

Facing the Long Shot: Out of Vaccine, Out of Time

*Public Health Assessment Case Study
Mid-America Regional Public Health Leadership Institute
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Green Thumbs – Cultivating Leadership

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ABSTRACT

It was a crisp fall day. The leaves on the trees were turning out brilliant colors of the season. The morning air held a chill but the first true cold snap had yet to make its way to this diverse and rural yet urbanizing midwestern community of Thumbsville, population 125,000. It appeared to be the start of another typical day at the Thumbsville’s local county health department. The flu shot clinics had been advertised and all were gearing up for the upcoming flu season. The Centers for Disease Control had predicted this year’s flu strain would put Thumbsville’s children and senior citizens at a particularly high risk for contacting the disease. In response, the Director of Nursing (DON) was off to a busy start, organizing and prioritizing the department’s upcoming flu clinics. Then THE CALL came.

It was the beginning of October when the DON first learned that her department would receive but a fraction of the flu vaccine initially ordered and expected, and not until mid-to-late November at that. Worse yet, it appeared possible that the department stood to receive no vaccine this year. To further complicate matters, the first clinic was scheduled and heavily advertised to be held within 10 days. This interdependent community had come to expect the annual Thumbsville health department flu clinics, a staple in their family calendars. In fact, it was said that the community believed they owed much of their good health and well being, particularly during the flu season, to the long-standing services and efforts of their reliable local health department. The DON was prepared to address this last minute crisis; or was she?

The following case study was designed to enhance your awareness of the potential problems associated with a vaccine shortage and how the core function of Assessment comes in to play in dealing with this crisis. Issues including preparedness, privatization (by default), community relationships and collaboration are included. This scenario will also demonstrate the effects on public relations, communications, and cultural issues that a public health department could face.

It is hoped that the predicaments both anticipated and realized throughout this case study will serve to better prepare those public health professionals charged with the responsibility of administering vaccination programs, to deal with the unexpected. Lessons exposed and to be studied in this case are designed to provoke thought among readers in the form of promoting more thorough planning among fellow public health care providers, with reference to the foreseeable - as well as the unforeseeable.

Introduction

Emerald County lies along the shores of the Ohio River, and its borders encompass plentiful farm fields and orchards, as well as multiple communities, include the rapidly growing city of Thumbsville, with a population of just over 125,000. The County's ideal location along the river has created a busy riverfront with high-volume barge traffic to ship goods from a growing manufacturing base and grains from large agricultural farms. This strong economic base has drawn many young urbanite professional families, as well as many Hispanic families. Combined with the pre-boom farming community population, this has led to a diverse county demographic. The majority of the county's Spanish-speaking population lives in the town of Greensboro, which is typically considered a part of Thumbsville, but has its own borders and government.

The Emerald County Health Department (ECHD) was established as a certified local public health department in the 1950s. Its structure is similar to that of many county health departments in that it has a governing board, a public health administrator, and multiple divisions with division directors reporting to the administrator. With the population boom Emerald County has experienced in recent years, election to the Board of Health has become very competitive because it is a prestigious post, and a springboard for future political ambitions. Despite this the board displays remarkable knowledge and flexibility, and maintains a strong relationship with the administrator and most of the health department's staff.

ECHD is by all accounts highly effective in protecting the public's health through its various programs. The board, the administrator, and the department staff all take pride in ECHD's reputation for quality and effective service to all residents of Emerald County. Residents of the county rely heavily on many of these services, and in recent years, have come to know ECHD as "the" provider of flu vaccine each influenza season. ECHD's clinics have always run early in October and the philosophy of Ima Lamduk, the longtime Director of Nursing (DON), has been that protection of the public from seasonal influenza is much more important than making money on seasonal clinics. This view is shared by the Board of Health, and in recent years the cost of adult and pediatric flu shots have remained stable even as surrounding providers have increased their prices regularly.

