



PACIFIC INSTITUTE FOR RESEARCH AND EVALUATION

Vermont Department of Health  
*Opioid Metrics Selection and Project Evaluation*

Evaluation Report  
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## Executive Summary

- Pacific Institute for Research and Evaluation (PIRE) is contracted by the Vermont Department of Health, Division of Alcohol and Drug Abuse Programs (ADAP) to serve as the evaluator for the Opioid Metrics Selection and Project Evaluation, a project funded by the Bureau of Justice Assistance (BJA) through their Comprehensive Opioid Abuse Program.
- PIRE has assisted ADAP in identifying opioid- and other substance-related measures that will be included in a data dashboard (referred to as the Health Surveillance Data Publisher [HSDP] project) being developed for community and state stakeholders to use to identify and monitor local trends. PIRE has also assisted with the identification of relevant and feasible features for the dashboard and has conducted a process evaluation of the dashboard development process to date. Once the dashboard is complete, PIRE will evaluate the usability of the dashboard.
- To date, PIRE's focus has included the following key metrics selection and evaluation activities: 1) Facilitated and obtained input on potential metrics for the dashboard via stakeholder meetings in March, 2020; 2) Developed a list of suggested metrics to be included in the dashboard; 3) Conducted focus groups during Fall 2020 to gather input on potential features for the dashboard; and 4) Conducted interviews with project team members during Summer 2021 as the key process evaluation activity for the dashboard development process.
- This evaluation report focuses on providing a summary of the interviews PIRE conducted during Summer 2021 with the project's team members. In addition, as a description of PIRE's involvement in key project processes and data collection efforts thus far, the report begins with summaries of PIRE's previous reports for the project related to the measure identification process and input obtained from stakeholders about desired features for the dashboard. Details about these latter activities are found in those earlier reports.
- The aim of the process evaluation is to document and assess the project's activities and to identify suggestions for the project's continued functioning and improvement. The questions and process for the interviews with project team members were designed to elicit team members' perspectives on the needs the dashboard will serve, the dashboard development process, and how both the process and the plans for the dashboard could be refined and improved. Interview participants included primary staff most involved with the project, other staff involved in specific ways, and VDH leadership. In total, PIRE conducted eight interviews, involving 15 interview participants (two invitees were unavailable).

- Most interview participants expressed the view that the project has been slow to progress, in part related to staff being re-assigned due to the COVID-19 pandemic, as well as due to some inefficient processes and staff turnover.
- Despite challenges related to the project's progress and coordination with other projects and agencies, all interview participants identified achievements the project has experienced. Interview participants identified the following notable achievements and contributors to project progress: staff collaborations and the commitment and leadership of key project staff, getting closer to a data governance plan, and the project's receipt of stakeholder input.
- The value of this project was consistently mentioned by all interview participants, which included their expressed support for the goals and desired outcomes of the dashboard. Moving forward, the key areas interviewees identified to ensure sustainable success of the project were adequate staffing and additional funding to support the adequate staffing.
- As attention and staffing demands were anticipated, at the time of the interviews, to shift away from the pandemic, a shared perspective was that there is an opportunity to focus on substance misuse prevention and overdose prevention and that the project will hopefully regain momentum and move forward.
- Based on suggestions made by interviewees, as well as through general comments made throughout the interviews, the report concludes with a list of recommendations for improving the HSDP project and others like it.

## **Introduction**

Pacific Institute for Research and Evaluation (PIRE) is contracted by the Vermont Department of Health, Division of Alcohol and Drug Abuse Programs (ADAP) to serve as the evaluator for the Opioid Metrics Selection and Project Evaluation, a project funded by the Bureau of Justice Assistance (BJA) through their Comprehensive Opioid Abuse Program. In this role, PIRE has assisted ADAP in identifying opioid- and other substance-related measures that will be included in a data dashboard (referred to as the Health Surveillance Data Publisher [HSDP] project) being developed for community and state stakeholders to use to identify and monitor local trends. PIRE has also assisted with the identification of relevant and feasible features for the dashboard and has conducted a process evaluation of the dashboard development process to date. Once the dashboard is complete, PIRE will evaluate the usability of the dashboard.

