

## 2017 Model Practices

### Applicant Information

Full Name:

Kelly Hanes

Company:

Title:

Email:

dkhanes@tarrantcounty.com

Phone:

City:

Fort Worth

State:

TX

Zip:

76104

### Model Practice Title

Please provide the name or title of your practice: \*

Facebook Boosting for Mosquito Ground Spraying

### Practice Categories

Model and Promising Practices are stored in an online searchable database. Applications may align with more than one practice category. Please select all the practice areas that apply.: \*

- |   |  |  |   |   |
|---|--|--|---|---|
| <input type="checkbox"/> Access to Care   | <input type="checkbox"/> Advocacy and Policy Making        | <input type="checkbox"/> Animal Control                    | <input type="checkbox"/> Coalitions and Partnerships        | <input checked="" type="checkbox"/> Communications/Public Relations |
| <input type="checkbox"/> Community Involvement  | <input type="checkbox"/> Cultural Competence               | <input checked="" type="checkbox"/> Emergency Preparedness | <input checked="" type="checkbox"/> Environmental Health    | <input type="checkbox"/> Food Safety                                |
| <input type="checkbox"/> Global Climate Change  | <input type="checkbox"/> Health Equity                     | <input type="checkbox"/> HIV/STI                           | <input type="checkbox"/> Immunization                       | <input checked="" type="checkbox"/> Infectious Disease              |
| <input type="checkbox"/> Informatics  | <input checked="" type="checkbox"/> Information Technology | <input type="checkbox"/> Injury and Violence Prevention    | <input checked="" type="checkbox"/> Marketing and Promotion | <input type="checkbox"/> Maternal-Child and Adolescent Health       |
| <input type="checkbox"/> Organizational Practices   | <input type="checkbox"/> Other Infrastructure and Systems  | <input type="checkbox"/> Organizational Practices          | <input type="checkbox"/> Primary Care                       | <input type="checkbox"/> Quality Improvement                        |
| <input type="checkbox"/> Research and Evaluation  | <input type="checkbox"/> Tobacco                           | <input checked="" type="checkbox"/> Vector Control         | <input type="checkbox"/> Water Quality                      | <input type="checkbox"/> Workforce                                  |
| <input type="checkbox"/> Conference Theme: Bridging Clinical Medicine and Population Health |  |  |   |   |

Other::

Is this practice evidence based, if so please explain. :

No.

### Winnable Battles

To keep pace with emerging public health challenges and to address the leading causes of death and disability, CDC initiated an effort called Winnable Battles to achieve measurable impact quickly. Winnable Battles are public health priorities with large-scale impact on health and known effective strategies to address them. Does this practice address any CDC's seven Winnable Battles? If so, please choose from the following: \*

- |   |  |  |                                  |   |
|---|--|--|----------------------------------|---|
| <input type="checkbox"/> Food Safety            | <input type="checkbox"/> HIV in the U.S. | <input type="checkbox"/> Nutrition, Physical Activity, and Obesity | <input type="checkbox"/> Tobacco | <input type="checkbox"/> Healthcare-associated Infections |
| <input type="checkbox"/> Motor Vehicle Injuries | <input type="checkbox"/> Teen Pregnancy  | <input checked="" type="checkbox"/> None                           |                                  |   |

Overview: Provide a brief summary of the practice in this section (750 Word Maximum)

**Your summary must address all the questions below:**

- Brief description of LHD- location, demographics of population served in your community
- Describe public health issue
- Goals and objectives of the proposed practice
- How was the practice implemented/activities
- Results/Outcomes (list process milestones and intended/actual outcomes and impacts.
  - Were all of the objectives met?
  - What specific factors led to the success of this practice?
- Public Health impact of practice
- Website for your program, or LHD.

