INFECTION CONTROL UPDATES
WITH
DR. JOSEF ZWASS
TUESDAY, MARCH 28, 2023
9:00 - 10:30 AM PST
CLINIC IN THE PARK MONTHLY COLLABORATOR ZOOM MEETING

American Academy of Pediatrics
AAP-CA3 Infectious Disease Committee

March 28, 2023
Dr. Josef Zwass
This session will be recorded for educational and quality improvement purposes.
DISCLOSURES

• I have no relevant financial relationships with the manufacturer(s) of any commercial product(s) and/or provider of commercial services discussed in this CME activity.

• I do not intend to discuss an unapproved/investigative use of a commercial product/device in our presentation.
OBJECTIVES

- Why Project Firstline—Review recent trends in Hospital Acquired Infections
- Introduce Project Firstline
- Review Respiratory Infection trends (COVID, Influenza, RSV)
- Project Firstline—
  - Resources and examples
- Review Infection Prevention actions (in Healthcare settings)
While COVID raged, another deadly threat was on the rise in hospitals

Severe sepsis acquired in California hospitals

Cases of "hospital acquired" sepsis rose during the pandemic, state data show.

Number of cases

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>30,495</td>
</tr>
<tr>
<td>2021</td>
<td></td>
</tr>
</tbody>
</table>

California Department of Health Care Access and Information

Emily Alpert Reyes LOS ANGELES TIMES
QUARTERLY NATIONAL SIRS FOR SELECT HAI TYPES, 2019-Q1 - 2021-Q3
# Healthcare-Associated Infections Report, 2021

## 328 Acute Care Hospitals

The trend lines show this hospital type's healthcare-associated infection (HAI) incidence from 2010 to 2019. July through December 2020, and 2021 reported on standardized infection ratios (SIR) when possible. Each result is interpreted as the **same**, **better**, or **worse** than the national or state comparison.

### Central Line-Associated Bloodstream Infections (CLABSIs)

<table>
<thead>
<tr>
<th>Year</th>
<th>2021 Reported</th>
<th>2021 Predicted</th>
<th>Central Line Days</th>
<th>SIR</th>
<th>Compared with 2015 National Baseline</th>
<th>Year 2020 Goal</th>
<th>Year 2020 SIR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,595</td>
<td>2,668</td>
<td>2,870,028</td>
<td>0.9</td>
<td><strong>Better</strong></td>
<td></td>
<td>0.90</td>
</tr>
</tbody>
</table>

### Methicillin-Resistant Staphylococcus aureus Bloodstream Infections (MRSA BSI)

<table>
<thead>
<tr>
<th>Year</th>
<th>2021 Reported</th>
<th>2021 Predicted</th>
<th>Patient Days</th>
<th>SIR</th>
<th>Compared with 2015 National Baseline</th>
<th>Year 2020 Goal</th>
<th>Year 2020 SIR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>801</td>
<td>889</td>
<td>15,273,387</td>
<td>1.0</td>
<td><strong>Same</strong></td>
<td></td>
<td>1.00</td>
</tr>
</tbody>
</table>

### Clostridium difficile Infections (CDI)

<table>
<thead>
<tr>
<th>Year</th>
<th>2021 Reported</th>
<th>2021 Predicted</th>
<th>Patient Days</th>
<th>SIR</th>
<th>Compared with 2015 National Baseline</th>
<th>Year 2020 Goal</th>
<th>Year 2020 SIR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4,355</td>
<td>7,563</td>
<td>5,054,917</td>
<td>0.9</td>
<td><strong>Better</strong></td>
<td></td>
<td>0.55</td>
</tr>
</tbody>
</table>

