GROWING PAINS, GETTING BY, AND MOVING ON WITH COVID-19 IN LTC

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PRESENTED BY WENDY BOREN, RN, BSN & CRYSTAL PLANK, RN, BSN, RAC-CT
UNIVERSITY OF MISSOURI-COLUMBIA QIPMO
Backwater Jacks pool was still crowded late Sunday afternoon, May 24, 2020, on Memorial Day weekend in Osage Beach, Missouri. Images from this scene and several other bars in the area are the focus of national scrutiny at a time when experts are still calling for social distancing due to the continued threat of the COVID-19 coronavirus. St. Louis County Executive Dr. Sam Page urged partygoers to self quarantine for fourteen days. PHOTO BY PAT TOSIE
“Never Let a Good Crisis Go to Waste.”
Covid is real!

You know of a home that has it!

Need to get PPE

Time to ramp up infection control!

Covid is on the news

Getting through... Getting on, moving forward... Working the plan and doing OK 😊
BASIC ICS STRUCTURE

We are here

Incident → Response → Recovery/Reevaluation
Growing Pains
Getting By
Moving On
Probably most of your staff

Residents
HIGH RISK

Based on what we know now, those at high-risk for severe illness from COVID-19 are:

- People 65 years and older
- People who live in a nursing home, long-term care facility, and other congregate living spaces such as prisons, rehabilitation centers, dormitories,
- People of all ages with underlying medical conditions, particularly if not well controlled, including:
  - People with chronic lung disease or moderate to severe asthma
  - People who have serious heart conditions
  - People who are immunocompromised
  - People with severe obesity (body mass index [BMI] of 40 or higher)
  - People with diabetes
  - People with chronic kidney disease undergoing dialysis
  - People with liver disease
SYMPTOMOLOGY

Symptoms may appear 2-14 days after exposure to the virus.

- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea


“Unofficial symptoms”

- COVID toes
- Rash
ASPR TRACIE created this timeline of COVID-19 progression based on a review of multiple reports (e.g., anecdotal physician experiences, webinars, journal articles, and news articles).

**Figure 5. Timeline of COVID-19 Disease Progression**

- **Day 1**: Patients initially seek treatment between day 3 and day 5.
- **Day 3**: Mild symptoms, generally 2-5 days after exposure, sometimes up to 14 days.
- **Day 5**: Hospital admissions between day 5 and 7.
- **Day 7**: Symptoms tend to worsen.
- **Day 8**: For patients with more moderate to severe disease, symptoms start to worsen.
- **Day 10**: If patients have severe illness, day 10-11 is typically the point where they are admitted to the ICU.
- **Day 17**: Most patients recover or succumb by day 17.
- **Day 27**: Average hospital stay about 27 days.

This timeline shows an approximation of disease progression for COVID-19 patients who admitted to the hospital between day 5 and 7. Patients with milder symptom presentation follow a similar path in terms of length of illness, but obviously do not progress to critical illness. COVID-19 patients can rapidly progress to death over several days versus weeks when placed on a ventilator.

[https://asprtracie.hhs.gov/](https://asprtracie.hhs.gov/)
Diseases and Conditions Reportable in Missouri (19 CSR 20-20.020)
Numbers in parenthesis represent ICD-10 Codes

Report Diseases and Conditions to your local health agency or to:
Missouri Department of Health and Senior Services during business hours 573-751-6113,
after hours and on weekends 800-392-0272 or by fax 573-526-0235

1. Immediately reportable diseases or findings shall be reported to the local health authority or to the Department of Health and Senior Services immediately upon knowledge or suspicion by telephone, facsimile or other rapid communication. Immediately reportable diseases or findings are—

(A) Selected high priority diseases, findings or agents that occur naturally, from accidental exposure, or as the result of a bioterrorism event (128, 265.4):