This fall it was expected that vaccine would arrive during the first week of October, as it always had. Ima had placed her vaccine order in March, and CDC reported throughout the spring, summer and early fall that more doses would be available this year than ever before. There was no reason for concern that ECHD would be short on doses; it never had before, and after all, it was a public agency and a participant in a statewide ordering group that would lobby on its behalf should vaccine distribution bog down. Advertisements for the first clinic had been placed in both of Thumbsville's major newspapers, as well as in the Greensboro Spanish-language newspaper. Radio and television ads and public service announcements were running daily, and Ima was confident that the community was receiving the message and that it would be no problem giving most of the 18,000 doses of Flu-Goo that had been ordered. Staff was actively promoting clinics, as were community advocates such as Diego Verde, the director of the Hispanic Cultural Center of Greensboro and a prominent and influential member of the Spanish-speaking community. Clinics would be held periodically throughout October and November, beginning October 10 at the Emerald County Courthouse.

The Call – October 1 and Beyond

In the mid-morning on Thursday, October 1, Ima had just met with her administrator, Guy Newman, in a regularly scheduled bi-weekly update meeting. Among the topics they had discussed were the Bioterrorism Grant budget, the implementation of a new continuing education policy, and final details of the seasonal flu kickoff clinic at the Courthouse. Mr. Newman had only been through one previous flu season as ECHD's administrator, and it had gone very smoothly. Ima reported that everything was in order and they were waiting on the arrival of Flu-Goo, which they expected any day. There was no reason for concern, just business as usual.

The meeting ended and Ima headed back to her office. She noticed her phone message light was blinking, but had a few emails to read before checking the message. Nitus Flourenge, Ima's immunizations coordinator, dropped in to chat and before Ima knew it, lunchtime had arrived. She grabbed her jacket and was just about to head out the door before she remembered the phone message. Though she could feel her stomach growling, she decided to listen to the call just to make sure it was nothing urgent.

"Ms. Lamduk. This is Mordy Lemmas from the SVOC (Statewide Vaccine Ordering Consortium). I wanted to touch base with all of our members about some vaccine distribution problems we are experiencing. It seems that there have been some problems with the vaccine distribution chain and we aren't going to be receiving all doses of Flu-Goo until at least late October. We are going to make every effort to get at least some doses out to all Consortium members before next Friday, but right now we just aren't sure if that is feasible. I'm sorry for the inconvenience, and please don't hesitate to call me if you have any concerns. Thanks, and talk to you later."

It took a moment for Ima to register what she had just heard, and all of the possible fall-out from the news. Her first reaction was to call the SVOC and tell them that ECHD already had clinics scheduled and needed priority. After thinking about it for a second, she reconsidered, knowing that many other health departments were also scheduling or had scheduled clinics for the second and third weeks of October. It would do no good to make that call, though Ima decided to write a letter later on to voice her frustration and concern. Now, she thought, was the time to think through the implications of having a limited and undefined vaccine supply.

The first thing that came to mind was her conversation just hours ago with Mr. Newman. "Everything is going as planned," she had told her boss. Now what would she tell him? That was really the least of her concerns considering all of the problems this would cause with the Board of Health during an election year, with the media and public trust in ECHD, and especially with the impact on general public health during what was predicted to be one of the worst flu seasons in recent years. She knew action was needed quickly to get this information out, but she wanted to get her thoughts in order before discussing this with Mr. Newman and her staff. She began to write down these thoughts.

Public Health - Who will be impacted most?

- 1) CDC says young will be especially vulnerable this year, as will the elderly.
- 2) We also need to keep medical and first responder personnel protected so they can report to work to assist others

Who else provides in the county?

NFP	- County General	} - who has vaccine - priority groups? - can we purchase - can we coordinate
NFP	- Eastside Medical Center	
private	- Greensboro medical group	
private	- Green-Wal Pharmacy	

Who have we told about our Clinics - We'll have to get the word out that they are either ~~cancelled~~ postponed, or that we may not have enough vaccine.

- staff & Board of health
- Volunteer nurses planning to show
- Courthouse staff
- Media - Get the public notified quickly
- Senior population & schools
- _____ who am I forgetting?

PR + Damage Control - Message must be consistent, up-to-date, and honest. We need to give viable alternatives to the clinics we planned (e.g. refer to other providers). Set up Phone line for updated info - use web too.

Mead

Ima thought that she had covered most immediate concerns in her written thoughts, though she felt like she was missing something. She just couldn't remember what. Well, she thought, it would come to her once she started talking things out with Mr. Newman and her staff.

