Potentially Preventable Hospitalizations Project Report: Year 4

Bonnie Corns, MPA
Ingrid K. Friberg, PhD, MHS
Monique Myers, MS
Alix Warren, MPH, CHES

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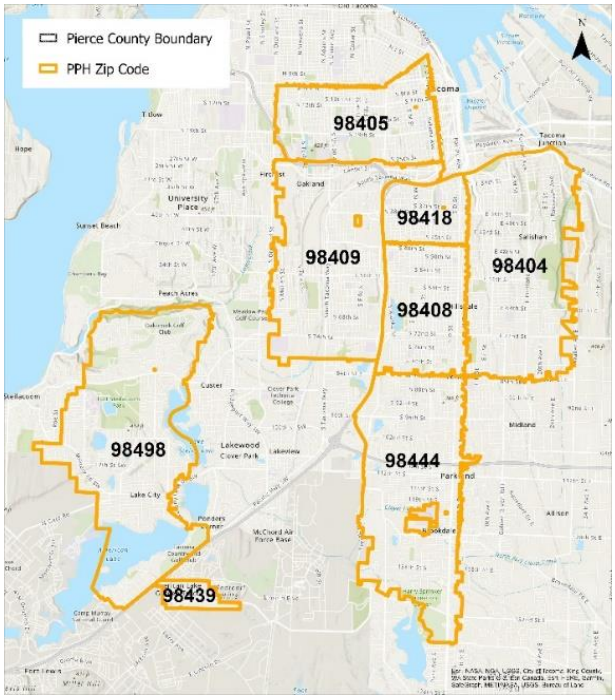
Tacoma-Pierce County
Health Department
Healthy People in Healthy Communities

Executive Summary

Potentially preventable hospitalizations (PPH) occur when someone is hospitalized for something that could have been avoided with proper primary care. Often these hospitalizations stem from chronic conditions (e.g. diabetes, heart disease) or communicable diseases like flu or pneumonia. It's possible to prevent many of these hospitalizations with regular healthcare visits and/or immunizations.

In 2017, the Washington State Office of Financial Management (OFM) released a report revealing that six Pierce County zip codes (98404, 98405, 98408, 98409, 98418, and 98444) had some of the highest PPH rates in the state.

In response, we partnered with local health systems and community-based organizations to launch the PPH project. Together, we aim to reduce the rates of PPH in our priority zip codes, with a goal of improving health outcomes and reducing healthcare costs. In this past year, we've also added 98439 and 98498 to the project given their hospitalization rates and proximity to the original zip codes.



Map of current PPH zip codes.

PPH Project Strategies

Improve immunizations
• Increase rates of pneumococcal, influenza, and COVID-19 immunizations. • Prevent spread of bacterial pneumonia and other conditions that can exacerbate chronic conditions.
Improve access to behavioral health
• Ensure access to behavioral health resources. • Connect people meet their substance use or mental health needs so that they can better manage chronic conditions.
Improve heart failure
• Reduce rates of heart failure – one of the biggest drivers of PPH in the region.

Year 4 Accomplishments

Improve immunizations

- Provided flu vaccine to our PPH partner health centers, ultimately serving uninsured and under-insured adults.

- The Health Department supported flu clinics across Pierce County, including PPH zip codes 98404, 98405, 98408, 98409, 98418, and 98444.

Improve access to behavioral health

- Designed and audience tested a smoking cessation social marketing campaign, tentatively called *What can smoke-free do for you?*, scheduled to launch in summer 2022.
- Educated more than 70 Community Health Workers (CHWs) and social service providers on risks related to tobacco use and trained them in cessation counseling.
- Trained more than 75 CHWs and social service providers to complete an opioid misuse brief intervention using motivational interviewing techniques. Participant feedback from that session is in the table below.

Improve heart failure

- Convened partners via the Improving Heart Failure Workgroup to standardize primary-to-specialty referral process for patients with heart failure diagnoses.
- Enrolled 51 patients into the CHW Pilot Project.
- Hosted 12 monthly Improving Heart Failure Learning Collaboratives with over 200 unique participants from the social service professions and the Pierce County community.

