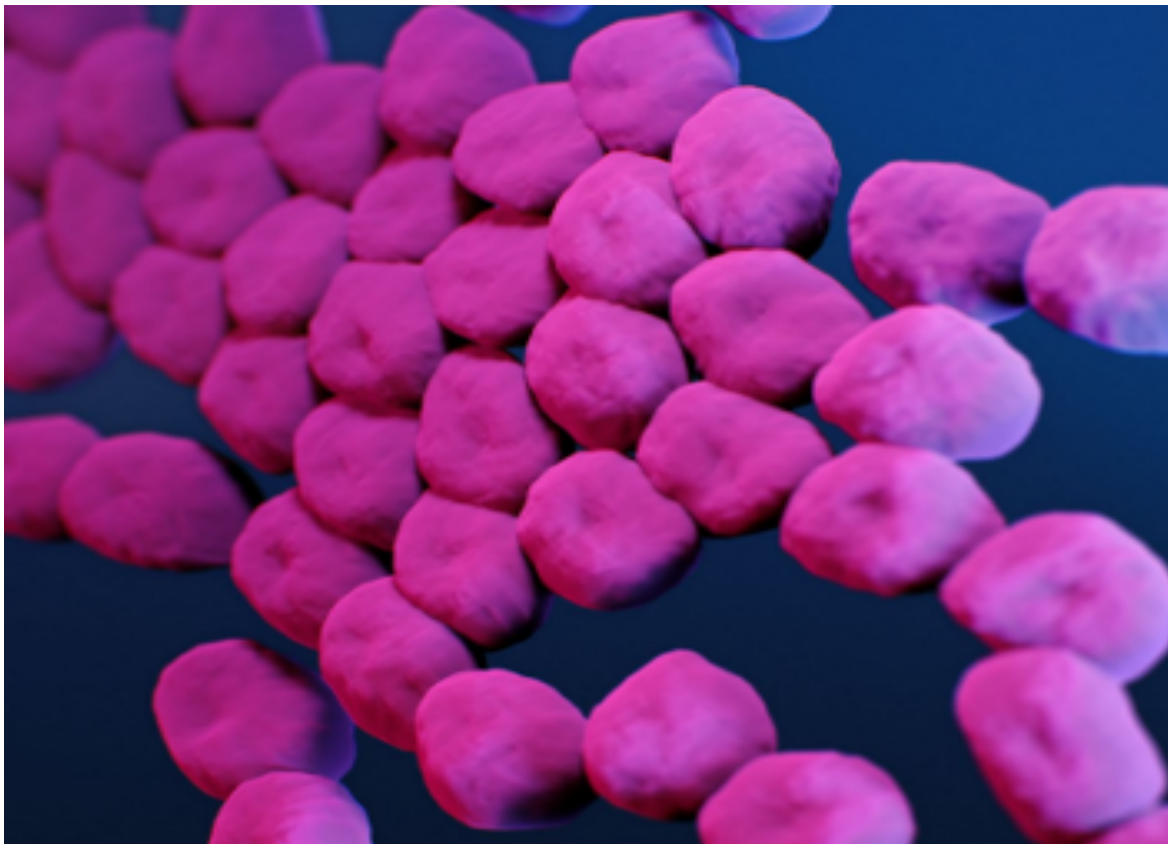


Facilitator Guide

Healthcare Associated Infections – A Long-Term Care Facility Based Tabletop Exercise focusing on the MDRO Carbapenem-resistant *Acinetobacter baumannii* (CRAB)

Exercise Name	Healthcare Associated Infections Tabletop
Exercise Dates	October 2023 through May 2024
Scope	This exercise is a tabletop, with 8 planned four-hour tabletops in 8 regions across the state of Iowa. Exercise play is limited to all partners that would be involved in the response and mitigation of an outbreak of CRAB in a long-term care facility.
Focus Area(s)	Prevention, Protection, and Response
Capabilities	Planning; Operational Coordination; Infrastructure Systems; Logistics and Supply Chain Management; Operational Communications; Public Health, Healthcare and Emergency Medical Services; Situational Assessment
Objectives	Goal 1: Increase awareness among Iowa hospitals and their partners about emerging multi-drug resistant organisms (MDRO) threats. Objectives – 1. Describe the characteristics of CRAB, i.e., prevalence, mode of transmission, treatment, and prevention. 2. Recognize the current emerging threat of MDRO to global, federal, state, and local public health. Goal 2: Increase the readiness and preparedness of Iowa hospitals and their partners to quickly identify, respond to, contain, and develop future prevention strategies for an emerging MDRO event. Objectives – 1. Identify local and state partners needed to effectively address an MDRO event and continuously maintain these partnerships, including coordinating an effective and efficient response. 2. Review evidence-based planning and response strategies appropriate to the participants' situations. 3. Identify the principles of Incident Command System to a MDRO event. 4. Explain the process of requesting additional resources through the local, state and federal partners including the Strategic National Stockpile program. Goal 3: Assist in identifying materials needed to allow individual facilities to successfully conduct similar MDRO response exercises in the future. Objectives – 1. Acknowledge evidence-based literature and apply these to update the current biological response plan. 2. Identify types of communication venues such as social media sites and webinar platforms commonly used by the participants. 3. Determine technological and personnel resources needed to enable future exercise presentations.
Threat or Hazard	Biological - multidrug-resistant organism (MDRO): Carbapenem-resistant *Acinetobacter baumannii* (CRAB)

Scenario	Interactive, discussion-based exercises that focus on the awareness and response of hospitals related to multidrug-resistant organism (MDRO) threats. MDRO's are bacteria that resist treatment with more than one antimicrobial. They are found mainly in hospitals and long-term care facilities and are often spread from patient to patient through the hands of healthcare workers.
Sponsor	University of Iowa Institute of Public Health Research and Policy, University of Iowa Carver College of Medicine, Iowa State Hygienic Laboratory, and Iowa Department of Health and Human Services
Participating Organizations	Long-term care facilities, their partners and those responsible for community emergency preparedness including Infection Prevention & Control, Emergency Preparedness, Public Health, Medical/Physician Administration, Emergency Management Agencies, Nursing Administration, Clinical Support, Healthcare Administration, Clinical Laboratory, Housekeeping and Emergency Medical Services. Appendix L includes a full list of participating agencies.
Point of Contact	Vickie Miene, Interim Director, Iowa Institute of Public Health Research and Policy, University of Iowa College of Public Health, N571-B CPHB, 319-384-1511, Vickie-miene@uiowa.edu, Iowa City, IA., 52242

AGENDA

Welcome and Introductions (15 minutes)
Review of Exercise, Goals & Objectives (20 minutes)
Input 1 – Ground Zero, the First Patient (10 minutes)
Input 2 – Case History, Admissions and Transfers, Oh My! (20 minutes)
Input 3 – Communications and Actions (20 minutes)
Input 4 – Facility Assessments (20 minutes)
BREAK – (15 minutes)
Input 5 – Developing and Implementing a Screening Plan and Communications (30 minutes)
Input 6 – Additional Screening Results and Follow Up Communication (20 minutes)
Input 7- Long Term Action Plan (20 minutes)
BREAK – (15 minutes)
Hotwash – (25 minutes)
Closing Comments and Next Steps (10 minutes)
Adjourn

INTRODUCTION

Facilitators guide exercise play and are responsible for ensuring that participant discussions remain focused on the exercise objectives and making sure all issues are explored as thoroughly as possible within the available time.

A key Facilitator role is to encourage all participants to contribute to the discussion, and to remind them that they are discussing hypothetical situations in a no-fault environment. Facilitators also build and maintain an environment where all the participants feel comfortable speaking honestly and where differences of opinion are respected. Facilitators should ensure that everyone feels included in the conversation and has an opportunity to participate. **Facilitators should not lecture or dominate the discussion, but rather keep conversations moving.** Additionally, Facilitators may want to use an issues list or "parking lot" to document valid points that are raised by participants during the exercise but that risk taking the conversation off topic; these items can be assigned for later discussion to the appropriate persons.

