INFECTION PREVENTION & CONTROL

WHO WE ARE……

Infection Prevention & Control Consultants

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OBJECTIVES

Participants will be able to:

- Describe the purpose of an effective IPCP
- Discuss measures to prevent disease transmission
- Describe the role of surveillance
- Discuss the impact of COVID-19 on nursing homes
- Identify steps to strengthen the facility IPC program

F880

§483.80 Infection Control

- "The facility must establish and maintain an infection prevention and control program designed to provide a safe, sanitary and comfortable environment and to help prevent the development and transmission of communicable diseases and infections."
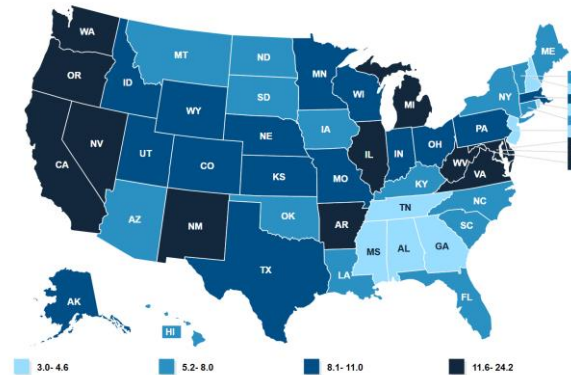
THE INFECTION PREVENTION & CONTROL PROGRAM

Purpose:

- Decrease the risk of infection to residents and personnel
  - Monitor for occurrence of infection and implement appropriate control measures
  - Identify and correct problems
  - Limit unprotected exposure
  - Minimize the risk.
  - Maintain compliance
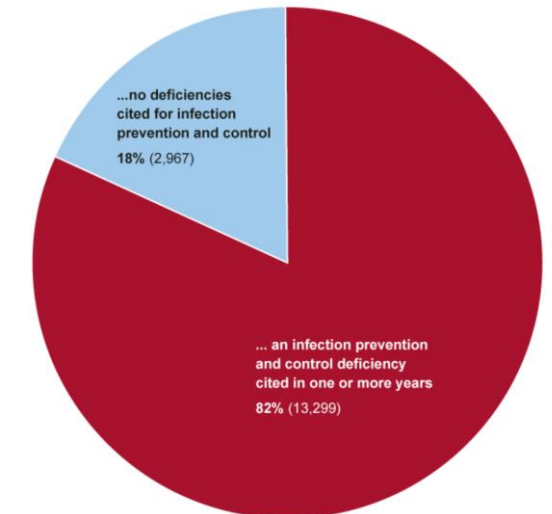
INFECTION CONTROL MATTERS

- Average number of deficiencies in US 9.5
- New Mexico 13.6

- US GAO Report – May 2020
  - Data between 2013-2017
  - 82% NF had IC deficiencies pre COVID

- CMS Press Release Aug 14, 2020
  - > $15 million in CMP to NF during pandemic
  - Non-compliance with IC and reporting failures
  - https://www.cms.gov/newsroom/press-releases/trump-administration-has-issued-more-15-million-fines-nursing-homes-during-covid-19-pandemic

Average Number of Deficiencies by State 2019

3.0- 4.6   5.2- 8.0   8.1- 11.0   11.6- 24.2

https://www.kff.org/other/state-indicator/avg-of-nursing-facility-deficiencies

Nursing homes with...

...no deficiencies cited for infection prevention and control
18% (2,967)

... an infection prevention and control deficiency cited in one or more years
82% (13,299)

https://www.gao.gov/products/GAO-20-576R

Risk assessment

Goals

Surveillance plan

Evaluation

ELEMENTS OF THE ICPC

INFECTION PREVENTION CONTROL PROGRAM INCLUDES…

- Written Plan

- Surveillance Systems

- Reporting of IC data

- Policies and Procedures

- Training and Resources

THE INFECTION PREVENTIONIST

- Advocates for Prevention
  - Hand Hygiene
  - Oversight of adherence to transmission-based precautions
  - Implementation of HAI strategies
    - Evidenced-based practice
  - Analyze, interpret and report surveillance data
  - Educator for all healthcare groups/professionals and residents
    - Prevention practices and control methods

