Infectious Disease Certification Program and Emory/UNMC EVD Training

Arizona Department of Health Services

August 19, 2015

Infectious Disease Certification Program

- Certification for Healthcare Facilities
- Focus on Infectious Disease Services
  - Prevention
  - Screening
  - Care and Treatment

Program

- Established Guidelines for voluntary certification
- Intended to be adapted to the many various infectious disease illnesses or situations.
  - Based on the needs and resources particular to the community and level of certification
  - Variations that improve the quality of infectious disease prevention and treatment are encouraged
    - provided that they are in accordance with local/national regulations and statutes and professional standards.
- Guidelines are based on rules, regulations, and best practices that have been identified to achieve the best outcomes for prevention, screening and treatment of infectious disease.
- The certification will address areas of responsibility in a comprehensive and progressive approach to systems of care
  - patient care,
  - continuing education,
  - professional requirements,
  - community involvement, and
  - evaluation of care and services.

Structure

- The Arizona Department of Health Services (ADHS) will be the responsible agency for development and maintenance of the certification program.
- The Bureau of Medical Facilities Licensing (BMFL) will be the bureau that will be accountable for the implementation of the program.
- The Governor's Council for Infectious Disease will approve the program and will be the authority to provide ADHS with guidance and direction as the program evolves.
- The initial certification program will focus on the highest level of care available to an individual with an infectious disease.
- Additional levels of services may need to be established in the future in order to have a comprehensive state-wide program.
- These levels may include the outpatient setting, community hospitals, acute care centers as well as the rural communities.
- Success of the Infectious Certification program will be due to the tremendous efforts of the physicians, nurses, healthcare professions, general community and others who engage in the process of certification.

Purpose

- The primary purpose of the certification program is to establish a system within Arizona that communicates to the people of Arizona the healthcare system is in place to meet the current and future needs to manage infectious disease illnesses and most importantly there is an emphasizes on the prevention of disease and outbreaks.
- The voluntary program will also give recognition to the agencies who deliver the highest standards of infectious disease prevention and treatment from the time of symptom identification, diagnosis, and treatment.

Voluntary Certification Program:

- The voluntary certification program goes above and beyond the required compliance with the State and Medicare rules applied to healthcare facilities.
- The certification will be based on the quality management process each facility has developed and implemented to demonstrate their excellence in the delivery of care for individuals with an infectious disease as well as the facility's participation in prevention within the facility and the community.
- Emphasis is placed on the certified facility's processes and systems for managing the delivery of care and communication of information related to infectious disease.
- The certification program will include the basis foundation requirements of the Statutes, Rules, Regulations and Best Practices identified through nationally recognized agencies.

Value of Certification:

- **For the community:**
  - Demonstrates to the community of Arizona the State recognizes and supports a system approach to infectious disease management.
  - Demonstrates Arizona is prepared and has systems in place to address outbreaks and the day-to day infections.
  - Once a full certification system is established there would be a coordinated link with other certified facilities based on the level of care each facility can provide. This opens the coordinated approach to consultation and transfer of identified at risk patients when needed, provision of continuing educations programs, and performance improvement opportunities among the certified healthcare facilities.
- **For the healthcare provider:**
  - Provides the healthcare facility with one more additional method to demonstrate the facility processes and systems meet all requirements and best practices related to infectious disease.
  - Communicates the healthcare facility is committed to providing high quality patient care.
  - Provides the opportunity for multi-disciplinary, comprehensive review of the infectious disease systems and processes.

Grant to Support Implementation

- Grant to support the implementation of the program
  - Primary Focus in alignment with the CDC's Activities related to Eboloa Preparation
  - Levels of Certification
    - Front Line
    - Assessment
    - Treatment Centers

Certification Program Materials

- Draft Guidelines are drafted
- Team is established and evolving

Facility Types

Acute healthcare facilities can serve one of three roles:

Frontline healthcare facilities

Ebola assessment hospitals

Ebola treatment centers

Frontline Healthcare Facility

Quickly identifies and isolates patients with possible Ebola

Notifies facility infection control and state and local public health officials

Has enough Ebola personal protective equipment (PPE) for at least 12–24 hours of care

Prepares for patient transfer, if needed

Ebola Assessment Hospital

Safely receives and isolates a patient with possible Ebola

Provides immediate laboratory evaluation and coordinates Ebola testing

Cares for a patient for up to 5 days (including evaluation and management of alternative diagnoses) until Ebola diagnosis is confirmed or ruled out