AN EFFECTIVE FACILITATOR

- Keeps discussions on track and drives play to meet exercise objectives.
- Controls group dynamics and manages strong personalities.
- Speaks competently and confidently without dominating the conversation.
- Has subject-matter expertise or experience.
- Has an awareness of local plans and procedures.
- Captures key findings and discussion points

Administrative Considerations

Facilitators should discourage side conversations, ensure cellular phones are turned off or made silent, and control group dynamics. Table arrangements for the exercise should try to maximize the interaction between the Facilitator and participants. During the exercise, Facilitators need to constantly be aware of time constraints, notifying participants about progress and moving the discussion toward completion of exercise objectives when time is running short.

Welcome and Introductions – 15 Minutes

When participants are ready:

- Call room and participants to order
- Introduce topic of exercise
- Introduce self and support staff
- Provide brief opening remarks and your role during exercise
- Introduce Dr. Herwaldt, Vickie Miene to call upon them to offer opening remarks
- Provide housekeeping information

Exercise Schedule

Provide overview of each item in the exercise schedule – refer participants to their Exercise Packets

Exercise Overview

Briefly review the purpose of the exercise, reviewing the capabilities and focus areas as listed in the packets.

Exercise Structure

The exercise has 7 modules to discuss operational response and mitigation. Each module consists of two main activities: a scenario overview and facilitated discussions.

Exercise Objectives – Review the objectives listed in the Participant and Facilitator Packets.

Exercise Guidelines -

Briefly review the exercise guidelines with participants:

- This is an open **no-fault environment** - varying viewpoints, even disagreements, are expected
- Base your responses on **existing plans**, policies, procedures, capabilities, and resources
- Please assume the exercise **scenario is plausible**, and events occur as they are presented
- Decisions are **not precedent setting**; consider different approaches and suggest improvements
- There is **no "hidden agenda"** nor are there any trick questions
  Issue identification is not as valuable as suggestions and recommended actions that could improve response efforts; problem-solving efforts should be the focus.
- During the exercise, you should play the role you would responsible for during an actual outbreak.

<u>Reminder of Facilitator Responsibilities</u>

- This exercise follows the FEMA format. Facilitators are for assisting as follows:
- Set the stage and facilitate the exercise;
- Assist the group by offering technical advice, question them about their role(s), direct their learning and help them focus on the task at hand;
- Facilitate entire during the discussion sessions;
- Providing training on the materials presented as needed, and;.
- Evaluate how the group(s) is doing during each input.

The facilitators are NOT there to give answers, as there are no right or wrong answers. They are there to guide the process.

TABLETOP EXERCISE

INPUT 1 – Ground Zero, the First Patient

20 minutes

NOTE: Long-term care facility-based players are employed by the Cy-Hawk Retirement Castle.

For this input refer to:
Appendix A: Illinois & Iowa Medical and Transfer History
Appendix Aa: Iowa Medical Transfer History Table

On March 6, the Iowa HHS Healthcare Associated Infections (HAI) nurse clinician for the region contacted Cy-Hawk Retirement Castle to report that they notified that a culture of a current resident Mr. Adam's decubitus ulcer wound grew carbapenem-resistant *Acinetobacter baumannii* (CRAB). The specimen was collected on February 25th when Mr. Adams' was residing at the Cy-Hawk Retirement Castle. He is currently a patient at the Silver Gardens Hospital. This is the first time this organism has been isolated from a resident in the Castle.

The Iowa HHS HAI Program has started an investigation.

In general, CRAB is spread in healthcare settings primarily person-to-person. However, CRAB can also be spread via contaminated surfaces and equipment and during procedures that create aerosols or droplets. CRAB survives better in the environment than do many other bacteria.

Objectives for Input 1 Operational Period
What should be accomplished during this operational period?

Things to Think About

- What is your role at this point?
- What are some key questions to ask as you begin planning a response to this information?
- What is your facility's policy and procedure for investigating possible clusters of infection? If there is no policy or procedure, what steps should be taken to investigate a possible cluster?
- What guidance(s) are available to guide actions? (Iowa HHS/SHL, Infection Control Plan, Reportable Disease Guidelines)
- Where would you find information or guidance that might be needed?

▶ Players may want to record their answers for future use on the provided worksheet

INPUT 2 – Case History, Admissions and Transfers – Oh My!

20 minutes

Refer to:
Appendix A: Illinois & Iowa Medical and Transfer History
Appendix Aa: Iowa Medical Transfer History Table
Appendix B: Mr. Adams' Medical History before to Arriving in Iowa

The CRAB isolate was forwarded to the State Hygienic Laboratory (SHL) in Coralville, IA, so that they could identify the mechanism behind the carbapenem resistance, which has implications for transmissibility. This testing is part of the statewide surveillance program for CRAB mechanisms.

On March 9, the Iowa HHS HAI Program notifies the Castle that the isolate produces Verona integron-encoded metallo-B-lactamase (VIM). VIM is a plasmid-mediated carbapenemase that makes bacteria highly resistant to antibiotics. This mechanism has not been identified in Iowa, although it has been identified in facilities in the Chicago area. As such, it is treated as Novel, Tier 2 organism per the CDC initial containment response.

The CDC goals of initial containment response for MDROs are:
https://www.cdc.gov/hai/mdro-guides/containment-strategy.html

1. Identify affected patients/residents.
2. Ensure appropriate control measures are promptly implemented to limit further spread.
3. Determine if transmission occurred within a healthcare facility and spread to other facilities (Tiers 1-2).
4. Characterize novel organisms or mechanisms to guide further response actions, patient/resident management, and future responses.
5. Coordinate response with ongoing prevention activities (e.g., MDRO education, infection prevention and control improvement initiatives, routine colonization screening, and improved interfacility communication) in the region

Silver Gardens Hospital moved Mr. Adams and Roommate Zander to private rooms and initiated contact precautions.

Objectives for Input 2 Operational Period
What should be accomplished during this operational period?

Things to Think About

- Given the VIM result reported by Iowa HHS on March 9, would the approach to the investigation change? If so, how?
- What information in Mr. Adams' history would be concerning with respect to how or where he became colonized or infected with CRAB and the risk of transmission of CRAB within the Castle and Silver Gardens?
- Given Mr. Adams' case history, how likely is CRAB transmission?

- What should be done to determine if transmission of CRAB has occurred within the Castle and Silver Gardens?
- Can you identify some aspects of his care that may have facilitated transmission?
- What should be the next key steps for the Castle?
- Do participants have an isolation policy for CRAB? If so, describe the policy. If not, what should the policy include?
- Do participants have educational materials on CRAB for staff members, residents, and family members? If yes, what do those materials include? If not, what should those materials include?
- Given the history as of March 1, what transmission-based precautions should be implemented in the Castle and what interventions would this involve?
- How do participant's housekeeping staff stay current with appropriate cleaning and disinfection procedures and products? Selected EPA-Registered Disinfectants | US EPA
- What other partners should be notified of the CRAB identification?
- Will there be challenges to implementing prevention recommendations? If so, what would type of challenges would the Castle's staff likely encounter?

Facilitator Notes/Questions

- Given the VIM result forwarded by Iowa HHS on March 9, would the approach to the investigation change? If so, how?
- What information in Mr. A's history would be concerning with respect to his risk of being colonized or infected with CRAB and the transmission modes of CRAB?
- Given Mr. A's case history, how likely is CRAB transmission?
- How can it be determined if transmission of CRAB has occurred?
- What should be key next steps for Castle?
- Do participants have an isolation policy for CRAB? If so, describe the policy. If not, what should the policy include?
- Do participants have educational materials on CRAB for staff members, residents, and family members? If yes, what do those materials include? If not, what should those materials include?
- Given the history as of March 1, what transmission-based precautions should be implemented and what interventions would this involve?
- How does housekeeping stay current with appropriate cleaning and disinfection procedures and products? Selected EPA-Registered Disinfectants | US EPA
- What other partners need to be notified of the CRAB identification?
- Will there be challenges to implementing prevention recommendations? If so, what would that be?