Year 5 Challenges and Lessons Learned

Each PPH strategy has its own unique challenges (described in more detail throughout the full report), but there are several overarching hurdles that affect each facet of the project. For example, the COVID-19 pandemic led to restrictions on in-person care and competing priorities. As a result, several of our healthcare partners were not able to report progress on Screening, Brief Intervention, and Refer to Treatment (SBIRT) implementation. The pandemic also temporarily prevented our CHW Pilot Project from sitting on-site, challenging the CHW's ability to enroll patients into the pilot in-person. And finally, competing time demands limited consistent participation from some partnering healthcare organizations.

What's next in Year 5?

The ongoing and impending effects of the COVID-19 pandemic will only exacerbate the need for immunization, behavioral health, and chronic disease prevention/mitigation. For this upcoming year more broadly, we will:

- Collaborate with Pierce County Fire and Rescue to identify smaller regions within our zip codes with the highest rate of preventable hospitalizations.
- Improve and standardize the patient access report process to inform access improvement strategies.
- Develop or maintain partnerships with related TPCHD programs, including Black Infant Health, Tobacco-free Places, and Communities of Focus, among others.
- Continue assessing the impact of PPH initiatives and produce an annual evaluation report.

Finally, we will prepare a funding proposal to extend the project beyond the current completion date of June 2023. Within that proposal, we will consider expanding the project's focus area to include the 98499 zip code, which has some of the highest rates of preventable hospitalization in Pierce County.

Contents

Introduction

Potentially preventable hospitalizations (PPH) occur when someone is hospitalized for something that could have been avoided with proper primary care. Often these hospitalizations stem from chronic conditions (e.g. diabetes, heart disease) or communicable diseases like flu or pneumonia. It's possible to prevent many of these hospitalizations with regular healthcare visits and/or immunizations.

In 2017, the Washington State Office of Financial Management (OFM) released a report detailing rates of PPH across the state. The report, based on data from the U.S. Agency for Healthcare Research (AHRQ), uncovered the highest PPH rates in six zip codes within the 27th and 29th legislative districts. The zip codes – 98404, 98405, 98408 (27th legislative district) and 98409, 98418, 98444 (29th legislative district) all fall within Pierce County.

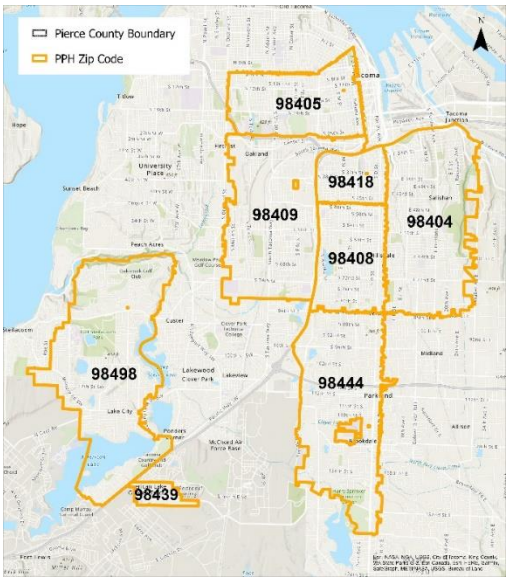


Figure 1: Map of the current PPH zip codes.

Upon receiving the report, Tacoma-Pierce County Health Department (TPCHD) formed a unique strike team of local healthcare leaders to address PPH in the priority zip codes. Since then, the PPH project, which officially launched in 2018, has grown to include local health systems, provider organizations, and community-based organizations (see Table 1 for participant list). The five participating healthcare organizations represent all 14 of the primary care locations in the PPH zip codes. In this past year, we've also added 98439 and 98498 to the project given their hospitalization rates and proximity to the original zip codes. Our team works in concert to improve PPH contributing factors, like insufficient vaccination rates and gaps in the care continuum. We aim to reduce the rates of PPH in our zip codes of focus, with a goal of improving health outcomes and reducing healthcare costs.