Has enough Ebola PPE for up to 5 days of care

Transfers a patient with confirmed Ebola to an Ebola treatment center in consultation with public health officials

Ebola Treatment Center

Safely receives and isolates a patient with confirmed Ebola

Cares for patients with Ebola for duration of illness

Has enough Ebola PPE for at least 7 days of care (will restock as needed)

Has sustainable staffing plan to manage several weeks of care

CDC Ebola Response Teams (CERTs) are ready to deploy to provide assistance as needed

Assessment Center

Assessment Hospital designation

- **Each state is encouraged to identify at least one assessment hospital**
- **Decision to serve as Assessment Hospital is made between state and local public health authorities and hospital administration**

PPE

- **Have sufficient supplies for five days of patient care**

Assessment Center

Capabilities

- **Receive and isolate a person under investigation for possible Ebola**
- **Coordinate Ebola testing in collaboration with public health officials**
  - **May involve transferring specimens to a Laboratory Response Network (LRN) laboratory capable of Ebola testing**
- **Care for the patient up to 96 hours until**
  - **Ebola diagnosis can be confirmed or ruled out**
  - **Discharge or transfer is completed**
- **Prepared to transport patient with confirmed EVD to an Ebola treatment center**

Treatment Center

Designated by state and local health authorities as an Ebola Treatment Center or for Arizona we will have them Certified if they agree as Infectious Disease Certified Facilities

CDC Rapid Ebola Preparedness Team has visited the facility

Both of our preliminary Treatment Centers have been visited by CDC

ADHS will be visiting and reviewing the Certification guidelines with the key leadership within each facility

Admission of a confirmed Ebola patient is made in collaboration with public health and referring physicians

Capabilities

Safely receive and isolate a patient with confirmed Ebola

Care for patients with Ebola for duration of illness

PPE

- **Has enough Ebola PPE for at least 7 days of care (at time of assessment)**
- **If additional products are needed, facility is aware of how to contact state/federal partners for assistance**

Facility Preparedness

Components

1. Pre-hospital transport plans EMS and Emergency Department preparedness
2. Patient transport from points of entry to designated Ebola treatment area
3. Patient placement
4. Patient care team staffing
5. PPE and procedures for donning and doffing
6. Monitoring healthcare workers and managing exposures
7. Laboratory safety
8. Environmental infection control
9. Management of waste
10. Communications
11. Management of the deceased
12. Special populations

Care Team Composition

- Must meet your resources
  - All RN Team Cross trained
  - Multidisciplinary Team

- Committed and Dedicated Team
- Meet on a regular basis to develop trust and respect for each other
- Staff interviewed “Loved” being part of the team and it is a sought after opportunity in Nebraska

Care Team

A trained Ebola Patient Care Team should be pre-identified

- **Consider cross-training nurses or physicians to minimize number of staff with direct patient care (e.g., phlebotomy, cleaning)**
- **Team members should receive training and demonstrate competency on an ongoing basis**
- **Qualified, trained staff members should be identified for processing and testing specimens from a patient with Ebola**

Additional team members for consultation should be identified

- **They should avoid entering patient room if possible (e.g., use audio/video conferencing)**

Care Team

Designate site managers responsible for overseeing precautions for healthcare workers and patient safety

- **At least one manager should be on-site at all times in the Ebola treatment unit**
- **Manager's sole responsibility is to ensure safe, effective treatment**

Put protocols and policies in place for the following:

- **Only direct patient care staff, wearing appropriate PPE, should deliver meals, supplies, etc. to patients**
- **Healthcare personnel movement, monitoring, and non-Ebola patient care responsibilities while serving on an Ebola patient care unit**
- **Ensure compliance with federal and state regulations on reducing employee exposure to Ebola**
- **Ongoing support and evaluation of team members, including a process for feedback to leadership**
- **Engaging occupational health to define a clear and practiced plan for responding to a recognized exposure of a staff member**

Staffing Plans

- Completed in conjunction with the Managers where the staff would be pulled
- Staff involved to adjust for time off requests