**750 Word Maximum**

Tarrant County Public Health (TCPH), located in Fort Worth Texas is the local health department (LHD) serving Tarrant County, Texas. Tarrant County is located in the North Central Texas. Fort Worth is the county seat and is the 17th largest city in the United States. The 2013 Census Bureau reported Tarrant County's demographics as White (50.1%), Hispanic (27.6%) and Black (15.9%). Per capita income in Tarrant County is \$28,125.00 with 14.7% of residents at or below poverty level. TCPH provides services to Tarrant County's approximately 1.9 million residents and 41 incorporated municipalities – including mosquito ground spraying in the unincorporated areas. With a budget of approximately \$60 million and a combined staff of 400 employees, TCPH is proudly established in 19 permanent locations with additional outreach sites to serve a diverse population. The total service area is the entire Tarrant County. The Mission Statement for TCPH is "A healthier community through leadership in health strategy." The 2016 mosquito season started out fast and ended as a record-breaker. Our laboratory confirmed the first positive West Nile Virus mosquito sample five weeks into the season -- a very early result compared to previous years. By mid-July, ground spraying had become a weekly occurrence. News releases and neighborhood yard signs had been the primary form of ground spraying public notification. The Public Health Director, along with the Public Information Office, saw a need for a more targeted notification system to allow for direct communication between residents and TCPH. Facebook is the gold standard of social media and TCPH intended to use it to its full advantage. The goals and objectives of the practice included (1) identifying Facebook as a trusted delivery source for credible messaging that we could create and control; (2) creating a visual median to capture the attention Facebook users in their news feed; (3) learning how to utilize Facebook's BOOST feature and understanding the costs associated with it; (4) geo-targeting the streets effected by the mosquito ground spraying; (5) monitoring the boosted post for public responses; and (6) developing responses that best educated our followers on the public health response to the West Nile Virus threat in their neighborhood. A team from TCPH comprised of the Public Health Director, Associate Director and Senior Public Information Officer worked closely with the County Administration to authorize the use of Facebook for timely public notification. The team anticipated the fiscal and staff requirements needed to keep pace with public information needs. In just over 13-weeks, the practice reached more than 102,600 Facebook followers within one mile of the positive mosquito traps. The boosted posts accounted for 898 Facebook Shares and more than 210 public comments. The practice captured attention in ways news releases couldn't. Residents replied with: "Dang that's close." – Dawn. W. "That's right by me!!" – Lisa D. Commonly deployed yard signage or door hangers could not capture this feedback. More importantly, residents had real questions that needed transparent answers quickly. Rachel H. wrote, "Are you all using a poison that will kill the bees the way that South Carolina did last month?" We quickly responded, "Hello again, Rachel H. The spray that is used in our unincorporated area is not the same as was used in South Carolina, where the bees died recently. Spray trucks in our county travel late at night in a very targeted area. Bees typically do not fly around at night; therefore they should not be impacted. Also, we have been using this chemical and spray technique for years now and have had no documented evidence of such impact." One of the most important outcomes from this practice was the overall cost. Over the course of 13 weeks we spent only \$310. That far exceeded any advertising options on the table that would have cost as much as \$10,000. Many factors led to the success of this practice: 1) A creative message design that Facebook users could easily read and comprehend, 2) Immediate Facebook postings provided residents advanced notification that could not be guaranteed before without a reverse-911 phone call, and 3) The relatively small budget was easy to approve and yet yielded big results. Public Health impact of practice: With quick and effective boosted Facebook messaging, residents received ground spray notification in a new and timely manner. Additionally, this new practice opened up our public communication channels and offered opportunities for TCPH to communicate and educate our public like never before. The practice even caught the eye of the second largest city in Tarrant County. The City of Arlington Office of Emergency Management requested a meeting with TCPH to learn more about this practice. After a joint strategy meeting, their team adopted this practice and yielded results that exceeded their expectations.

