

Newbie's Guide to Policy Development

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Learning Objectives

- ▶ Examine the quality, accessibility, and feasibility of existing infection control policies in place at your facility
- ▶ Determine the highest-priority policies and procedures to implement quickly in the face of a facility outbreak or emerging threat
- ▶ Utilize tools provided to implement best practices in early outbreak situations or before outbreak situations occur

Are We Prepared?

- ▶ Survey of 1,603 practicing physicians across multiple specialties (2011-2012)
- ▶ 50% felt prepared to handle a natural disaster, foodborne illness, or major outbreak of an airborne infection
- ▶ 44% did not know whether their hospital had an emergency plan

SteelFisher GK, et al. *Disaster Med Public Health Prep.* 2015;9:666-80.

Preparedness Tools

- ▶ Two recent systematic reviews of evaluation tools for hospital preparedness highlight the need for improvement
- ▶ Most evaluation tools focused on structural components and paid little attention to the functional aspects of hospitals
- ▶ None of the checklists or tools included all dimensions for hospital preparedness or were specific for biologic threats

Nekoie-Moghadam M, et al. *Disaster Med Public Health Prep.* 2016;10:781-8; Heidarlanlu E, et al. *PLoS Curr.* 2015;14:7.

What We Will Cover

- ▶ Risk assessment
- ▶ Early identification of patients
- ▶ Facility design
- ▶ Infrastructure
- ▶ Training
- ▶ Laboratory management
- ▶ Staffing
- ▶ Patient care

Risk Assessment: How Can You Assess Risk?

- ▶ Likelihood of event happening (0-3)
- ▶ Severity of impact (1-3)
- ▶ Mitigation by preparedness (0-3)

Program Components	Probability of Performance Failure				Impact (Clinical/Financial/Resources)			Infection Prevention Systems			Score ≥ 7	
	High	Medium	Low	Never	High	Moderate	Minimal	Poor	Fair	Good		Excellent
Potential Risks/Problems	3	2	1	0	3	2	1	3	2	1	0	
Policy procedures												
Current policies or procedures related to infection control and prevention												
Established policy or procedures—safe injection practices												
Preparedness												
Bioterrorism agents												
Norovirus/influenza/other respiratory infections												
Outbreak community ID risk—lice/scabies/bed bugs												

APIC. www.community.apic.org

Specific Considerations for Influx of an Infectious Agent

- ▶ Population served by the hospital
- ▶ Travelers
 - ▶ Proximity of hospital to a major airport
 - ▶ Travelers from specific areas that visit the region
- ▶ Industry near the hospital
 - ▶ Farms/animal exposure
 - ▶ Research facilities with possible exposures

Early Identification of Patients: What Should You Be Thinking About?

- ▶ Clusters of infections in the community
- ▶ Emerging infections in other countries
 - ▶ Plague
 - ▶ MERS-CoV
 - ▶ Avian influenza
 - ▶ Viral hemorrhagic fever
- ▶ Communication of potential threats to bedside staff, administration, and the public
 - ▶ Keeping staff up-to-date without creating alarm fatigue

Resources for Information on Emerging Infections

- ▶ Public health department
- ▶ ProMed (www.promedmail.org)
- ▶ Center for Infectious Disease Research and Policy (www.cidrap.umn.edu)
- ▶ CDC Current Outbreak List (www.cdc.gov/outbreaks)
- ▶ Disease Outbreak News (www.who.int/csr/don/en)

The screenshot shows the homepage of the Center for Infectious Disease Research and Policy (CIDRAP) at the University of Minnesota. The header includes the university logo and the tagline "Driven to Discover". A search bar for "CIDRAP" is located in the top right. Below the header, there are navigation menus for "News & Perspective", "Infectious Disease Topics", "Antimicrobial Stewardship", "Ongoing Programs", "About Us", and a "DONATE NOW" button. A "TRENDING TOPICS" section lists "Zika", "Antimicrobial Resistance", "Avian Influenza (Bird Flu)", "MERS-CoV", and "Ebola". The main content area features several articles:

- China now in its worst H7N9 avian flu season on record** by Lisa Schriming | Feb 10, 2017. The article states that since November, China has totaled at least 347 H7N9 avian flu cases.
- Completing the Development of Ebola Vaccines** by CIDRAP / WELLCOME TRUST REPORT. It is the third report from the Ebola Vaccine Team B, highlighting vaccine successes and challenges.
- Studies shed light on effects of serial flu shots, current vaccine's benefits** by Robert Roos | Feb 10, 2017.
- Zika** RESOURCE PAGE — UPDATED FEB 10. A CIDRAP-compiled list of links to the latest updates, resources, guidelines, and Twitter feeds on Zika virus infection.
- Flu widespread in 43 states, 5 more fatal cases in kids** by Lisa Schriming | Feb 10, 2017. Flu markers rose to their highest points yet, and influenza B detections rose slightly.

On the right side, there are sections for "NEWS SCAN" (listing Saudi MERS case, Senate confirms HHS pick, and Avian flu update) and "STEWARDSHIP / RESISTANCE SCAN" (listing tolerance to resistance in France and Stewardship in pediatric EDs). At the bottom right, there is a section for "OUR UNDERWRITERS" mentioning BENTSON FOUNDATION.

Travel Screening: Are You Prepared for Active Travel Screening?

- ▶ **Passive travel screening**

- ▶ Passive approach would involve patient signs and clinician education

- ▶ **Active travel screening**

- ▶ Patients should be screened reliably and at all points of entry
 - ▶ Surgery, outpatient sites, emergency rooms, admissions, self-register kiosks
 - ▶ Consider leveraging the EHR
- ▶ If a positive screen occurs, have a process in place for escalation
- ▶ Establish the availability of expert and support personnel outside of regular hours

CDC. www.cdc.gov.

Lessons Learned

- ▶ It is critical to screen at all points of entry
- ▶ Frontline staff training and communication is essential
 - ▶ Assess staff knowledge on the communication pathway
 - ▶ Initiate immediate proper isolation for patients who screen positive
- ▶ The travel screen should be simple and easy to conduct

Facility Design: Is Your Facility Ready?

- ▶ Preparing a facility for an infectious agent requires:
 - ▶ A private area to care for patients away from other patients or public areas
 - ▶ The capacity for patient isolation
 - ▶ Negative pressure rooms
 - ▶ Conversions of direction of airflow direction—individual room or units
 - ▶ The capacity for patient overflow
 - ▶ Create additional triage/patient care areas (eg, ED, tents)
 - ▶ Collaborate with the public health department, schools, and churches

Infrastructure: Do You Have a Hospital Incident Command Center?

- ▶ All hospitals credentialed by the joint commission have emergency management plans
 - ▶ Who is responsible for each component of the plan?
 - ▶ What tasks are a part of each component of the plan?
- ▶ Use the infrastructure of this plan to test for preparedness in an outbreak setting

Sample Work Plan Template

Categories	Tasks	Key Person Responsible	Due Dates
Policy and guidelines			
Training			
Exercises			
Direction of patient care			
Operational management (command center)			
Facility			
Communication			
Waste management			
Equipment			
Cleaning			
Throughput			
Staffing			
Finance			

Communication: External and Internal

- ▶ **Multiple lines of communication needed**
- ▶ **General public**
 - ▶ Maintain confidentiality
 - ▶ Manage media
- ▶ **Public health departments**
 - ▶ Contact persons from the hospital and public health department
 - ▶ Confirm availability for off-hours communication
- ▶ **Internal operational communication**
 - ▶ Bedside staff should provide reassurance and relay changes in operations
 - ▶ Be consistent with messaging

Call Tree

- ▶ Identify all individuals who need to be contacted
- ▶ Save up-to-date contact information for all of those individuals
- ▶ Hold training to ensure that each person on the list does not receive multiple phone calls
- ▶ Consider a commercial software system to initiate automatic alerts that have been prespecified
- ▶ Have a call-in number to ensure that everyone gets the same message

Lessons Learned

- ▶ Make sure all phone numbers are up-to-date
- ▶ Have regular drills
- ▶ Include hospital leadership in town halls with bedside staff to build trust and show that leadership is committed to ensuring staff safety
- ▶ Be transparent and honest
- ▶ Circle back to check staff understanding and the potential need for additional messaging

Training: How Do You Best Prepare Staff?