### Vancomycin-Resistant Enterococcus Bloodstream Infections (VRE BSI)

<table>
<thead>
<tr>
<th>Year</th>
<th>2021 Reported</th>
<th>2021 Predicted</th>
<th>Patient Days</th>
<th>SIR</th>
<th>Compared with 2015 National Baseline</th>
<th>Year 2020 Goal</th>
<th>Year 2020 SIR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>511</td>
<td>564</td>
<td>15,253,267</td>
<td>0.4</td>
<td><strong>Same</strong></td>
<td></td>
<td>0.34</td>
</tr>
</tbody>
</table>

### Surgical Site Infections (SSI) - Adult

<table>
<thead>
<tr>
<th>Year</th>
<th>2021 Reported</th>
<th>2021 Predicted</th>
<th>SSI Rate</th>
<th>SSI Unavailable Rate per 15,600 patient days</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.43</td>
<td>0.43</td>
<td>0.34</td>
<td></td>
</tr>
</tbody>
</table>
Healthcare-Associated Infections Report, 2021

328 Acute Care Hospitals

The trend lines show this hospital type’s healthcare-associated infection (HAI) incidence from 2015 to 2019, July through December 2020, and 2021 reported as standardized infection ratios (SIR) when possible. Each result is interpreted as the Same, Better, or Worse than the national or state comparison.

Central Line-Associated Bloodstream Infections (CLABSI)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>0.97</td>
<td>0.95</td>
<td>0.85</td>
<td>0.79</td>
<td>0.67</td>
<td>0.98</td>
<td>0.90</td>
</tr>
</tbody>
</table>

2021 Reported: 2,583
2021 Predicted: 2,869
Central Line Days: 2,879,638
SIR: 0.90

Compared with 2015 National Baseline: Better
Met 2020 Goal: No

Methicillin-Resistant Staphylococcus aureus Bloodstream Infections (MRSA BSI)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>0.97</td>
<td>0.95</td>
<td>0.87</td>
<td>0.76</td>
<td>0.72</td>
<td>0.95</td>
<td>1.00</td>
</tr>
</tbody>
</table>

2021 Reported: 892
2021 Predicted: 889
Patient Days: 15,251,367
SIR: 1.00

Compared with 2015 National Baseline: Same
Met 2020 Goal: No
Project Firstline is a national collaborative led by the U.S. Centers for Disease Control and Prevention (CDC, a department under HHS) to provide infection control training and education to frontline healthcare workers and public health personnel.

American Academy of Pediatrics is proud to partner with Project Firstline, as supported through Cooperative Agreement CDC-RFA-OT18-1802.

The contents of this program do not necessarily represent the policies of CDC or HHS and should not be considered an endorsement by the Federal Government.
WHAT MAKES PROJECT FIRSTLINE UNIQUE?

• Resources are developed with healthcare workers, specifically for healthcare workers

• Content is accessible to all healthcare workers, regardless of previous training or background knowledge

• Bite-sized content is tailored for practice and on-the-go use and is designed to be integrated into the workday

• Teaches the “why” behind infection control recommendations as much as the “what” and “how”

• Educational resources and dissemination methods are tailored for the diverse healthcare workforce, including translations for those who speak Spanish and multiple Asian languages
PROJECT FIRSTLINE:

TRAINING TO RECOGNIZE RESERVOIRS: WHERE GERMS LIVE

- was developed to address gaps in infection control knowledge and practice in healthcare settings nationwide;
- delivers innovative and accessible infection control education for all frontline healthcare workers;
- provides relevant information and training for all healthcare workers regardless of role;
- offers a variety of infection control educational resources, from videos and infographics to training toolkits and interactive tools.

https://www.cdc.gov/infectioncontrol/projectfirstline/healthcare/educational-materials.html
CURRENT INFECTION TRENDS
Figure 4.1. **COVID-19** Confirmed and Probable Cases by CDC Episode Week*,
San Diego County Residents, N=1,069,356

![COVID-19 cases by CDC episode week](image)

*Note: Probable cases are included in the confirmed cases for the same week.*
**COVID-19 Hospitalizations by Date Admitted - Daily Counts**

**Episode date is the earliest of the following available dates: symptom onset date, specimen collection date, date of death, date reported.**

Data for the most recent week may be incomplete.

