POCT & Lab Preparedness

A regional approach to being Eveready

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Objectives

• Describe previous experience in using POCT in preparedness for a disaster or emergency event in a populated region

• Define use of POCT in such an event

• Provide what testing a current POCT program can provide in a disaster or emergency event
Children’s Hospitals and Clinics

Minneapolis

St. Paul
Minnesota History

- Pre 9/11 some hospitals in MN wanted to develop a collaboration for disaster preparedness, but agreements in other metropolitan areas were being held up due to legal language issues
- No one understood fully what resources were available, much less how to get them if needed
- Community involvement was minimal
- Hospitals were essentially little black boxes where patients went to get better
Minnesota History

• Post 9/11, interest in collaboration increased significantly
• Minnesota has 87 counties which have been grouped into eight regions
• Throughout the state, we have 140 acute/chronic care hospitals, 10 community behavioral health hospitals and 7 regional treatment centers
Minnesota History

• The Metro Region is made up of 7 counties in and around Minneapolis & St. Paul
• We have 30 hospitals in these 7 counties

• The Minnesota Metropolitan Medical Response System (MMRS) was being developed prior to 9/11, and after 9/11 stepped up its activity
Metropolitan Compact

- MMRS laid the groundwork that eventually helped to draft the contract language of the Metropolitan Compact Agreement
- A representative from MMRS then went around to the metro hospitals to ask for buy in
- The Metropolitan Area Hospital Compact was formed on April 9, 2002
- Bylaws were established later in 2002
- But what does this Compact mean for hospitals?
Metropolitan Compact

- The compact is not a legally binding contract, but it is “a belief and commitment by the 30 hospitals in the 7 county metro region that, in the event of a significant disaster, the medical needs of the community would be best met by all of the hospitals cooperating with each other to coordinate the response efforts”
- As part of the compact agreement, the metro hospitals have agreed to share staff and supplies
- Each hospital keeps an emergency stockpile of various supplies (PPE, decon, etc) as well
These supply stores, along with bed availability and patient tracking are tracked thru a system called MnTrac

All 30 hospitals update information in MnTrac daily
The Metropolitan Compact

- The Compact also designated 2 sites in the Metro area as Alternative Care Sites (ACS), to be used in the event such a facility was needed.
Metro Lab Preparedness Group

- Once the compact was formed, drills began to happen and lab staff quickly realized we needed to be in on the action.
- In 2007, the Metro Lab Preparedness Group was formed.
- This group was made up of mainly Lab Safety Officers, Supervisors, Microbiology staff and POCCs from the 30 metro hospitals named in the Metro Compact Agreement.
Metro Lab Preparedness Group

The group was tasked with:

− Deciding on what roles the lab would play in a disaster or significant event
− Identifying what testing we could easily and quickly supply outside the walls of our hospitals and how we could do the testing
− Ensuring we could staff any scenario and provide laboratory services that would be expected of us
Metro Lab Preparedness Group

• The group created essentially a new lab – but only for emergencies!

• Items we created:
  – Procedures
  – Forms
  – Lab positions
  – Job Action Sheets
  – Workflow for the ACS lab
  – Training
  – And…supply availability
ACS Lab Manual

- Five sections
  - Procedures
  - Supply Lists
  - Contact Information
  - Reference materials
  - Forms

- Three master copies are stored at the Department of Health and the two regional hospital resource centers

- Fifteen electronic copies on USB drives distributed to Metro Compact Hospitals

- Updates sent via MnTrac needed
ACS Lab Manual

• Testing to be completed on site:
  − Urinalysis (by dipstick), hCG qualitative, and the following iSTAT tests: EC8+ cartridge, Creatinine, Glucose, Troponin and INR
  − Any other testing requested will be treated as a send out.

