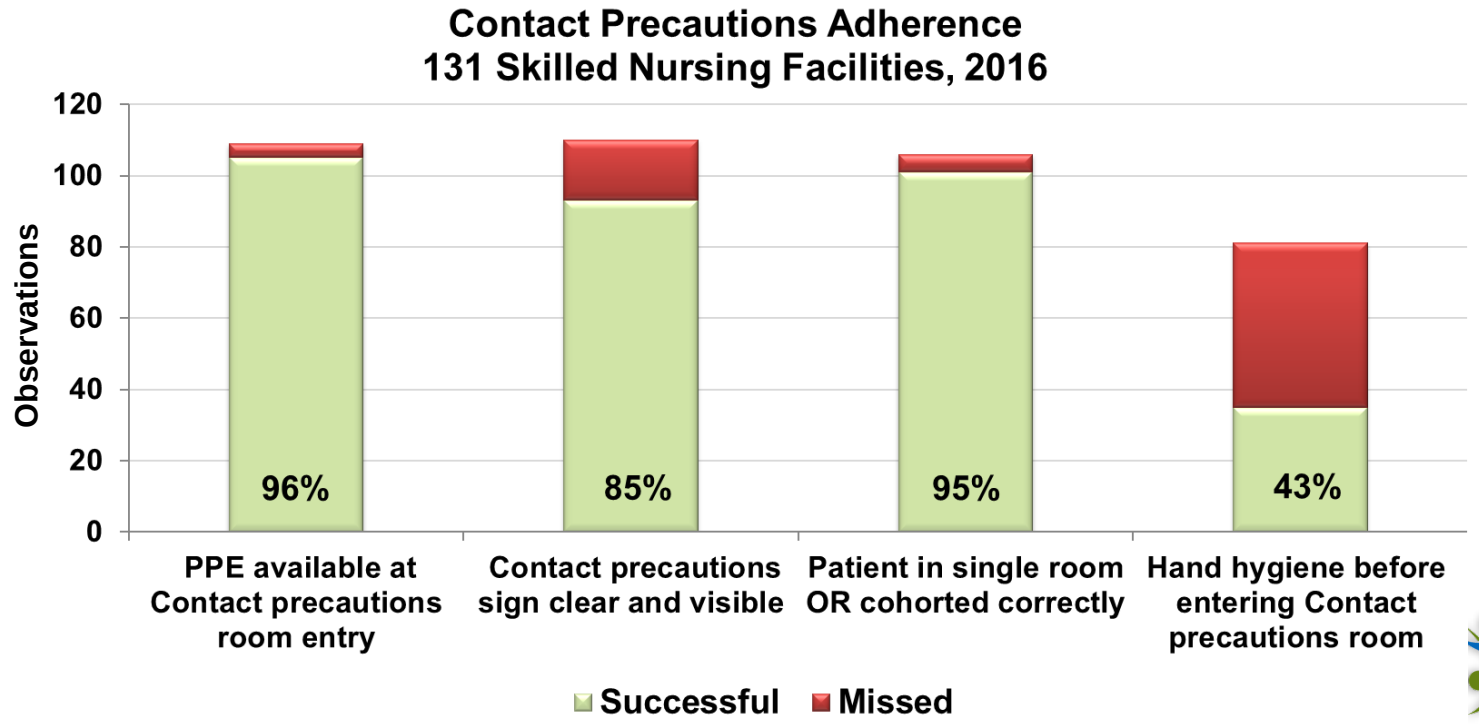
Are Transmission-based Precautions Performed Routinely?