To date, PIRE's focus has included the following key metrics selection and evaluation activities:

- 1) Facilitated and obtained input on potential metrics for the dashboard via stakeholder meetings on March 18<sup>th</sup> and March 31<sup>st</sup>, 2020.
- 2) Developed a list of suggested metrics to be included in the dashboard.
- 3) Conducted focus groups in October and November, 2020 to gather input on potential features for the dashboard.
- 4) Conducted interviews with project team members in June and July, 2021 as the key process evaluation activity for the dashboard development process to date.

This evaluation report provides a summary of the interviews PIRE conducted with the project's team members. In addition, as a description of PIRE's involvement in key project processes and data collection efforts thus far, the report begins with summaries of PIRE's previous reports for the project related to the measure identification process and input obtained from stakeholders about desired features for the dashboard.

## **Stakeholder Meetings for Eliciting Suggestions for Dashboard Metrics**

In March 2020, two Opioid Metrics Selection Stakeholder Meetings were held to elicit input on the planned data dashboard, with a focus on measures of interest to and recommended by stakeholders. The two stakeholder meetings, which were originally scheduled to take place in person in Waterbury on March 18<sup>th</sup> and in Rutland on March 31<sup>st</sup> were adapted to be held virtually via Zoom due to COVID-19 pandemic restrictions. A total of 12 community members participated. Representatives from PIRE and ADAP also participated.

The stakeholder meeting discussions centered on the following key questions:

- 1) What do you consider the key priorities to be for this web-based tool (in terms of content and usability)?
- 2) For what purposes will you use the tool (or specific measures)?
- 3) What existing opioid measures are important to include?
- 4) What existing measures related to other substances are important to include?
- 5) What challenges have you encountered when using State of Vermont substance use measures (in general and with respect to data needs in Vermont communities)?
- 6) What data measures are you not able to access or find easily?

Participants also prioritized the data measures they would like to see in the dashboard and described how they would use the measures. Additional details about the stakeholder meetings are in the report that PIRE submitted to ADAP on April 30, 2020 summarizing the input gained during these meetings.

## **Metrics Recommendations**

PIRE prepared a list of metrics recommendations based on input from stakeholders through the aforementioned stakeholder meetings and through early interviews conducted by the project team, as well as through the review of other states' data dashboards, VDH reports, and other sources pertaining to opioid measures. In the list of recommended metrics, the measures were coded to differentiate priority measures from measures that could be considered as space in the dashboard and resources allow. In addition to listing the measures, the recommendations also included data display possibilities (e.g., demographics, geography) for the dashboard based on stakeholder interest, and an explanation of the measures, including their importance to stakeholders. PIRE submitted the list of recommendations to ADAP on June 30, 2020.

## **Dashboard Features Focus Groups**

PIRE conducted focus groups on October 27<sup>th</sup>, October 30<sup>th</sup> and November 5<sup>th</sup>, 2020 to obtain feedback from stakeholders on four existing data dashboards in order to inform the development of the dashboard for this project. The three focus groups were organized by stakeholder role: Community stakeholders provided insights on how those working in the fields of substance misuse prevention, treatment, and recovery would use a data dashboard; VDH Communications staff provided ideas on ways to present the data in an effective way for communities and reporters; and other stakeholders from VDH offered thoughts on preferences for those working internally as well as thoughts about how a dashboard might best serve the department's grantees. Focus group participants provided input on five key areas: appearance of the homepage, navigation, data selection, data presentation, and portability. PIRE submitted

the focus group findings, which included a summary of priority features and recommendations, in a report to ADAP on November 11, 2020.

## **Interviews with Project Team Members**

### **Overview**

As the central process evaluation activity of the project's dashboard development activities so far, PIRE conducted interviews with project team members between June 17<sup>th</sup> and July 8<sup>th</sup>, 2021. The aim of the process evaluation is to document and assess the project's activities and to identify suggestions for the project's continued functioning and improvement. The interview questions and process were designed to elicit team members' perspectives on the needs the dashboard will serve, the dashboard development process, and how both the process and the plans for the dashboard could be refined and improved.

