2018 Model Practices

Applicant Information

Full Name: Alyson Shupe
Title: Informatics, Epidemiology and Health Planning Manager
City: Greenwood Village
Size: Large (500,000+)

Company: Tri-County Health Department
Email: ashupe@tchd.org
Phone: (720)233-6764
State: CO
Zip: 80111-5113

Practice Categories

Access to Care
Advocacy and Policy Making
Animal Control
Coalitions and Partnerships
Communications/Public Relations

Community Involvement
Cultural Competence
Emergency Preparedness
Environmental Health
Food Safety

Global Climate Change
Health Equity
HIV/STI
Infection

Informatics
Information Technology
Injury and Violence Prevention
Marketing and Promotion

Organizational Practices
Other Infrastructure and Systems
Primary Care
Quality Improvement
Research and Evaluation

Tobacco
Vector Control
Water Quality
Workforce

Other:
Opioid and Heroin Use and Prevention

Is this practice evidence based, if so please explain.:
All data used on this practice website were analyzed and presented adhering to strict epidemiologic standards, including HIPAA restrictions. Kernel density maps are based on guidelines widely used in the geographic information systems community for data display. The website was developed following the World Wide Web Consortium (W3C) standards for web design and applications and ArcGIS development principles.

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: *
- Food Safety
- HIV in the U.S.
- Nutrition, Physical Activity, and Obesity
- Tobacco
- Healthcare-associated Infections
- Motor Vehicle Injuries
- Teen Pregnancy
- 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
**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/why?
    - Is it new to the field of public health
    - 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 Community Preventive Services, MMWR Recommendations and Reports, National Guideline Clearinghouses, and the USPSTF Recommendations.)