INFECTION PREVENTIONIST SKILL SET

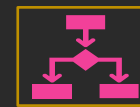Surveillance Tools

Health Informatics

Communication

Computer Software
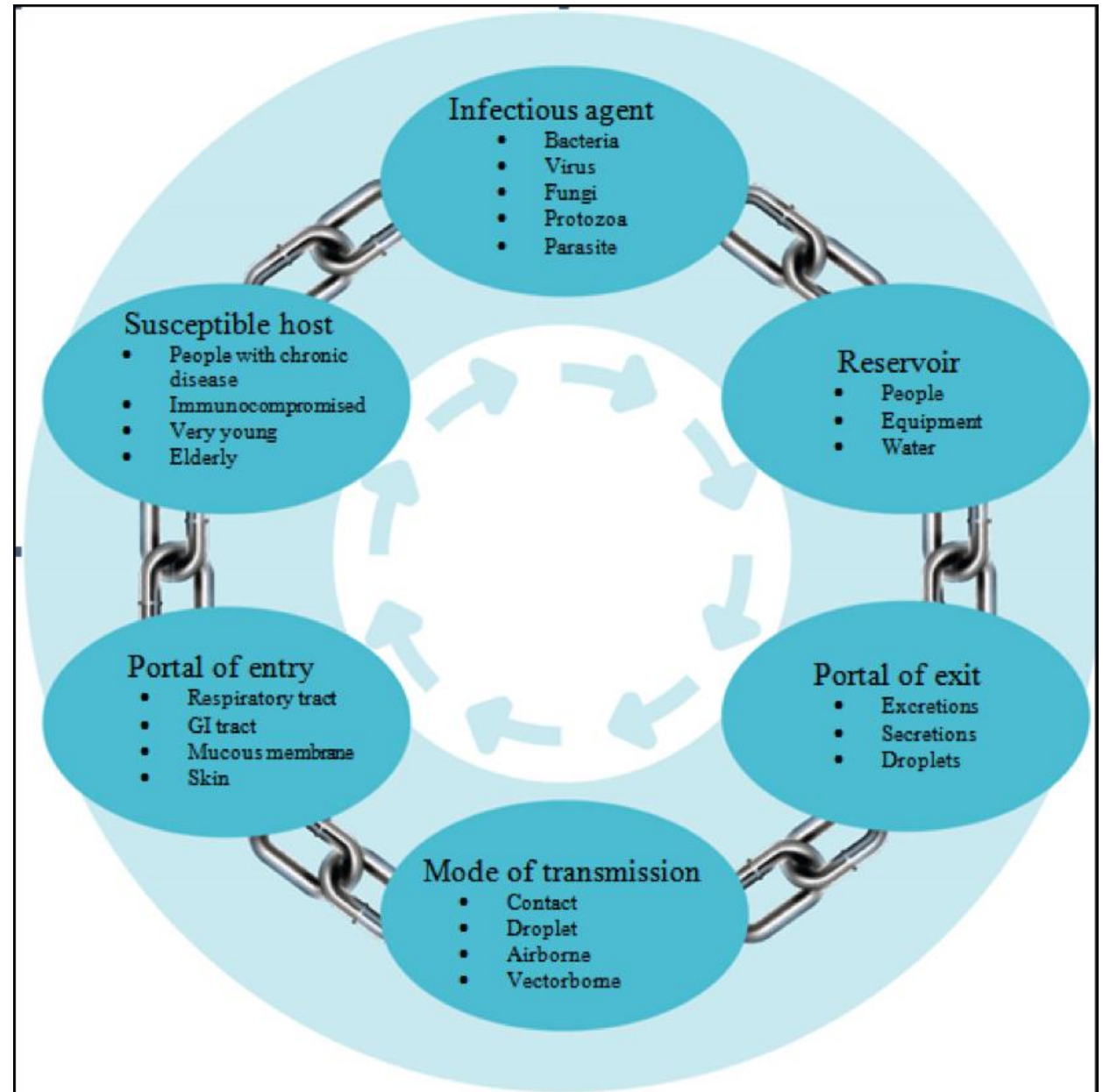
Integration of research into practice