During monthly project meetings, PIRE coordinated with the project lead from ADAP and with other team members to develop and refine the interview questions and overall plans. This included identifying appropriate staff to interview and grouping the interviewees by role and project focus area. The list of individuals to invite included primary staff most involved with the project, other staff involved in specific ways, and VDH leadership. The ADAP project lead sent an initial email to inform the 17 potential interviewees of the purpose of the interviews and the request to participate. PIRE subsequently coordinated the interview scheduling. In total, PIRE conducted eight interviews, involving 15 interview participants (two invitees were unavailable).

PIRE conducted the interviews using an interview guide developed in collaboration with the project team (see Appendix A). Each interview group was asked slightly different variations of the questions, with those most involved in all aspects of the project being asked all questions and with others addressing specific questions relevant to their project role (see Appendix B). The interviews occurred virtually using Microsoft Teams and ranged in duration from 30 to 60 minutes. In all but two interviews, one PIRE staff member facilitated the interviews. For the first two interviews, another PIRE staff member joined to assist in taking notes and asking follow-up questions. PIRE audio recorded all interviews to help ensure the completeness and accuracy of the interview notes. The interviewer analyzed the interview data, identified main themes, and summarized the overall findings. The second PIRE staff member reviewed the themes and overall findings and contributed to the summary.

## Findings

### ***Priorities for the Dashboard***

All interview participants agreed that the main priority of the dashboard is for it to allow users (e.g., community agencies, individuals, media, and internal state data users) to access substance use-related data in one place in a user-friendly and timely manner. Multiple interview participants mentioned the importance of communities having access to usable (e.g., without the need for a data analyst) and interactive data (e.g., customizable maps) that would support data-driven planning and policy creation for issues like the opioid epidemic. One interviewee noted that this access to timely data for communities ties in with Vermont's desire to replicate a prevention model similar to that in Iceland (i.e., the Icelandic model). Another expressed priority was that this access to data, ideally, will also assist with and reduce VDH's need to directly field data requests from the public and media.

### ***Progress of the Dashboard Development Process***

Most interview participants expressed the view that the project has been slow to progress, in part related to staff being re-assigned due to the COVID-19 pandemic, as well as due to some inefficient processes and staff turnover. Interviewees explained that staff re-assignments resulted in key staff being removed from the project almost entirely starting in March 2020 at the outset of the pandemic, and that, although monthly project meetings were taking place, there was not time for project tasks to be completed between meetings. Other contributors to the slower pace related to what a few interviewees described as unfamiliar processes and procedures, and too many people involved in the project's meetings without having clear roles for who makes decisions. Specifically, the involvement of ADAP, Health Surveillance, and the Agency of Digital Services (ADS) resulted in three sets of processes using three different "languages" that took time for each group to become familiar and comfortable with. This approach was deemed to be slow, further compounded by staff turnover. At the time of the interviews, staff members' COVID deployments were anticipated to be coming to an end and there was hope that the project would gain pace and ultimately result in a finished product that offers access to timely data.

Interview participants believed that the project generally has followed the intended Community Engagement Model and Data System Planning Process frameworks. Consistent with the affected momentum described above, some interviewees felt that the project had stalled. One interviewee noted, "the gears [in the Planning phase of the Data System Planning Process] are a good visual because we are stuck in this process." However, another interviewee expressed the view that planning should be 75% of a successful project and that the planning phase was too rushed to fully determine the scope and needs of the project.



Multiple interview participants mentioned the value of the time and effort the project has devoted to gathering input from internal and external stakeholders during the project. Most interviewees mentioned that the initial stakeholder engagement process to determine desired measures and dashboard features was helpful and necessary and that the process of reviewing other dashboard examples has helped better understand the potential setup and design of this project's dashboard. By engaging a wide range of individuals who are likely to be users of the project's dashboard, interviewees believed that the project team was able to learn about stakeholders' key priorities, concerns, and recommendations and that the input will help create a useful dashboard. They also recognized that taking the time to gather the input is time consuming and that it will be challenging to create a dashboard that is usable by a wide audience (e.g., the general public, local health offices, non-profits, local municipalities,) with varying abilities to analyze data. However, one interview participant commented that looking at existing dashboards to consider desired or undesired features will ultimately save time and money by providing details and a vision that are useful for designing the initial prototype for the dashboard.

