Executive Summary

Research Project Overview

The Texas Medical Association’s Council on Health Promotion, at 2018 TMA Fall Conference, established a workgroup to reevaluate TMA’s Be Wise – ImmunizeSM program, which the council oversees. Amid a changing vaccination landscape, TMA has seen a significant downtrend in shots given while Be Wise program funding and number of vaccination events have continued to increase.

The workgroup was charged with studying the Be Wise program and bringing recommendations to the Council on Health Promotion at 2019 TMA Winter Conference, including how to make the program more attractive to funders and to TMA/TMA Alliance members. The workgroup included representatives from the council, TMA Foundation, TMA Alliance, Be Wise – Immunize Physician Advisory Panel, and Council on Legislation.

Shots Given Through Be Wise – Immunize

Further research was needed to assess Be Wise program goals and direction, and TMA enlisted the help of intern Mike Garcia, MPH, a student at The University of Texas Health Science Center School of Public Health. Mr. Garcia worked closely with TMA staff to create two online surveys of TMA Family members – one for Be Wise program participants (2012-18), including TMA Alliance members, and another for nonparticipating TMA members and medical students. The past participant survey explored the strengths and weaknesses of the Be Wise program, ease of participation, and potential new strategies. The second survey gauged awareness of the Be Wise program and attitudes about public health outreach related to TMA priorities.

A History of Be Wise – Immunize

Be Wise – Immunize began as a three-year initiative to improve Texas’ infant and child vaccination rates, and raise awareness among physicians and the public that vaccinations are safe, important, and effective.
Be Wise – Immunize Program Overview

TMA launched Be Wise – Immunize in 2004 to reduce vaccine-preventable diseases in children and to promote the importance, safety, and effectiveness of vaccines. At the time, Texas ranked near the bottom of the 50 states in childhood vaccination coverage. Over the years as childhood vaccination rates increased, the Be Wise program expanded to include adolescent and adult vaccinations, as well as health care worker vaccinations.

TMA Family members host local shot clinics and events to educate about vaccinations. The Be Wise program provides educational, promotional, and financial support for the events. TMA Family members can receive a Local Impact Grant of up to $2,500 to help fund a shot clinic. Over the past seven years, TMA has awarded more than $203,000 in Local Impact Grants.

“The TMA outreach team is very helpful, supportive, and responsive. We have participated for 2 years in a row, and I am getting ready to plan this fall’s event.” — SURVEY PARTICIPANT

In most cases, Be Wise shot clinics target those who are uninsured or underinsured as determined by ZIP codes and other identifiers of low-economic areas, such as Title 1 schools. Be Wise event sponsors have administered more than 360,000 shots to Texas children, adolescents, and adults since the program began. Be Wise is a joint initiative of TMA and the TMA Alliance.

Be Wise Program Funders

The TMA Foundation, the charitable arm of the association, is dedicated to funding initiatives with the power to help physicians create a healthier future for all Texans. TMAF supports collaborative programs among medicine, business, and community that have measurable outcomes. Be Wise addresses TMAF focus areas of vaccine-preventable diseases and population health.

In 2019, Be Wise is funded with support from H-E-B, TMF Health Quality Institute, Pfizer Inc., and gifts from physicians and their families.
The State of Vaccinations

Vaccines prevent dangerous infections that can kill, maim, and readily spread to others. Through intensive immunization campaigns, smallpox was eradicated from the planet, and polio was eliminated in the U.S. Other diseases, like measles, went away but came back.

2019 has seen a resurgence of measles cases nationwide, and experts believe misinformation is to blame. The virus was eliminated in the U.S. in 2000, yet increases in international travel and vaccine exemptions have led to a widespread and alarming outbreak. Unfortunately, the number of individuals being vaccinated worldwide against various diseases continues to decrease – which heightens the risk for disease outbreaks and global epidemics.

The Centers for Disease Control and Prevention estimates that somewhere between 12,000 and 56,000 Americans have died from complications of the flu since 2010. Nearly 1.4 million people in the U.S. are affected by hepatitis B, which can result in liver cancer and death. Every year, 900,000 Americans get pneumococcal pneumonia. And the list goes on.

This disease burden is avoidable, and, although researchers and practitioners have worked ceaselessly over the decades to ensure immunizations are safe, effective, and affordable, many people are not getting vaccinated. For the first time ever, the World Health Organization has declared vaccine hesitancy one of the top global health threats.