- ▶ Incorrect PPE and frequent self-contamination are commonly found in evaluations of healthcare settings
 - ▶ In an observational study of 30 HCW, only 17% removed PPE in the correct order and disposed of it in the patient room
 - ▶ A point-prevalence study in 4 hospitals showed contamination in 200/435 episodes of gown and glove removal
 - ▶ An assessment of self-contamination when trained HCP doffed EVD PPE using a standardized protocol demonstrated that:
 - ▶ A structured doffing protocol with a trained monitor reduced rates of contamination
 - ▶ Nonenveloped viruses showed more contamination than enveloped viruses

Zellmer C, et al. *Am J Infect Control*. 2015;43:750-1; Tomas ME, et al. *JAMA Intern Med*. 2015;175:1904-10; Casanova LM, et al. *Infect Control Hosp Epidemiol*. 2016;37:1156-61.

Key Components of a Training Program

- ▶ A competency-based training program should be implemented for PPE use
- ▶ Training includes:
 1. Appropriate indications for specific PPE components
 2. Proper donning, doffing, adjustment, and wear of PPE
 3. Proper care, maintenance, useful life, and disposal of PPE
- ▶ Training should be provided to all personnel who use PPE
- ▶ Re-training should be provided to prevent deterioration of learned skills

Training Skills

- ▶ Education on donning and doffing effectively
- ▶ Tabletop of simulation drills
- ▶ “Tracer” drills

Which Methods Are the Most Effective?

- ▶ A 2008 meta-analysis of 258 studies investigated whether disaster preparedness training interventions improve knowledge and skills in disaster response
 - ▶ Not enough evidence to draw a conclusion
 - ▶ Outpatient clinics: computer- and lecture-based methods may be beneficial
 - ▶ In-hospital clinicians: not enough information to make comparisons

Williams J, et al. *Ann Emerg Med.* 2008;52:211-22.

Laboratory Management: How Do You Best Prepare Your Laboratory?

- ▶ Communicate with laboratory personnel before ordering testing
- ▶ Determine the availability of trained staff off-hours
- ▶ Train laboratory staff on PPE and cleaning laboratory equipment
- ▶ Deliver specimens to the laboratory (avoid the tube system)
- ▶ Designate areas where laboratory specimens are handled
- ▶ Plan for which tests will be performed
- ▶ Establish policies for shipping specimens to the state health department/CDC

Mortuary Services

- ▶ Establish how/where a body will be transported if an individual dies
- ▶ Identify local funeral homes that are willing to handle contagious diseases
- ▶ Train funeral directors to use PPE



Waste Management

- ▶ Plan early
- ▶ Consider all types of waste:
 - ▶ PPE
 - ▶ Contaminated equipment and supplies
 - ▶ Sewage
- ▶ Make a plan that extends beyond the hospital; communicate with the state health department, local water treatment department, and waste-handling vendors

Staffing: How Do You Ensure You Have a Staff Ready and Able to Respond?

▶ Willingness to respond

- ▶ 25%-50% of hospital staff would not be willing to work during a biologic disaster or pandemic influenza
- ▶ Concern for family is the greatest factor in the lack of willingness to work

Masterson L, et al. *J Emerg Med.* 2009;36:43-9; Balicer RD, et al. *BMC Public Health.* 2010;10:436; Devnani M. *Prehosp Disaster Med.* 2012;27:551-66.

Key HR Policy Decisions

- ▶ Volunteer versus requirement to work
- ▶ Fitness to work
 - ▶ Pregnancy
 - ▶ Trainees
 - ▶ Physical fitness
- ▶ Psychological support
- ▶ Evaluate whether supplementary pay will be offered
 - ▶ Hazard pay
 - ▶ Training time
 - ▶ Call time

What If a Staff Member Is Exposed?