One of the interview discussions noted the benefit of ADS's involvement with the dashboard design, including their contributions to keeping the project moving when other key programs were re-deployed due to COVID. Other comments included the reflection that the process could have been smoother if the roles were clearer (e.g., who directs the project and who has final say on decisions) and the ADS policies, procedures, and vocabulary were more similar to those of other projects (e.g., it took time to understand the ADS terminology; sometimes seemed there were unnecessary hoops to jump through). The IT ABC form was another aspect mentioned during one of the interviews. It was noted that this form helps guide ADS staff members' time allocation and overall work on the project and that there were challenges when needs came up that did not fit in with content on the form. Further, it was mentioned in one interview that ADS receives multiple data requests related to a variety of projects with varying levels of priority, which means delays occur when they do not have the resources to adequately staff and support all requests being made of them.

Multiple interview participants mentioned the Power BI selection process as a hindrance to the dashboard's creation. Some interviewees said that initially there seemed to be a decision-making process for choosing the appropriate software, but that ultimately it seemed Power BI was chosen for the project without much team member input. Some interviewees thought that this may be due to cost, but believed that so much time and money will go into paying for staff and IT support when using the software, that in the end it might not be economically advantageous. In addition to concern that Power BI is not the most appropriate software for the dashboard's needs, there were concerns about this decision from the standpoints of efficiency and team morale (i.e., feeling that taking the time to invest in a decision-making process only to feel that there really was no choice at all was a waste of time and slowed down the project). There was concern among some interview participants that this has been a missed

opportunity to select a platform that will serve diverse needs. Another interviewee expressed the perspective that there is no 100% perfect choice for a dashboard that seeks to serve a diverse audience and that compromises would need to be made no matter which software was selected. This interviewee also believed that now that the scope of the project and features of the dashboard are more defined and Power BI has been selected, the process is generally moving in the right direction.

As the project was approaching the implementation/execution phase at the time of the interviews, interviewees shared their views on how the dashboard prototype development has gone so far. The prototype that had recently been shared with the team for feedback was noted as having limitations due to including data for only a few years. There was anticipation that this issue would be resolved once data analysts' COVID re-deployments ended and they have more time for this project. A noted benefit of using Power BI is that there are existing VDH reports that were created using this software that can be used as templates for this project. A few interview participants discussed the need for a transformation layer to streamline the process between data gathering, analysis, and display, given concerns about the complexity involved with getting data prepared to bring into the dashboard and the staff time that will be required to do so.

### ***Coordination Involving Health Surveillance Data Publisher, Health Informatics Consultant, and Green Mountain Care Board***

While many interviewees appreciated the attempt for the project to coordinate with other projects and recognized associated benefits (e.g., in-depth conversations on data governance; working toward more efficient data sharing in the long term even if it slows down the dashboard development; having a stronger relationship between ADAP and Health Surveillance), most interview participants considered the project's efforts to coordinate with the Green Mountain Care Board (GMCB) dashboard project and the Health Informatics Consultant to not have gone smoothly, nor to be effective. Some interviewees mentioned that attempting to coordinate the needs of these projects had some successes, but that it was challenging to have focused meetings that resulted in plans of reasonable scope. The view was that competing priorities of the different projects resulted in inefficiencies for each one rather than a streamlined approach that ostensibly was the original intent behind combining efforts. Specifically, multiple interviewees mentioned that it took the first year to try to figure out the scope of this project and how all three projects could work together, to then discover that they could not be combined effectively. The interviewees explained that the projects were too different and the scopes too large, which made coordination a hindrance to progress.