• Procedures for the iSTAT and urine collection were created

• Requisition Forms for in house & send out tests created
ACS LABORATORY TESTING REQUISITION

Requesting Provider: _______________________________
Date/Time collected: __________________________________
Collected by: _______________________________________

☐ GLUCOSE
☐ CREATININE (iSTAT)
☐ TRO PonIN (iSTAT)
☐ INR (iSTAT)
☐ URINALYSIS (DIPSTICK)
☐ hCG QUALITATIVE (PREGNANCY)

SEND-OUT TESTING:
ORDER ANY ADDITIONAL TESTING IN THIS SPACE. EXPECT INCREASED TURN-AROUND TIMES.
IF WRITING IN UNLISTED TESTS, BE SPECIFIC AND DO NOT USE ABBREVIATIONS.
THE PROVIDER OR NURSE MUST COLLECT SPECIMENS OTHER THAN BLOOD AND URINE.
RESULTS WILL BE ATTACHED TO REPORT FORM.

☐ BLOOD CULTURE
☐ AEROBIC ONLY
☐ AEROBIC/ANAEROBIC
☐ URINE CULTURE
☐ URINE MICROSCOPIC
☐ SPUTUM CULTURE (INCLUDES GRAM STAIN)
☐ CBC
☐ OTHER: ________________________________

PROVIDER SIGNATURE

ATTACH PATIENT LABEL HERE

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Children's Hospitals and Clinics of Minnesota
ACS Lab Positions

- Six staff positions created for each pod in the ACS
  - Two Rounding Technologists (one serves as lead)
  - Two Static Technologists
  - One Pod Clerk
  - One Runner
- The beauty of these positions is being able to staff up or down as needed
- Each position has a Job Action Sheet that gives a list of duties and responsibilities, following HICS layout
  - Training to occur upon arrival at ACS
ACS Lab Positions

Metro Region Alternate Care Site (ACS)
Operations Section, Medical Care Branch, Laboratory Unit

Position Title: Rounding Technologist

Location: Varies depending upon site
Department: Laboratory

Date Prepared: 1/08/2008
Date Approved: 

Statement of Employee Conduct:
The lab staff member will support the values of The Metro Alternate Care Site Operations Section (ACS) and be familiar with and abide by all ACS and Laboratory specific policies and procedures. These employees will conduct themselves in a manner that reflects the values of a laboratory staff member.

Position Summary:
a) Performs blood collections inside the pods for iSTAT and/or send-out testing.
b) Performs iSTAT and glucometer testing, completes the Result Form with appropriate stickers if abnormal (yellow) or critical (red) values are observed, and immediately notifies nursing staff of any critical results.
c) Troubleshoots any error messages or QC failures of the iSTAT instrument or glucometer.

Supervision/Work Direction:
a) Performs independently in all areas of responsibility.
b) Resolves all technical and quality assurance problems whenever possible, and consults the Lab Unit Leader for problems that require further action.

Machines/Equipment/Software Utilized:
a) Personal Computer (utilizing Windows Office software)
b) Printers
c) iSTAT instrumentation (analyzer, cartridges, and printer)
d) Accu-Chek glucose meter
e) All other laboratory instrumentation used in their area of expertise.

CRITICAL JOB DEMANDS:
The following information describes the physical activities that are performed during the normal workday by employees in this job classification. The percentage of the normal workday that the physical activity is conducted is delineated as follows:

| Rarely: 1-5% of an 12-hour workday (0-1/2 hour) | Occasionally: 6-33% of an 12-hour workday: (1/2 hour - 4 hours) | Frequently: 34-66% of an 12-hour workday: (4 hours - 8 hours) | Continuously: 67-100% of an 12-hour workday: (8 hours - 12 hours) |

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<th>ITEM:</th>
<th>0%</th>
<th>1-5%</th>
<th>6-33%</th>
<th>34-66%</th>
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<tr>
<td>Left carry</td>
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<td>Rotation sitting</td>
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<td>Rotation standing</td>
<td>X</td>
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<td>Crawl</td>
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<td>Kneel</td>
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<td>Crouch - deep static</td>
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<td>Right upper extremity</td>
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OTHER
Vision | X |
Smell | X |
Hearing | X |
Taste | X |
ACS Laboratory Workflow