Table 1: PPH Steering Committee Members

PPH Participant	Role
Tacoma-Pierce County Health Department	Convener
MultiCare Health System	Partner
Kaiser Permanente	Partner
Virginia Mason Franciscan Health	Partner
Sea Mar	Partner
Community Health Centers (CHC)	Partner
Korean Women's Association (KWA)	Contractor, Learning Collaboratives
Elevate Health	Contractor, CHW Pilot Project
Heidi Henson	Contractor, Nicotine Cessation

PPH data update

The OFM findings were based on AHRQs Prevention Quality Indicators (PQI) from 2013-2015, and prior project reports have used that period as a baseline. As of 2020, our reports have used 2016 data as a baseline due to changes in how hospitalizations are reported and to align with project implementation, which began in 2018. We consider 2016-17 to be the project baseline, with 2018-2019 our early intervention period and then 2020-2021 as the COVID-19 pandemic period. The following are the primary indicators of interest due to their high contribution to preventable hospitalizations and their potential responsiveness to intervention: overall PPH (PQI 90), PPH due to bacterial pneumonia (PQI 11), and PPH due to congestive heart failure (PQI 08).

The rate of preventable hospitalizations (PQIs) have remained relatively stable since 2016, although a small increase was seen in the 2018-2019 biennium. The consistency is seen across the three categories of hospitalizations (acute, chronic, and diabetes-related) (*Figure 2*).

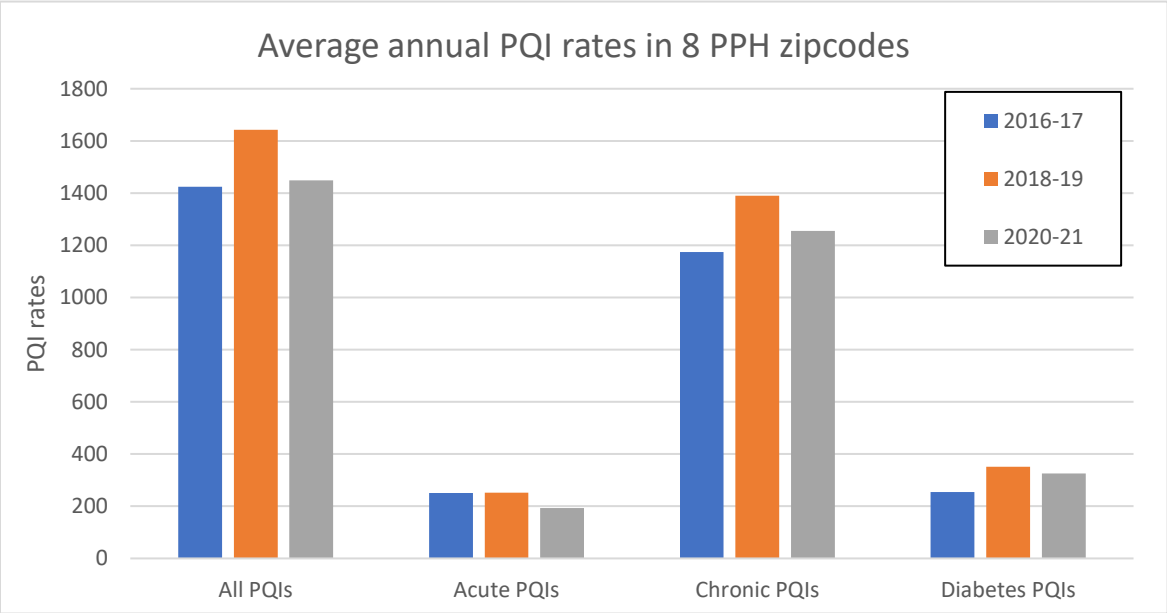


Figure 2: Average annual PQI rates in PPH zip codes.

We see more stark rate changes over time when looking at individual PQIs (*Figure 3*). The majority of PQI rates remain consistent over time, with several noteworthy exceptions. Within the chronic condition category, COPD seems to have dropped dramatically since 2016-2017. Heart Failure hospitalization rates have increased since the same time period but appear stable over the past four years. Among acute PQIs, urinary tract infections and pneumonia may have declined slightly over time. At this point, it is unclear how the COVID-19 pandemic affected these hospitalization rates; we hope to draw more definitive conclusions once additional data is available.