Various interventions address this public health emergency. The majority of these programs target knowledge when, in fact, social psychologists and health behavior change experts have found vaccination decisionmaking involves “emotional, cultural, social, spiritual, [and] political factors as much as cognitive factors.” Several interventions have been employed around this topic including motivational interviewing, communication and marketing, and education; most professionals agree programs concerning vaccine-preventable diseases should contain multiple components and be culturally and linguistically adaptable.

Summary of Maps

One of the goals of this report is to visualize vaccine coverage and conscientious exemptions by county throughout Texas to determine if geographic patterns emerge. Such information could aid in targeting future Be Wise – Immunize program efforts.

Information was obtained from the Texas Department of State Health Services (DSHS) Immunization Unit:

- Conscientious exemption data for kindergartners-12th graders are collected through the Texas Annual Report of Immunization Status of Students, as reported by participating school schools/districts in each county.

- DSHS extracts information from the immunization status report to determine vaccine coverage levels by county. The lower map on page 4 shows measles data for kindergartners.

Reported Conscientious Exemptions by County, 2018-19 School Year

Percentage of K-12 students with a conscientious exemption on file for at least one vaccination

- > 3%
- 1.58-2.99%
- 0.68-1.57%
- 0.01-0.67%
- 0%
- No schools/districts reporting

Source: Texas Department of State Health Services

The map highlights counties with measles coverage rates below 95%, which is the herd immunity threshold recommended by vaccine experts to keep measles from spreading. Measles is one of the most contagious vaccine-preventable illnesses. Counties not highlighted have a 95% or higher rate of coverage, putting them at lower risk for the spread of disease.

Source: Texas Department of State Health Services

School Vaccination Coverage Levels, 2018-19 School Year

Percentage of up-to-date measles vaccinations among kindergartners

- < 80%
- 80-84%
- 85-89%
- 90-94.9%
- One or more cases of measles reported in 2019

Source: Texas Department of State Health Services
Be Wise Past Participant Survey

Demographic Profile

The Be Wise – Immunize Past Participant Survey assessed facilitators and barriers related to the Be Wise – Immunize processes. This survey was sent to 304 TMA physician, resident, student, and alliance members who have participated in a Be Wise – Immunize event since 2012 when the Local Impact Grants program began. The survey was deployed via email over one week, with a response rate of 20%.

“Social media is an important tool to share positive and scientific information in the fight against the very loud voice of the anti-vaccination community.”

— SURVEY PARTICIPANT

Physician and student members made up the majority of responses at 36% and 32% respectively, followed by alliance members at 24%, other respondents at 6%, and residents at 2%. The majority of respondents were female: 74% female respondents and 26% male respondents. Specialty information was not collected for this sample. Most respondents in this survey lived in Tyler (14%), the Rio Grande Valley (7%), Lubbock (7%), El Paso (5%), and Galveston (5%).

Participant Survey Findings

Nearly half (46%) of respondents indicated they plan to host a Be Wise – Immunize event within the next 12 months, 37% said they might host an event, and 17% do not intend to host an event. Such a high level of intended future involvement may indicate positive perceptions about Be Wise among

<table>
<thead>
<tr>
<th>Proposed modification</th>
<th>Overall rank</th>
<th>Mean rank score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborate with Title I schools to host vaccination events (shot clinics, education)</td>
<td>1</td>
<td>2.95</td>
</tr>
<tr>
<td>Apply for a Be Wise Local Impact Grant to secure multi-event funding (versus funding for a one-time event)</td>
<td>2</td>
<td>3.21</td>
</tr>
<tr>
<td>Work with local organizations (e.g., Meals on Wheels; Women, Infants, and Children) to host vaccination events (shot clinics, education)</td>
<td>3</td>
<td>4.12</td>
</tr>
<tr>
<td>Become a vaccination advocate (testimony training, op-ed writing, ad hoc committee membership)</td>
<td>4</td>
<td>4.63</td>
</tr>
<tr>
<td>Use interactive, evidence-based resources to help you educate your patients about vaccinations and overcome vaccine hesitancy (e.g., model conversations, how-to videos, staff training)</td>
<td>5</td>
<td>4.84</td>
</tr>
<tr>
<td>Enroll in the Texas Vaccines for Children program, which provides no-cost vaccines to enrolled providers</td>
<td>6</td>
<td>5.14</td>
</tr>
<tr>
<td>Access new CME opportunities on vaccination topics</td>
<td>7</td>
<td>5.30</td>
</tr>
</tbody>
</table>
members who have previously participated in program activities. Additionally, respondents rated most program resources to be very useful and most steps within program implementation, specifically hosting a shot clinic, to be somewhat easy. The Local Impact Grants were the most useful resource among those listed, and securing a location for an event was the easiest step in the coordination of a Be Wise event.