Additional Information for Facilitators

- Chicago area is a "hot bed" for MDRO including CRAB.
- Care staff have had a LOT of contact with Castle residents, including Mr. A, that could lead to staff contaminating their clothing, hands, and other body sites.
- Wounds are high risk for colonization and infection with CRAB.
- John Hopkins Hospital had an outbreak because the lavage created aerosols that contaminated surfaces and supplies in the treatment room.
- Contact precautions include gowns and gloves for contacts with the residents and the patient's environment. The sign by the resident's room would indicate what precautions are to be taken.

INPUT 3 – Communications and Actions

20 Minutes

Refer to
Appendix C - CRAB Flowchart
Appendix D – CRAB Referral Transfer Network

With the confirmation of CRAB, the Castle's administration discusses who needs to be told what and when should this be done and whether or not their legal counsel should be consulted. They know that Silver Garden's Hospital's infection preventionist is aware of the situation. The Castle often transfer residents to Silver Gardens Hospital and Silver Gardens often discharges patients to the Castle. The Castle's infection preventionist realized the current policies to not specifically address how internal and external information should be handled. Information must be timely, delivered accurately, presented at a level the audience can understand and reach all people who need the information.

Objectives for Operational Period 3
What should the objectives be for this operational period?

Things to Think About

- Does CDC or Iowa HHS already have "canned" messages that can be used?
- Who should be responsible for preparing and delivering the notifications and messages? Ex. (PIO), Would an informal JIC (joint information center) be useful?
- If incident command (IC)has not been activated, should it be done now?
- Should there be a joint IC?
- What platforms should/could be used to circulate information?
- Should the public be informed about this situation?
- How should staff of the Castle answer questions if contacted by the media?

Communication with Staff

- What information about CRAB and transmission prevention steps should be shared with staff members? (What is CRAB, why is it important, who is at risk, hand hygiene, PPE use, cleaning and disinfection, handling used linens…)
- What just in time training (JIT) should staff receive. For example, what important infection prevention measures should be included in the JIT? Who should get this training?
- Given the possible extent of the outbreak, will all facilities have enough PPE?
  - If not, how do they get more?
  - Is it likely that they will need to request activation of the SNS (Appendix G)?

Communication with Residents and Family Members

- What information about CRAB and the measures used to prevent CRAB transmission should be shared with residents and family members? (how it is spread, what is CRAB, why is it important, who is at risk, hand hygiene, PPE use, cleaning and disinfection, handling used linens,…)
- What information should be shared about screening?
- What should be shared about the precaution signs on residents' doors in the Castle?

Communications with Other Facilities and Partners

- Should the residents' charts be flagged?
- Which external facilities and partners should be notified? Who is responsible for this notification?
- If the "shoe were on the other foot" and the Castle was receiving a resident known to have CRAB, what information should the transferring facility share?

INPUT 4 – Facility Assessments

20 minutes

Refer to Appendix H: ICAR Cy-Hawk Retirement Castle

Staff from the Iowa HHS HAI Program visit the Cy-Hawk Retirement Castle to assess infection prevention practices by conducting an in-person Infection Control and Response (ICAR) assessment to assess the risk for transmission and recommend specific steps for containment. They remind the Castle staff these in-person assessments are non-regulatory, thus non-punitive but focused on identifying gaps and enhancing resident care and staff safety.

The infection prevention and control gaps identified are:

1) Lack of training and onboarding for infection control coordinator
2) Hand hygiene compliance varies by unit
2) Some staff wore the same pair of gloves for multiple resident-care tasks and sometimes did not change them after performing dirty tasks.
3) Gowns are not easily accessible.
4) Alcohol hand rub dispensers are not available at/by each room, and some are empty or non-functional.
5) Gait belts and other physical therapy equipment were shared among residents without proper cleaning and disinfection.
6) Some environmental services staff members were not clear about policies and procedures for cleaning and disinfecting surfaces.
7) Staff were observed exiting residents' rooms while wearing gloves, getting supplies from supply closets down the hall and then re-entering the residents' rooms.
8) Single use items (i.e., gloves) were used more than once.
9) Reusable items (i.e., scissors) were not disinfected properly

They also observed wound care, including a pulsatile lavage wound treatment. Gaps identified include:

1) Understanding and appreciation for amount of aerosol generated during the procedure and how far the aerosol can travel.
2) Staff did not know how long the CRAB stays alive on surfaces.
3) Staff wore double gloves while caring for one resident, removed the top glove, and the use the bottom pair of gloves when caring for another resident.
4) Clean supplies were stored in an open cabinet close to the treatment table.
5) The cart in the room was cleaned and disinfected after each treatment BUT other surfaces in the room were not cleaned between treatments.

During the assessment, staff commented that they felt pressure to cut costs or avoid expenses and to increase efficiencies at the cost of using appropriate infection control measures.

<u>Objectives for Operational Period</u>

What should the objectives be for this operational period?

Things to Think About

- Who would be responsible for addressing the infection prevention concerns noted by Iowa HHS's HAI Program staff?
- Who should ensure the concerns are addressed, implemented and the changes are maintained?
- What resources would be needed to address/remediate the gaps identified by Iowa HHS?
- Who should be involved in addressing these concerns?
- How can staff identify an appropriate product for cleaning and disinfecting product?
- How would environmental services be educated regarding appropriate cleaning and disinfecting procedures? Who is responsible for developing the training, providing it and ensuring all staff remain current on policies and procedures?

Facilitators Notes/Questions

- Who would be responsible for addressing the infection prevention concerns noted by HAI staff?
- Who should be involved to ensure the concerns are addressed, implemented and maintained?
- What resources would be needed to address/remediate the gaps identified by HHS?
- will need to be involved to address these concerns?
- How would an appropriate product for cleaning and disinfecting product be identified?
- How would environmental services be educated regarding appropriate cleaning and disinfecting procedures? Who is responsible for developing the training, providing it and assuring all staff are continually current on policies and procedures?

INPUT 5 – Developing and Implementing a Screening Plan and Communications

25 minutes

Refer to:
Appendix C– CRAB Flowchart

Given their observations, staff from the Iowa HHS HAI division feel that transmission could be occurring in the Cy-Hawk Retirement Castle. They recommend screening residents for CRAB colonization.

Objectives for Operational Period
What should the objectives be for this operational period?

Things to Think About

- Using the information provided and Mr. Adams' case history, who should be screened for CRAB colonization?
- Who would be responsible for initiating screening? If the long-term care facility is part of a corporation, who should be notified?
- Who might give push back about screening? Would administrators object to the cost? Would staff members object to the work required to do the screening? Would corporate leadership object? How would this be handled?
- How would screening be prioritized? Consider recording on the worksheet.
- What information should be provided to patients, family members and residents?
- Would consent need to be obtained for surveillance cultures?
- Who is responsible for notifying Memorial Hospital and Silver Gardens Hospital regarding the possible need for screening?
- Who should receive the results of the screening?
- What swabs would you use and what sites would you swab?
- Where would the swabs be sent for testing? And how would the results be received?

Additional Information for Facilitators

- Screening is free to the facilities. Iowa HHS and SHL will help facilitate screening.
- During a real life cluster/outbreak investigation, this would be the time to create a linelist (basically a spreadsheet) of the affected people and their possible contacts.
- Swabs that can be used: Dual copan swabs for CPO (rectal swab), Eswab in amies transport media (or equivalent) for C. auris and CRAB. SHL is working on stocking kits for facilities to be able to order.
- Minnesota Department of Health (MDH) sends the final report to SHL and "we" send it back to the submitter. If it is positive, MDH enters the redcap alert and sends notice to SHL and Iowa HHS. Iowa HHS calls the facility to follow up on the result almost immediately following receipt of the redcap alert. (When does the local public health department find out?)

INPUT 6 – Additional Screening Results and Follow-Up Communications

20 minutes

Refer to: Appendix E: CRAB Flowchart

20 residents at Castle have been identified to be screened, including:

- Residents who have received physical therapy in the gym or in their rooms (n=13)
- Residents who have received pulsatile lavage wound treatments (n=5)
- Mr. Brown, who was moved into the room vacated by Mr. Adams when he was transferred to Silver Gardens Hospital.
- In addition, Roommate Zander at Silver Gardens Hospital and Roommate Mr. Williams at hospital were also identified as persons to be screened.