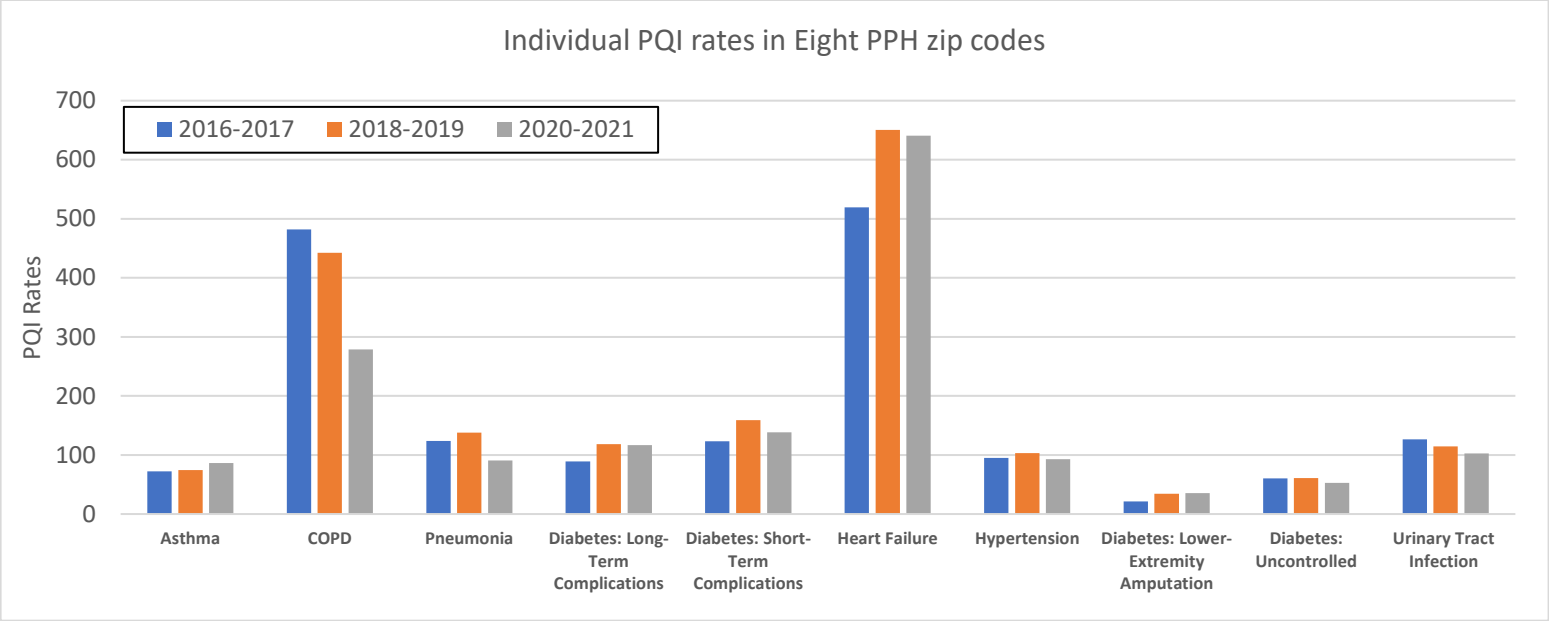


Figure 3: Individual PQI rates in PPH zip codes.

Considering these hospitalization trends, we also reviewed the mortality due to heart failure and COPD. A trend towards reduced COPD is visible with minimal to no change in mortality due to Heart Failure or Diabetes.