As referenced earlier, interview participants described the larger group meetings as being tedious and ineffective, with many agreeing that the project's progress was delayed due to a year struggling to get everything to fit between the projects, when the combination of the

projects, especially with GMCB, did not work. This realization resulted in needing to change the goals of this project (i.e., to not combine with other projects), which further delayed development of the dashboard. It was noted that GMCB decided to use a simple model requiring manual data entry because doing more than that was not feasible, implying that a more complex system might not be feasible for this project either. One interviewee described the coordination as a chicken and egg situation, where no one project could drive the others, so they all reached a standstill. GMCB was described as having an internal legislative deadline that facilitated identifying a solution. Some interviewees felt that not having a mandate for this project resulted in it falling down on the priority list for VDH, especially given the work needed to respond to COVID.

### ***Coordination Between ADAP, Health Surveillance, Agency of Digital Services, and Public Safety***

As with the coordination of projects mentioned above, the attempted coordination between agencies and departments was viewed as valuable yet challenging. Coordinating multiple partners (i.e., ADAP, Health Surveillance, ADS, and Public Safety) as well as staff from additional projects (i.e., Health Informatics Consultant and Green Mountain Care Board) resulted in the feeling that there were “too many cooks in the kitchen” and that the monthly project meetings were too large (i.e., some people who attended did not really need to be there for each meeting). Concern was expressed that this may have resulted in meeting fatigue or burnout on the part of some team members who did not feel it was necessary for them to attend each monthly meeting. One interviewee suggested that the project be mindful of who is invited to meetings in the future, paying particular attention to the relevance of the meeting to each attendee and making sure that all agency-specific jargon is understood by all so that everyone feels they can participate in the meeting.

There was a feeling among a few non-ADS staff that while the rigid protocols involved with security and sustainability are important, it made working with ADS challenging at times. In addition to the concerns noted above about the selection of Power BI, interviewees also described a tension related to determining what data are released, as well as an undercurrent of hesitancy to give up information because no one knew who would ultimately “own” the data. Further, as the dashboard features became more limited, some interviewees expressed frustration that certain things originally on the table as options were now out of scope.

### ***Key Successes and Achievements***

Despite the challenges related to the project’s progress and coordination, all interview participants identified achievements the project has experienced. As summarized in turn in this section, notable achievements and contributors to project progress included staff collaborations and the commitment and leadership of key project staff, getting closer to a data governance plan, and receipt of stakeholder input.

Staff collaboration, strengthened working relationships, and program staff spearheading the efforts in each of the programs were mentioned by many interviewees as key contributors to the project's progress. It was noted that the fact that any progress was made over the past year and a half was impressive, given staff deployments to cover COVID-19 needs. Interviewees acknowledged that getting to the point where a prototype has been developed is a key success, specifically noting that the DevOps tool was helpful to get there. There were key staff in ADAP and ADS that continued to move things along, and to ensure that action items were being identified during meetings and carried out between them. ADAP and Health Surveillance's collaborative relationship has been strengthened through this project, as well as others, and there is better understanding that when Health Surveillance provides their expertise and assistance to ADAP, they will ultimately end up with a better product.

The creation of the data dictionary, with terms for each of the project, was mentioned in at least two of the interviews as a beneficial tool that ultimately increased communication and efficiency. Through this project and establishing the need to have conversation on data definitions, the team created the beginnings of a data governance process, which was felt by many to be a critical need. Taking the time to define data terms has been valuable, with more work in this area deemed to be needed.

As mentioned above, multiple interview participants mentioned their appreciation of the time and effort involved in gathering a wide range of stakeholder input on proposed measures and features for the dashboard. They believed that obtaining this input will help the dashboard be as useful as possible. Having external stakeholders, and not just internal project staff, provide input was considered important and likely to save time in the future by minimizing the number of iterations of the prototype that are needed. An additional perceived benefit of learning about desired dashboard features and functions was that the information could be used for the development of other dashboards in the future.

### ***Key Challenges and Lessons Learned***

The COVID-19 pandemic and the resulting shut down and VDH staff re-deployment were the most frequently mentioned challenges to the project's progress, mentioned by all interview participants. In their descriptions, the momentum built from 2018 through March 2020 was halted when project staff were re-assigned to respond to the COVID emergency. Staff's attention was diverted from the project and little to no work took place between the monthly project meetings, which one interviewee commented should have been weekly, ideally. This effect on the project team included the project's key decision-makers having less time to devote to the project since it was a lower priority during the pandemic. One view expressed during the interviews was that the project should have been officially put on hold during the pandemic.