Regulations and Standards

Outcome and Process Measures

PREVENTION MEASURES

CHAIN OF INFECTION

Infectious agent
- Bacteria
- Virus
- Fungi
- Protozoa
- Parasite

Reservoir
- People
- Equipment
- Water

Portal of exit
- Excretions
- Secretions
- Droplets

Mode of transmission
- Contact
- Droplet
- Airborne
- Vectorbome

Portal of entry
- Respiratory tract
- GI tract
- Mucous membrane
- Skin

Susceptible host
- People with chronic disease
- Immunocompromised
- Very young
- Elderly

Image from the Northern Ireland Regional Infection Prevention & Control Manual https://www.niinfectioncontrolmanual.net/basic-principles

HAND HYGIENE

Your 5 moments for hand hygiene at the point of care*

1 BEFORE PATIENT CONTACT

2 BEFORE A CLEAN/ASEPTIC PROCEDURE

3 AFTER BODY FLUID EXPOSURE RISK

4 AFTER PATIENT CONTACT

5 AFTER CONTACT WITH PATIENT SURROUNDINGS

*Adapted from the WHO Alliance for Patient Safety 2006

- Readily available
  - Point of use

- ABHS

- Soap and Water

- Assessment
  - Effective technique
  - Opportunities for Hand Hygiene

PERSONAL PROTECTIVE EQUIPMENT

PPE Selection and Application

Consider:

- Purpose
- Level of protection
- Staff familiarity
- Appropriate reuse
- Cleaning/disinfection
- Storage

CLEANING & DISINFECTION

- Overall cleanliness of the environment

- Resident rooms

- Common areas

- High touch areas
  - Residents and staff

- Shared areas
  - Showers

- Special Areas
  - Laundry
  - Kitchens
  - Therapy Gyms
  - Activity Rooms
  - Medication Rooms
  - Nursing Station

PLANS WITHIN THE PROGRAM

- Preparedness Plans
  - Pandemic/Emergency Plan

- Exposure Plans
  - BBP Plan
  - Respiratory/ TB Plan
  - Influenza Vaccination Plan

- Surveillance Plan
  - Respiratory Illness
  - UTI

ROLE OF SURVEILLANCE

SURVEILLANCE

A process of systematically collecting, managing, analyzing, interpreting, and reporting information

Essential component of an effective IP & C program

Serves multiple purposes
- Determine rates of disease occurrence
- Detect and investigate clusters or outbreaks
- Assess effectiveness of prevention and control measures
- Monitor occurrence of adverse outcomes
- Observe practices to promote compliance
- Provide Risk assessment data