Early that afternoon, Mr. Newman returned from lunch to find a hastily written email from Ima telling him they needed to meet ASAP about flu vaccine delivery. He was curious, but not overly concerned, and wanted to get settled in and check his other messages before calling Ima. In the meantime, Ima had decided lunch was not all that important, and that she would get in touch with other providers in the community to assess their current supply and distribution plans. She found that County General had received 500 doses, which they were planning to give to CDC defined high-risk individuals and key staff. Eastside Medical Center, the area's FQHC, had received 2,000 doses of the 5,000 they had ordered. The clinic's 2,000 doses were Flu-Squirt, the inhaled version of the seasonal flu vaccine, and they were earmarked for distribution to pediatric populations to avoid giving kids injections. Eastside was happy to work with ECHD though, and would take any recommendations to better serve the community. Vaccine price varied based on ability to pay, but most individuals were asked to pay \$20/dose. Greensboro Medical Group, the large private-practice clinic in the area, had received their full order, 1,500 doses of Flu-Goo and 500 doses of Flu-Squirt. Though the Director of Patient Services stated to Ima that they would help in any way they could, she could detect that their plan was to preserve the vaccine for their own staff and patients. They planned to charge \$35/dose for either vaccine and did not take the state medical card. Ima spoke with the Pharmacy Manager at Green-Wall, the chain pharmacy in Thumbsville, but couldn't get any useful information about the plans Green-Wall had for their vaccine (nor how much they had ordered, as that was proprietary information). Through the grapevine, Ima heard from one of her nurses who knew a Green-Wall pharmacist that the business had received 7,000 doses of Flu-Goo and 2,500 of Flu-Squirt, and that they would be charging \$18.50/dose and would accept some Medicare. It seemed to her they were trying to undercut other providers, either to pick up a larger chunk of customers or as a political maneuver. Ima knew the owner of the Green-Wall store in Thumbsville was currently running against a Board of Health incumbent for a seat at the Board table, and it would look good politically to be able to tout this public service in his campaign.

By the time Mr. Newman called Ima, it was 2:00 PM, and Ima was starving. She had a little bit of hypoglycemia, and was shaking slightly. As she broke the news that ECHD's order would be delayed, Mr. Newman noted this and perceived it to mean she was very worried and nervous about the developments. As Ima went over her thoughts on the delay, he mentally registered what she was saying, but also began thinking about the major political ramifications for the Board of Health and how that might impact him. Board members, already touting the reputation of ECHD in delivering reliable and broad flu vaccine coverage to the County, had begun emailing him to inquire about the arrival of the vaccine. He had assured them it was scheduled to arrive on time. He also thought about the February board meeting, where he had proposed that ECHD continue to order through the Consortium to save money, even though Ima had recommended that for an additional \$0.20/dose, they could order directly from the manufacturer and receive a guaranteed delivery. This was never really a consideration though, as never before had there been a problem with arrival of vaccine in plenty of time for the first public clinic. As Ima finished her summary, Mr. Newman voiced these concerns. It was decided to notify the Chairman of the Board of Health of this situation, and to begin an active effort to notify the media that vaccine would not arrive on time and that clinics were postponed until further notice. Mr. Newman was to talk to the Chairman and Ima was to talk with her staff and begin drafting a press release that would notify county residents. She would also have to pull all advertising immediately.

By the end of the day on October 1, Ima had contacted all local media and made sure that all advertising for ECHD's public clinics were pulled. She asked the Supportive Services Division to be prepared to change the phone message to reflect information that she would provide them in a press release. She also asked that they designate one phone line (123) 444-5678, to play the pre-recorded message in English and Spanish, with the option of being transferred to the switchboard once the message was completed. She contacted Mordy Lemmas at SVOC to see if anything else was known at present, but Mordy could only tell her that from what he understood, the manufacturer of Flu-Goo had all the vaccine produced, but there was a problem with the packaging. Mordy also felt that there would be a partial shipment by Tuesday, October 6, and that ECHD could consider keeping the first clinic scheduled. Ima asked how sure Mordy was about this, and he said "Off the record, 100%. I can get you 1,800 doses, shipped Monday by Fed Ex". Ima discussed this with Mr. Newman and the Chairman of the Board on a conference call, and together they decided that ECHD would keep the October 10 clinic scheduled,

but “postpone” all other clinics. With that information at hand, Ima had Nitus Flourengale draft a press release to fax (Appendix 1).

