The Pandemic Influenza Preparedness Planning Project: An Evaluation of Strategies for Engaging Rural Community Partners

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Abstract
Rural communities frequently lack resources and sufficient formal government structures, requiring these communities to engage a diverse group of stakeholders in order to facilitate effective preparedness, response, and recovery processes. The Pandemic Influenza Preparedness Planning Project was an interagency partnership between the USA Center for Rural Public Health Preparedness and the Texas Department of State Health Services Region 2/3 (HSR 2/3) to engage public and private rural community partners within HSR 2/3 in the development of pandemic influenza response plans. The USA Center conducted an evaluation focused on county participation, types of stakeholders participating, local versus regional delivery, and interactive versus non-interactive/didactic delivery strategies. These results suggest that interactive strategies held locally within communities over a period of time increase participation rates and diversity of stakeholder groups represented.

Background
Rural communities are more vulnerable than their urban counterparts as they confront unique challenges that affect how they are able to prevent, serve, and respond to the public's needs during emergencies.[1] Particularly during an influenza pandemic or other emergent threat, these challenges may endanger "the continuity of the public health systems that protects and preserves our nation's health ."[2] Rural communities frequently lack resources and sufficient formal government structures, requiring these communities to engage a diverse group of stakeholders to facilitate effective preparedness, response, and recovery processes.[2,3,4]

To address this, the USA Center for Rural Public Health Preparedness (USA Center) and the Texas Department of Health Services Region 2/3 (HSR 2/3) partnered over a two year period to engage public and private rural community partners in the development of pandemic influenza response plans. This paper describes the results of an evaluation on county participation, types of stakeholders participating, local versus regional delivery, and interactive versus non-interactive/didactic delivery strategies.

Texas Department of State Health Services Region 2/3 designated thirty-three counties for participation in this project (Figure 1). The thirty-three counties comprise an area serving over 29,000 square miles that surround the Dallas/Fort Worth Metroplex. The median county population is 12,402 and the mean county size is 858 square miles.[5] Two of the thirty-three counties have full-service participating public health departments.[6] Seven of the thirty-three counties have non-participating public health departments.[7] Twenty-six of the thirty-three counties have one hospital or less.[8]

Pandemic Influenza Planning Project
The Pandemic Influenza Planning Project was a three-phase project consisting of interactive and non-interactive/didactic delivery strategies provided regionally during Phases 1 and 2 and locally during Phase 3 (Figure 2). Interactive strategies included Rural Preparedness Roundtables (RPR), tabletop exercises, Technical Assistance Team (TAT) visits, and functional exercises. Rural Preparedness Roundtables (RPR) engage a diverse group of stakeholders in rural communities to identify the rural public health system stakeholders, local strengths and resources, existing relationships, and gaps within the current system; to identify and educate local decision makers; and to create an environment for local stakeholders to collaboratively address issues related to pandemic influenza preparedness planning.9 A tabletop exercise was conducted regionally to exercise completed county plans. TAT visits were conducted by USA Center staff to continue the process of building relationships with each county judge and emergency management coordinator, discuss current county planning efforts, and determine additional needed assistance for development or revision of plans. Counties were presented with resources to help them update their pandemic influenza preparedness plan with current information and to ensure that procedures and guidelines were National Incident Management System (NIMS) compliant. In addition, each county was also presented with county-specific information regarding special and vulnerable populations, including locations of residential facilities, demographics about disabled, minority, and age-vulnerable populations. A modified functional exercise, offered at the local level, allowed counties to exercise new or modified pandemic influenza preparedness plans. This exercise satisfied the requirement that all recipients of the Centers for Disease Control and Prevention Public Health Emergency Preparedness funding conduct regularly scheduled exercise activities to test and validate plans, procedures, training of personnel, equipment, and facilities. This particular exercise addressed multiple areas, including Comprehensive Public Health Response Plan, HAN Notification System, and 24/7 Capacity for public health response. A hot wash conducted with county participants, followed by an after action report written by USA Center staff, provided an additional opportu-

nity to review strengths and weaknesses. A corrective action plan was then developed by the county to identify next steps for the local level.