**Top 3 Proposed Program Modifications**

1. Collaborate with Title I schools to host vaccination events
2. Apply for a Be Wise Local Impact Grant to secure multi-event funding
3. Work with local organizations to host vaccination events

Survey respondents were asked to rank proposed modifications to the Be Wise – Immunize program, and a similar theme emerged within the top three ranked responses. The most-liked program component members wanted to see was collaboration with Title 1 schools to host vaccination clinics and provide education. At the moment, a promising model for vaccination outreach in the school setting may be coming out of the University of the Incarnate Word School of Osteopathic Medicine. If such models exist and are found to be easily replicated, this could be a viable program modification.

The second most popular response was changing the funding scheme of the Local Impact Grants offered through Be Wise. More specifically, respondents wanted to add the option of long-term funding for multiple events to the current funding for one-time events.

This program modification was further supported in an interview with TMA member Li-Yu Mitchell, MD, of Tyler. She has received several Local Impact Grants for one-time events and is working with Northeast Texas Public Health District to reach vulnerable populations in a multi-county area in East Texas. This group has received vans to deploy mobile shot clinics in the area. Longer-term funding could help sustain projects such as this to amplify the impact of the Be Wise program.

“I like the flexibility to modify the program to meet my patients' and clinic staff needs.”

— SURVEY PARTICIPANT

The third most popular response was working with local organizations like Meals on Wheels to host vaccination events. However, an interview with TMA member Janice Stachowiak, MD, who is working with her local Meals on Wheels organization in Lubbock to promote a vaccine intervention, found concerns with patient confidentiality and organizational liability that could prevent the effective implementation of the model. More research is needed to determine if this strategy is viable for the Be Wise – Immunize program and if other community organizations could be viable partners for a Be Wise shot clinic.
Overall, members support the concept of Be Wise meeting patients in the places where they are, such as elementary schools or homes, to remove barriers to vaccination, such as transportation.

The lower ranked modifications should not be dismissed. For example, the option in fifth place – using interactive, evidence-based resources to help educate patients to combat vaccine hesitancy – has been found to be extremely effective. An article published in 2018 addresses the effectiveness of using motivational interviewing (MI) to address vaccine hesitancy and increase vaccine uptake.\(^2\) MI is defined in the paper as “a brief intervention style that proposes a patient-centered approach used to enhance the patients’ internal motivation to change by exploring and solving their own ambivalence.”

“We all need to continue growing collaborations in our communities.” — Survey Participant

The researchers in this study used MI as an intervention strategy with postpartum women to attempt to increase vaccine uptake in their newborns. This program was based on Prochaska’s stages of change – a behavior change theory asserting an individual must pass through several stages to make behavioral change. Because the intervention relies on this theoretical model, the program is easily adaptable to people at various levels of vaccine hesitancy. Further, public health officials assert that multifaceted interventions are more efficacious than single-component programs. Evidence-based strategies like these could be explored by the Be Wise – Immunize program to strengthen program outcomes. The use of evidence-based strategies often is attractive to funding organizations, so modifying the program in a way that incorporates these methods could enhance program sustainability.

Be Wise Engagement and Awareness Survey

Demographic Profile

The Be Wise – Immunize Engagement and Awareness Survey assessed levels of program awareness and attractiveness of the Be Wise program. Accordingly, this survey was sent to 44,344 TMA physician, resident, student, and alliance members who have never participated in the Be Wise program or who have not engaged with the program since 2012. The survey was deployed via email over one week with a response rate of 4%.

Physician members made up the majority of responses at 80%, followed by student members at 10%, alliance members at 6%, and resident members at 4%. Additionally, the sample comprised more male members: 60% male respondents and 40% female respondents. Of the physicians surveyed, family medicine, pediatrics, internal medicine, obstetrics-gynecology, and anesthesiology represented half of specialties. Geographically, most respondents lived in the large, urban areas of Texas: Houston (17%), Austin (11%), Dallas (10%), San Antonio (9%), and Fort Worth (3%).