October 2 turned out to be a much busier Friday than ECHD staff and management had hoped for. Ima’s entire staff was busy contacting churches, schools, nursing homes and other groups that had made arrangements to receive flu shots through ECHD. Ima and Mr. Newman were busy fielding calls from the media, from concerned citizens, and from various board members who wanted to be kept directly informed of the situation. One staff member was assigned the duty of monitoring television and radio media for misinformation. At one point, conflicting statements were discovered between information on channel 10 and channel 12. Ima suspected that Mr. Newman might have misspoken to the Channel 12 newscaster that the clinic would run extended hours to accommodate school children (after all, it was on a Saturday). Ima quickly ensured that the information was corrected and suggested to Mr. Newton that she be the Public Information Officer to ensure a consistent message. He quickly agreed, relieved to be able to focus on the Board of Health concerns.

By late afternoon on Friday, Ima has been asked a number of times by various individuals and media why there appears to be no vaccine supply problems at Green-Wall or Greensboro Medical Group, the two private providers in the area, but that all of the public providers are without their full vaccine orders. She has no strong answer, and alludes to the type of vaccine ordered and the fact that vaccine supplies, especially flu vaccine supplies, are always vulnerable to manufacturing and distribution problems. Green-Wall has stepped up its media advertising campaign, stating that it has plenty of vaccine, plenty of staff (“average wait times are shorter than a fast-food drive through”, the ad states), and an affordable price. Ima and Mr. Newman have discussed partnering with Green-Wall by offering staff and a location, but elect not to because it may step on the toes of the current board members facing re-election. Instead, Ima contacts the Chief Medical Officer at County General and the Director of Nursing at Eastside Medical Center to form a “County Emergency Flu Response Strategy”. The goal of the group is to assess the current countywide situation and determine level of coverage for vulnerable populations, medical personnel and community first responders and how best to utilize the available combined vaccine (currently approximately 4,300 doses, including the promised shipment from SVOC). The group will meet Tuesday, October 6. Ima doesn’t call Greensboro Medical Group for this planning committee, as she has already decided their administration will not cooperate.

Monday, October 5 is much like the previous Friday, with Ima’s staff busy fielding calls and making last minute plans for the October 10 clinic. All supplies are ready, and if Flu-Goo arrives as promised by SVOC, there should be just enough doses to cover the clinic unless the media coverage has caused a panic. Ima makes a mental note to ask Eastside’s Director of Nursing if they would provide vaccine should ECHD run out at the clinic. In the afternoon, the Sheriff’s office calls Mr. Newman to inquire about security at the clinic. Sheriff Andy Fife has concerns that long lines and possible shortages may lead to some level of civil unrest. He is up for re-election and doesn’t need a black mark on his record fresh in voter’s minds. Mr. Newman agrees that security is not a bad idea, but asks that officers carry their weapons concealed so as not to create an atmosphere of fear, especially in any Hispanic individuals who already distrust county and city police. The Sheriff Fife thinks this is ridiculous and the issue is left unresolved, though two officers are committed to attend the clinic. Late in the day, Ima and Mr. Newman meet to make sure everything is proceeding well. They discuss how the media has been handled, the prospect of receiving their 1,800 doses of Flu-Goo the next day, and various other issues. Ima reports that staff has handled all of the public inquiries admirably, and there doesn’t appear to be an air of panic within the community. Mr. Newman thinks the Board of Health will be as satisfied as they can be with the situation as it has been handled.

The next morning, the three-member flu response strategy committee meets. The Eastside DON agrees to provide up to 500 doses for the October 10 ECHD clinic, as well as 3 nurses and 1 support staff. Her only caveat is that Ima make every effort to give Eastside’s doses to individuals aged 4 – 18 years, to which Ima agrees. County’s Chief Medical Officer states that he is concerned that there is unrest in the Spanish-speaking community about receipt of timely information related to the current flu vaccine issue. Suddenly Ima has a sinking feeling in her stomach... “Oh no, I didn’t call Diego.”