2000 Word Maximum
Problem Every day, more than 90 Americans die after overdosing on opioids. The misuse of and addiction to opioids—including prescription pain relievers, heroin, and synthetic opioids such as fentanyl—is a serious national crisis that affects public health as well as social and economic welfare. The Centers for Disease Control and Prevention estimated that the total “economic burden” of opioid misuse alone in the United States is $76 billion a year, including the costs of healthcare, lost productivity, addiction treatment, and criminal justice involvement [https://www.drugabuse.gov/drugs-abuse/opioids/opioid-overdose-crisis]. A more recent estimate from the Council of Economic Advisors indicates that the actual cost could be as high as $5 billion per year. Communities within TCHD’s jurisdiction saw similar effects of the opioid crisis. In the five years from 2012-2016, there were 565 opioid-related deaths within our jurisdiction. In each of the three counties, the death rate from opioid overdose tripled between 2015-2016 and 2017-2018. Although specific causes of death vary, relative terms, each tragic and the impacts are far reaching throughout families and communities. Target population The ultimate goal is to assist communities hardest hit by the opioid epidemic by providing data and information that can help to allocate resources, support programs, and funding to address the problem at a local level. This website was designed to address an audience with influence on the allocation of resources, program support, and policy development, some of which include: local governments, city council members, healthcare providers, and non-profit and partner groups working in substance abuse prevention and treatment. Because of the open nature of a website it can be hard to quantify reach, but through a combination of the following factors, we can conclude that we have been quite successful in reaching our target population. 1) There have been over 9,000 unique visits to this site with an average of 44 per day since its launch in April. The number of visits has far exceeded many other public health-related websites we have experienced in the past. 2) Since the launch of the site, TCHD has had numerous engagements with our elected officials and community groups who have asked specifically about the data and information on the site. In addition, our Executive Director has used the site as a tool in multiple presentations to our elected officials to communicate information about the opioid epidemic. 3) There has been work around the community with both our local governments and substance abuse coalitions that have relied on data and information from this site within the framing issue of opioid crises. 4) Past efforts Traditional means of public health data dissemination and information sharing are in the form of Community Health Assessments, issue briefs, and the like, typically featuring static bar graphs and charts. Prevalence data and death rates are commonly displayed; however, resource data and program support is not as common. LPHAs strive to make data available to multiple audiences, frequently supplying estimates and rates, but with little interpretation and limited ability to display data for small areas. Only some public health surveillance systems collect data which can be geocoded and mapped, and even then, issues of confidentiality and small numbers limit the ability to drill down to the neighborhood level. Due in part to the organizational structure of many LPHAs, the data analysts (if they exist) are frequently in their own shop, somewhat segregated from program staff. The result is data that is both difficult to come by and difficult to use. This website was designed to help bridge this gap by providing a user-friendly and accessible tool to those who need it. 5) TCHD has recently been recognized by ESRI for its effective use of GIS platforms in disseminating public health data at both its Annual 2017 User Conference and as a case study. a. [http://www.esri.com/library/casestudies/communicating-the-severity-of-the-opioid-crisis.pdf] b. [https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=46&cad=rja&uact=8&ved=2ahUKEw9i8nOGl6jRAhUIoweIHXz7McvAQ_wcBAJ&usg=AOvVaw2aW1v99j05HnOs 提供的地图和数据，允许他们根据经验在社区内形成问题的全面、及时的图片。对方支持，预防，和治疗，以及政策发展，其中一些包括：地方政府，市议会成员，医疗保健提供者，非营利和合作伙伴组织 在应对物质滥用的预防和治疗。因为公开性质的网站，它的打开程度是很难量化，但是通过以下因素的结合，我们可以得出结论，我们非常成功地达到了我们的目标受众。1) 自四月上线以来，该网站的平均每天访问量为44次。该网站的访问量远超我们过去经历的其他公共健康相关网站。2) 自该网站发布以来，TCHD已经与我们的当选官员和社区团体进行了多次互动，他们具体询问了该网站的数据和信息。此外，我们的执行董事在向其他官员进行多个演示时，已经使用过该网站，以传达有关阿片类药物的紧急状况的信息。3) 在社区中，我们与地方政府和物质滥用联络团体进行了多次互动。他们依赖于该网站的数据和信息来通过社区出台政策。4) 传统手段传统的公共卫生数据传播和信息分享形式为社区健康评估、问题简报等，通常以静态的柱状图和图表形式展示。存在和死亡率数据通常是显示的，然而资源数据和项目支持并不常见。LPHAs努力使数据可供多个受众，经常提供估计和率，但缺乏解释和针对小区域的有限能力。5) TCHD最近被ESRI因其有效使用GIS平台在传播公共卫生数据而受到表彰。a. [http://www.esri.com/library/casestudies/communicating-the-severity-of-the-opioid-crisis.pdf] b. [https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=46&cad=rja&uact=8&ved=2ahUKEw9i8nOGl6jRAhUIoweIHXz7McvAQ_wcBAJ&usg=AOvVaw2aW1v99j05HnOs 提供的地图和数据] 6) 邻近LPHAs请求我们的协助和沟通，可利用他们的社区数据和信息在相似情况下更有效。此外，他们还借助该网站的数据和信息将资源和信息分发到社区，供他们使用。该地图代表使用该地图和数据时，需要考虑受保护的患者隐私。该网站的受众范围包括三个层面：在死亡。该数据密度表面使用了均等间隔的图以与个人事件匹配。该图代表了几个关键的知识点。该网站本身功能为“一个一站”的结果，结合输出，资源，预防，和治疗，以及政策发展，其中一些包括：地方政府，市议会成员，医疗保健提供者，非营利和合作伙伴组织。 目标(s)和实践的步骤 What did you do to achieve the goals and objectives? Steps taken to implement the program Any criteria for those who selected to receive the program (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 further the practice goal(s) Any start up or on-going costs and funding services associated with this practice? Please provide actual data, if possible. Otherwise, provide an estimate of start-up costs/budget breakdown.
Goal(s) and objectives of practice: The goal of this practice was to develop a website containing timely and accurate data to identify the scope of the opioid problem and available resources to support individual and community prevention efforts to address the crises from various angles. The objectives of this practice were to: 1) geographically display the prevalence of opioid and heroin deaths over time; 2) display substance abuse and mental health treatment options including contact information and detailed characteristics of each treatment setting; 3) display prevention initiatives including household drug take-back sites and Naloxone retailers; and 4) link viewers to concrete action items and community and statewide initiatives to address the crisis. Steps taken to implement the practice: This practice grew out of interest by community member, media, and elected official's interest in understanding the opioid crisis on a local level and seeking actions to combat the crisis. Initially, requests for data and information from TCHD were fulfilled and linked to the Opioid-Related Work Group of the Health Information Initiative. The site was designed and launched by inquiries from the media and elected officials. Two of the counties in TCHD's jurisdiction were particularly concerned. In one county, a county commissioner pulled together a task force to address the opioid crisis with various county departments, community mental health centers, and Kaiser Permanente. In another county, a concerned citizen approached the county commissioners who then convened a diverse stakeholder group with government, private and nonprofit partners. In response to this growing concern, TCHD was asked to convene leadership from both of these county's action groups and to form a coalition to reduce overdose deaths and increase awareness and education of prevention strategies. The third county in TCHD's jurisdiction has asked to join this effort at a future date. This Coalition was named the Tri-County Opiate Overdose Prevention Partnership (TCOPP). Current membership includes public, private, non-profit partners, law enforcement, treatment providers, hospitals, community mental health centers, youth prevention coalitions, statewide organizations, and private residents. TCOPP desired to be data driven and also wanted to use data in its education efforts. It soon became apparent that a comprehensive central location for data and information which was easily accessible to the public would meet many of the needs. An internal TCHD Executive Development team was assembled consisting of two population health epidemiologists, the Manager of Informatics, Epidemiology and Health Planning, the Public Health Prevention and Policy Manager (in charge of tobacco and substance abuse), the Syndromic Surveillance epidemiologist, and the Medical Epidemiologist. This group reviewed the requests for data that were routinely coming in and the requests for data and data products from TCOPP. The group carefully catalogued all potential data sets and evaluated their utility for inclusion, deciding on the data elements to be included in the site. The group also provided the inclusion of other elements for the site. The Senior Population Health Epidemiologist, and GIS expert, explored the functionality of the ESRI ArcGIS Open Data site to use as a platform for sharing the opioid and heroin data. It was determined that the Open Data site would be an adaptable and easy-to-use interface to quickly communicate relevant and accurate information that could be utilized by all the department's community members. Two population health epidemiologists compiled the data from various organizations and prepared it for the site. The Senior Epidemiologist programmed the site. The team, including TCHD's Executive Director and the Epidemiologist, planned and designed the site, created maps and site template, and stakeholders and staff reviewed the site. The Executive Directors of the five metro Denver area LPHAs have formed the Metro Denver Partnership for Health to support collaborative public health initiatives across the region. One work group of the Partnership is the Infrastructure Work Group comprised of data analysts, epidemiologists and informaticians from each of the 5 LPHAs. The goal of this group is to build capacity to share data and analytic resources to reduce duplication of effort and enable data-driven collaboration efforts such as policy development. This provided critical feedback regarding the site and offered suggestions for enhancements. TCHD is fortunate to have myriad active coalitions and community partners and this network was used to review and provide input into the site as well. Specifically the newly formed TCOPP was key in both supporting the development of the site and providing input into the content and feedback regarding the final site. With Mental Health being the focus of TCHD's Community Health Improvement Plan, various mental health work groups comprised of an array of stakeholders also provided input into the site and suggestions for additions and other refinements. One unanticipated outcome of this was the desire among mental health professionals to develop a mental health website, although not the focus of this application, the site has been recently developed and can be viewed here: http://mentalhealth-tchdgis.opendata.arcgis.com/! Finally, the site was made live and advertised through various channels including TCHD's internal newsletter, presentation to TCHD's Board of Health, email to TCHD's key list, presentations to various coalitions and committees, featured at conferences, and in a blast through state department to all ULPHAs. The site went live on April 1, 2017 and was a huge success at the state of Colorado. The timeframe for the practice from the request for website development was in Feb 2016 to spring of 2017 (site was launched April 1, 2017). Stakeholder involvement: As reported above, stakeholders played key roles in all phases of the practice. Much of TCHD's work is conducted through community partnerships. TCHD carefully nurtures relationships with the medical provider community, mental health and substance abuse providers, the early childhood community, local and county government officials, and more. Because of these strong relationships, TCHD has ready avenues for disseminating information and resources such as this Open Data Website. These groups also disseminated the website through their independent networks. Practice costs: Most of the costs of the project were covered by staff resources. As estimated cost was also required for the practice. Though the software and servers used were already purchased and in use by TCHD, the ArcGIS server had an initial cost of $5,000 and an ongoing maintenance fee of $2,000 per year and SAS software is used to analyze the data. Both the server and software are used for many other projects as a part of the data and information infrastructure of TCHD. The freeware version of Tableau software was also used for part of the site.