The non-interactive strategy was the distribution of a pandemic influenza preparedness plan template and the didactic strategy consisted of a sub-regional conference on pandemic influenza. The USA Center created the pandemic influenza preparedness plan template which was distributed to each participating county, in addition to a resource guide for county planning officials to use while developing individual county plans. The resource guide was provided electronically and included a broad range of topics: planning and coordination, situation monitoring and assessment, prevention and containment, workforce support, and communications. The sub-regional conference was held to provide additional information on the current status of pandemic influenza, surge impact on the health care system, community containment and support services, and isolation and quarantine.

Population and Methods

Stakeholders from thirty-three rural counties in North Texas participated in the project and were included in the evaluation. This evaluation used project tracking materials to address four evaluation areas. Registration forms were used to track participation for each project component, including two rural preparedness roundtables, two tabletop exercises, a sub-regional conference (offered in three locations), and a functional exercise (offered in each county). Registration data also allowed for the identification of the number and types of stakeholders who participated in each component. Stakeholders for each county were classified into one of four categories: public health and medical, government (state, county, or local), first responders (law enforcement, fire, EMS), or non-traditional stakeholders. Participants categorized as non-traditional stakeholders included businesses, faith-based community, non-healthcare service providers, and public/private education.

A county participation dataset was created by the USA Center. County participation was defined as having at least one county stakeholder present for a project component. This dataset was also used to determine participation rates at the county level based on delivery strategy and location of component.

Results

County Participation

Most counties (73%) participated in at least one component within the three phases of the project. The number of counties participating in all offered components increased across the three phases: 19% in Phase 1, 27% in Phase 2, and 58% in Phase 3.

Types of Stakeholders Participating

Over the course of the project, 481 different individuals participated in at least one component and were categorized as follows: 29% public health/medical, 28% government, 23% first responders, and 20% non-traditional stakeholders. Of the government participants, 13% were county judges and emergency management coordinators, the key decision makers in these rural counties in the planning and response processes. County judges in 27 of the 33 counties (81%) participated in various components of this project. In addition, non-traditional stakeholders were engaged and included representatives from education (9%), service agencies (5%), business/community partners (3%), faith-based community (1%), and other non-traditional stakeholders (2%).

Local vs. Regional Delivery Locations

During Phase 3, all activities were offered locally, and 100% of the counties participated in at least one activity. County participation rates were substantially lower when offered at a regional location: 9% during Phase 1 and 21% during Phase 2. The proportion of the stakeholders by type remained constant throughout all three phases of the project; however, the number of each type of stakeholders increased when components were offered locally. In addition, the total participation rate increased when components were delivered at the local level (Figure 3).

Interactive Versus Non-Interactive/Didactic Delivery Strategies

Higher levels of participation were observed when components were interactive. County participation rates for interactive components ranged from 58% to 100%, while the county participation rates for the non-interactive component was 28% and 52% for the didactic component. Additionally, stakeholder participation rates were higher for interactive components than for didactic components.

Conclusion/Discussion

This evaluation was conducted to determine the effectiveness of various strategies to engage rural community partners in pandemic influenza planning. Evaluation data indicate participation rates for counties and stakeholders increase when components are interactive. Interactive components provide an opportunity for traditional and non-traditional stakeholders to understand and practice their roles in pandemic influenza preparedness planning and response and may increase the recognition of their role and importance in the overall process. Participation rates for counties and stakeholders increase when components are delivered locally. It is important to note that many individuals in rural communities serve in multiple capacities, and this may limit their ability to participate in activities that require travel outside the local area, as observed by lower participation in Phase 2 sub-regional components. This may also affect the diversity of stakeholder types able to participate in project components. Rates for county and stakeholder participation also increased over the course of the project. This would suggest community engagement is a process and sufficient time needs to be allocated to ensure successful development of relationships.