## Responsiveness and Innovation

A Model Practice must be responsive to a particular local public health problem or concern. An innovative practice must be (1) **new to the field of public health (and not just new to your health department)** OR (2) **a creative use of an existing tool or practice**, including but not limited to use of an Advanced Practice Centers (APC) development tool, The Guide to Community Preventive Services, Healthy People 2020 (HP 2020), Mobilizing for Action through Planning and Partnerships (MAPP), Protocol for Assessing Community Excellence in Environmental Health (PACE EH). Examples of an inventive use of an existing tool or practice are: tailoring to meet the needs of a specific population, adapting from a different discipline, or improving the content.

- Statement of the problem/public health issue
- What target population is affected by problem (please include relevant demographics)
  - What is the target population size?
  - What percentage did you reach?
- What has been done in the past to address the problem?
- Why is the current/proposed practice better?
- Is current practice innovative? How so/explain?
  - Is it new to the field of public health
- OR**
- Is it a creative use of existing tool or practice:
  - What tool or practice did you use in an original way to create your practice? (e.g., APC development tool, The Guide to Community Preventive Services, HP 2020, MAPP, PACE EH, a tool from NACCHO's Toolbox etc.)
- Is the current practice evidence-based? If yes, provide references (Examples of evidence-based guidelines include the Guide to

## 2000 Word Maximum

Please state the Responsiveness and Innovation of your practice (2000 Word Maximum) : \*