Staff turnover, particularly involving the ADS project manager role, was also noted during three interviews as a challenge to the project's progress. This turnover required time to train new team members on the different "languages" and procedures involved in the project, particularly given the variety of departments and agencies involved in the project. In addition, it was noted that there were instances when project files could not be found during transitions between staff.

Meeting coordination was noted as a barrier to project progress by a few interview participants, namely that the meetings were not efficient and that there often was not time to carry out work between meetings due to COVID-related staff deployments. Specifically, interviewees described the meetings as being too large and not requiring the attendance of everyone who was there, which affected the ability to make decisions as well as diverted staff time from other tasks to which they could have been tending. There was also mention that the necessary decision-makers were not consistently at meetings, making it difficult to proceed with action items. One opinion was that having more regular meetings with the data analysts would have been helpful so that those staff would have a better understanding of the project's overall timeline and ongoing data needs, as well as greater clarity on what data they would need to gather ahead of the prototype creation.

In multiple interviews, communication around data was mentioned as a challenge. Interviewees explained that it took some time for project team members to get on the same page in terms of data definitions and for the data analysts to get data to ADS as the developer due to COVID re-deployment. There was anticipation that soon a project delay would stem from ADS not having the capacity to handle all the data they will be receiving. Another issue mentioned in multiple interviews was the need for data governance. One opinion was that the project coordination would have been smoother if a more informed backend system had been established at the beginning of the project, with knowledge of what data would be available (i.e., versus setting up the system before knowing the available data).

Multiple interview participants mentioned that the factors that resulted in the decision to use Power BI as the dashboard's platform were unclear and did not consider the views or preferences of the project team. Some interviewees felt that the choice to use Power BI seemed to be because it was the easiest (i.e., "the path of least resistance"). One interviewee noted that Power BI originally was going to be used for a proof of concept design before a more robust product was created using different software, but that transitioned into using Power BI for the actual dashboard creation. Some interview participants felt the choice had to do with saving money, but it was also noted during three interviews that Power BI will require a fair amount of staff time to use (e.g., will require data owners, process owners, and data cleaning). Another concern raised by an interviewee was that Power BI is new to many in ADS and therefore it would be preferable not to try a new platform on a large project like this. That said, another interview participant expressed the opinion that while Power BI has limitations, this

choice will not affect the project too significantly and that it will be able to fulfill the majority of the project's goals. However, a remaining question raised during an interview was how this tool will be sustained in the long term and who will manage the data. With the various project challenges considered, a few interviewees perceived this project to have involved more challenges than other similar IT projects (e.g., the Vermont Prescription Monitoring System).

### ***Looking Ahead***

The value of this project was consistently mentioned by all interview participants, which included their expressed support for the goals and desired outcomes of the dashboard. Moving forward, the key areas interviewees identified to ensure sustainable success of the project were adequate staffing and additional funding to support the adequate staffing. Many interview participants mentioned concern that there is the lack of a sustainability plan to ensure timely data updates to the dashboard (i.e., ADS is building the tool, but there is yet to be a plan for maintaining it). Interviewees noted that the current level of data analysis is expected to increase, as the goal of the dashboard is to have more frequent analysis broken down in more specific ways (e.g., age, gender, geography), and that there is the need to build this ongoing work into someone's job and to ensure that there is Power BI expertise available to build new sections of the dashboard as new data become available. A question raised during the interviews was how this can be done when there is no specific funding allocated for data analysts within Health Surveillance to perform duties related to this project.

A suggestion mentioned during two of the interviews was to invest time and money now to automate the dashboard so that less staff time is needed down the road, by considering the possibility of involving new staff (i.e., new hires or existing staff to bring on to this project). One interviewee noted that using staff in this way could lead to opportunities for staff to grow and learn professionally, while also helping to advance and support the project. Another suggestion during an interview was the potential need to prioritize what is possible with limited time and funding. Specifically, it was noted that thinking flexibly and understanding that working with technology solutions is an iterative process is important as the project proceeds. Further, as attention and staffing demands were anticipated, during the time of the interviews, to shift away from the pandemic, one shared perspective was that there is an opportunity to focus on substance misuse prevention and overdose prevention and that the project will hopefully regain momentum and move forward.