This project utilized a number of strategies to assist rural Texas counties in pandemic influenza planning. The interactive strategy engaged key stakeholders and helped to ensure understanding of their roles and responsibilities in planning and

response. Delivering components at the local level guaranteed increased participation of key stakeholders and involved them in the planning process. Issues and strategies are more relevant when viewed from the local perspective. Allowing sufficient time to build relationships among key stakeholders was critical to increasing stakeholder involvement and the successful completion of functional exercises that tested community response capabilities. The results of this evaluation suggest public health professionals should consider these strategies to engage public health communities in capacity building activities.

References

1. Office of Rural Health Policy, Health Resources and Services Administration, U.S. Department of Health and Human Resources. Rural communities and emergency preparedness. 2002 [cited 2005 February 24]; Available from: ftp://ftp.hrsa.gov/ruralhealth/RuralPreparedness.pdf.
2. Meit, M. and A. Knudson, Why is rural public health important? A look to the future. J Public Health Manag Pract, 2009. 15(3): p. 185-90.
3. Center for Rural Health Practice, Bridging the health divide: the rural public health research agenda. 2004, University of Pittsburgh, Center for Rural health Practice: Pittsburgh, PA.
4. Quiram, B.J., M. Meit, K. Carpender, G. Castillo, D. Duchicela, and C. Pennel, Rural public health infrastructure: A literature review, in Rural Healthy People 2010: A companion document to Healthy People 2010, L.D. Gamm and L. Hutchinson, Editors. 2004. p. 117-123.
5. US Census Bureau. State & County QuickFacts. 2008 [cited October 25, 2008]; Available from: http://quickfacts.census.gov/qfd/states/48000.html.
6. Texas Department of State Health Services. Full Service Local Health Departments and Districts of Texas. 2008 [cited October 25, 2008]; Available from: http://www.dshs.state.tx.us/regions/lhds.shtm.
7. Texas Department of State Health Services. Texas Non-participating Local Health Departments. 2008 [cited October 25, 2008]; Available from: http://www.dshs.state.tx.us/regions/nonlhd.shtm.
8. Texas Department of State Health Services Regulatory Services. Directories of General & Special Hospitals- By County. 2008 [cited October 25, 2008]; Available from: http://www.dshs.state.tx.us/HFP/apps.shtm#directoryhosp.
9. Pennel, C.L., S.K. Carpender, and B.J. Quiram, Rural health roundtables: a strategy for collaborative engagement in and between rural communities. Rural Remote Health, 2008. 8(4): p. 1054.

