

## Alternative Methods of Dispensing: Model Highlights



### Home Delivery Model: Utilizing Public School Buses

Chesapeake County Health Department, Virginia



#### Background

Located in eastern Virginia, the City of Chesapeake is adjacent to the cities of Norfolk and Portsmouth and lies near the border of North Carolina. As the third most populated city in Virginia, it spans some 350 square miles, is home to almost 230,000 residents, and is comprised of urban areas as well as protected forests and wetlands.

As part of the Cities Readiness Initiative, the Chesapeake County Health Department proposes to employ a “push distribution method” to provide mass prophylaxis of its residents within 48 hours of a declared public health emergency. This door-to-door delivery of antibiotics or other life saving countermeasures, proposes to use public school buses, Medical Reserve Corps volunteers, and City employees to dispense these medications.

Initially, Chesapeake Health Department had planned to use a fixed site Points of Dispensing (POD) model to provide medical countermeasures to their community. Further review suggested that this model could present significant challenges in dispensing these life-saving treatments in an efficient and effective manner. Such challenges included significant traffic congestion in the parking lots of these community PODs and on the streets surrounding these sites.

#### The Plan

Going back to the drawing board, the City’s planning committee began

exploring alternative, more effective methods of dispensing medical countermeasures during the critical 48 hour period required in the CRI guidance; namely residential delivery of medications using public school buses.

Full implementation of the plan calls for approximately 900 volunteers and public health staff and 196 buses to work one full 8-hour shift that would include: just-in-time training, kit assembly, and door-to-door delivery by school bus.

Now in its third year of testing and evaluation, the plan has demonstrated that antibiotic kits can be assembled and delivered to approximately 90,000 residences covering the entire population of 230,000 people within 5 hours.

#### Exercising the Plan

The 2007 exercise, appropriately named, Special Delivery, time tested both kit assembly and delivery. Each kit consisted of a drawstring bag containing:

- Four (4) bottles of a 10-day antibiotic regimen,
- Two information sheets describing the mock anthrax bioterrorism attack being exercised; and
- An 8-page newspaper-size insert with teaching information about anthrax as well as instructions describing the medication being distributed and recommended treatment regimen. The newspaper insert is made available in four languages.

One-thousand “antibiotic” kits were assembled. Using public school buses and pre-determined GIS-mapped routes, one bus driver and four volunteers delivered the kits, hanging them on the door knobs of 934 residences.

The results of the exercise were based on the following assumptions: 1) 900 City staff and volunteers from the Medical Reserve Corps will be available and show up in an event; and 2) the 196 buses that will be needed to transport these volunteers and staff and dispense these medication kits will be maintained and available for use. Additionally, data did not take into account receipt and staging of medicines and supplies, volunteer/staff notification; and that deliveries will need to be made to rural areas (see resources below for more information for an executive summary of the 2007 exercise).

Follow-on exercises have been conducted, including a tabletop

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exercise in July of 2008 that incorporated the various county departments in the Emergency Operations Center (EOC) and looked at the impact this plan will have on the county and the services it provides. In August 2008, another full-scale exercise was conducted. This exercise, with the consent of the U.S. Postal Service, tested placing the medication kits in the mailboxes of homes of those residents living in rural areas outside the City.

### Pros

- Reduces traffic congestion in the streets and parking lots of POD sites and ultimately reduces the associated anxiety and frustration of residents.
- Accommodates most residents' preference to stay at home during an emergency and may have the added benefit of creating recommended social distancing measures likely to be implemented in the event of a pandemic influenza.
- Greatly increases the feasibility of meeting the 48-hour timeline required under the CRI program.
- Volunteers and non-health department staff are only needed for one shift lasting eight hours instead of multiple 12 hour shift required during POD operations.

### Cons

- Implementing this type of plan can be a challenge for some jurisdictions that do not have the human or transportation resources required to administer such a method. In Chesapeake, outcomes are based on the assumption that the MRC volunteers and City employees will show up in an actual emergency and that a sizable number of public school buses will be maintained and available.
- A significant number of human resources are likely to be required to provide security services to protect volunteers and staff assigned to mobile dispensing activities and the medication from theft.
- If surrounding jurisdictions are not participating in a residential delivery plan, any media messages associated with the residential delivery plan may be confusing to those not eligible for the service.
- May not be as effective in densely populated areas or in primarily rural areas.

### Costs/Resources Needed

- A significant number of staff and/or volunteers.
- Strong relationship with the public school system and commitment of school busses, especially where employee unions are involved.

- Drawstring bags, printing of materials, bus fuel (in Chesapeake, Public Schools have committed to pay fuel costs even though the health department planned to pay for it).
- Costs associated with the newspaper insert included in the bags. Chesapeake, along with other health districts in the region, works with *The Virginian-Pilot*, a local newspaper, for this. There is a small fee involved (see resources below for more information on the printing partnership for CRI).

### Planning Tips

- Logistics and transportation are important issues that need to be fully addressed.
- Develop public-private partnerships, to include (but not limited to) city/county officials, public school officials, unions, emergency management and law enforcement officials, volunteer groups such as the local Medical Reserve Corps unit, Community Emergency Response Teams (CERTs), or American Red Cross.
- Include a strong public information and risk communications component to your plan. Ensure clear, repetitive messages so that community residents understand what to expect, who to go to with questions, and what local officials they will receive necessary information from.
- Sustain planning and exercise activities. Keep partners engaged and motivated towards continuous quality improvement.

### Resources

- *Printing Partnerships for CRI*, presented by the Virginia Department of Health and *the Virginian Pilot* at the regional SNS Workshops. (PDF)
- Executive Summary, After Action Report/Improvement Plan, Full Scale Exercise "Special Delivery 08." (PDF)
- *Davis, K. (2008, August 2).* Video: Chesapeake's Trial Run Helps Test Anthrax Readiness. *The Virginian-Pilot*. Retrieved October 6, 2008 from <http://hamptonroads.com/node/474951>

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