Special Populations

Have protocols to address needs

- **Pregnant women, infants and children, dialysis patients**

Have plans and protocols for

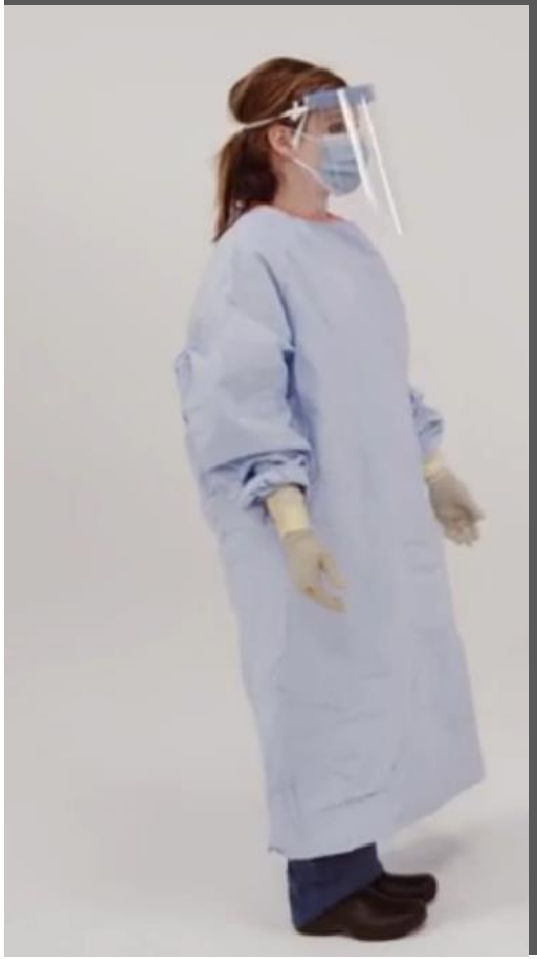
- **Patient arrival at all entry points**
  - **e.g., labor & delivery, outpatient clinic, dialysis unit**
- **Delivery of care (including staff and equipment)**
  - **Labor & delivery**
  - **Dialysis**
  - **Surgical intervention**
- **Communications, parent/child interaction**
- **Family area outside Ebola unit if appropriate (consult with public health officials)**

Recommendations for Safely Performing Acute Hemodialysis in Patients with Ebola Virus Disease in U.S. Hospitals at: http://www.cdc.gov/vhf/ebola/hcp/guidance-dialysis.html

Guidance for Screening and Caring for Pregnant Women with Ebola Virus Disease for Healthcare Providers in U.S. Hospitals at: http://www.cdc.gov/vhf/ebola/hcp/guidance-maternal-health.html