TRACKING & REPORTING

- **Surveillance**
  - Process
  - Outcomes

- **Collect and Analyze Data**

- **Practice measures and recommendations**

- **Share Information**
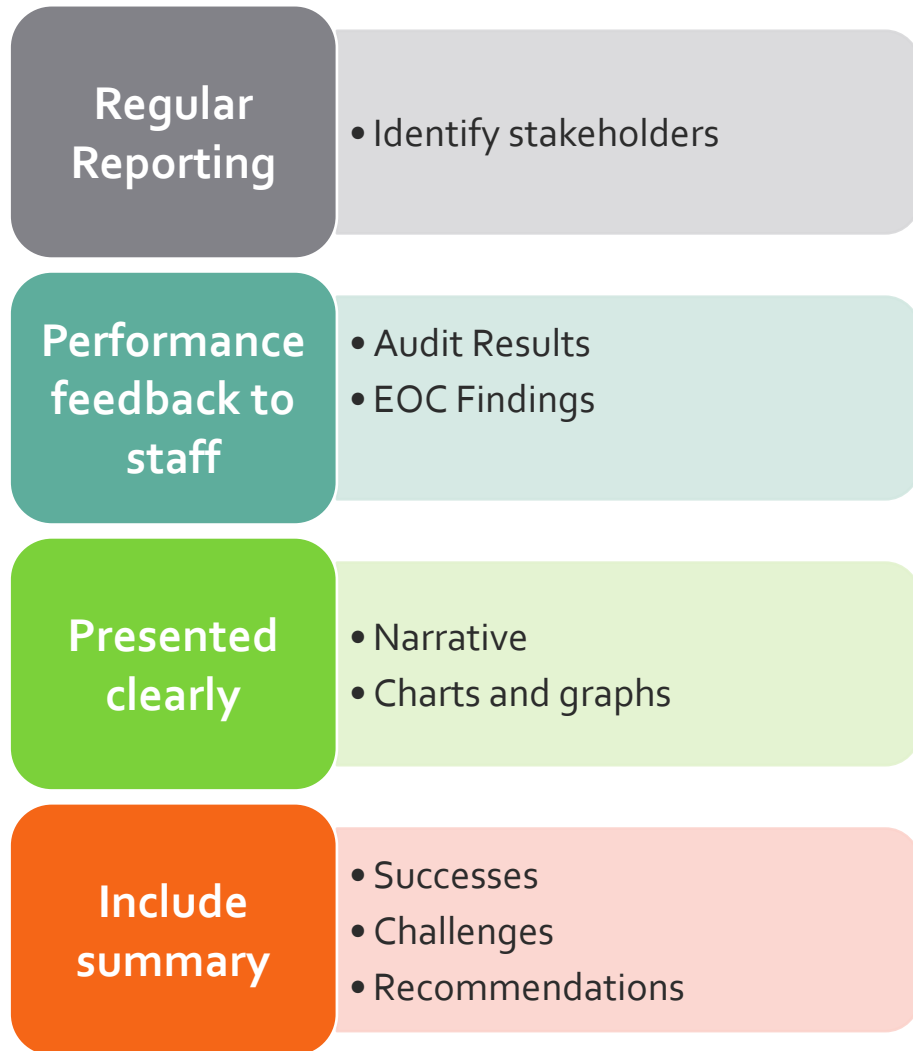
COLLECTING DATA

- Methodology dependent on
  - Chart Review
  - Observation Audits
  - Check lists
  - Line list
    - Respiratory Surveillance line list
      - https://www.cdc.gov/longtermcare/pdfs/LTC-Resp-OutbreakResources-P.pdf

LTC Respiratory Surveillance Line List

Date:_____/_____/_____

This worksheet was created to help nursing homes and other LTC facilities detect, characterize and investigate a possible outbreak of respiratory illness.

	A. Case Demographics					B. Case Location			C. Signs and Symptoms (s/s)					D. Diagnostics					E. Outcome During Outbreak^			
	Name	Age	Gender (M/F)	Resident (R) or Staff (S)	Residents Only: Short stay (S) or Long stay (L)	Residents Only: Bldg/Floor	Residents Only: Room/Bed	Staff Only: Primary floor assignment	Symptom onset date: (mm/dd)	Fever^B (Y/N)	Cough (Y/N)	Myalgia (body ache) (Y/N)	Additional documented s/s (select all codes that apply) H – headache, SB – shortness of breath, LA – loss of appetite, C – chills, ST – sore throat, O – other: Specify_____	Chest x-ray (Y/N)	Type of specimen collected (select all codes that apply) NP – nasopharyngeal swab, OP – oropharyngeal swab, U – urine, S – sputum, Other: Specify_____	Date of collection: (mm/dd)	Type of test ordered (Select all codes that apply) 0 – No test performed, 1 – Culture, 2 – PCR, 3 – Urine Antigen, 4 – Other: Specify_____	Pathogen Detected (Select all codes that apply) 0 – Negative results Bacterial: 1 – S. pneumoniae, 2 – Legionella, 3 – Mycoplasma Viral: 4 – Influenza, 5 – RSV, 6 – HMPV 7 – Other: Specify	Symptom resolution date: (mm/dd)	Hospitalized (Y/N)	Died (Y/N)	Case (C) or Not a case (leave blank)
1.																						
2.																						
3.																						
4.																						
5.																						
6.																						
7.																						
8.																						
9.																						
10.																						

If faxing to your local Public Health Department, please complete the following information:

Facility Name: _____   City, State: _____   County: _____

ANALYZING DATA

- Purpose of analyzing data is to identify useful information
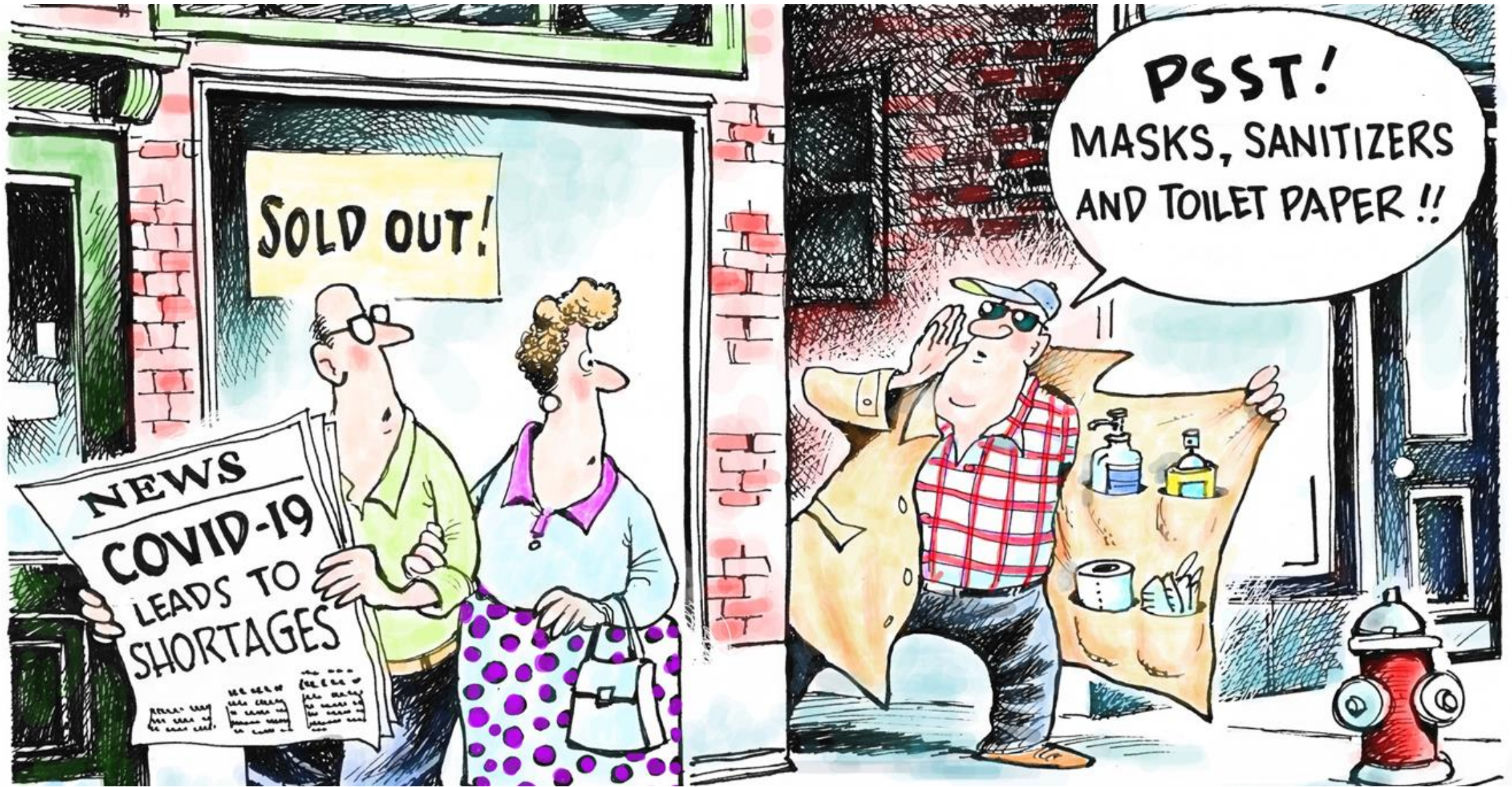 - Decision making
  - Identifying issues

Regular Reporting	• Identify stakeholders
Performance feedback to staff	• Audit Results • EOC Findings
Presented clearly	• Narrative • Charts and graphs
Include summary	• Successes • Challenges • Recommendations

REPORTING THE DATA

PROGRAM GOALS

- Surveillance Plan should align with
  - Regulatory reporting requirement
  - Program goals

- Surveillance reports provide documentation of progress towards goals

CONSIDERATIONS FOR THE SURVEILLANCE PLAN

- **Time Period of Observation**
  - Month, Quarter, Year
  - Frequency of event

- **Surveillance Criteria**
  - Case definitions
  - Use generally accepted criteria
    - NHSN, McGreer
  - Definitions need to be applied consistently and precisely
  - Can differ from clinical definitions

Eligibility Criteria

IMPACT OF COVID ON LTC

STAFFING

Impact On Facility Staffing

- Furlough time impacts staffing
- Family members need care
- Refusal to work
- Fear
- Financial
- Staff working with no/mild symptoms
- Managing testing/results