The screening results from the Castle provide evidence of transmission. The Castle and Silver Gardens Hospital information coordinators both agreed that a communication plan should be implemented to facilitate disseminating critical and essential information within the Castle, the hospital and to all other affected entities.

Of the 20 residents at risk of acquiring VIM-producing CRAB, 18 residents consent to be swabbed.

- 12 of these residents screened positive.
- Of note, Mr. Brown (the resident who occupied Mr. Adams' bed after Mr. Adams was discharged back to the hospital) was also colonized with the VIM-producing CRAB.

<u>Surveillance Culture Results</u>
Silver Gardens Hospital –

- Mr. Zander screened positive for VIM-producing CRAB

Memorial Hospital and Grand Oak Rehabilitation Hospital -

- Mr. Adams' Roommate Mr. Williams screened positive for VIM-producing CRAB. Likely he was the source of the VIM-producing CRAB for Mr. Adams.
- Mr. Adams' Roommate Mr. Xavier at Grand Oak Rehabilitation Hospital screened negative.

The following recommendations from Iowa HHS have been communicated:

<u>To Cy-Hawk Retirement Castle</u>

- Inform downstream facilities and upstream facilities.
- Communicate often and in a timely manner.
- Consider active screening all admissions
- Continue screening residents until there are two consecutive negative rounds.
- Continue contact precautions until two consecutive screening rounds find little to no transmission at which time transition to enhanced barrier precautions for the Castle.
- Clarify the role of nursing staff and environmental services staff for cleaning resident care equipment.

- Reinforce education for nursing and environmental services staff on appropriate cleaning and disinfection of surfaces and equipment.
- Educate all staff (including dietary, etc.) about CRAB and appropriate infection prevention precautions (e.g., hand hygiene, PPE use, environmental cleaning, etc.)
- Consider point prevalence screening on a quarterly basis.
- Consider creating a communication guide about the response plan and policies.
- Implement the use of enhanced barrier precautions facility wide for all nursing homes at all times.

Silver Garden Hospital:

- Continue contact precautions.
- Screen patients coming from the Castle and other high-risk facilities.
- Clarify the role of nursing staff and environmental services staff for cleaning patient care equipment.
- Reinforce education for nursing and environmental services staff on appropriate cleaning and disinfection of surfaces and equipment.
- Educate all staff about preventing spread of MDROs.

Memorial Hospital was notified of the incident and has implemented multiple measures to treat current infections and prevent future infections.

Objectives for Operational Period

What should the objectives be for this operational period?

Things to Think About

- Are there issues and/or questions to discuss with the Iowa HHS HAI Program? If so, what are they?
- Should staff members, residents, family members, and partners receive updated information? If so, what information should be provided and how will it be communicated?
- Who will be performing the screening tests? How will results be communicated?
- Should Incident Command (Appendix F) be used? If so, is it designed to be scalable?
- What should staff who work in multiple facilities be concerned about?
- How do positive tests affect the facility's ability to admit new residents?

Facilitators Notes/Questions

Are there issues and/or questions to discuss with the Iowa HHS HAI program? If so, what are they?
Should staff members, residents, family members, and partners need to receive updated information? If so, what is it and how will it be communicated?
Does local public health have the resources to support the screening?
Who will be performing the screening tests? How will results be communicated?
Should IC be used? If so, how is it designed to be scalable?

Additional Information for Facilitators

HAI nurses from Iowa HHS can do health/infection prevention education if a facility requests this.

INPUT 7 – Long Term Action Plan

20 minutes

Facilities that have shared residents/patients with the Castle have been notified of the outbreak. The Iowa HHS HAI team has visited the Castle again to confirm practices are improving. The team recommends doing additional point prevalence surveys (2 weeks apart) to determine if there is further transmission. Neither prevalence surveys identified additional VIM-producing CRAB. Mr. Adams is discharged to the Cy-Hawk Retirement Castle in contact precautions until he can transition to enhanced barrier precautions.

Objectives for Operational Period

What should the objectives be for this operational period?

Things to Think About

- Does your organization's outbreak response plan include:
  - The CRAB reporting process to Iowa HHS?
  - Education policies and tools about CRAB and MDRO infection prevention and containment?
  - Information about the available resources?
  - The roles for Iowa HHS HAI, SHL and other partners in CRAB and MDRO identification, prevention, containment and mitigation?
- How is a cluster defined in your response plans?
- Who and how is data collected and analyzed to determine the status of the spread and effect of mitigation procedures?
- Are the MDRO infection prevention and containment polices and procedure current? Is there a system in place for review and updates?
- Is there any other messaging that should be shared within the facilities, with partners and/or with the public? Who is responsible for preparing and delivering these messages?
- If Incident Command has been activated during the outbreak, is there an exit strategy in the response plans?
- DON'T GIVE UP!

HOTWASH [25 MINUTES]

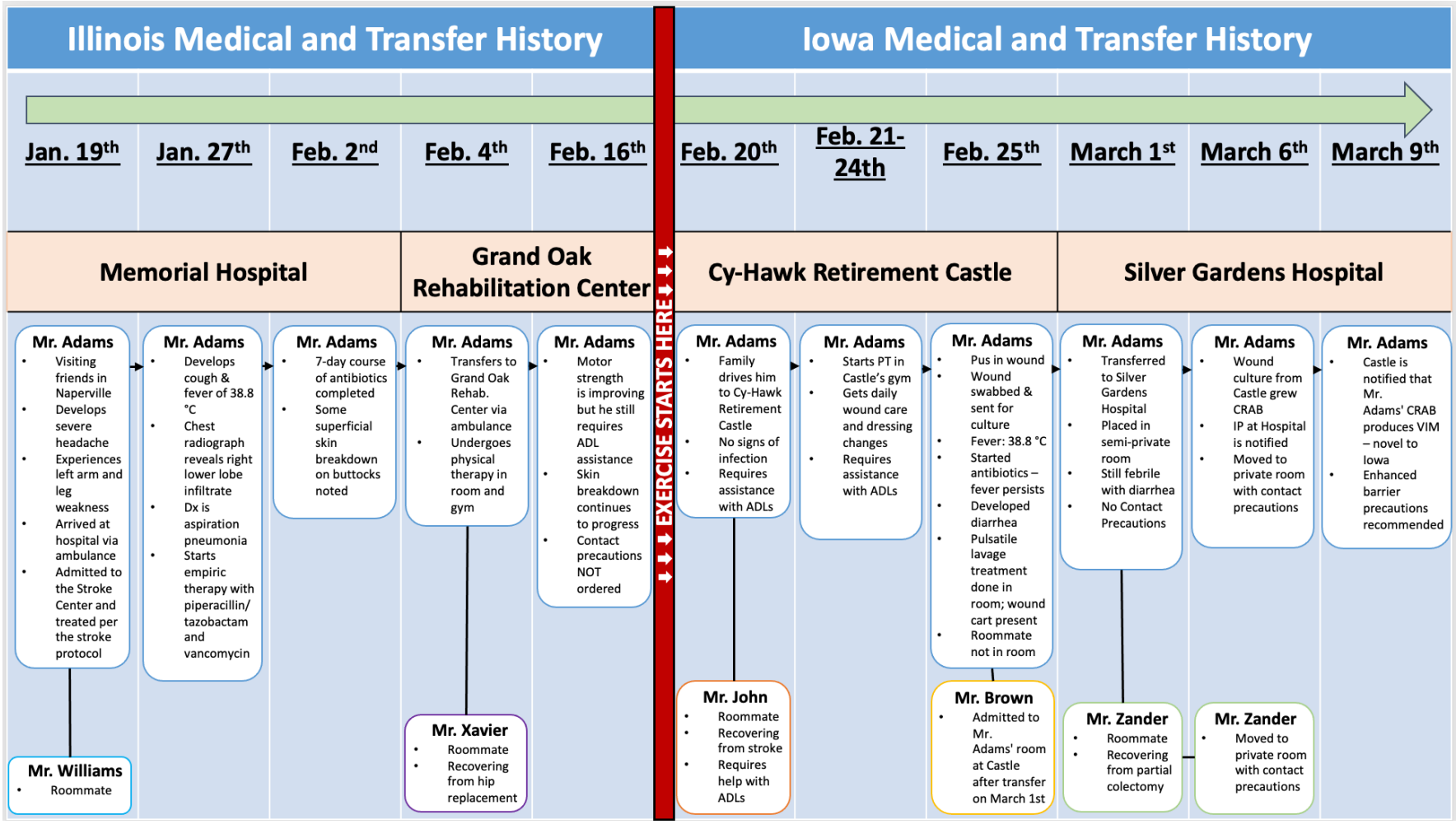
Topic/Issue	Facilitator Notes/Questions
Hot Wash	The facilitator should point out the participant feedback form in the folders to capture the responses in writing and aggregate them in the After-Action Report. *Provide a brief overview of the purpose of the Hot Wash:* • The purpose of the Hot Wash is to debrief the exercise and provide participants with the opportunity to discuss their general observations ○ Are there any other issues you would like to discuss that were not raised? ○ What strengths did you observe in relation to meeting exercise objectives? ○ What areas should be examined further or need additional work (areas for improvement)? ○ Was the exercise beneficial? Did it help prepare you for follow-on testing? ○ What did you gain from the exercise? ○ How can we improve future exercises and tests? Evaluators are to record responses for summarization after the exercise. These responses should be used to improve the next exercises and as "lessons learned" for the final report.