- Anthrax (A22, Z20.810, Z20.818)
- Botulism (A00.1, A48.31, A48.32)
- Paralytic Poliomyelitis (A80.0, A80.1, A80.2, A80.30, A80.39, A80.9)
- Plague (A00)
- Rabies (Hum) (A82, Z00.3)
- Bacterial (T38.6X)
- Severe Acute Respiratory Syndrome-associated Coronavirus (SARS-CoV) Disease (J12.81, R07.21)
- Smallpox (B03)
- Tularemia (suspected intentional release) (A21)
- Viral hemorrhagic fever, suspected intentional (e.g., Ebola, Marburg, Lassa, Lujo, new world Arasanviruses (Guarantary, Machupo, Junin, and Saba viruses), or Crimean-Congo virus) (A96, A98, A99)

(B) Instances, clusters, or outbreaks of unusual diseases or manifestations of illness and clusters or instances of unexplained deaths which appear to be a result of a terrorist act or the intentional or deliberate release of biological, chemical, radiological, or physical agents, including exposures through food, water, or air. (T38, 265.4)

(C) Instances, clusters, or outbreaks of unusual, novel, and/or emerging diseases or findings not otherwise named in this rule, appearing to be naturally occurring, but posing a substantial risk to public health

- Outbreaks (including nosocomial) or epidemics of any illness, disease, or condition that may be of public health concern, including illness in a food handler that is potentially transmissible through food. (A05)
- Pertussis (A37)
- Poliovirus infection, non-paralytic (A00.4, A00.9, B91)
- Q fever (acute and chronic) (A78)
- Rabies (animal)
- Rubella, including congenital syndrome (B06, P05.0, Z00.4)
- Shiga toxin-producing Escherichia coli (STEC) (A04.3, B96.21-B96.23)
- Shiga toxin positive, unknown organism
- Shigellosis (A05)
- Staphylococcal enterotoxin B (A05.0)
- Typhus, including congenital typhus (A350, A53, A65, O98.11, O98.12, O98.13)
- T2-mycotoxins (T64.81-T64.84, Y38.6X)
- Tetanus (A33-A35)
- Tuberculosis disease (A15, A17-A19, B90, B95, O98.0, P37.0)
- Tularemia (all cases other than suspected intentional release) (A21)
- Typhoid fever (Salmonella Typhi) (A01, Z32.0)
- Vancomycin-intermediate Staphylococcus aureus (VISA), and Vancomycin-resistant Staphylococcus aureus (VRSA)
- Venezuelan equine encephalitis virus meningitis disease (A92.3, A92.9)
- Venezuelan equine encephalitis virus non-encephalitis disease (A09.2, A09.8, A09.9)
- Viral hemorrhagic fever other than suspected intentional (e.g., Ebola, Marburg, Lassa, Lujo, new world Arasanviruses (Guarantary, Machupo, Junin, and Saba viruses), or Crimean-Congo virus) (A96, A98, A99)
- Yellow fever (A95)
GETTING BY MOVING ON

C'MON GUYS!!

WE CAN DO IT!!
COVID IN LOS ANGELES VETERAN’S HOME--

“During March 26–April 23, a total of 19 cases of COVID-19 were diagnosed among 99 SNF residents (19.2%). At the time of diagnosis, 14 of 19 residents were asymptomatic, eight of whom were presymptomatic; one patient died. One half of the eight staff members with a diagnosis of COVID-19 were initially asymptomatic. This report demonstrates the high prevalence of asymptomatic SARS-CoV-2 infection that can occur in SNFs, highlighting the potential for widespread transmission among residents and staff members before illness is recognized and demonstrating the utility of universal RT-PCR testing for COVID-19 after case identification in this setting.”

KEY POINT: limited OVERALL testing and delayed recognition on symptoms can lead to big outbreaks!

https://www.cdc.gov/mmwr/volumes/69/wr/mm6921e1.htm?s_cid=mm6921e1_w
COVID IN LOS ANGELES VETERAN’S HOME

PCR testing tests for ACTIVE, LIVE viruses so a negative test this week may not be a negative test next week.