Engagement and Awareness Survey Findings

According to survey data, 80% of TMA members do not currently engage in vaccination outreach in their personal volunteer activities. Members were asked about their current and future involvement in TMA’s priority public health areas. Vaccine-preventable disease was found to be a topic members wanted to engage in more, with a 94% increase displayed between current and future involvement. In other words, although a majority of TMA members do not currently volunteer in activities related to vaccination, the survey indicates high interest for future involvement in this arena (along with environmental health and unplanned pregnancy). Based on survey results, expanding the Be Wise program could provide more robust volunteer opportunities for TMA members to engage with their communities.

Current and Future Involvement in Public Health Issues

The survey also found the majority of members (55%) were unaware TMA has an outreach program focused on vaccine-preventable disease. Additionally, members were asked if they knew how to get involved with the program; 63% of members either did not understand or were unsure how to get involved. Finally, a large proportion of members also were unsure if the Be Wise website was useful to volunteers (58%). Together, these findings may indicate opportunities for program growth through increased communication and marketing of Be Wise – Immunize. More data would be necessary, however, to fully support this conclusion.
Appendix A  Be Wise – Immunize Past Participant Survey

Thank you for hosting or volunteering with Texas Medical Association’s Be Wise – Immunize® program. TMA is reviewing the Be Wise program to better understand member involvement. Please take a few minutes to tell us about your experience.

Q1 When was the last time you participated in a Be Wise – Immunize event?
❍ 2018-19  ❍ Before 2018

Q2 Are you planning to host or volunteer at another Be Wise event in the next 12 months?
❍ Yes  ❍ Maybe  ❍ No

Skip To: Q4 If Are you planning to host or volunteer at another Be Wise event in the next 12 months? = Yes
Skip To: Q4 If Are you planning to host or volunteer at another Be Wise event in the next 12 months? = Maybe
Skip To: Q3 If Are you planning to host or volunteer at another Be Wise event in the next 12 months? = No

Q3 Tell us why you are not participating next year (select all that apply):
❍ Not enough time  ❍ Too complicated  ❍ Unable to secure vaccine  ❍ Unable to secure volunteers and other local collaborators  ❍ Other (please specify) ________________________________

Q4 Rate each program resource used in your Be Wise event.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Extremely useful</th>
<th>Very useful</th>
<th>Moderately useful</th>
<th>Slightly useful</th>
<th>Not at all useful</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bee mascot</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<tr>
<td>Event banner</td>
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<td>○</td>
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<tr>
<td>Event planning guide (Quick Start)</td>
<td>○</td>
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<tr>
<td>Local impact grant</td>
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<td>○</td>
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<tr>
<td>Media exposure handout</td>
<td>○</td>
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<tr>
<td>Merchandise and giveaways</td>
<td>○</td>
<td>○</td>
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<tr>
<td>Vaccine infographics</td>
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<tr>
<td>Other (please specify):</td>
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</tbody>
</table>

Q5 Rate each step in the coordination of your Be Wise event.

<table>
<thead>
<tr>
<th>Step</th>
<th>Extremely easy</th>
<th>Somewhat easy</th>
<th>Neither easy nor difficult</th>
<th>Somewhat difficult</th>
<th>Extremely difficult</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordinating volunteers</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Evaluating the event</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<td>○</td>
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<tr>
<td>Finding vaccination record readers</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<td>○</td>
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<tr>
<td>Securing a location</td>
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<td>○</td>
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<td>○</td>
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<tr>
<td>Securing vaccine</td>
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<td>○</td>
<td>○</td>
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<td>○</td>
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<tr>
<td>Storing vaccine</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<tr>
<td>Tracking/recording shots given</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Working with sponsors and vendors</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Other (please specify):</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Q6 Are you currently enrolled as a provider for the Texas Vaccine for Children program?
❍ Yes  ❍ No

Q7 TMA is considering quality improvements to the Be Wise program. Below is a list of proposed modifications to improve the effectiveness and implementation of the program.

Please rank by dragging and dropping the proposed volunteer activities that could enhance the program for your community (1 being high interest and 8 being low interest).