CLOSING COMMENTS [10 MINUTES]

Slide #	Topic/Issue	Facilitator Notes/Questions
Thank You slide	**Closing Remarks**	• Call upon Dr. Herwaldt, Vickie Miene or other senior ranking participant in exercise to provide closing remarks • Provide information about next steps and how the information will be used

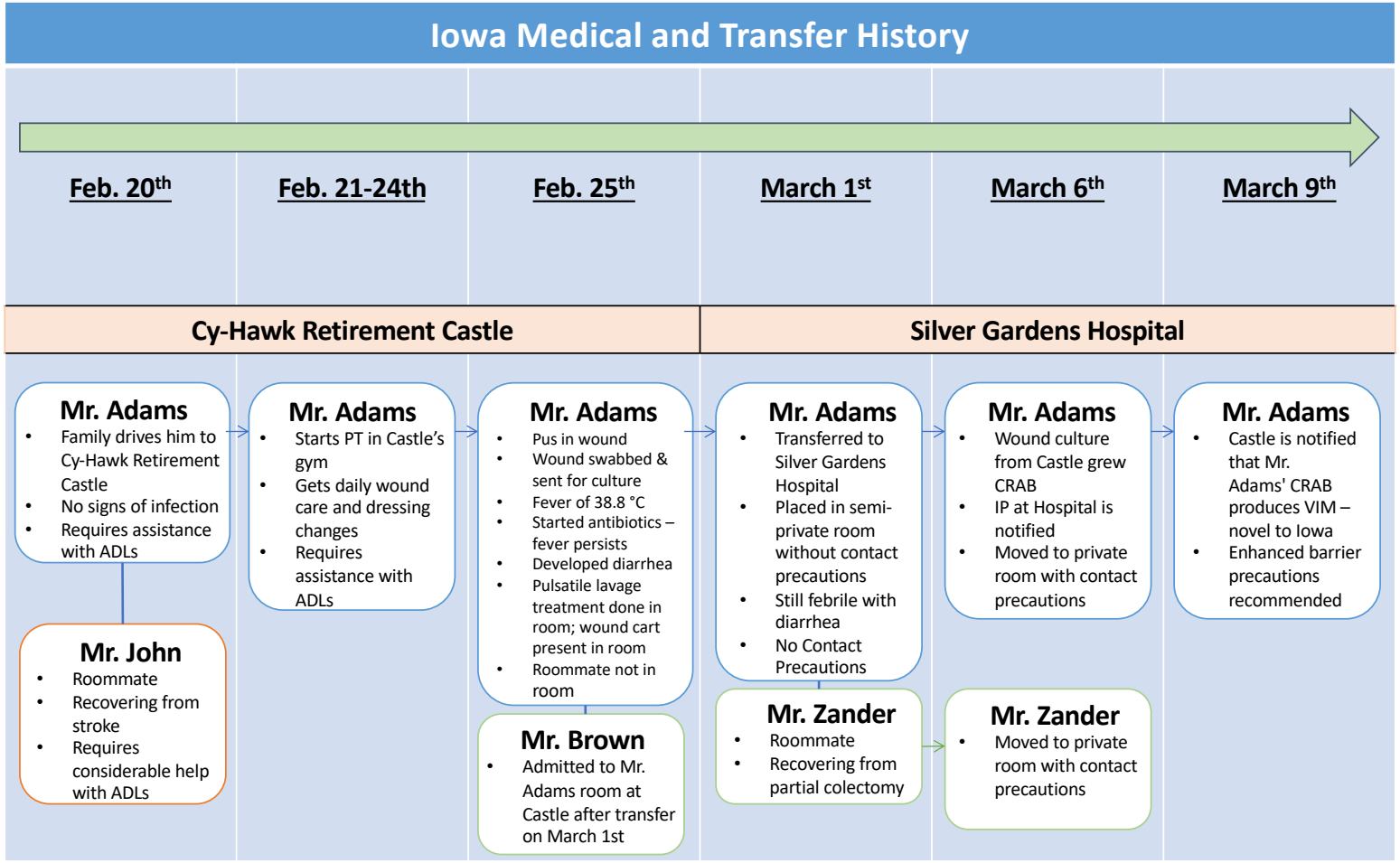
ENDEX [ADJOURN]

APPENDIX A
ILLINOIS & IOWA MEDICAL AND TRANSFER HISTORY



IOWA Institute of Public Health Research and Policy
University of Iowa Carver College of Medicine
University of Iowa Health Care
IOWA State Hygienic Laboratory
IOWA HHS

APPENDIX Aa
IOWA MEDICAL AND TRANSFER HISTORY



IOWA Institute of Public Health Research and Policy
University of Iowa Carver College of Medicine
University of Iowa Health Care
IOWA State Hygienic Laboratory
IOWA HHS

APPENDIX B
MR. ADAM'S MEDICAL HISTORY PRIOR TO ARRIVING IN IOWA

Memorial Hospital Summary

Patient Name: Howard Adams Today's Date: February 4, 2023

DOB: September 13, 1954

Date of Transfer: February 20, 2023

Summary of and Elaboration of All Pertinent Data

January 19

Patient is a 69 y.o. male who was visiting friends in Naperville when he developed a severe headache and experience left arm and leg weakness. He arrived at the Memorial Hospital emergency treatment center by ambulance. He was admitted to the Comprehensive Stroke Center and treated per the stroke protocol.

January 27

Patient develops a cough and fever of 38.8C. Chest radiograph reveals a right lower lobe infiltrate.

Dx: Aspiration pneumonia.

Started on empiric therapy with piperacillin-tazobactam and vancomycin.

February 2

7-day course of antibiotic therapy completed. Some superficial skin breakdown on buttocks was noted. Patient in double room with Mr. Williams.

February 4

Patient transferred to Grand Oak Rehabilitation Center.

Released by: V. Spock, M.D. Feb. 4, 2023

Grand Oak Rehabilitation Center Medical and Transfer Summary

Patient Name: Howard Adams Today's Date: February 20, 2023

DOB: September 13, 1954

February 4

Patient received via ambulance from Memorial Hospital. Continuing physical therapy both in his room and the physical therapy gym. He currently shares this room with Mr. Xavier, who is recovering from a hip replacement.

February 16

Patient's motor strength has been improving but he is still weak and unable to transfer or walk unaided. He requires assistance with ADLs, including toileting, bathing, and dressing. He spends most of his time lying in bed or sitting in a chair. Skin breakdown continues to progress with some areas of partial-thickness skin loss and some areas of full-thickness loss.