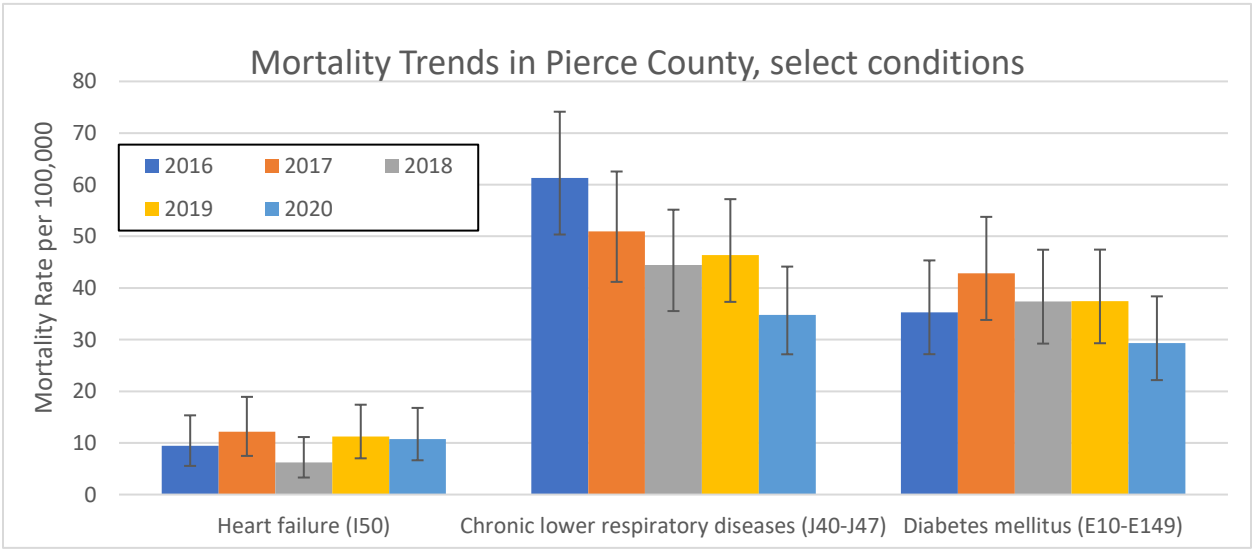


Figure 4: Pierce County mortality trends, select conditions

These findings confirm that improving heart failure should remain a primary focus of the PPH project given the high number of hospitalizations relative to the mortality rate. Reducing bacterial pneumonia has historically been a main strategy within the project, as well. Although it is not a major contributor to preventable hospitalizations in Pierce County, we may continue to prioritize it as county-wide efforts seem to be effective and improving immunization rates will be especially important in the wake of the COVID-19 pandemic.

Historical work summary

Although the overarching goals of the PPH project have remained consistent since 2018, strategies and initiatives have evolved to ensure our efforts continually align with priority region's strengths and challenges. Each project year's work summary is outlined in Table 2 (below). The remainder of this report will detail PPH Year four's primary focus areas (Immunizations, Behavioral Health, and Heart Failure), as well as the individual initiatives within each strategy. COVID 19 has had a profound impact on healthcare in Pierce County. PPH has leveraged and supported COVID –19 specific work to help reduce hospitalizations. For example, by strengthening Community Health Worker (CHW) capacity to help people access preventive services.

See next page for PPH Project Work Summary by Year

Table 2: PPH Project Work Summary by Year

Year 1 – July 2018-June 2019	Year 2 – July 2019-June 2020	Year 3 – July 2020-June 2021	Year 4 – July 2021-June 2022	Year 5 – July 2022-June 2023
Distributed bacterial pneumonia and influenza vaccines. Trained community partners in immunizations and WAIIS. Assessed community partner agencies' use of screening, brief intervention, and referral to treatment (SBIRT) and motivational interviewing (MI). Conducted 2 SBIRT/MI trainings for community providers and staff.	Increased access to vaccines through community immunization clinics. Conducted 5 additional SBIRT/MI trainings for community providers and staff. Learned about community partners' use of data. Worked on ways to share data across health systems to improve patient care and care coordination.	Offered a virtual tobacco cessation support group. Supported efforts to improve heart failure with free knowledge- and skill-building trainings. Launched a community health workers pilot program to provide specialized care for heart failure patients. Contributed to vaccine distribution and assisted with TPCHD immunization efforts. Encouraged data sharing across health systems to improve patient care and care coordination. Created a Refer to Treatment webpage to simplify the referral to treatment stage of SBIRT for county providers.	Collaborated with community partners to provide trainings on SBIRT, heart disease, and patient-centered care. Supported TPCHD and PPH partner's pneumococcal, influenza, and COVID-19 immunization efforts. Cultivated a community health worker network, focused on patients with heart failure. Secured a partnership that will allow access to all-payer claims data, which will inform future PPH strategy. Worked closely with TPCHD's Communities of Focus initiative to center health equity and reduce health disparities	Develop an infrastructure for analyzing all-payer claims data to share costs and data with partner agencies. Support TPCHD and PPH partner flu immunization programs. Standardize heart failure referral criteria to ensure timely and appropriate access to care. Expand reach of smoking cessation services, including social marketing campaign. Identify more specific areas within the PPH zip codes that have the most preventable hospitalizations. Continually evaluate the impact of previous and ongoing PPH initiatives.