"Hello Mr. Verde, this is Ima at the Health Department. I know you have already heard on the news that we are having some problems with the delivery of vaccine. I wanted to touch base though, and give you an update on where things stand at this point. We are still running our October 10 clinic, and appreciate your help in promoting it. Right now, our other clinics are postponed, including the one planned on October 14 at St. Mary's Cathedral. We do hope to be rescheduling later in October and early November, and hope that the church will be available at some point during that time."

"Ima, I must be honest. I have already been telling others that the clinics are cancelled, but I am very concerned that we as a community are not being fully informed of the situation. You know, many of us in Greensboro won't be able to have transportation to the Courthouse in Thumbsville. We have been banking on the clinic at St. Mary's. In fact, I have been assuring others that there will certainly be a clinic here because I hadn't heard from you yet. I truly appreciate all your department does for our community, but I see a real issue here, and I plan to point it out. Also, I have been told that you have a Spanish-language message on your question line, but that if additional information is needed, no person at the health department speaks Spanish fluently enough to help. I think we have multiple problems that the Board of Health should be addressing in the future if this is indeed a *County* Health Department."

After the uncomfortable conversation with Mr. Verde, Ima checked in with Nitus, who was happy to report that 1,800 doses of Flu-Goo had arrived. She also reported that in pre-filling syringes, it seemed that nurses could get about 10.75 doses per vial instead of 10, which would yield as much as 1,935 doses. Ima agreed that was good news indeed, and reported the same to Mr. Newman. In the meantime, he had received a call from the County Judge, Roy Bean (the main man in Emerald County by all accounts), who felt that his family was at high risk for flu and would be coming down on Thursday to receive their shots. Ima was proud that Mr. Newman had told Judge Roy that no exceptions could be made and he should arrive early on Saturday to avoid any delays in receiving vaccine.

On Wednesday, Green-Wall began running daily clinics on a walk-in basis. They appeared to be running smoothly despite reports that some retired nurses volunteering at the clinics might have been working under expired licenses (or as they stated, working under the license of the pharmacy director). Green-Wall even went as far as to rent a bus to travel back and forth from Greensboro to ensure access to the Hispanic population, a move praised mightily by local media (though one political analyst questioned whether the move was mainly political in nature).

The rest of the week went relatively smoothly for ECHD, and by Friday afternoon everyone was ready to get Saturday going. People began lining up at 8:30 AM, and Ima made the decision to begin service at 10:00 instead of 11:00 so that an 11:00 rush would not further add to the line lengths. She assumed that she would hear some negative feedback on this move, but felt it was the right thing to do. With the additional Eastside nurses helping, things still ran relatively smoothly. The Courthouse had been the site of a "kickoff" clinic for many years and the layout and flow was well known to staff and patrons. However, at 2:00 PM, Nitus found Ima and reported her concern that the vaccine supply was running low, and might not last until 3:00. Ima reminded Nitus that Eastside would give an additional 500 doses, but cringed when Nitus reported that she had included that in her calculations. The clinic had already distributed 2,200 doses and only 250 remained. The nurses were beginning to panic. "Nitus," Ima said, "We've done all we can do. I will go count out the line and at 250, will cut it off. I'm just going to direct the rest of these folks to Green-Wall."

The clinic ended and only about 25 individuals had to be redirected. Everyone breathed a sigh of relief. They had come through without too many problems. Of course they faced the rest of the flu season with the prospect of no additional vaccine unless SVOC came through.

The Aftermath – Post 10/10

After the Saturday clinic, Ima felt that ECHD had handled the flu vaccine crisis as well as could be expected. Public health had remained her highest priority despite the various pressures from the media, the board, other political factions, and the public in general. She contacted SVOC the next Monday, October 12. Mordy Lemmas had bad news; vaccine would not be available until late November. ECHD would give no more vaccine that flu season, as demand would be non-existent after Thanksgiving. Green-Wall had already successfully purchased an additional 7,500 doses from another regional provider who had ordered excess, and would by default be the primary provider of flu vaccine that season, effectively privatizing this vital public health service.