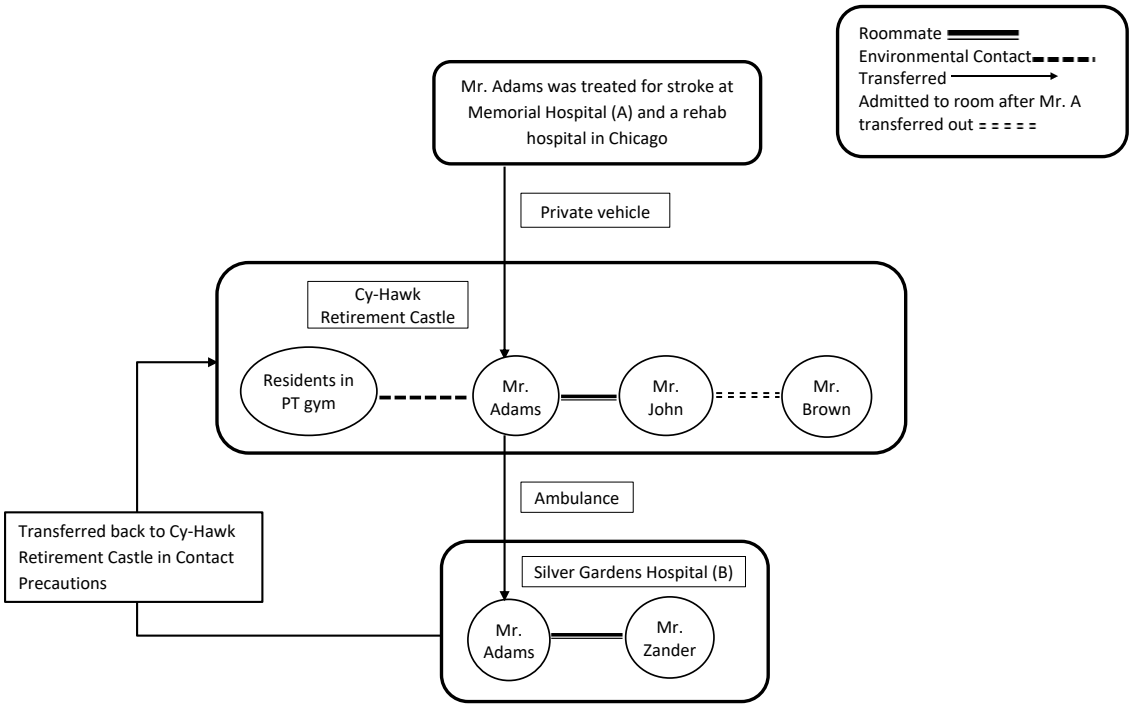
Contact Precautions are NOT ordered.

February 20

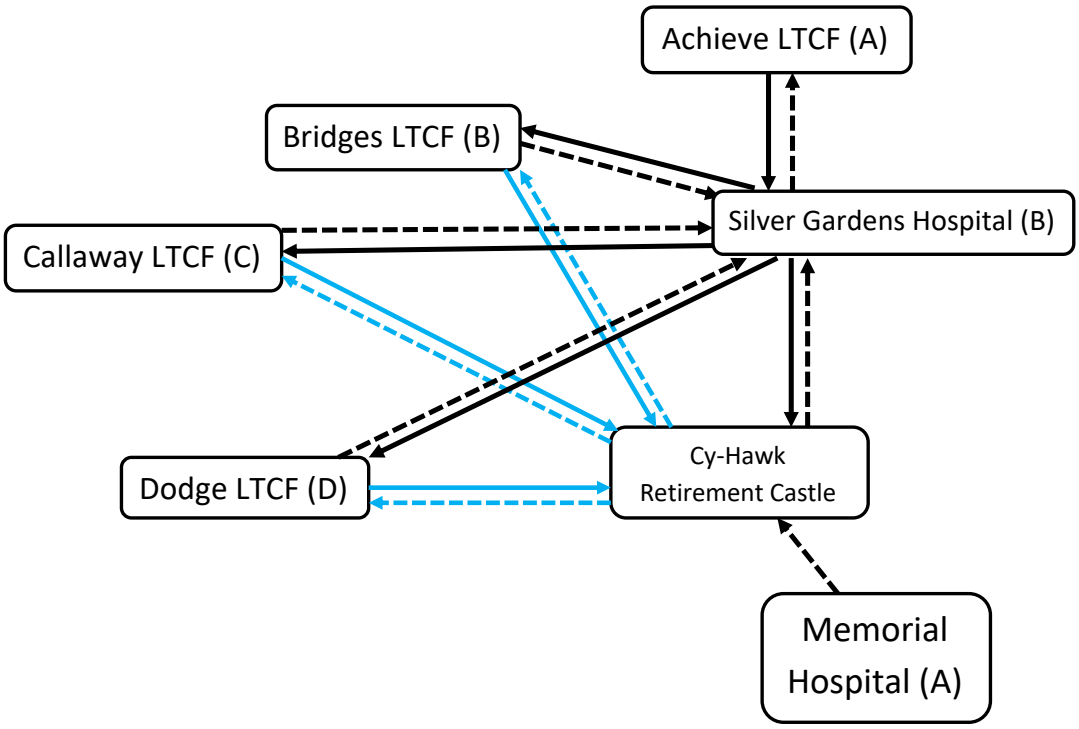
Patient wishes to be closer to home so family and friends can visit. He will be transferred to Cy-Hawk Retirement Castle in Iowa via his family's car.