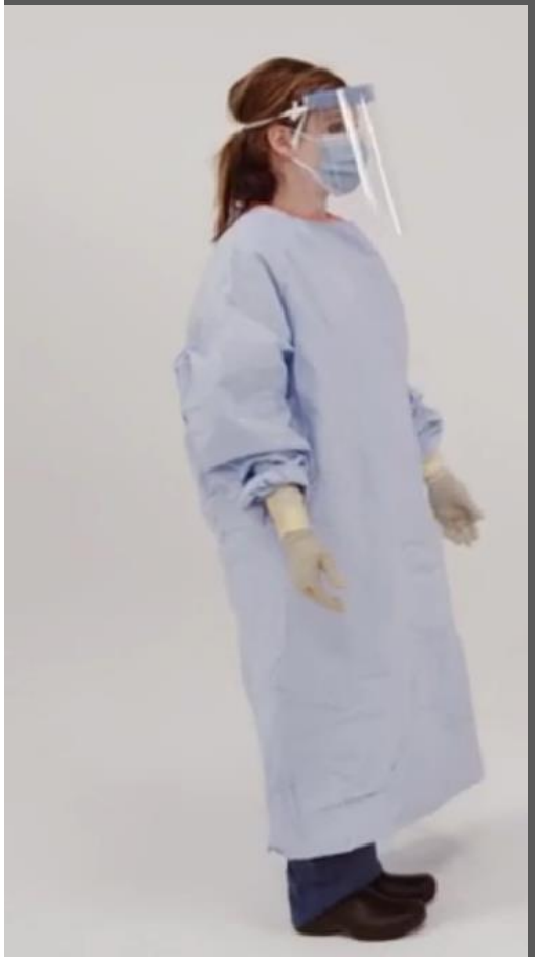
Personal Protective Equipment

PPE for “Dry” Person Under Investigation



http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/

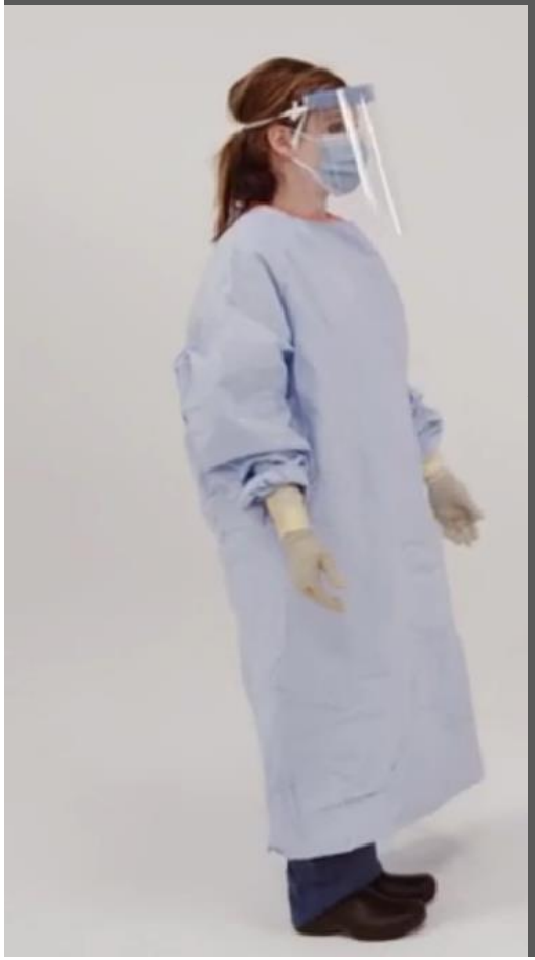
PPE for “Dry” Person Under Investigation



1	Single use (disposable) full face shield, Single use (disposable) surgical mask

http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/

PPE for “Dry” Person Under Investigation



2	Single use (disposable) fluid-resistant gown that extends to at least mid-calf or coverall without integrated hood

http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/

PPE for “Dry” Person Under Investigation

3	Single use (disposable) gloves with extended cuffs. Two pairs of gloves should be worn. At a minimum, outer gloves should have extended cuffs.

http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/

PPE for patient with confirmed Ebola infection or “wet” PUI

http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/

PPE for patient with confirmed Ebola infection or “wet” PUI

1	Single use face shield, surgical hood extending to shoulders, and N95 Respirator OR PAPR with a full face shield, helmet, shroud (not shown)

http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/

PPE for patient with confirmed Ebola infection or “wet” PUI

2	Single use fluid-resistant or impermeable gown that extends to at least mid-calf OR Coverall without integrated hood (not shown)

http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/

PPE for patient with confirmed Ebola infection or “wet” PUI

3	Two pairs of single use, disposable gloves. At a minimum, outer gloves should have extended cuffs.

http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/

PPE for patient with confirmed Ebola infection or “wet” PUI

4	Single use fluid-resistant or impermeable apron that covers the torso to the level of the mid-calf

http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/

PPE for patient with confirmed Ebola infection or “wet” PUI

5	Single use fluid-resistant or impermeable boot covers that extend to at least mid-calf OR Single-use fluid-resistant or impermeable shoe covers, which are acceptable only if used with a coverall with integrated socks (not shown)

http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/

PPE Donning & Doffing

Training

Training –

Training –

Exercise

Exercise

Patient Placement

Patient Placement

- **Overarching goal** - Isolate patient with possible Ebola while allowing for diagnosis and treatment of more likely infectious conditions

- **Private room** - Patients should be placed in a private room with private bathroom (or covered bedside commode) that is physically separate from other patient care areas
  - If feasible, a negative pressure airborne infection isolation room (AIIR) in case an aerosol generating procedure needs to be performed unexpectedly

- **Remote communication** - Ebola patient room should have a method of remote communication so that only essential personnel enter the room

- **Adequate space** - Patient room should provide enough space for HCW to move around the room safely

Patient Placement

- **In close proximity to patient room, separate areas should be designated for:**
  - Healthcare worker changing area (change from street clothes into hospital scrubs or disposable garments)
  - Clean area where clean PPE is stored and healthcare worker can don PPE before entering patient room
  - PPE doffing area
  - A designated area for waste storage
  - A shower in close proximity to PPE doffing area for HCW to use following PPE doffing protocol

Patient Placement

- **Dedicated room and equipment** - Patient room should have disposable patient care equipment or dedicated equipment not used for any other patient until it is completely decontaminated
  - e.g., blood pressure monitoring devices, pulse oximeters
- **Sharps disposal** - Puncture-proof sealed sharps containers are located in the room, in close proximity to patient bed
- **Personnel log** - A log is maintained of all personnel who enter any potentially contaminated space or handle infectious materials, with information to assign exposure categories (high-, some, low-risk) for monitoring