Date admitted is not known for all hospitalizations; information may be updated as case investigations proceed.
COVID SAN DIEGO DATA

Data through February 25, 2023. Updated March 2, 2023. Data are preliminary and subject to change.

Age-Adjusted COVID-19 Rates for Confirmed Cases by Race/Ethnicity - Cumulative

- All County Residents: 22,471
- American Indian / Alaska Native: 17,590
- Asian: 18,650
- Black or African American: 22,951
- Hispanic or Latino: 31,813
- Native Hawaiian / Other Pacific Islander: 59,925
- White: 17,956
- Multiple Race: 5,688

The black lines represent the 95% confidence intervals (error bars). Rates are not calculated for fewer than 20 events. Death rates for previous three months are not shown.
COVID-19 ORANGE COUNTY

711,799 total confirmed cases
129 average cases per day
4.0 cases per 100K (7-day average)

Cases per 100K

Cases and deaths source [data](#). Data is updated weekly.
COVID-19 ORANGE COUNTY

147 COVID-19 hospitalized patients
3 fewer patients hospitalized from prior day total (2.0% decrease)
7,982 total confirmed deaths
1 average deaths per day
0.03 deaths per 100K (7-day average)
Percentage of Influenza Detections at Clinical Sentinel Laboratories, 2015–2023 Season to Date
National data-Flu view

Virologic Surveillance

Clinical Laboratories:
Percent Positive for Influenza

Public Health Laboratories:
Influenza Virus Subtyping/Lineage Testing

- 99.5% influenza A
- 76% H3
- 24% H1
- 0.5% influenza B
- 100% Victoria lineage
Percentage of Influenza Detections at Clinical Sentinel Laboratories, 2017–2023 Season to Date
CDPH data

Note: Data have been shifted so that Week 1 aligns across seasons.

Respiratory Specimens Testing Positive for Influenza — Clinical Sentinel Laboratories, Current Week and Season to Date
Pediatric Mortality

Source: CDC Fluview, week ending February 11, 2023

Influenza-Associated Pediatric Deaths by Week of Death, 2019-2020 season to 2022-2023 season

- 2019-2020: Number of Deaths = 199
- 2020-2021: Number of Deaths = 1
- 2021-2022: Number of Deaths = 45
- 2022-2023: Number of Deaths = 111

Week of Death:

- Deaths Reported Previous Weeks
- Deaths Reported Current Week
RSV IN ORANGE COUNTY

For week 11 (ending 3/18/23):

- 0.9% Percent of Specimens Positive
- 1 Total Deaths < 5 Years

Respiratory Syncytial Virus Cases by Specimen Collection Date, Orange County
Figure 28. SARS-CoV-2 Wastewater Lineage Prevalence Over Time in San Diego

Source: SARS-CoV-2 variant prevalence in wastewater was generated by the SEARCH consortia (https://searchcovid.info/dashboards/wastewater-surveillance/).
NON SARS CO-V2 VIRUSES IN SAN DIEGO

Positive Respiratory Pathogens by Week (excl SARS) - Data as of 1/22/2023
INFO ON OTHER INFECTIONS

Figure 4. Select Enteric Infections by Month
March 2022 – February 2023
- Salmonellosis
- Shigellosis
- Shiga toxin-producing E. coli

Figure 5. Select Vaccine-Preventable Infections by Month
March 2022 – February 2023
- Pertussis
- Mumps
- Hepatitis A

Figure 6. Select Vector-Borne Infections by Month
March 2022 – February 2023
- Dengue
- West Nile Virus
- Zika
Reservoirs Review

**Body**
- Skin
- GI system or “gut”
- Respiratory system
- Blood

**Environment**
- Water and wet surfaces
- Dry surfaces
- Dirt and dust
- Devices
VIDEOS AND SOCIAL MEDIA CONTENT

Recognize Infection Risks in Healthcare
View on YouTube [Video – 4:55] external icon