____ Access new CME opportunities on vaccination topics
____ Become a vaccination advocate (testimony training, op-ed writing, ad hoc committee membership)
____ Collaborate with Title I schools to host vaccination events (shot clinics, education)
____ Enroll in the Texas Vaccines for Children program, which provides no-cost vaccines to enrolled providers
____ Apply for a Be Wise Local Impact Grant to secure multi-event funding (versus funding for a one-time event)
____ Host educational town hall events on vaccination topics
____ Use interactive, evidence-based resources to help educate your patients about vaccinations and overcome vaccine hesitancy (e.g., model conversations, how-to videos, staff training)
____ Work with local organizations (e.g., Meals on Wheels; Women, Infants, and Children) to host vaccination events (shot clinics, education)
Q8 What does Be Wise – Immunize do well (select all that apply)?
- [ ] Assists with event coordination
- [ ] Fulfills my personal volunteer outreach goals
- [ ] Offers quality educational resources
- [ ] Offers useful marketing, promotional, and giveaway materials
- [ ] Provides funding for vaccination event
- [ ] Other (please specify)

Q9 How could Be Wise – Immunize improve?
__________________________________________________________________________

Thank you for taking our survey. Your responses will help us shape the future of the Be Wise program.

Appendix B  Be Wise – Immunize Engagement and Awareness Survey

Statement 1 The Texas Medical Association is working to increase the member benefits associated with the Be Wise – Immunize program. Please provide your perceptions about vaccination and the Be Wise – Immunize program.

Q1 Is vaccination part of your personal volunteer activities?
- [ ] Yes
- [ ] No

Q2 Are you aware TMA has a vaccination education and outreach program, called the Be Wise – Immunize program?
- [ ] Yes
- [ ] No

Skip To: Q3 If Q2 = Yes  
Skip To: Statement 2 then Q4 If Q2 = No

Q3 Please respond to each statement below regarding TMA’s Be Wise – Immunize program.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Somewhat agree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat disagree</th>
<th>Strongly disagree</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>I understand how to get involved.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>I understand the program’s goals.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>[ ]</td>
</tr>
<tr>
<td>The Be Wise website is useful for prospective volunteers.</td>
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<td>[ ]</td>
</tr>
<tr>
<td>The program is important to TMA’s overall goals and image.</td>
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<td>[ ]</td>
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</tr>
<tr>
<td>The program is valuable to TMA members for their personal outreach.</td>
<td>[ ]</td>
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<td>[ ]</td>
</tr>
</tbody>
</table>

Statement 2 TMA’s Be Wise – Immunize program works with physicians, medical students, and TMA Alliance volunteers to improve vaccination rates in Texas. Be Wise provides educational resources, best practice guidelines, and grant funding to offset the cost of hosting a vaccination event. Be Wise promotes the importance, safety, and effectiveness of vaccines for children, adolescents, and adults. The TMA Foundation, the charitable arm of the association, provides funding for Be Wise – Immunize. For more information about Be Wise, visit www.texmed.org/BeWise.

Q4 Would you consider participating in a Be Wise – Immunize event?
- [ ] Yes
- [ ] Maybe
- [ ] No

Skip To: Q6 If Q4 = No

Q5 May we contact you with more information about getting involved with Be Wise? If so, please provide your name, email address, and phone number.

Q6 We would like to better understand your engagement with volunteer outreach activities in the following public health issues. Please select all that apply.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Current Involvement</th>
<th>Future Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental health</td>
<td>[ ]</td>
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</tr>
<tr>
<td>Mental health</td>
<td>[ ]</td>
<td>[ ]</td>
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<tr>
<td>Obesity and metabolic syndrome</td>
<td>[ ]</td>
<td>[ ]</td>
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<tr>
<td>Substance use disorders</td>
<td>[ ]</td>
<td>[ ]</td>
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<tr>
<td>Tobacco use</td>
<td>[ ]</td>
<td>[ ]</td>
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<tr>
<td>Unplanned pregnancy</td>
<td>[ ]</td>
<td>[ ]</td>
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<tr>
<td>Vaccine-preventable diseases</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Violence, victimization, and unintentional injuries</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

Thank you for taking our survey. Your responses will help us shape the future of our community outreach.
For more information, contact Tammy Wishard, TMA outreach coordinator, at (512) 370-1470 or tammy.wishard@texmed.org. www.texmed.org/BeWise