Nebraska Medicine
Campus and Community Support in the Care of a Patient with Ebola Virus Disease
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Sarpy Co Public Health
Offutt AirField/SAC
Center for Disease Control
UNMC College of Public Health
Media Relations
Nebraska Medicine Command Center
Nebraska Public Health Lab
Family/SO
Nursing Concierge
Clinical Research
Infectious Disease
Medical Materials
Environmental Services
Patient Care Equipment
Linen
Facilities
Pharmacy
Nebraska Medicine NBU
Critical Care Medicine
Nephrology/ Dialysis
Nebraska Core Lab
Mental Health
Primary Care following discharge
Hospitalists
Radiology
Physical Therapy
Nutritional Services
Cremation
Pastoral Care
NPHL


Autoclave
Chair


Biocontainment
Unit Team


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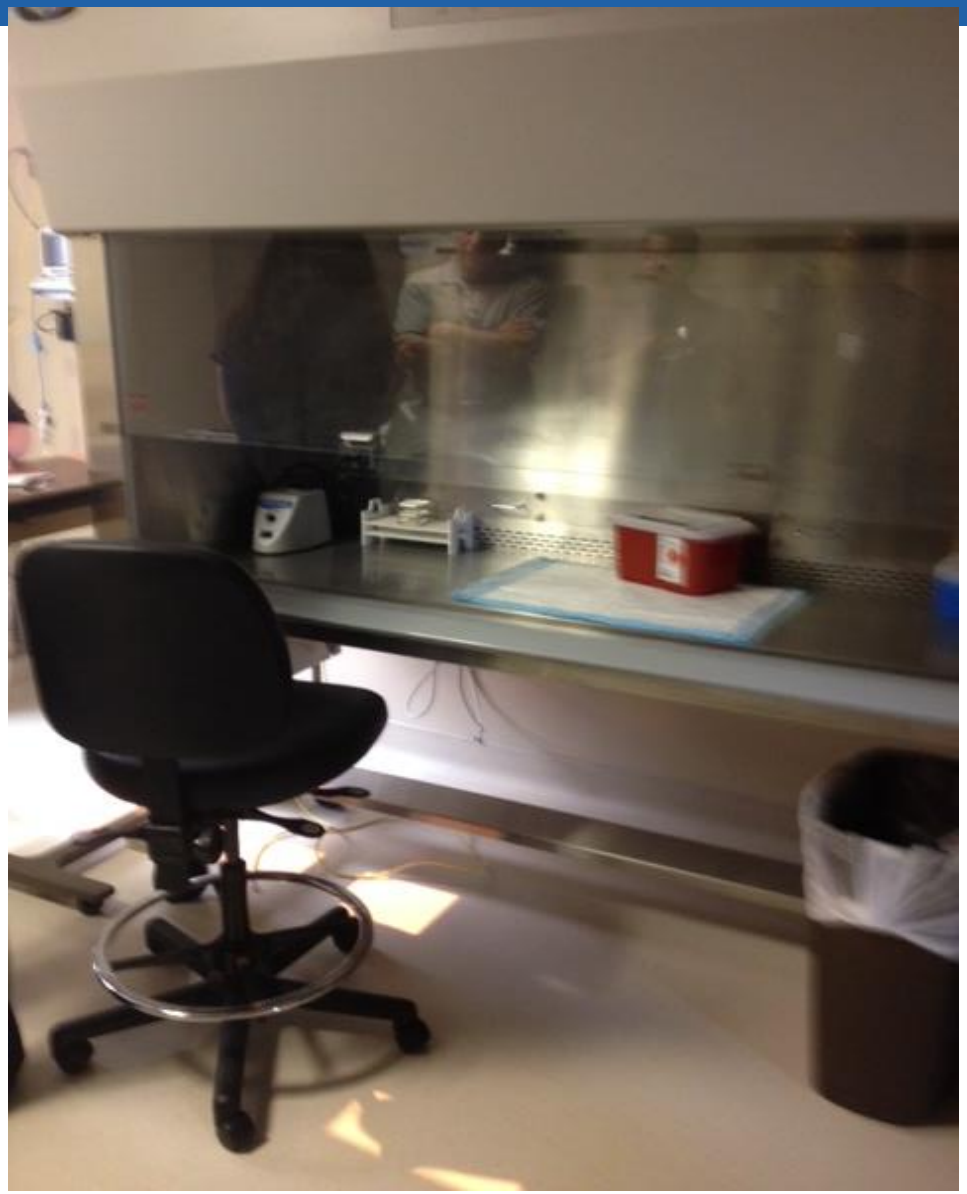
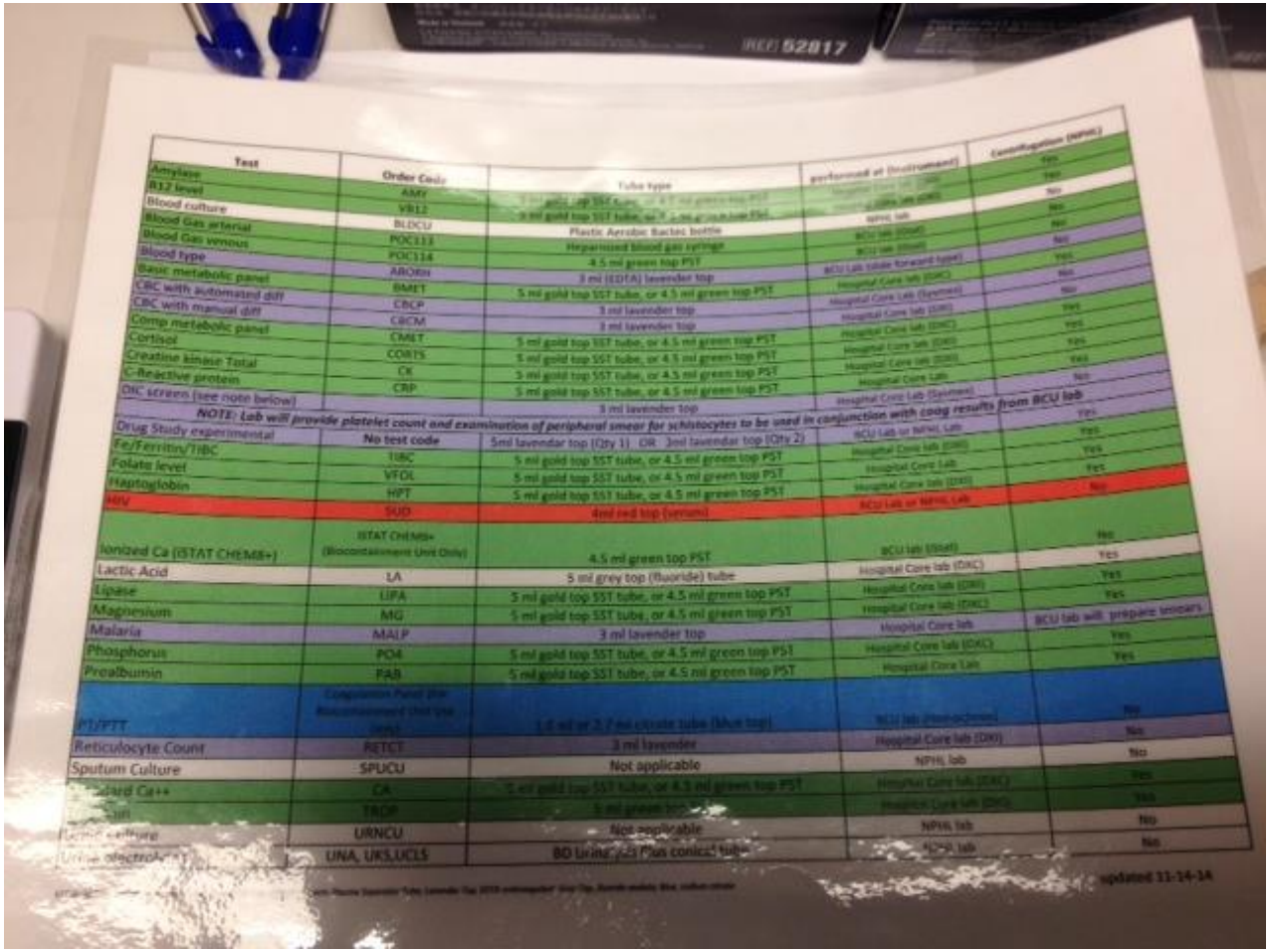
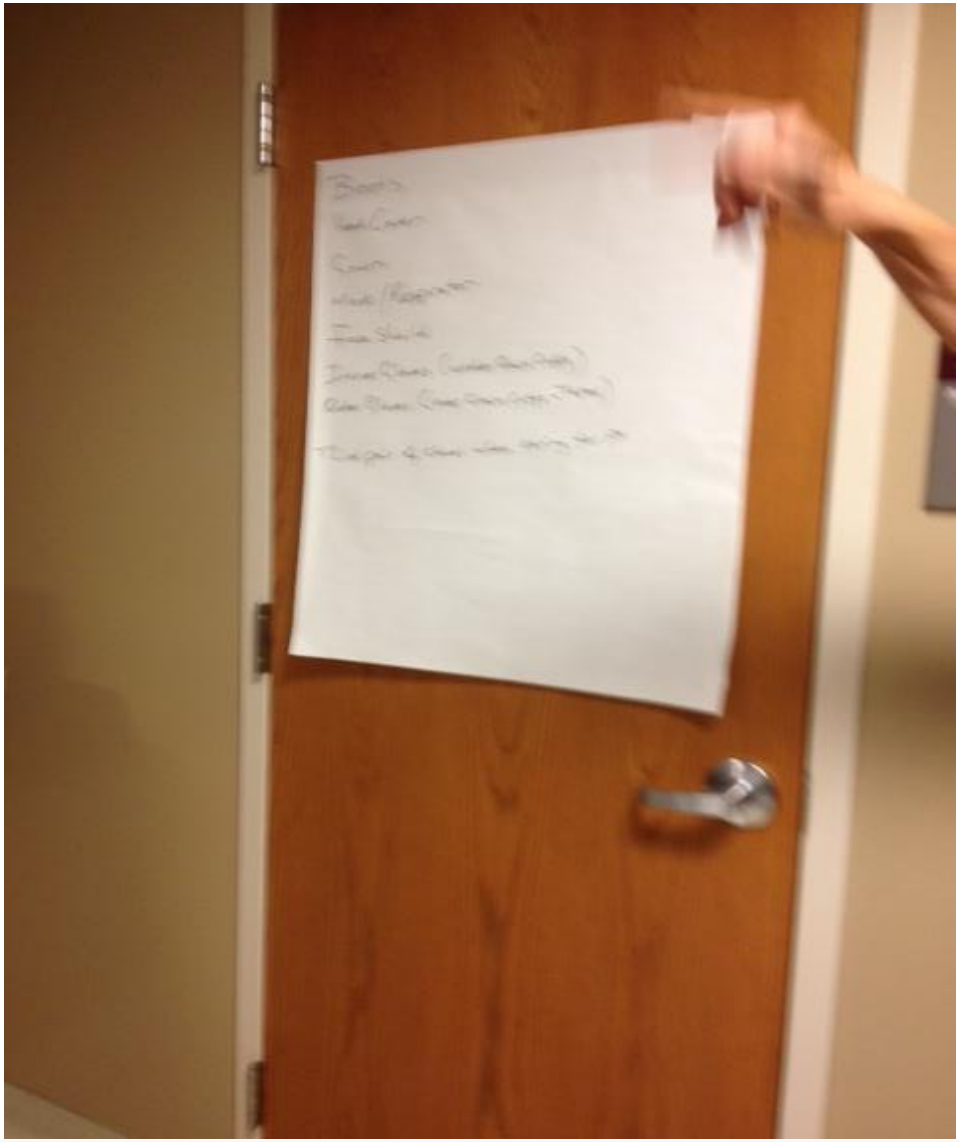
Supply Roo