### ***Recommendations***

Based on suggestions made by interviewees, as well as through general comments made throughout the interviews, the following list presents recommendations for improving the HSDP project and others like it. PIRE encourages the project team to consider these recommendations, and other issues raised during the interviews, as the project progresses and refinements and decisions are made.

- Identify goals more clearly and earlier. Goals should be specific and achievable. This need for improved clarity includes the need for more and accurate details on the IT ABC form and an understanding that updates should be made in the event of changes to the project.
- Combine projects only when they have the same scope, budget, and timeline.
- Ensure there is clarity regarding team members' roles, project decision-making processes and authority, and the purpose of individual meetings and the participants most relevant to the agenda.
- Have a process for defining, understanding, and supporting the collaborative relationship between ADS and ADAP that is required for an IT project such as this.
- Use the expertise of staff. One opinion was that the ADS staff working out of VDH have experience creating dashboards that has not been fully utilized during this project and could have provided a good deal of guidance and expertise to other ADS staff who were more involved.
- Maintain ADS staffing for the duration of the project, when possible. The transition between project managers was considered to be time-consuming and inefficient.
- Have a clear understanding of the data needs and the existing data prior to developing the system that will display the data. A perspective expressed during the interviews was that perhaps the backend could have been built in a more targeted and appropriate way if the builders had a clear understanding of what the existing data look like. This would include engaging data analysts early on and having a clear understanding of the data measures and format of the available data from the start.
- A lack of permissions to share data was noted as a significant barrier. Encourage data analysts from VDH and ADS to work together from the start and use memoranda of understanding (MOUs) to define and support a relationship that would allow for data sharing permissions between agencies.
- Create a prototype using different platforms (e.g., Power BI and Tableau) to show the trade-offs of each. Consider the benefits of investing time and resources early in the dashboard development process that may have cost-savings later on.
- Promote process improvement and quality improvement trainings among key project staff. It was noted during the interviews that providing training to staff is not part of the state's culture, but that doing so could have avoided some of the delays experienced during the first year of the project.

## **Next Steps for the Evaluation**

Once the dashboard is complete, PIRE will conduct an outcome evaluation with the goal of assessing its usability. In the interim, PIRE will participate in reviewing the prototype of the dashboard as well as obtain stakeholder feedback on the prototype. Methods for the outcome evaluation will include interviews with project team members and key stakeholders, with the aim of obtaining in-depth feedback on and suggestions for further development of the dashboard. In addition, a survey will be used to obtain feedback on the dashboard from a broader sample of stakeholders. The following outcome evaluation questions will be addressed:

- 1) To what extent do the dashboard and its measures meet stakeholder needs?
- 2) How is the information provided by the dashboard being used to inform assessment, planning, monitoring/evaluation, and decision-making activities at the community (and state) levels?



## Appendix A

### Metrics Team Members Interview Guide

- 1) How long have you been (or were you) involved in the Health Surveillance Data Publisher project? What is/was your role with the project?
- 2) In your opinion, what are the priority needs the dashboard will serve? Thus far, how has the process gone in terms of creating a dashboard that will address those priority needs?
  - To what extent will the dashboard and its measures meet stakeholder needs (e.g., for assessment, planning, monitoring/evaluation, and decision-making at the community level)?
- 3) Please share your view of how the dashboard development/creation process (i.e., the project) has gone thus far?
  - Prompt about aspects of the planning phase (charter, project plan, stakeholder interview, work item stories, glossary, prototype) and development (if it has started at the time of interview).
- 4) The initial proposal for the dashboard development process was for it to be guided by the Evidence-Based Community Engagement model and the Data System Planning Process [show graphics of each].
  - How closely has this project and process stayed within the framework of the Evidence-Based Community Engagement model? [*show graphic - Evidence-Based Community Engagement model*]
  - How closely has this project and process stayed within the framework of the data system planning process? [*show graphics - Data System Planning Process*]
- 5) How has the process of gathering input from different groups gone, specifically: stakeholder interviews, project staff, and PIRE as the evaluator?
  - Prompt: How has it been to give feedback? How have those interactions gone? Do you feel that your voice, and other voices, have been heard by the project team?
- 6) What are your thoughts on the process of coordinating the Green Mountain Care Board, Health Informatics Consultant and Health Surveillance Data Publisher (HSDP)/Metrics (aka ADAP Dashboard) projects all at once? What have been the benefits of that? What have been the downsides?
- 7) How have inter-departmental (e.g., ADS and VDH) and external, agency (e.g., AHS) factors informed the project?
  - How has this influenced the efficiency of the project?
  - How has this influenced the scope of the project?