Strategies

I. Improve immunizations

Bacterial pneumonia hospitalizations can be prevented through vaccination. Since 2018, the PPH project has worked to improve rates of pneumococcal and influenza immunizations in Pierce County. In the past two years, we focused on increasing access to bacterial pneumonia, influenza (flu), and COVID-19 vaccines for community members living in PPH zip codes, including lower-income adults as well as those experiencing homelessness and living in congregate settings.

Accomplishments

- Provided flu vaccine to our PPH partner health centers, ultimately serving uninsured and under-insured adults.

- The Health Department supported flu clinics across Pierce County, including PPH zip codes 98404, 98405, 98408, 98409, 98418, and 98444.

Challenges and Lessons Learned

- Washington state does not require providers and pharmacies to enter adult vaccine information into the statewide database (WAIIS) which makes it difficult for providers to know if an adult patient is up to date on immunization.

- The WAIIS database is not conducive to efficiently tracking flu immunizations over time, making it difficult to determine how the rate of immunization by clinic has changed.

- COVID-19 vaccines provided an opportunity for health care providers to enter adult immunizations into WAIIS either manually or via data transfer, as data entry is a requirement for that vaccine.

What's next in Year 5?

Moving forward, the PPH project will continue to purchase and distribute flu immunization to clinics serving uninsured adults. We will also continue to identify, share, and implement best practices to improve vaccination coverage

II. Improve access to behavioral health

Managing a chronic health condition, like diabetes, heart failure, and chronic obstructive pulmonary disease (COPD), can require commitment and strict adherence to a health action plan. Individuals with substance use or mental health issues may have more difficulty managing their chronic condition, which can lead to worsening health outcomes and preventable hospitalizations.

In response, we have worked to expand the use of screening, brief intervention, and referral to treatment (SBIRT), an evidence-based approach to identifying and referring a patient to substance or mental health services. This year we have primarily focused on nicotine cessation by training providers to complete a brief intervention and refer to treatment (*Ask, Advise, Refer*), and by offering a virtual cessation support group (*Freedom from Nicotine Dependence*). We have contracted with Heidi Henson, a Mayo-certified tobacco cessation specialist to complete these trainings and host the support group.

Accomplishments

- Designed and audience tested a smoking cessation social marketing campaign, tentatively called *What can smoke-free do for you?*, scheduled to launch in summer 2022.
- Hosted two *Ask, Advise, Refer* (AAR) brief intervention trainings for community health workers and medical providers.
- Expanded the *Freedom from Nicotine Dependence* support group to three times per week to accommodate additional participants.
- Educated more than 70 CHWs and social service providers on risks related to tobacco use and trained them in cessation counseling.
- Trained more than 75 CHWs and social service providers to complete an opioid misuse brief intervention using motivational interviewing techniques. Participant feedback from that session is in the table below.

Opioid Misuse Brief Intervention Learning Collaborative – select survey responses *How will you use what you learned about opioid and prescription pain reliever misuse in your job or with your clients?*
"[This] has given me more insight on my own previous addiction (just over 2 years clean and sober)…Knowing how to converse with someone to help make them feel more confident and to feel better about themselves is helpful and something I will be taking with me to utilize later."
"This will help me have an open dialogue, instead of hiding behind just a lot of facts."
"Motivational Interviewing is good way to not lose sight of the fact that [people] are more than just their diagnoses."
"I will practice with the affirmations because it is a great reminder that congratulating and highlighting the positives to clients of their journey to quitting misuse will help them become successful."

Challenges and Lessons Learned

- Attendance for the *Freedom from Nicotine Dependence* support group has remained relatively low since the program was launched. We believe reduced in-person care and competing priorities for providers have negatively impacted dissemination of the service.
- With low support group attendance, it is difficult to evaluate the effectiveness of the service.
- We received feedback from AAR training participants that the curriculum was too scripted, did not allow for motivational interviewing techniques, and was not culturally relevant. We are researching best practices for nicotine brief interventions and will improve the training accordingly.
- Very few healthcare partners responded to the annual SBIRT self-assessment survey, which allows us to track provider practices related to behavioral health interventions over time. As a result, it is difficult to assess the current state of SBIRT implementation among PPH partners or tailor trainings effectively.
- We have worked with a third-party interpretation service to ensure the support group is accessible to all languages.

What's next in Year 5?