This is what they did in the LA home and their results:
1. Quickly isolated sick residents.
2. Cohorted (moved together) of positive but clinically stable residents into a ward A.
3. Restricted staff movement between units.

Results:
Restricting staff movement between SNF wards reduced potential for transmission between wards. With these measures, the outbreak in ward A was suppressed within 1 week, the outbreak in ward C was suppressed within 2 weeks, and no cases occurred in ward B.

https://www.cdc.gov/mmwr/volumes/69/wr/mm6921e1.htm?s_cid=mm6921e1_w
Predictive Labs

Taken from What’s Working for COVID-19 Patients, and validated by numerous subject matter experts, articles, and presentations:

- **CBC with differential:** The white blood count is usually normal, lymphopenia is very frequent, and mild thrombocytopenia is common. ([https://bit.ly/2UQO8CT](https://bit.ly/2UQO8CT))
- **CMP with magnesium and phosphorus:** Liver function tests (ALT, AST) commonly elevated
- **Coagulation studies with D-dimer:** PT/PTT/INR is usually normal on initial presentation. Some develop DIC. The D-dimer is commonly elevated and severe elevations are associated with poor outcomes.
- **COVID PCR:** (RVP if you suspect alternate viral etiology, though coinfection is possible.) False-negative COVID testing found in 10-30% percent of cases (especially if samples are collected too early or inappropriately).
- **Procalcitonin:** This is usually not increased with COVID-19. If elevated, it may indicate an alternate diagnosis or superimposed bacterial infection. Procalcitonin is not routinely elevated higher than 0.5 ng/mL in these patients ([https://bit.ly/3bDobxu](https://bit.ly/3bDobxu)). It does seem to increase as disease progresses. An elevated procalcitonin in the emergency department should lead you to consider an alternative or additional diagnosis more strongly.
- **CRP** (sometimes ESR too, but difficult for some because it is often performed manually): This is elevated in COVID-19 patients, and it seems to trend upward with the progression of the disease. It may have some prognostic correlation.
- **CPK, LDH, ferritin, urine legionella, blood cultures, lactate, troponin, CK, CKMB, ABG, and G6PD:** Chloroquine causes hemolytic anemia in G6PD; these labs are helpful for inpatient teams as well.
MORE LABS TO NOTE

Poor Prognostic Factors

- Absolute lymphocyte count <0.8
- LDH >245 U/L
- Ferritin >300 ug/L
- CRP >100 mg/L
- D-dimer >1000 ng/mL. (https://bit.ly/3b1GQYT)
- Rising troponin, not attributed to renal insufficiency (JAMA. March 2020)

COVID-19 Laboratory Testing (updated 5.18.20)

The FDA has published updated information on all the tests available for COVID-19 diagnostics.

The FDA has provided a list of available serological tests along with their expected performance and accuracy.
There is an increased incidence of VTE and likely a role of microthrombi in COVID. Lots of studies being performed on this right now. Hospitals are using aggressive anticoagulation therapies.

Two different studies showed cause of death in an autopsy:
Hamburg, Germany: 7/12 DVT, 4/12 PE
Wuhan, China: 41/48 DVT (85%)
    Most distal: 36/48 (75%); 5/48 (10%) proximal

What this means for you? In your COVID assessments, watch for s/s of DVTs and report immediately if you suspect anything!

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7162769/
Why lay prone? Think about where your lungs are and where fluid goes. Wouldn’t you want to breathe easier?
Do not lie patient prone unless ordered to do so by their physician. While it may help them to breathe, there are other considerations/risks you may not be aware of. However, it could be worth exploring on an individual basis.

https://repository.netecweb.org/exhibits/show/ppe-cons/item/1002
Emergent Return to Supine Position for Prone Position Patient

1. Use the full sheet under the patient to turn the patient
2. Cover the patient fully with the sheet, bringing together the edges on the side toward you
3. Pull out the slack in the sheets
4. Rapidly assure there is sufficient slack in remaining lines and tubes for the patient movement
5. Rotate the patient toward the ceiling and then supine
https://www.youtube.com/watch?v=sQwheE7wJZY
RESPIRATORY THERAPY NOW!