- ▶ Monitor symptoms
- ▶ Implement a post-exposure furlough
 - ▶ Paid time if exposed
 - ▶ Housing resources (protect family members)
 - ▶ Must stay home after exposure
- ▶ Implement travel restrictions

**11pm each night, resource nurse to fax all forms to Employee Health Clinic: (216) 778-3990

Attachment A: Direct Healthcare Provider
Symptom Questionnaire and Daily Exposure Log

1.) Only complete this form if you have entered the pt room **OR** if you are lab personnel who has handled the pt's blood under the hood.

2.) You must call employee health (216 778-8088) every day at 7am and 7pm with your temperature, **AND** fill out this form to place in the SDCU unit binder.

Name _____ Phone # _____ Alt Phone _____
Email _____ Employee ID # _____
Employee DOB _____ Date/Time Worked _____

Symptom	Start of Shift	End of Shift
Temperature:	_____	_____
Nausea/Vomiting:	N ___ Y ___	N ___ Y ___
Diarrhea:	N ___ Y ___	N ___ Y ___
Headache:	N ___ Y ___	N ___ Y ___
Joint or Muscle Aches:	N ___ Y ___	N ___ Y ___
Stomach Pain:	N ___ Y ___	N ___ Y ___
Lack of Appetite:	N ___ Y ___	N ___ Y ___
Weakness:	N ___ Y ___	N ___ Y ___

Exposure

*Any direct skin to skin or mucus membrane contact or contact with blood and body fluids without using appropriate personal protective equipment? N ___ Y ___ *Follow the "Ebola Virus Disease Employee Exposure Protocol".

- If you have a fever of > 37.8 degrees C (100 degrees F), any of the above symptoms, or an exposure, immediately call Employee Health (216) 778-8088. Also, complete an Employee Incident Report.
- Refrain from leaving the unit until consultation with Dr. Hanrahan
- You are required to report any fever of > 37.8 degrees C (100 degrees F) or any of the above symptoms for 21 days from the last shift worked on the unit.
- Any health care provider in contact with the patient, is required to monitor their temperature twice daily and monitor for symptoms listed above including days not worked in the unit.

Signature _____

Patient Care: How Do You Prepare for Taking Care of Exposed Patients?

▶ Equipment

- ▶ Supply—contracts and contingency plans, stockpiling (Strategic National Stockpile)
- ▶ Distribution plan with scarce resources
- ▶ Special supplies (masks, point-of-care tests)

▶ Medications

- ▶ Oseltamivir
- ▶ Ciprofloxacin

▶ PPE

Multidisciplinary Clinical Care Plan

- ▶ **Include ancillary services**
 - ▶ Phlebotomy, radiology, respiratory procedures, EVS
- ▶ **Minimize:**
 - ▶ Exposed staff
 - ▶ Consultants, cross-trained staff
 - ▶ Transport
 - ▶ Procedures
 - ▶ Intubation, central line placement, hemodialysis, catheter insertion, deliveries, surgeries

Visitor Policy

- ▶ Are visitors allowed?
- ▶ How do you provide family-centered, safe care to infected children?

Closing Thoughts

- ▶ “An ounce of prevention is worth a pound of cure”
- ▶ Review policies regularly and test the processes frequently
- ▶ Engage community partners and other hospitals in simulations and drills
- ▶ Explore tools and templates on the CDC Web site

Additional References

- ▶ Rebmann T. Assessing Hospital Emergency Management Plans: A Guide for Infection Preventionists. www.ncbi.nlm.nih.gov/pubmed/19699558
- ▶ Crises and Emergency Risk Communication (CERC). Centers for Disease Control and Prevention. emergency.cdc.gov/cerc/index.asp
- ▶ Emergency Preparedness and Response Preparation and Planning. Centers for Disease Control and Prevention. emergency.cdc.gov/planning/
- ▶ Hospital All-Hazards Self-Assessment. Centers for Disease Control and Prevention. www.cdc.gov/phpr/healthcare/documents/hah_508_compliant_final.pdf
- ▶ Hospital Emergency Management Program Checklist. California Hospital Association. www.calhospitalprepare.org/sites/main/files/file-attachments/emp_checklist_v080311.doc