VISITATION

Restrictions to Visitation

- Impacts health and well being of residents
  - Mental – isolation anxiety
  - Physical – failure to thrive

- Responding to inquiries from family members may be time consuming
  - Frustrations

- Alternative Communication Tools
  - Video calls
  - Window visits

PERSONAL PROTECTIVE EQUIPMENT

- Challenges around sourcing

- Disruptions to supply chain

- Manufacturing

- Acute care facilities prioritized

- Variation in PPE supplies

- Education on safe PPE use
  - Donning and Doffing

- Extended use practices
  - PPE

THE ENVIRONMENT

- Restricted movement about facility
- Plastic barriers
- Creation of alternate spaces
- Relocation of residents
- Designated work areas

LTC TRANSMISSION RISK FACTORS

- Findings from Outbreak in King County, Washington State
  - Staff who worked in more than one facility
  - Poor adherence to standard and transmission-based precautions
  - Challenges to implementing proper infection control practices
  - Delay in recognition of cases
  - Limited availability of testing
  - Difficulty identifying persons with COVID-19 on the basis of signs and symptoms alone

McMichael TM, Clark S, Pogosjans S, et al. COVID-19 in a Long-Term Care Facility — King County, Washington, February 27–March 9, 2020. MMWR Morb Mortal Wkly Rep 2020;69:339-342. DOI: http://dx.doi.org/10.15585/mmwr.mm6912e1

STRATEGIES TO STRENGTHEN THE IPCP

UNDERSTANDING THE RISK

- **Risk Assessment**
  - Underpins the Infection Prevention and Control Program
  - Risk Measured
    - Probability of event occurring
    - Impact of severity of event occurring
    - Current level of preparedness/prevention

CONDUCTING A RISK ASSESSMENT

- Conducted Annually & When Significant changes occur

- Responsibility of the IP

- Interdisciplinary Approach
  - Representation from all departments

- Draw on facility data
  - Services provided
  - Special populations
  - Surveillance data

- Community/County data
  - Environmental risks
  - Natural/man-made hazards
  - Disease rates

TEAM ROUNDS

Environment of Care Rounds
- Identify issues early
- Schedule monthly
- Look at all areas of facility and grounds
- Team members
  - Facilities
  - IP
  - Administrator
  - Department managers
- More eyes looking for issues

EDUCATION

- Identify the Purpose
  - Annual competencies
  - New information or updates
  - New equipment or product
  - Response to requests
  - Regulatory information
  - Outbreak related
- Identify the Outcomes
  - New Skill
  - Recognition
  - Improvement

- Identify the Audience
  - Clinical staff
  - Ancillary/support staff
  - Residents
  - Family/visitors

- Evaluation
  - Return demonstration
  - Quiz
  - Pre and post
  - Monitoring
    - Observation/audits

HAND HYGIENE

- Purpose:
  - Outbreak Related

- Outcome
  - Recognition of when to perform
  - Increased activity
  - Compliance

- Audience
  - Facility wide
  - Residents
  - Visitors

- Evaluation
  - Return demonstration
  - Daily audits

- Methods
  - Demonstration
  - Hand outs
  - Posters
  - Videos
  - Visual aids

- Include:
  - When to preform hand hygiene
  - How to use the products
  - Routes of transmission
  - Consequences

ENVIRONMENTAL CLEANING

- Select appropriate disinfectant
- Follow directions on the disinfectant label
- Have effective cleaning procedures
- Single use vs. shared equipment
- Keep linens clean
- Provide education and training to all staff
- Monitor cleaning processes

SHARED RESIDENT EQUIPMENT

- Cleaning and Disinfection
  - Appropriate product for equipment item
  - Manufactures recommendations
  - Contact time of disinfection product

- Identifying Clean vs. In use
  - Process
  - Monitor
  - Storage

- High Risk Areas/Equipment
  - Showers
  - Therapy gyms
  - Scales
  - Lifts

SUMMARY

- IPCP is a high focus area

- An effective IPCP is needed to respond to emerging infections

- Impact of COVID-19 has highlighted deficiencies in IPC programs

- Surveillance data collection, analysis and reporting is essential to identify both opportunities for improvement and successful interventions

- Infection Prevention and Control is a program not a person

THANK YOU