Released by: D. Howser, M.D. Feb. 20, 2023

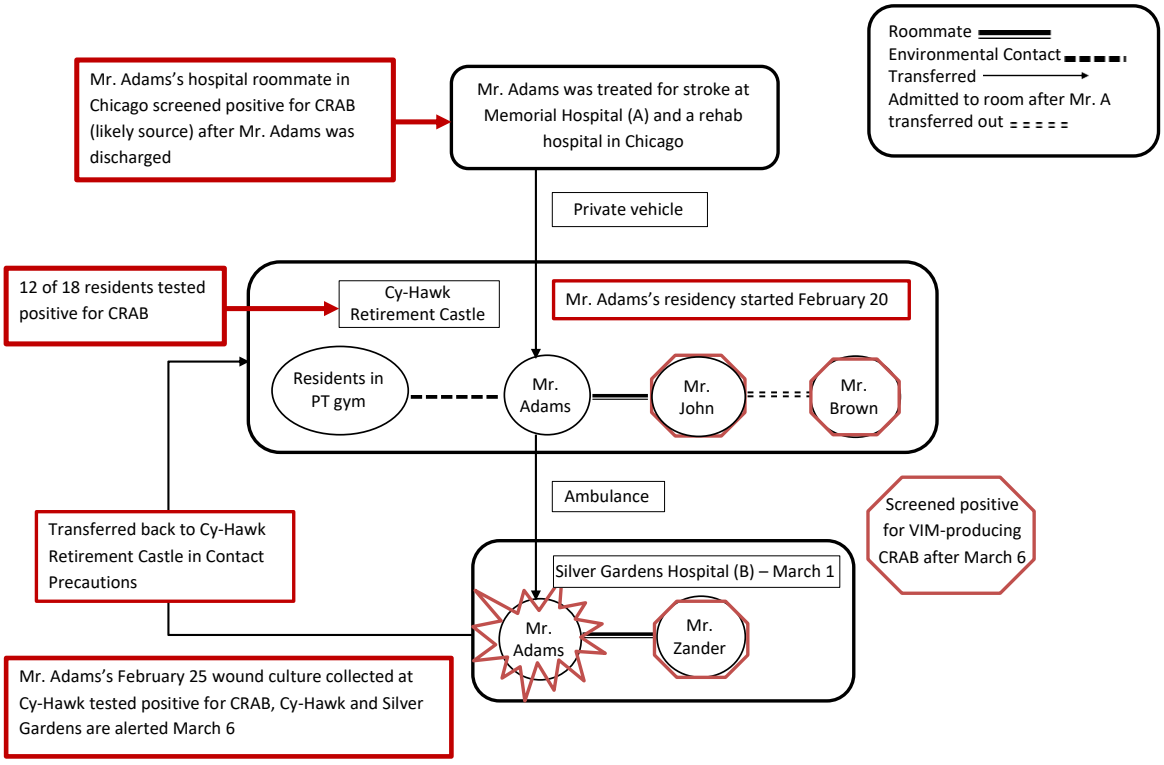
APPENDIX C
CRAB FLOWCHART



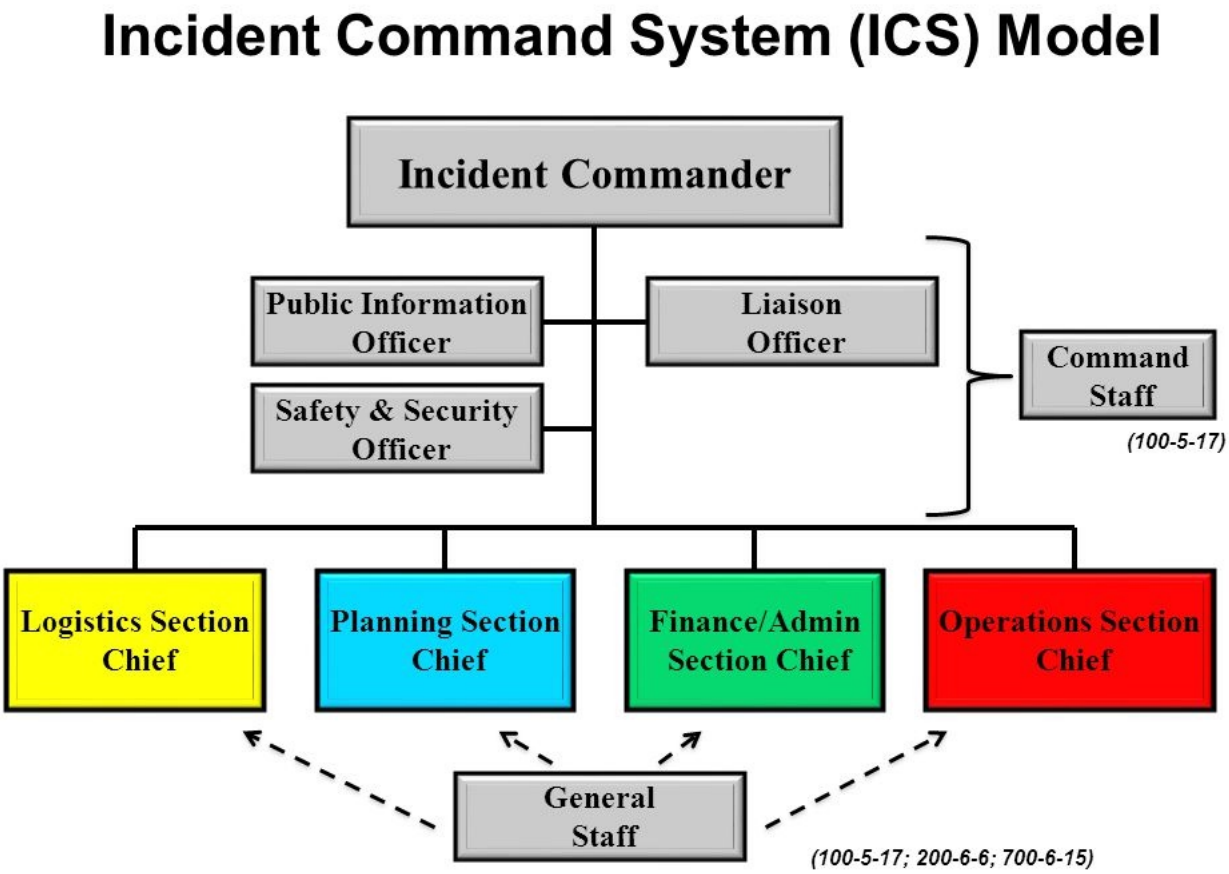
APPENDIX D
CRAB REFERRAL TRANSFER NETWORK



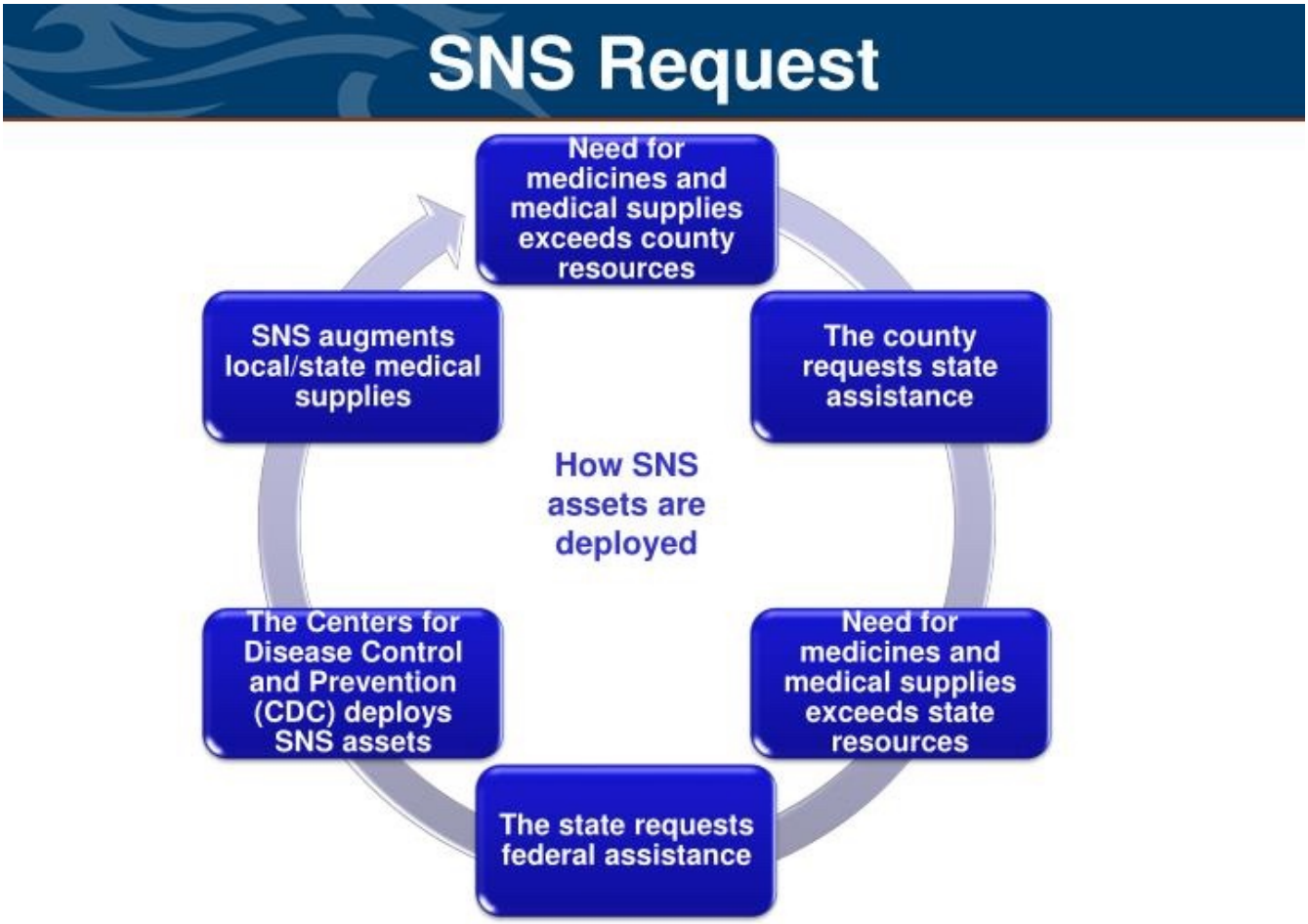
APPENDIX E
CRAB FLOWCHART



APPENDIX F
STRUCTURE OF THE INCIDENT COMMAND SYSTEM



APPENDIX G
STRATEGIC NATIONAL STOCKPILE ACTIVATION PROCESS



APPENDIX H
ICAR – CY-HAWK RETIREMENT CASTLE RECOMMENDATION SUMMARY PAGE 1

The following are a summary of all the recommendations made for your facility during the ICAR process. If there was no recommendation made for a specific policy or protocol, it is not included in this summary. Complete data for all responses is includes after this summary as well as additional information boxes with additional resources.

Policies and Infrastructure Recommendations

Facility specific recommendations for QUALITY IMPROVEMENT/TRAINING PROGRAMS: Last Iowa HHS ICAR was completed at the facility's request (for prevention reasons) in 2020. Consider requesting ICAR at least once every 2 years. We are also more than happy to help you with an in-service for staff education at any time.