- Breathing exercises
- Use incentive spirometers
- Inhalers vs nebs
- Be very cautious with your residents that use CPAPs. FYI, the aerosols from a CPAP can travel to cover a 16 feet in only 3 breaths. (Think about that roommate!!)
- Consider cutting back on carbohydrates and adding good fats. Carbohydrates as they break down increase the amount of CO2 in the body.
- Don’t overuse dairy because it thickens secretions

Possibly coming hyperbaric treatment for COVID-19
MOVING ON
Infection Control Team: Infrastructure from the Front Lines

- Infection prevention nurse
- Maintenance
- Dietary: Supporting units and specialized diets, accommodating for staff meals
- Activities: Repurposing therapy roles, individualized focused activities
- Housekeeping: Cross-training roles, HR policies, Deputize / designate / assign personnel
- Staff educator/coordinator

INFECTION CONTROL TEAM - INFECTION CONTROL NURSE/INFECTION PREVENTIONIST

The infection preventionist should act as the overseer. They will be accountable for infection control operations, including overseeing policies, tracking and documentation, and accountability.

Other considerations/duties:

• Implementing telehealth operations for COVID patients
• Creating policies/procedures related to outpatient procedures and appointments *make this a working document that can be altered as contagion requirements may change per disease.
• Setting up the COVID unit (lots of example out there and QIPMO can help—even do a virtual site visit with you!)
• Laboratory testing coordination and reporting with public health department, DHSS, and CDC
• Equipment logistics
  • HEPA filters for Ambu-bags
  • PPE type, storage, tracking, assignment, cleaning, fit testing (if needed)
• PPE education
• “Doff-icers”
• Oxygen concentrators, tubing, E-tanks, portability
• IV poles and equipment
• Disposable vitals equipment
• Zoning for contagion (red, yellow, green)
INFECTION CONTROL TEAM—MAINTENANCE

The maintenance person will be your go-to man/woman in rebuilding or restructuring your physical building.

Other Considerations:
• Mapping of beds on units, including routes for egress and staying within fire code
• Ventilation systems and possible negative air spaces
• How or if to utilize privacy curtains as room dividers
• Lockers for staff
• Shower unit for staff working on COVID unit
• Staff entrance designation and security
• Additional storage requirements for PPE, nursing equipment, cots, food
• Repurposing of normally non-resident areas for additional beds/units
• Electrical and technical components/needs for converted units
The housekeeping infection control team leader should oversee considerations related to the appropriate disinfects, waste management, and biohazard.

**Other Considerations:**
- Hand soap, paper towels
- Hand sanitizer (and batteries if touch sensitive units) (and deployment)
- Disinfectant wipes and sprays
- Toilet paper
- Linen & laundry handling
- PPE for housekeeping staff
- Commodes (including bedside commodes)
Supporting Staff (ASPR TRACIE Subject Matter Experts)