Figure 1. Rural Counties in Region 2/3 Participating in Project

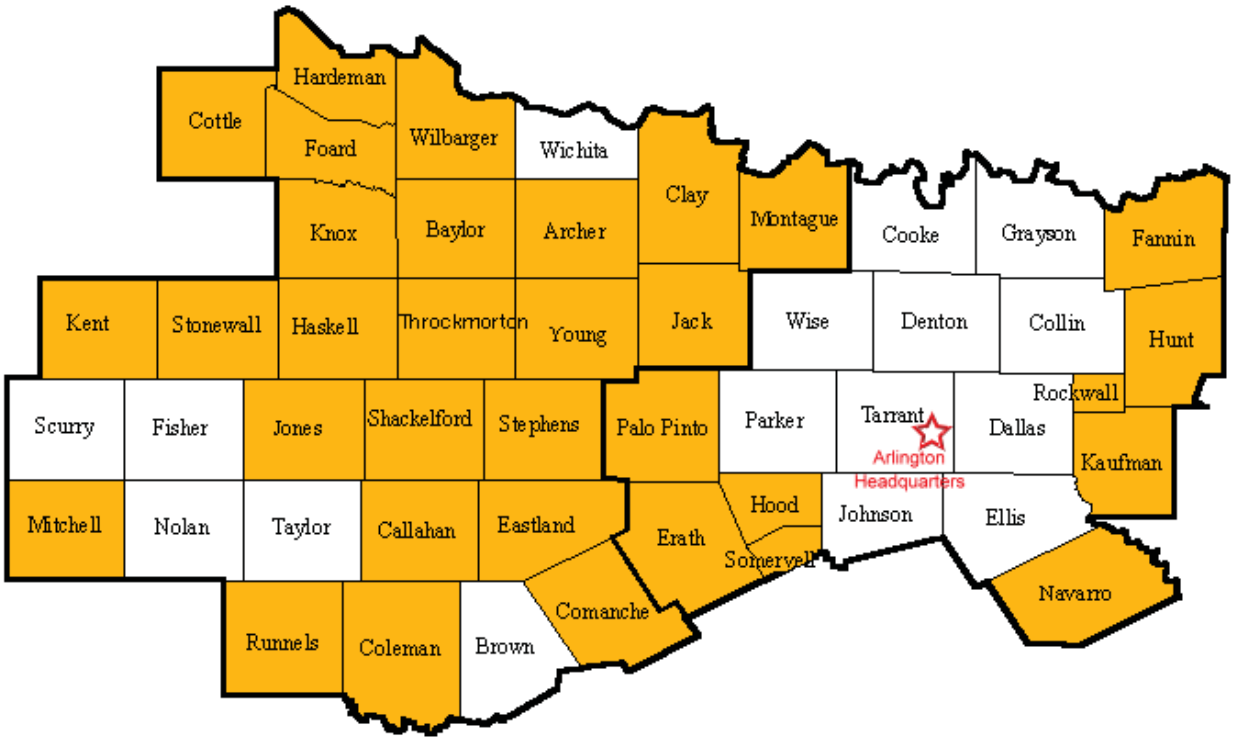
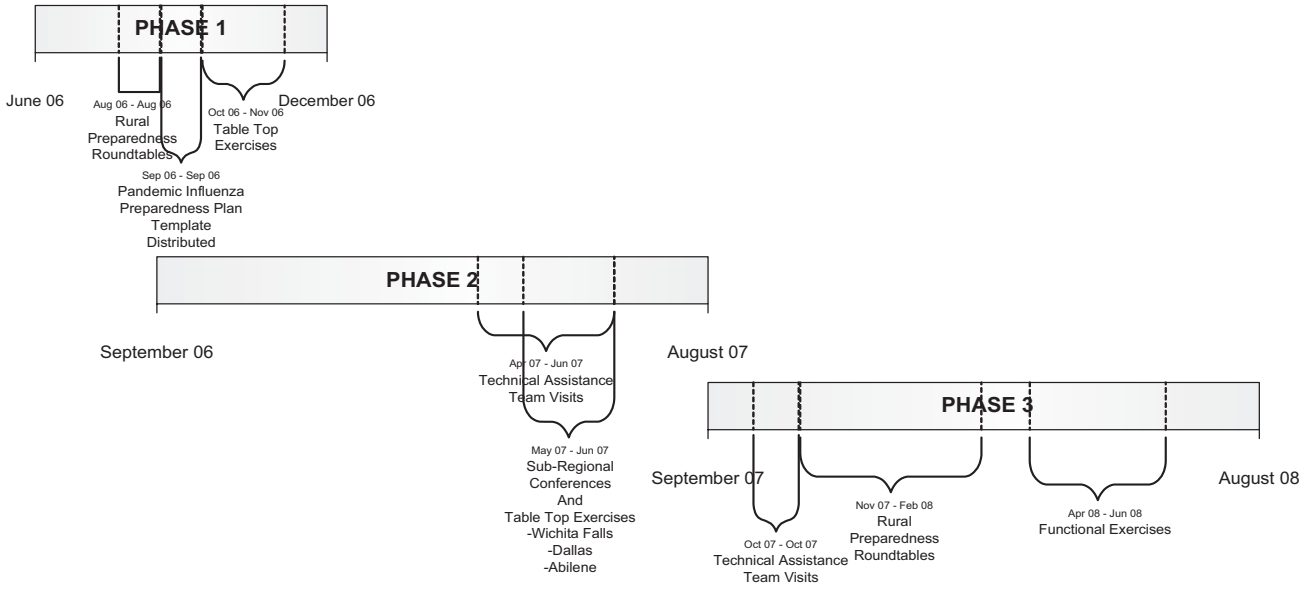


Figure 2. Project timeline for activities delivered to participating counties, does not include



planning and preparation activities conducted by USA Center staff

Figure 3. Stakeholder participation by activities and phase