Evaluation

Evaluation assesses the value of the practice and the worth it has to other LHDs and the populations it serves. 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 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 evidence of your practice (2000 Words Maximum): *
Describe sustainability plans

Lessons learned TCHD reaped the benefits from developing this practice with heavy subject matter expertise and community input. Before using this method, our data products reflected traditional display methods—prevalence graphs, pie charts, and the like. These methods have their utility, but we have found that building data products with and for the community engages our partners in a more meaningful way and therefore ensures that data are used. This method requires more time on the front end, but saves time in response to data requests on the back end. Cost/benefit analysis done? No. Stakeholder commitment to sustain the practice The project is self-supporting; however, partner’s interest in the site can only be maintained through regular updating of the data on the site, and by including new datasets and information as it becomes available. For instance, Colorado has a Prescription Drug Monitoring Program and we have been working with partners to mine the data related to opioid prescribing practices and trends. TCHD’s Medical Epidemiologist has partnered with another LPHA to develop a dashboard displaying opioid-related calls to the Rocky Mountain Poison Control Center and we will link this site to and from this practice site in the near future. Sustainability plans As mentioned, we built this practice using hard- and software that are already part of TCHD’s informatics infrastructure. We have skilled staff who can develop these websites using the ArcGIS technology. We are building redundancy for this skill set as well. One outgrowth of this project’s success was the development of our website featuring mental health. This was initiated based on stakeholder request and is currently live. In this case, we were able to capitalize on lessons learned and repurpose much of the code and data for this site. As we go further, our process will become better refined and our skills will increase, making this practice our new way of doing business. We are currently working on developing a site featuring tobacco and one featuring obesity. Due to the interest in the approach among our regional LPHA partners, we will also be able to support their efforts and subsequently learn from them as we grow this practice in our region.

How did you hear about the Model Practices Program:

- I am a previous Model Practices applicant
- Model Practices Brochure
- Public Health Dispatch
- At a conference
- Colleague in my LHD
- Colleague from another public health agency
- NACCHO Connect
- NACCHO Exchange
- NACCHO Exhibit Booth
- NACCHO Website
- E-Mail from NACCHO
- NACCHO Website