Test	Order Code	Tube type	performed at (instrument)	Centrifugation (NPHL)
Amylase	AMY	[illegible]	[illegible]	Yes
B12 level	VB12	3 ml gold top SST tube, or 4.5 ml green top PST	[illegible]	No
Blood culture	BLDCU	Plastic Aerobic Bactec bottle	NPHL lab	No
Blood Gas arterial	POC113	Heparinized blood gas syringe	BCU lab (iStat)	No
Blood Gas venous	POC114	4.5 ml green top PST	BCU lab (iStat)	No
Blood type	ABORH	3 ml (EDTA) lavender top	BCU Lab (slide forward type)	Yes
Basic metabolic panel	BMET	5 ml gold top SST tube, or 4.5 ml green top PST	Hospital Core lab (DXC)	No
CBC with automated diff	CBCP	3 ml lavender top	Hospital Core Lab (Sysmex)	No
CBC with manual diff	CBCM	3 ml lavender top	Hospital Core lab (DXC)	Yes
Comp metabolic panel	CMET	5 ml gold top SST tube, or 4.5 ml green top PST	Hospital Core lab (DXC)	Yes
Cortisol	CORTS	5 ml gold top SST tube, or 4.5 ml green top PST	Hospital Core lab (DXC)	Yes
Creatine kinase Total	CK	5 ml gold top SST tube, or 4.5 ml green top PST	Hospital Core lab (DXC)	Yes
C-Reactive protein	CRP	5 ml gold top SST tube, or 4.5 ml green top PST	Hospital Core Lab	No
DIC screen (see note below)		3 ml lavender top	Hospital Core Lab (Sysmex)	No
NOTE: Lab will provide platelet count and examination of peripheral smear for schistocytes to be used in conjunction with coag results from BCU lab				
Drug Study experimental	No test code	5ml lavendar top (Qty 1) OR 3ml lavendar top (Qty 2)	BCU Lab or NPHL Lab	Yes
Fe/Ferritin/TIBC	TIBC	5 ml gold top SST tube, or 4.5 ml green top PST	Hospital Core lab (DXC)	Yes
Folate level	VFOL	5 ml gold top SST tube, or 4.5 ml green top PST	Hospital Core Lab	Yes
Haptoglobin	HPT	5 ml gold top SST tube, or 4.5 ml green top PST	Hospital Core lab (DXC)	No
HIV	SOD	4ml red top (serum)	BCU Lab or NPHL Lab	
Ionized Ca (iSTAT CHEM8+)	iSTAT CHEM8+ (Biocontainment Unit Only)	4.5 ml green top PST	BCU lab (iStat)	No
Lactic Acid	LA	5 ml grey top (fluoride) tube	Hospital Core lab (DXC)	Yes
Lipase	LIPA	5 ml gold top SST tube, or 4.5 ml green top PST	Hospital Core lab (DXC)	Yes
Magnesium	MG	5 ml gold top SST tube, or 4.5 ml green top PST	Hospital Core lab (DXC)	Yes
Malaria	MALP	3 ml lavender top	Hospital Core lab	BCU lab will prepare smears
Phosphorus	PO4	5 ml gold top SST tube, or 4.5 ml green top PST	Hospital Core lab (DXC)	Yes
Prealbumin	PAB	5 ml gold top SST tube, or 4.5 ml green top PST	Hospital Core Lab	Yes
PT/PTT	Coagulation Panel (for Biocontainment Unit Use Only)	1.8 ml or 2.7 ml citrate tube (blue top)	BCU lab (Sysmex)	No
Reticulocyte Count	RETCT	3 ml lavender	Hospital Core lab (DXC)	No
Sputum Culture	SPUCU	Not applicable	NPHL lab	No
[illegible]dard Ca++	CA	5 ml gold top SST tube, or 4.5 ml green top PST	Hospital Core lab (DXC)	Yes
[illegible]in	TROP	5 ml green top [illegible]	Hospital Core lab (DXC)	Yes
[illegible] culture	URNCU	Not applicable	NPHL lab	No
Urine electrolytes	UNA, UKS,UCLS	BD Urine [illegible] plus conical tube	NPHL lab	No

updated 11-14-14




ThinkLabs

Lessons Learned about Waste Management

- There will be a lot more waste than you anticipate
- Be proactive, start communication with all who will be involved
  - Build your partnerships now
    - Local authorities
    - Your biomedical waste vendors

Lessons Learned about Waste Management

- Be very systematic
- Think sustainable
  - Have a plan, a back up and a back up to the back up
  - AND test the plan
- Know the rules, regulations and guidelines
- If you have access to Biorisk Management Professionals, involve them in the process.
- Document everything

Laboratory

- Laboratory Testing
  - Lessons learned
    - Decontamination process
    - Waste Management
    - Testing protocols
    - Handling Spills
    - Transport of Specimens
    - Chain of Command

Communication

- Pre Arrival of a Patient
- During Assessment; Care; Discharge
- Consistent Messaging
  - One person or a dedicated team
- Arrange for Public Information sessions at a site not on the proper where the patient is located

Certification Program Next Steps

- Work with Treatment Centers on their design plans and organization of their units based on the Department Physical Plant requirements
- Begin meetings to share the guidelines and have open discussions
- Determine Assessment Facilities

Questions