An unusually warm 2016 spring led to greater mosquito numbers across Tarrant County. On May 6th, TCPH received confirmation of the first positive seasonal West Nile Virus mosquito sample leading TCPH Associate Director Anita Kurian to say, "This is an unusually early positive sample. Typically, the first positive occurs in June." TCPH's staff entomologist called for an early, active and long season, leading the TCPH communications team to start prioritizing department messaging. By July, ground spraying operations had become an almost daily occurrence in the partner cities and a weekly occurrence in the County's unincorporated areas. Media attention had so strongly turned towards the threat of Zika Virus that mentions of West Nile Virus and subsequent mosquito ground spraying activities had diminished. TCPH needed a more effective communications tool to communicate directly with the residents inside each spray zone. The leadership team did not feel news releases and yard signs could do the job on their own. TCPH's Senior Public Information Officer (PIO) presented an idea of using the Facebook BOOST feature as a means to target residents who lived directly within or just outside the one-mile spray zone. Not only would the paid form of messaging directly target those residents, but they could easily share the message with their neighbors. Additionally, residents could ask questions directly to TCPH through the reply feature, offering TCPH the opportunity to reply and educate. TCPH's Health Director and Associate Director settled on a budget of \$10 per post -- an amount that would cover the average 500-1,000 residents expected around each unincorporated spray zone. In consultation with the Senior PIO, the team decided to launch the boosted post immediately following notification of a positive mosquito sample from the lab. The team also agreed to run the boosted post through the morning following a scheduled overnight spray response. In past years, TCPH had posted news releases to social media as a form of public notification. After much consideration and review, the leadership team determined the written news releases did not appeal to social media followers and most likely did not help share the information. To capture the attention of Facebook followers, the Senior PIO utilized the department's Adobe Photoshop account and created a visually appealing infographic. The graphics -- sized to Facebook's standards -- showcased a large headline that read: WEST NILE VIRUS GROUND SPRAYING It featured a map that highlighted the positive mosquito sample location in proximity to major County landmarks. The Senior PIO experimented and discovered Google Maps to be the easiest way to create the specific map. Once the map had been created, he simply used the Microsoft Snipping Tool to capture the image. The personalized text on each graphic turned out to be an extremely important messaging tool. As an example, it explained that: "TCPH has confirmed a positive WNV mosquito sample from Unincorporated Northwest Tarrant County -- around Walter Smith Court." "Weather permitting, TCPH will ground spray on Monday, October 17. Ground spraying will start at 9 p.m. and conclude by 5 a.m. the following morning." The Senior PIO then rendered these graphics as easy JPGs and saved them to his desktop for easy loading to Facebook. Once it was time to load, he placed the same message from the infographic into the body of the Facebook post to ensure delivery of the message to readers with short attention spans. The message read: "TCPH has confirmed the presence of West Nile Virus in a mosquito sample collected in unincorporated Northwest Tarrant County - in an area around Walter Smith Court. To help drive home the messaging, he added special hashtags and asked followers to LIKE the TCPH page: "LIKE our Facebook page to stay updated on #WestNileVirus, #ZikaVirus and other mosquito related concerns in our community. #BeMosquitoFree" Loading the approved messaging to Facebook took some time at first, but got easier as the weeks went by. The most important tool turned out to be one that required the most time. Facebook allows a user to place a specific geo-target on a map and then the user can determine how far of a radius they would like the message to be shared within. TCPH used the nearest cross street in proximity to the positive mosquito trap as the reference point. A distance of one mile became the approved value. If the radius appeared to cover a lot of undeveloped land, the Senior PIO would make minor adjustments to move the zone over a more populated area, but still covering the designated spray zone. This ability to control the target area proved to be another key factor in sharing the message and also controlling the budget. TCPH never felt like money had been wasted. Wednesday lab positives resulted in Friday night spray operations, so the posts ran from Wednesday through Saturday -- for a total of three days at an average of \$3.33 per day. Friday lab positives resulted in Monday night spray operations, so the posts ran from Friday through Tuesday -- for a total of four days at an average of \$2.50 per day. One of the beneficial lessons learned from this plan turned out to be the ease of and creative control TCPH had over the Facebook scheduling tool. Facebook's "Ad Manager" tool proved to be an invaluable source of information for budgeting. Rather than a final report, Facebook updates boosted post results in real-time, so you can adjust your budget or cancel altogether. If a boosted post conflicted with a sudden weather pattern that ensured the cancellation of the spray response, the post could easily be cancelled. By doing so, the department's PIO Office managed costs and controlled spending. In just over 13-weeks, the practice reached more than 102,600 Facebook followers within one mile of the positive mosquito traps in unincorporated Tarrant County. The boosted posts accounted for 898 Facebook Shares and more than 210 public comments. The results turned out to be so positive that the department shared the practice with the City of Arlington in August, who adopted the same strategy for the remainder of the mosquito season. TCPH is committed to continuing this notification process and is prepared to use it for other public health responses such as Zika Virus, Ebola, MERS, influenza, bioterrorism, boil water notifications and other environmental hazards. TCPH began to recognize a growing challenge in publicly notifying neighborhoods in advance of ground spraying responses for mosquitoes. The once trusty media had begun focusing on Zika Virus and had lost some interest in West Nile Virus. Yard signs prove to be useful, but also time consuming to place in our rural neighborhoods and are often overlooked by hurried homeowners. TCPH values the reverse 911 system but did not want to turn to that option and desensitize residents who count on it in times of clear emergencies. TCPH needed a new option and could see the tremendous use, growth and potential of Facebook. From this vantage point, the idea of boosting Facebook posts grew. In a county of more than 1.9 million people, the target population for each boosted post could be relatively small depending on the size of the neighborhood within the one-mile notification radius in the unincorporated areas of Tarrant County. The size of the Facebook audience offered for the budget we used varied from as few as 300 residents to as many as 2,200 residents. The upside to using Facebook is the number grows with the more dollars you spend, so you can reach more if the budget fits. In the past our notification efforts have mainly included media coverage, in addition to yard signs and HOA letters. From discussions with partner cities, that seems to be the accepted norm in our region. The proposed practice is not only better because it directly reaches those homeowners on their mobile phones and desktop computers -- where they go for their trusted information -- but also because it opened up a new and easy line

of communication that had not existed before. These residents didn't have to be followers of our TCPH Facebook page to see the notification. Facebook placed the post in their timelines for them to see. This allowed them the opportunity to comment or contact us directly. We received more than 210 comments, more than we could have imagined, most of which we replied directly too. As part of our initial research into boosted Facebook posts, we reached out to several partners and canvassed other health departments to see who might have been using this new tool as well. We could not find another department doing the same. TCPH created a process that, to our knowledge, is new to the field of public health. We hope it grows from here and helps other local health departments, whether big or small, continue to serve their communities and share public notifications in a more successful manner. This project is not evidence based.