Twitter image icon [JPG]
Facebook image icon [JPG]

Gifs
VIDEOS AND SOCIAL MEDIA CONTENT

https://www.cdc.gov/infectioncontrol/projectfirstline/videos/RecognizeRisks-LowRes.mp4
KEY POINTS

GERMS NEED:

1. A PLACE TO GROW
2. A PATHWAY
3. A PERSON TO INFECT
4. A WAY AROUND NATURAL DEFENSES
5. TO SURVIVE
INTERACTIVE RESOURCES

Understanding Where Germs Live and How they Spread

https://www.cdc.gov/infectioncontrol/projectfirstline/healthcare/interactive-Infographic.html
Dirt and dust are reservoirs for germs.

How Germs Spread from Dirt and Dust

- Germs live in dirt and soil. Most of the time they aren’t a problem for healthy people but can cause serious illness in people with weakened immune systems.
- Building construction can send dirt and the germs in it into the air, which can then get inside a healthcare facility.
- Smaller construction and maintenance projects inside a building – like taking out parts of a wall, removing ceiling tiles, or renovating a room – can also create dust that has germs in it.

Infection Control Actions

- Cleaning and disinfection
- Ventilation
- Using barriers and other types of construction containment
- Hand hygiene
What’s Wrong with this Picture-Outpatient Exam Room

https://www.cdc.gov/infectioncontrol/projectfirstline/healthcare/interactive-Outpatient.html
Overflowing Sharps Container

When sharps containers are overfilled, there is greater risk of accidentally getting poked with a dirty needle or sharp instrument. Remove or replace frequently-used sharps containers often, and before they become too full.
What’s Wrong with This Picture? Outpatient Exam Room

Placing Supplies Close to the Sink

Tap water is clean, but it is not sterile. Places that are frequently wet with tap water or sprayed by tap water, like sinks and the counters around sinks, can be a risk for germs in water to spread. That’s why it’s important to keep healthcare supplies away from water.
What’s Wrong with This Picture? Outpatient Exam Room

When a sample from a patient is collected, body fluids and germs can easily get on the outside of the container and spread. These samples should be placed in a biohazard bag to prevent the spread of germs.
WHAT’S WRONG WITH THIS PICTURE

What’s Wrong with This Picture? Outpatient Exam Room

A blocked vent can decrease the air handling system’s ability to replace the air in a room with new, clean air.

If you see an air vent blocked by something mobile, like a chair or a trashcan, move the item to improve ventilation. If a vent is blocked by something else, like cabinets, notify a supervisor or the person in charge of the area.
WHAT’S WRONG WITH THIS PICTURE

https://www.cdc.gov/infectioncontrol/projectfirstline/healthcare/interactive-Nurses-Station.html
INFECTION CONTROL TRAINING TOOLKITS

• Use the toolkits to help your team learn to recognize infection risks throughout their workday.
Firstline’s toolkits are easy to use and can be integrated into existing infection control training programs.

### Recognizing Risk Using Reservoirs Training Toolkit

**Session 1:**
What Does it Mean to Recognize A Risk?

- Session Plan: Recognizing Risk [PDF – 18 Pages]
- Slide Set: Recognizing Risk [PPT – 22 Slides]
- Participant Booklet: Recognizing Risk

**Session 2:**
How Germs Make People Sick

- Session Plan: How Germs Make People Sick [PDF – 21 Pages]
- Slide Set: How Germs Make People Sick [PPT – 25 Slides]
- Participant Booklet: How Germs Make People Sick
INFECTION CONTROL MEASURES
• Hand hygiene
• Environmental cleaning and disinfection, including air exchange
• Injection and medication safety
• Risk assessment with use of appropriate personal protective equipment (e.g., gloves, gowns, face masks) based on activities being performed
• Minimizing Potential Exposures (e.g. respiratory hygiene and cough etiquette)
• Reprocessing of reusable medical equipment between each patient or when soiled
ENVIRONMENTAL CLEANING