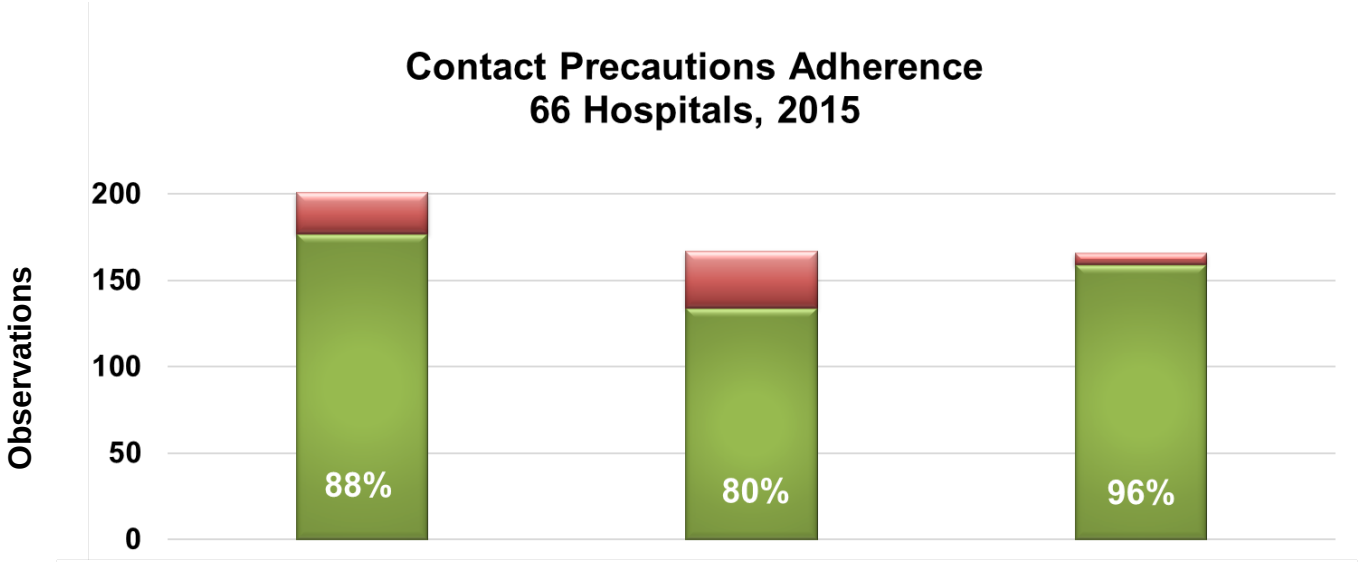
Results of CDPH HAI Program Observations