Facility specific recommendations for ICP PROGRAM SUPPORT: Providing training and onboarding for the facility IP will help strengthen your overall program.

Facility specific recommendations for ENHANCED BARRIER PRECAUTIONS: Further educate staff on when contact precautions should be used., Ensure staff have the proper knowledge of appropriate PPE to use when practicing contact precautions. _____

Antimicrobial Stewardship

Facility specific recommendations for ANTIBIOTIC STEWARDSHIP PROGRAM: Currently your IP is also in-charge of your antimicrobial stewardship efforts. Consider involving more people to increase your intra facility expertise.

Hand Hygiene

Facility specific recommendations for SUPPLIES: Some existing alcohol based hand sanitizing stations were empty. Ensure that EVS regularly checks stations at least daily, and refills them when appropriate. Also implement a system to notify EVS as soon as a station runs out of solution.

Some stations were also broken. Ensure EVS is either repairing or replacing stations when they are no longer functional.

Facility specific recommendations for HAND SANITIZING STATIONS: _____ Add additional stations so one is available outside of each resident's room.

Facility specific recommendations for AUDITS: While there is a system to audit in place, audits are not documented. Document/record audit results to monitor trends overtime and gauge improvement.

Facility specific recommendations for FEEDBACK: Feedback and compliance seem to differ between units. Standardardized the feedback process.

APPENDIX H
ICAR – CY-HAWK RETIREMENT CASTLE RECOMMENDATION SUMMARY PAGE 2

Wound Care

Facility specific recommendations for WOUND CARE PERSONNEL Even with contracted staff, audits should be performed regularly to ensure that policies and procedures and not only being followed for wound care, but also for PPE use within your facility.

Facility specific recommendations for WOUND CARE EQUIPMENT & SUPPLIES If clean supplies are stored in a resident's room, they should be stored in a closed system (i.e. closed cabinet).

Limit equipment used between residents as much as possible. If equipment is used for multiple patients, such as the bandage scissors, a cleaning AND disinfection step must both be performed every time. Only disinfects listed in the manufacturer's guidelines should be used.

Clostridioides Difficile Infections

Facility specific recommendations for ANTIBIOTIC STEWARDSHIP STRATEGY TO REDUCE CDI: Currently your IP is also in-charge of your antimicrobial stewardship efforts. Consider involving more people to increase your intra facility expertise.

Environmental Services

Facility specific recommendations for TRAINING: In addition to doing annual training, incorporate training anytime new equipment or protocols are introduced.

Facility specific recommendations for REUSABLE/NON-DISPOSABLE EQUIPMENT CLEANING AND DISINFECTION: Currently, physical therapy equipment is being cleaned once a day, or if it is visibly soiled. To minimize transmission risk for all MDROs, clean and disinfect physical therapy equipment after each resident finishes a session.

General Recommendations and Thoughts

The following are few general recommendations for your facility based on this assessment.

Thank you for allowing me to complete an assessmen at your facility. Feel free to contact me about any of the recommendations in this assessment. I am more than happy to discuss strategies to strengthen infection prevention and control at your facility anytime.

APPENDIX H
ICAR – CY-HAWK RETIREMENT CASTLE RECOMMENDATION SUMMARY PAGE 3

Andrew's Test Zone
Record ID 8
Page 3

Guidelines And Resources

NOTE: If a hyperlink in this Guidelines and Resources section is listed on a single line, clicking directly on it should take you to that resource. If a hyperlink is split between two lines, Adobe cannot correctly convert the hyperlink. In these instances, copy and paste the text of the hyperlink into your internet browser to access the resource.

Based on this infection control assessment, it is recommended you integrate the following Quick Observation Tools (QUOTs) for Infection Prevention into your infection prevention and control program to enhance your ability to assess and audit staff compliance with IPC policies and protocols:

[-] Hand Hygiene Provision of Supplies:
https://www.cdc.gov/infectioncontrol/pdf/QUOTS/Standard-Precautions-Hand-Hygiene-Supplies-P.pdf

Based on this infection control assessment it is recommended you review the following infection prevention and control resources:

[-] CDC Consideratoin for use of Enhanced Barrier Precautions in SNFs:https://www.cdc.gov/hicpac/workgroup/EnhancedBarrierPrecautions.html

[-] CDC Implementation of Personal Protective Equipment (PPE) Use in Nursing Homes to Prevent Spread of Multidrug-resistant Organisms (MDROs): https://www.cdc.gov/hai/containment/PPE-Nursing-Homes.html

[-] Iowa HHS Enhanced Barrier Precautions 101 video:https://www.youtube.com/watch?v=4NQdlx1dnl8

[-] Guideline for Hand Hygiene in Healthcare Settings: http://www.cdc.gov/mmwr/PDF/rr/rr5116.pdf

[-] Hand Hygiene in Healthcare Settings: https://www.cdc.gov/handhygiene/

[-] Hand hygiene auditing tool - Measuring Hand Hygiene Adherence: Overcoming the Challenges:https://www.jointcommission.org/-/media/tjc/documents/resources/hai/hh_monograph.pdf

[-] CDC Sequence for Donning and Removing Personal Protective Equipment:
http://www.cdc.gov/hai/pdfs/ppe/PPE-Sequence.pdf

[-] CDC Core Elements of Antibiotic Stewardship for Nursing Homes:
https://www.cdc.gov/longtermcare/prevention/antibiotic-stewardship.html

[-] CDC Options for Evaluating Environmental Infection Control:https://www.cdc.gov/HAI/toolkits/Evaluating-Environmental-Cleaning.html

[-] CDC How to Read a Disinfectant Label:https://www.cdc.gov/hai/pdfs/HowToReadALabel-Infographic-508.pdf

APPENDIX I
DEFINITONS

Antimicrobial Resistance: Occurs when microorganisms change over time and no longer respond to antimicrobials, making infections difficult to treat and increasing the risk of disease spread, severe illness, and death.

Cluster: An aggregation of cases grouped in place and time that are suspected to be greater than the expected case number.

Colonization: The presence and replication of microorganisms on or in a host or object (no immune response from host).

Contact Precautions: Set of infection prevention and control measures that are used in addition to standard precautions to prevent the spread of microorganisms through direct or indirect contact (gloves, gowns, etc.).

Enhanced Barrier Precautions: Set of infection prevention and control measures that are used in addition to standard precautions to prevent the spread of microorganisms during high-contact resident care activities (gloves, gowns, etc.). For use in the nursing home setting only.

Infection: The presence and multiplication of microorganisms on or in a host leading to symptoms and disease (immune response from host).

Point Prevalence: A measure of the proportion of people in a population who have a disease or condition at a particular time.

Mitigation: Actions taken to minimize the severity and seriousness of problematic events, such as clusters or outbreaks.

Standard Precautions: Basic infection prevention and control measures that apply to all patient care (hand hygiene, PPE, etc.).

Screening: Strategy used to look for disease before symptoms present.

Surveillance: The practice of monitoring the spread of disease to establish patterns of progression.

APPENDIX J
ACRONYMS

ADL: Activities of Daily Living

CRAB: Carbapenem-Resistant *Acinetobacter baumannii*

CPO: Carbapenem-Producing Organisms

MDRO: Multi-Drug Resistant Organisms

VIM: Verona Integron-Encoded Metallo-β-Lactamase

HAI: Healthcare-Associated Infection

SNS: Strategic National Stockpile

CDC: Centers for Disease Control and Prevention

Iowa HHS: Iowa Department of Health and Human Services

SHL: State Hygienic Laboratory at the University of Iowa

Minnesota PHL: Minnesota Public Health Laboratory

LTCF: Long-Term Care Facility

LTACH: Long-Term Acute Care Hospital

SNF: Skilled Nursing Facility

VSNF: Ventilator-Equipped Skilled Nursing Facility

PT: Physical Therapy

HCW: Health Care Worker

PIO: Public Information Officer

IP: Infection Preventionist

ICAR: Infection Control Assessment and Response

ICS: Incident Command System

PPE: Personal Protective Equipment

WORKSHEET AND NOTE TAKING