Common high-touch surfaces include:
• bedrails
• IV poles
• sink handles
• bedside tables
• counters where medications and supplies are prepared
• edges of privacy curtains
• patient monitoring equipment (e.g., keyboards, control panels)
• transport equipment (e.g., wheelchair handles)
• call bells
• doorknobs
• light switches
<table>
<thead>
<tr>
<th>ACH 5 4</th>
<th>Time (mins.) required for removal 99% efficiency</th>
<th>Time (mins.) required for removal 99.9% efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>138</td>
<td>207</td>
</tr>
<tr>
<td>4</td>
<td>69</td>
<td>104</td>
</tr>
<tr>
<td>6*</td>
<td>46</td>
<td>69</td>
</tr>
<tr>
<td>8</td>
<td>35</td>
<td>52</td>
</tr>
<tr>
<td>10*</td>
<td>28</td>
<td>41</td>
</tr>
<tr>
<td>12*</td>
<td>23</td>
<td>35</td>
</tr>
<tr>
<td>15*</td>
<td>18</td>
<td>28</td>
</tr>
<tr>
<td>20</td>
<td>14</td>
<td>21</td>
</tr>
<tr>
<td>50</td>
<td>6</td>
<td>8</td>
</tr>
</tbody>
</table>
INJECTION AND MEDICATION SAFETY

“Im afraid of needles.”

© Jenny Hawkins 2015
USING APPROPRIATE PPE

SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

1. GOWN
   - Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
   - Fasten in back of neck and waist

2. MASK OR RESPIRATOR
   - Secure ties or elastic bands at middle of head and neck
   - Fit flexible band to nose bridge
   - Fit snug to face and below chin
   - Fix check respirator

3. GOGGLES OR FACE SHIELD
   - Place over face and eyes and adjust to fit

4. GLOVES
   - Extend to cover wrist of isolation gown

HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE)

EXAMPLE 1

There are a variety of ways to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. Here is one example. Remove all PPE before exiting the patient room except a respirator if worn. Remove the respirator after leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GLOVES
   - Pull off gloves over contaminated hand
   - If your hands get contaminated during glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
   - Using a gloved hand, grasp the palm area of the other gloved hand and pull off first glove
   - Hold-renovated glove in gloved hand
   - Slide fingers of ungloved hand under remaining glove at wrist and pull off second glove over first glove
   - Discard gloves in waste container

2. GOGGLES OR FACE SHIELD
   - Unscrew of goggle or face shield are contaminated
   - If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
   - Remove goggle or face shield from the back by lifting head band or nose piece
   - If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in waste container

3. GOWN
   - Gown front and sleeves are contaminated
   - If your hands get contaminated during gown removal, immediately wash your hands or use an alcohol-based hand sanitizer
   - Pull gown away from neck and shoulders, touching inside of gown only
   - Turn gown inside out
   - Fold or roll into a bundle and discard in waste container

4. MASK OR RESPIRATOR
   - Front of mask/respirator is contaminated — DO NOT TOUCH
   - If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
   - Grasp bottom tie or elastic of the mask/respirator, then the loop at the top, and remove without touching the front
   - Discard in waste container

5. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE

HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE)

EXAMPLE 2

Here is another way to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. Remove all PPE before exiting the patient room except a respirator if worn. Remove the respirator after leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GOWN AND GLOVES
   - Gown front and sleeves are outside of gloves are contaminated
   - If your hands get contaminated during gown or glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
   - Grasp the gown in your front and pull from your body starting at the knee break, touching outside of gown only with gloved hands
   - While removing the gown, fold or roll the gown inside-out into a bundle
   - As you are removing the gown, pull off your gloves at the same time, only touching the inside of the gloves and gown with your bare hands. Place the gloves and gown into a waste container