- How has this influenced the quality of the dashboard development process?
- 8) Overall, what has worked well with this project? What key successes has the project experienced so far?
- Prompt to gain input on the quality and efficiency of the development process; metrics selection process; dashboard features; and staff relations/communication.
  - How has this project compared to similar projects that you've worked on (e.g. the Environmental Health Tracker, COVID dashboard)? Is this project being approached differently? In what ways? Why?
- 9) What has helped facilitate project progress and successes?
- 10) What has not worked well? What challenges have there been? How have the challenges been addressed?
- How have the closures and staff re-assignments resulting from the COVID-19 pandemic affected your work on this project and the project overall?
  - How have the new dashboards developed as a result of COVID (e.g., COVID-19 dashboard, Vaccine dashboard) been utilized to inform this project?
- 11) What, if any, lessons learned do you think there have been so far?
- 12) How could the planning and execution of the dashboard development process (i.e., the project) be improved?
- What suggestions do you have to improve the IT process?
  - If you could go back and start the project again from the beginning, what would you change, if anything?
  - What suggestions would you have for others working on a dashboard development project?
- 13) The project is nearing the end of its **planning phase** (charter, project plan, stakeholder interview, work item stories, glossary, prototype), what expectations, concerns, or suggestions do you have for the project as it moves into the execution stage?
- Looking ahead to the maintenance and operations stage of the project, what expectations, concerns, or suggestions do you have for the project during that phase?

<b>Appendix B – Interview Questions by Project Role</b>	DPS	GMCB	VDH Analysts	ADS	ADS	VDH ADAP	VDH/ADS	VDH Leadership
1) How long have you been (or were you) involved in the Health Surveillance Data Publisher project? What is/was your role?	X	X	X	X	X	X	X	
2) What are the priority needs the dashboard will serve? How has the process gone in terms of creating a dashboard that will address those priority needs? To what extent will the dashboard and its measures meet stakeholder?	X		X	X	X	X	X	Limited – only ask first part of Q2
3) Share your view of how the dashboard development/creation process has gone thus far? Prompt about planning phase and development	Limited – ask generally, without prompts		X	X	X	X	Limited – ask generally, without prompts	
4) How closely has this project and process stayed within the framework of the Evidence-Based Community Engagement model? The data system planning process?			X	X	X	X		
5) How has the process of gathering input from different groups gone?		X	X	X	X	X		
6) What are your thoughts on the process of coordinating the GMCB, (HSDP)/Metrics projects all at once?			X	X	X	X	X	X
7) How have inter-departmental (e.g., ADS and VDH) and external, agency (e.g., AHS) factors informed the project?			X	X	X	X	X	X
8) Overall, what has worked well with this project? What key successes has the project experienced so far?	X	X	X	X	X	X	X	Streamline Q8-Q12 to ask generally how have things gone with the project? What suggestions or expectations do you have?
9) What has helped facilitate project progress and successes?	X	X	X	X	X	X	X	
10) What has not worked well? What challenges have there been? How have the challenges been addressed?	X	X	X	X	X	X	X	
11) What, if any, lessons learned do you think there have been so far?	X	X	X	X	X	X	X	
12) How could the planning and execution of the dashboard development process (i.e., the project) be improved?	X		X	X	X	X	X	
13) The project is nearing the end of its planning phase (charter, project plan, stakeholder interview, work item stories, glossary, prototype), what expectations, concerns, or suggestions do you have for the project as it moves into the execution stage?	X		X	X	X	X	X	