Stationary Technologist

SEND-OUT SPECIMENS & RESULTS

STATIC LAB: URINE/BLOOD COLLECTIONS, iSTAT TESTING, UA, SEND-OUTS

PATIENTS FOR URINE AND/OR BLOOD COLLECTION, SEND-OUT SPECIMENS, SEND-OUT RESULTS

Runners

Rounding Technologist

COT-SIDE ROUNDS (q 2 hr)

PODS

CLERK: UPDATES PATIENT CHARTS

Pod Lab Lead
ACS Supplies

• Equipment
  - iSTATs – purchased using Healthcare System Preparedness Program (HSPP) Grant monies and divided up between Metro Compact Hospitals; Kept up to date by being used in these hospitals, but designated to be pulled for ACS & MMU use if the need arises

• Supplies
  - Stored at a warehouse in Minneapolis; only those without expiration dates
  - Black boxes typically used to carry band equipment for concerts; on wheels – easy to move
ACS Supplies

- Lab Wall System from MarketLab used to set up the ‘lab’
- Phlebotomy & Specimen collection supplies, PPEs, Testing supplies
Drill! Drill! Drill!

• Based on HSPP grant requirements, we are required as a region to plan & exercise annually. Hospitals in the region have the option of participating or not in these exercises. If they choose not to participate, they must develop their own exercise or participate in some other area exercises.

• Recent drills:
  - 6/2/11: ACS exercise at Xcel Energy Center in St. Paul
  - 5/1/12: MDH Lab/Bioterrorism exercise
  - 1/16/13: Regional drill, Operation Curtain Call exercise – with fatality management component (St. Paul campus)
Drill! Drill! Drill!
Life also really happens...

- H1N1 (PPE supplies needed and shared)
- Flu/RSV season (ventilators needed and shared)
- Red River flooding in NW MN (MMU deployed)
- 35W Bridge collapse (Alternative ACS site deployed)
- Republican National Convention (MMU deployed)
- Fire in an adjacent building to Children’s (acquired portable HEPA filters)
Mobile Medical Teams (MMT): A group of volunteer medical & support professionals who have received training and practice in providing acute medical care in a mobile field environment

Minnesota residents interested in participating in an MMT can learn more & sign up by going to [www.mnresponds.org](http://www.mnresponds.org) and become part of the Medical Reserve Corps

We currently have two teams in place ready to respond in Minnesota
Evolving Disaster Response: MMT & MMU

• Mobile Medical Unit (MMU): The Minnesota Mobile Medical Unit is a tractor-trailer that opens up into a 1000 square foot stand alone medical treatment center.

• Our unit was purchased by grant dollars in anticipation of the RNC coming to St. Paul in 2008, and later donated to the Minnesota Department of Health to be available for potential statewide use.

• When deployed, the MMU has 8 patient care beds (2 for critical care).

• It also is equipped with a lab, pharmacy, mechanical ventilators, advanced airway management, cardioversion, ultrasound, oxygen, suction and portable X-ray.
Evolving Disaster Response: MMT & MMU

Ready for use...
Evolving Disaster Response: MMT & MMU

...all year long!
Minnesota Eveready

Life Cycle

Mitigation
- Short & Long Term
- Securing Critical Assets
- Resumption/Restoration
- HVA
- Hazard Management
- Public Education

Preparedness
- Resource Management
- Planning & Training
- Exercises, Evaluation
- Corrective Actions

Response
- Incident Management
- Integrated Response
- Planning & Intelligence

Recovery
- Incident Management
- Integrated Response
- Planning & Intelligence
Thank you!

• Carol Buhl-Schafer MT (ASCP)  
  Laboratory Education and Safety Coordinator  
  Children’s Hospitals and Clinics

• Susan Stoltz, MT(ASCP)  
  Laboratory Technical Consultant - POCT  
  HealthEast Medical Laboratory

• Connie Weston MS, MT (ASCP)  
  Laboratory Clinical Development Specialist  
  University of Minnesota Medical Center, Fairview

• Pam Schultz  
  Corporate Emergency Manager  
  Children’s Hospitals and Clinics

• Mark Lappe  
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  Hennepin County Medical Center

• Nathan Kendrick, MS, M(ASCP)  
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  Emergency Preparedness & Response Unit