2. GOGGLES OR FACE SHIELD
   - Glasses of goggle or face shield are contaminated
   - If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
   - Remove goggle or face shield from the back by lifting head band or nose piece
   - If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in waste container

3. MASK OR RESPIRATOR
   - Front of mask/respirator is contaminated — DO NOT TOUCH
   - If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
   - Grasp bottom tie or elastic of the mask/respirator, then the loop at the top, and remove without touching the front
   - Discard in waste container

4. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE

USE SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION

• Keep hands away from face
• Limit surfaces touched
• Change gloves when torn or heavily contaminated
• Perform hand hygiene

FIRST LINE
CDC’s National Training Collaborative for Healthcare Infection Prevention & Control
MINIMIZE POTENTIAL EXPOSURES

Aerosol

Fomites
OVERVIEW OF MEDICAL DEVICE REPROCESSING (FDA)

1. Reprocessing begins at the point of use. Protective covers are discarded. Reusable devices are segregated from waste. Devices are typically wiped clean of visible soil, kept moist, properly contained and transported to a dedicated cleaning work area.

2. Thorough Cleaning. Intended to render the device safe for handling by health care workers and to make it suitable for subsequent processing steps, and does not necessarily make the device suitable for patient use.
   a. Disassembly to facilitate cleaning and subsequent microbicidal steps.
   b. Thorough cleaning with a compatible detergent and rinsed to remove unsafe residues. Enzyme cleaners, ultrasound baths, and brushes may be used.

If thorough cleaning is adequate (non-critical devices unlikely to be sources of cross-transmission or soiled by body fluids), it may be returned to service.

3. Final Processing/Routing: Thoroughly cleaned devices that are not returned directly into service are routed for terminal microbicidal process (e.g., disinfection/sterilization). After cleaning, additional microbicidal steps may be performed, depending on the device’s intended use, including either a disinfection or sterilization process, to render them safe for the next patient use.

For low level or intermediate level disinfection, instructions for non-critical reusable devices should describe how to effectively and safely apply the disinfectants to devices, and include the EPA label-recommended contact time (it should be conveyed that the disinfectant instructions should be followed exactly, especially with respect to contact time).

For high level disinfection, devices should be treated using a validated high level disinfection method and that method should be device specific. The device should then be rinsed to remove residues and dried prior to storage.

For terminal sterilization, the validated sterilization instructions should be followed. When the terminal process is completed, devices may be returned to service.
SUMMARY

• We reviewed--Why Project Firstline- was created and the recent trends in Hospital Acquired Infections

• Review Respiratory Infection trends (COVID, Influenza, RSV)- essentially back to pre-pandemic levels

• Viewed examples of Project Firstline Resources (available at the CDC website) to help health care personnel understand the areas of infection control risk

• Review Infection Prevention actions that can help address these risk issues shown Project Firstline
RECOGNIZE THE RISKS.
PROTECT YOUR PATIENTS.
How to Get Involved and Feedback

Project Firstline on CDC.gov: https://www.cdc.gov/infectioncontrol/projectfirstline/index.html

CDC’s Project Firstline on Facebook: https://www.facebook.com/CDCProjectFirstline

CDC’s Project Firstline on Twitter: https://twitter.com/CDC_Firstline

Project Firstline Inside Infection Control on YouTube: https://www.youtube.com/playlist?list=PLvrp9iOILTQZQGtDnSDGViKDdRtlc13VX

To sign up for Project Firstline e-mails, click here: https://tools.cdc.gov/campaignproxyservice/subscriptions.aspx?topic_id=USCDC_2104

• Project Firstline feedback form: https://www.cdc.gov/infectioncontrol/pdf/projectfirstline/TTK-ParticipantFeedback-508.pdf

• AAP-OC PFL Page

• AAP-CA3 PFL Page
  - https://aapca3.org/project-firstline/
QUESTIONS?