## LHD and Community Collaboration

The LHD should have a role in the practice's development and/or implementation. Additionally, the practice should demonstrate broad-based involvement and participation of community partners (e.g., government, local residents, business, healthcare, and academia). If the practice is internal to the LHD, it should demonstrate cooperation and participation within the agency (i.e., other LHD staff) and other outside entities, if relevant. An effective implementation strategy includes outlined, actionable steps that are taken to complete the goals and objectives and put the practice into action within the community.

- Goal(s) and objectives of practice
- What did you do to achieve the goals and objectives?
  - Steps taken to implement the program
- Any criteria for who was selected to receive the practice (if applicable)?
- What was the timeframe for the practice
- Were other stakeholders involved? What was their role in the planning and implementation process?
  - What does the LHD do to foster collaboration with community stakeholders? Describe the relationship(s) and how it furthers the practice goal(s)
- Any start up or in-kind costs and funding services associated with this practice? Please provide actual data, if possible. Otherwise, provide an estimate of start-up costs/ budget breakdown.

### 5000 words maximum

Enter the LHD and Community Collaboration related to your practice (5000 words maximum): \*

Goals and Objectives: 1. Identify Facebook as a trusted delivery source for credible messaging that TCPH could create and control. 2. Create a visual median to capture public attention. 3. Learn how to utilize Facebook's BOOST features and understand the costs associated with them. 4. Geo-target specific streets affected by mosquito ground spraying. 5. Monitor Facebook user responses to our boosted posts. 6. Develop responses that best educated our followers on the public health response to the West Nile Virus threat in their neighborhood. TCPH assembled a small team to build this model practice and to achieve the goals and objectives. The team included the Health Director, Associate Health Director and Senior Public Information Officer. As the model practice took shape, the Senior PIO trained the Public Information Officer to be his backup. The model practice relied on important information (positive samples, addresses, response dates, etc.) that came through existing channels. No new lines of communication or approvals needed to be created. The Senior PIO managed the majority of the creative workload and the Associate Health Director managed the budget approval process. The timeframe for this model practice begins at the time of the first positive West Nile Virus mosquito sample each Tarrant County mosquito season and continues until the last sample and ground spraying response is conducted. Truth be told, this practice can be used for all public health responses, so it is applicable year-round, and will be used by TCPH for years to come. TCPH shared with the City of Arlington (Tarrant County's second largest city, DFW's third largest city) this practice at the mid-point of the mosquito season. Their emergency coordinator asked TCPH's Senior PIO to present the practice to their Office of Emergency Management. A meeting took place in their Emergency Operations Center and in less than a week they had adopted the practice. They reported equally positive results and in some cases outperformed in their high-density neighborhoods what TCPH did in the more rural unincorporated areas of the county. Both offices stayed in communication throughout the season and committed to sharing results as the season concluded. TCPH's Senior PIO will be presenting this model practice to all 41 partner cities at TCPH's annual mosquito meeting in 2017. One of the best parts about this model practice is that it only requires an approved local health department Facebook page, and very modest budget and an inspired department leadership team. TCPH chose to operate with a small budget and thankfully received big results. With an even larger budget or \$1,000 or more, we would expect even bigger gains in 2017.

## Evaluation

Evaluation assesses the value of the practice and the potential worth it has to other LHDs and the populations they serve. It is also an effective means to assess the credibility of the practice. Evaluation helps public health practice maintain standards and improve practice. Two types of evaluation are **process** and **outcome**. Process evaluation assesses the effectiveness of the steps taken to achieve the desired practice outcomes. Outcome evaluation summarizes the results of the practice efforts. Results may be long-term, such as an improvement in health status, or short-term, such as an improvement in knowledge/awareness, a policy change, an increase in numbers reached, etc. Results may be quantitative (empirical data such as percentages or numerical counts) and/or qualitative (e.g., focus group results, in-depth interviews, or anecdotal evidence).