- Have PPE safety officers (e.g., non-clinical nurse educators, administrative staff) round regularly to instruct/supervise safe PPE use. Assign “doff-icers” to ensure PPE is doffed correctly.
- Care for the caregiver is immeasurably important. Ensure staff have access to mental health support and are given information on self-care in disasters.
- Be prepared to implement “Line of Duty Death” plan when needed- can help ease the loss for family and colleagues.
- Internal communication should occur regularly and take many forms (e.g., emails, rounding, town halls). Ensure engagement and duplicate messaging with all staff and shifts.
- Tracking absenteeism can help with staff planning.
- Promoting effective technology-based patient/family interface can help alleviate stress on all parties and contribute to sense of satisfaction for staff.
- Ensure healthcare facilities are practicing social distance policies for staff not wearing PPE or not working in clinical areas of the facility.
Learn from the stories! It won’t work if you don’t have everyone on board.
Infection control affects your WHOLE facility and ALL your staff. *crazy, true story
EVERYONE wear your masks, correctly, all the time!!
WASH YOUR HANDS!!!!!!! WASH YOUR HANDS!!!!!!
Support each other in positive ways, especially during donning and doffing of PPE, because doing it wrong hurts everyone.
Talk to your families, often.
Welcome the community efforts to support and serve, whether it be lunches, flowers outside the windows, signs, virtual hugs.
INFECTION CONTROL SURVEY—OUTCOMES, WHAT THEY WANT, HOW THEY WANT IT

• In the building about 4 hours on average.
• Asking for:
  - Cleaning and disinfection policy
  - COVID-19 policy
  - Hand hygiene policy
  - In-services
  - Surveillance /monitoring
  - Emergency Preparedness

• Concerns:
  Staff eating at the same table
  Staff not sanitizing hands between passing out each resident tray

• Questions:
  Hand hygiene, social distancing and what would you do if the majority of your staff became sick.
INFECTION CONTROL SURVEY—OUTCOMES, WHAT THEY WANT, HOW THEY WANT IT

Asking for:

- Cloth mask policy—proper way to wash and wear them and make sure they don’t slip below the nose

Watching screening, handwashing, meal pass, twice daily temp checks, went into the kitchen.

- Concerns:
  - Staff eating at the same table
  - Staff not sanitizing hands between passing out each resident tray
  - Staff not knowing the infection control policies

- Questions:
  - Hand hygiene, social distancing and what would you do if the majority of your staff became sick.
Region A:
Erin Lynch, Mid-America Regional Council
elynch@marc.org
816-701-8390

Region B, D, E, F, G, H & I:
Jackie Gatz, Missouri Hospital Association
jgatz@mhanet.com
573-893-3700

Region C:
Dale Chambers, St. Louis Area Regional Response System
Dale.chambers@ewgateway.org
314-421-4220
Missouri Healthcare Coalition
Liaison Contacts

Region B
Carissa Van Hunnik
cvanhunnik@mhanet.com
573-893-3700, ext. 1329

Regions D, G, I
Stacie Hollis
shollis@mhanet.com
573-893-3700, ext. 1321

Regions E, F
Kara Amann-Kale
kamann-kale@mhanet.com
573-893-3700, ext. 1402

Region H
Keri Barclay
kbarclay@mhanet.com
573-893-3700, ext. 1407
The State of Missouri has been actively engaged in outreach to medical equipment manufacturers and distributors in an effort to open up new supply chains for PPE and other critical medical supplies. In an effort to streamline this process, we are very excited to announce the Missouri COVID Supply Solution PPE Marketplace is live and ready for
HealthCare/Business Registration

Facility Name

Street Address

City

State
Missouri

Zip Code

Phone Number

Ownership

County

Type

Admin Full Name

Admin Email
borenw@missouri.edu

Admin Phone Number

Emergency Services Available

Disclaimer: This website does not support Internet Explorer 11 browser. Use Chrome, Firefox, Edge, or Opera for full functionality.
We appreciate you so much. Stay safe.
Wendy, Crystal, Debbie, Katy, Carol, Mel, Mark, Libby, Nicky, Jess, Ronda, & Marilyn
Your QIPMO Nurses

Wendy’s email: borenw@missouri.edu

Katy’s email: nguyenk@missouri.edu

Crystal’s email: plankcl@missouri.edu

Debbie’s email: poold@missouri.edu

Melody’s email: schrockm@missouri.edu

Carol’s email: siemc@health.Missouri.edu
QIPMO Coaches & Administrative Team

Nicky’s email: martincaro@missouri.edu

Libby’s email: youseme@missouri.edu

Mark’s email: francismd@missouri.edu