Flu season did not strike as hard this year as CDC said it would. Ima and all of the Emerald County Health Department breathed a sigh of relief at that. The community as a whole had received fairly adequate coverage, only about 5% down from the previous 5-year average. Though a small blow to the Health Department's reputation of being a "premiere" public health department in the state, the whole incident quickly died down in the media and the general populace seemed to forget there was ever concern. By February, ECHD had rapidly and effectively handled a small local outbreak of salmonella and had launched a new after school program for at risk youth, and the media had raved at these successes. However, Ima's mind still mulled over the problem-riddled flu season. She decided that this could not happen again, and wanted to make sure that multiple stakeholders considered what had occurred and how to plan for the expected and unexpected in future flu seasons. In late February and just before flu vaccine orders would be due through the SVOC, Ima called representatives from her staff, the previously organized "Emergency Flu Strategy" group, the Board of Health (including the 2 newly elected members, neither of which was the Green-Wall owner), schools, the senior center and the cultural center (Mr. Verde was definitely remembered this time) together for a planning meeting. The meeting was well attended, and everyone was very appreciative to be included in the process. At the meeting, the following questions and issues arose.

February 23 Flu Planning Group Meeting – Critical Questions and Issues

- 1. What thoughts and facts discussed during the assessment of the situation would lead the coalition to decide who would receive the first doses of vaccines?**
- 2. What information should be included in the assessment process as the group develops a plan for next year?**
- 3. Should there be more than one source to purchase vaccine? Should the vaccine be purchased through a competitive bid process involving several manufacturers/providers? Why?**
- 4. What would be the advantages and disadvantages to public health relinquishing the administration of the vaccines to the private sector? Does it really matter who gives the vaccine?**
- 5. How can the Hispanic community be better included and informed in this scenario?**
- 6. Where in the assessment process did Ima go wrong in developing her response to the shortage?**
- 7. Are there other groups that could/should be included in the collaborative assessment of this years project and in the planning for the coming year's effort?**
- 8. In Ima's assessment of stakeholders who else could she have included?**
- 9. What role does the assessment of political interests have in the delivery of public health services?**

Appendix 1 – Nitus Flourenge's October 2 Press Release

Emerald County Health Department

For Information Contact:
(123) 456-7890

PRESS RELEASE – FOR IMMEDIATE RELEASE – October 2, 2006

UPDATED INFORMATION ON EMERALD COUNTY HEALTH DEPARTMENT SEASONAL INFLUENZA CLINICS

Emerald County Health Department (ECHDD) was notified today that shipments of seasonal flu vaccine have been delayed. ECHD orders seasonal flu vaccine through a consortium representing multiple local health departments in the state. According to the distributor, it is anticipated that distribution of vaccine to all consortium members will be completed by late October. As a result of the delay in receipt of flu vaccine, changes to ECHD's seasonal flu clinics will occur as follows:

- ECHD's previously scheduled flu clinic at the Emerald County Courthouse on Saturday, October 10 will proceed as scheduled from 11:00 AM to 3:00 PM.
- All other flu clinics previously scheduled are postponed, and will be rescheduled upon ECHD's receipt of flu vaccine.
- The United States Centers for Disease Control and Prevention have indicated that seasonal flu this year may be most severe in young children and the elderly. At this time, ECHD will not limit the distribution of vaccine to these target groups, but does ask that healthy adults consider waiting to receive their flu shot until more supply arrives.
- A question line has been set up, and anyone with concerns or questions may call (123) 444-5678 and a Health Department representative will address their concern.

In Emerald County, influenza typically does not circulate in the community until February-March. Therefore, at this time, a short delay in vaccine delivery does not present a public health concern to Emerald County. Individuals who have specific concerns regarding receipt of an adult flu shot prior to public clinics should call their primary care provider to discuss their concerns. As always, individuals should practice good personal hygiene to minimize their risks from flu and other illnesses. These practices include:

- Cover your mouth and nose with a tissue when you cough or sneeze. Discard the used tissue and thoroughly wash your hands with soap and warm water. If no tissue is available, sneeze into your sleeve instead of your hand.
- To minimize the spread of germs, stay home when you are sick and avoid close contact with others who are sick.
- Parents should ensure that their children wash hands frequently.
- Practice other good health habits, including getting plenty of rest, eating nutritious food, being physically active, and avoiding stress.

ECHD will continue to provide updated information to the community regarding rescheduling of seasonal flu clinics as information on vaccine delivery becomes available.

END

Facing the Long Shot: Out of Vaccine, Out of Time References

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