- What did you find out? To what extent were your objectives achieved? Please re-state your objectives.
- Did you evaluate your practice?
  - List any primary data sources, who collected the data, and how (if applicable)
  - List any secondary data sources used (if applicable)
  - List performance measures used. Include process and outcome measures as appropriate.
  - Describe how results were analyzed
  - Were any modifications made to the practice as a result of the data findings?

## 2000 Words Maximum

Please enter the evaluation results of your practice (2000 Words Maximum): \*

The goals and objectives of the practice included (1) identifying Facebook as a trusted delivery source for credible messaging that we could create and control; (2) creating a visual median to capture public attention; (3) learning how to utilize Facebook's BOOST feature and understanding the costs associated with them; (4) geo-targeting the streets effected by the mosquito ground spraying; (5) monitoring the boosted post for public responses; (6) developing responses that best educated our followers on the public health response to the West Nile Virus threat in their neighborhood; (7) and seeking approval from County leadership to execute the plan. We found out that this practice works! Not only does it work, but it achieved greater results than we anticipated. We opened up direct lines of easy communication with our residents and knew our messages had reached their audience. The reporting feature for this model practice is as easy as you will find. Facebook collects all of the data and delivers you a summarized report – to both your account dashboard and your email. You can also monitor the results in real-time. To evaluate this model practice, our Senior PIO created an easy Excel spreadsheet. The key performance factors he tracked included: Date, Days, Budget, Amount Spent, Reach, Views, Shares and Comments. Then he broke each Facebook post down to a Daily Average that included: Budget, Reach, Shares, Comments. This second approach enabled our department to view each boosted post on a Daily Average – in a more apples to apples fashion. Additionally, he broke the Daily Averages down to an Overall Daily Averages. By doing so, our department could see how our boosted posts performed on a daily budget. This proved invaluable for our budgeting strategy. The data findings proved to be very close to what we expected. No large modifications needed to be made to the practice as a result of the data findings. If anything, empowered us to spend more money because we were quite certain what the return would be on our investment.

## Sustainability

Sustainability is determined by the availability of adequate resources. In addition, the practice should be designed so that the stakeholders are invested in its maintenance and to ensure it is sustained after initial development (*NACCHO acknowledges that fiscal challenges may limit the feasibility of a practice's continuation.*)

- Lessons learned in relation to practice
- Lessons learned in relation to partner collaboration (if applicable)
- Did you do a cost/benefit analysis? If so, describe.
- Is there sufficient stakeholder commitment to sustain the practice?
  - Describe sustainability plans

## 1500 Words Maximum

Please enter the sustainability of your practice (2000 Words Maximum): \*

This model practice only has three true requirements; 1) the department must have a Facebook page, 2) the producer of the content must have an active Facebook account with editorial privileges on the department page, 3) and lastly it requires a small budget anywhere between \$100 on up to \$1,000. The budget is largely dependent on the size of the targeted audience and how much market penetration the department is looking to get. One lesson learned from this practice is that it only requires one person to manage, but it must be someone who has access to the public information, and this person must be a relatively social media savvy individual. The comprehensive Excel spreadsheet used for tracking turned out to be the best cost/benefit analysis we could hope for. It utilized every bit of information Facebook offered and solidified our department's faith that this model practice works. There is most definitely sufficient stakeholder commitment to sustain the practice. Our health director is a big proponent of social media outreach for the dissemination of public information. He has committed to this model practice for 2017 and is working on increasing the budget to sustain it for the foreseeable future.

## Additional Information

How did you hear about the Model Practices Program?: \*

☐ I am a previous Model Practices applicant

☐ At a Conference

☐ NACCHO Website

☐ Public Health Dispatch

☒ Colleague in my LHD

☐ Model Practices brochure

☐ NACCHO Exhibit Booth

☐ NACCHO Connect

☐ Colleague from another public health agency

☐ E-Mail from NACCHO

☐ NACCHO Exchange