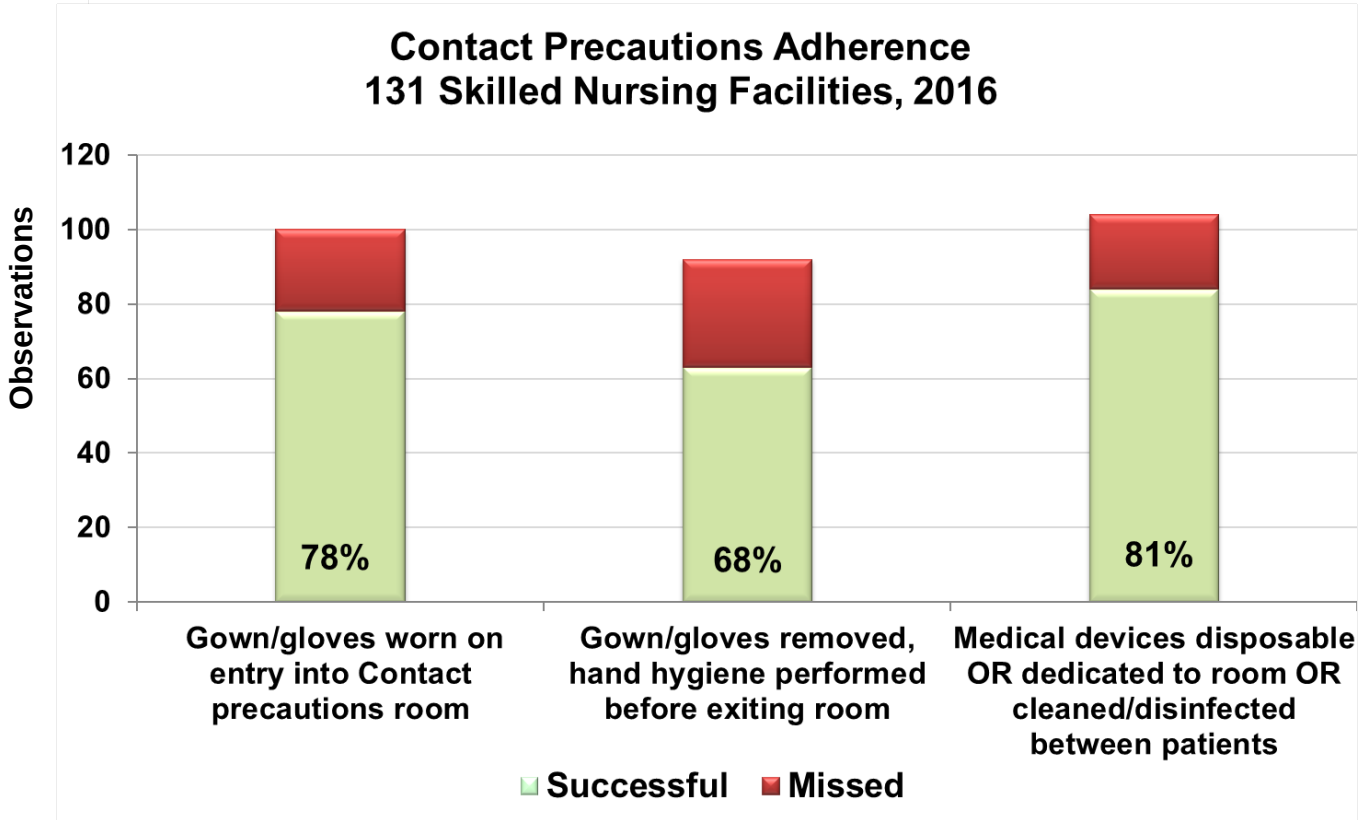
Monitoring Contact Precautions

Contact Precautions Practices	Pt/Res 1	Pt/Res 2	Adherence by Task	
			#Yes	#Obs
Gloves and gowns are available near point of use.	(Yes) No	(Yes) No	2	2
Signs indicating the patient/resident is on contact precautions are clear and visible.	(Yes) No	(Yes) No	2	2
The patient/resident housed in single-room or cohorted based on a clinical risk assessment.	(Yes) No	(Yes) No	2	2
Hand hygiene is performed before entering the patient/resident care environment.	(Yes) No	Yes (No)	1	2
Gloves and gowns are donned before entering the patient/resident care environment.	(Yes) No	(Yes) No	2	2
Gloves and gowns are removed and discarded, **and** hand hygiene is performed before leaving the patient/resident care environment. *Soap & water if C. difficile* infection.	Yes (No)	Yes (No)	0	2
Dedicated or disposable noncritical patient-care equipment (e.g. blood pressure cuffs) is used	(Yes) No	(Yes) No	2	2
Total #Yes **11** Total #Observed **14** Total #Yes/Total #Observed = % Adherence **79** %				


Contact Precautions Adherence
66 Hospitals, 2015
Observations
200
150
100
50
0
100%
98%
100%
51%


Contact Precautions Adherence
131 Skilled Nursing Facilities, 2016
Observations
120
100
80
60
40
20
0
96%
85%
95%
43%
PPE available at Contact precautions room entry
Contact precautions sign clear and visible
Patient in single room OR cohorted correctly
Hand hygiene before entering Contact precautions room
Successful
Missed


Contact Precautions Adherence
66 Hospitals, 2015
Observations
200
150
100
50
0
88%
80%
96%


Contact Precautions Adherence
131 Skilled Nursing Facilities, 2016
Observations
120
100
80
60
40
20
0
78%
68%
81%
Gown/gloves worn on entry into Contact precautions room
Gown/gloves removed, hand hygiene performed before exiting room
Medical devices disposable OR dedicated to room OR cleaned/disinfected between patients
Successful
Missed

Summary

- Correct use of Standard and Transmission-based precautions prevents disease transmission
- Enhanced precautions in SNF allow for individualization of the necessary precautions depending on resident ability to contain infectious body fluids – they are in their home
- Perform adherence monitoring to Transmission-based precautions and give feedback to staff to prevent the spread of infection

Reference

2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings

Jane D. Siegel, MD; Emily Rhinehart, RN MPH CIC; Marguerite Jackson, PhD; Linda Chiarello, RN MS; the Healthcare Infection Control Practices Advisory Committee

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https://www.cdc.gov/infectioncontrol/guidelines/isolation

Questions?

For more information,
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Or email
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