Prior to the COVID-19 pandemic, the PPH Behavioral Health Workgroup had evaluated the current state of SBIRT implementation and was conducting in-office consultations to initiate or improve SBIRT practices. This workgroup disbanded during in 2020 in order to respond to the pandemic. In PPH Year 5, we will restart the workgroup and once again prioritize SBIRT implementation.

The smoking cessation social marketing campaign will continue through June 30, 2023 and we will expand the messaging to be more culturally inclusive. We will also partner with other health department programs, like Black Infant Health and Communities of Focus, to provide culturally relevant resources and support the most underserved populations within our zip codes.

III. Improve heart failure

At the culmination of PPH Year 2.0, Comprehensive Hospital Abstract Reporting System (CHARS) hospital discharge data showed that potentially preventable hospitalizations were increasing among patients with heart failure. In response, we launched several heart failure-specific initiatives over the past year.

There are two primary initiatives within this strategy: the CHW Pilot program and Improving Heart Failure Learning Collaboratives. The CHW Pilot project is an intensive support program for patients with heart failure who also face barriers to care related to social determinants of health. Patients are referred from their provider to a heart failure CHW who then helps the patient manage their health and social needs (e.g. schedule medical appointments, accessing transportation, paying rent, etc.). We have contracted with Elevate Health to manage this program.

Not all patients at risk for heart failure are well-connected with a medical provider. For that reason, we also host Learning Collaboratives. The Learning Collaboratives are geared towards CHWs and social service providers so they can educate community members about issues related to chronic disease prevention, treatment, risk factors, and more. This year, topics have included women and heart disease, oral health and chronic disease, blood pressure self-monitoring, tobacco risk and cessation, and trauma-informed self-care. The trainings also utilize principles of motivational interviewing.

The Learning Collaboratives have occurred monthly since March 2021 and are extremely well-received by participants. Roughly 96% of attendees are Very Satisfied or Satisfied with the experience, on average. The remaining 4% are Somewhat Satisfied. Qualitatively, we have received the following feedback:

PPH Learning Collaborative feedback *Select quotes, July 2021-March 2022*
"This is my first session but very valuable. Theoretical and practical. First very helpful for me [because] I have [high blood pressure]. Through the session, I can help clients more and more."
"Each session has had something I did not know and all sessions have been informative."
"I have learned so much about many things that everything has been so helpful. I enjoy PPH Learning [Collaboratives]."

"Every month the topics you present to our group is always useful and interesting. I really enjoyed learning about diabetes. I learned a lot that I didn't know before."
"I thought I knew how to talk to my clients, but I am learning something new every time."

Accomplishments

- Convened partners via the Improving Heart Failure Workgroup to standardize primary-to-specialty referral process for patients with heart failure diagnoses.
- Engaged with partner organizations that hadn't previously participated in PPH workgroups.
- Enrolled 51 patients into the CHW Pilot Project.
- Hosted 12 monthly Improving Heart Failure Learning Collaboratives with over 200 unique participants from the social service professions and the Pierce County community.

Challenges and Lessons Learned

- COVID restrictions and limited space prevented the CHW from working onsite and fully engaging with providers. As a result, many providers were unaware of the CHW Pilot program and did not refer patients to the service. Those who did, were not able to provide a warm hand-off immediately after the patient's appointment. And finally, the CHW could only connect with patients by phone – a barrier to those with unreliable phone service or limited technological capabilities.
- The CHW Pilot program's Pathways model was time-consuming to execute and many participants were not able to participate fully. Moving forward we will consider more efficient changes that will still meet patient needs.
- Although the Improving Heart Failure workgroup continued to meet monthly, attendance was low for the first half of PPH Year 4 due to competing priorities and staff turnover at partner organizations.
- An array of health system roles (e.g. primary care, cardiology, administrative, etc.) must be represented at the workgroup to make effective change. Competing time demands have limited consistent participation from each partnering healthcare organization.

What's next in Year 5?

In the upcoming year, we will continue to develop community standards of care for the primary-to-specialty referral process among our PPH healthcare partners. We will also continue hosting the Learning Collaboratives, either with KWA or a new contractor.

Due to organizational changes at Elevate Health, they are no longer able to support the CHW Pilot program. To maintain this initiative, the PPH Steering Committee is developing a CHW Pilot model that builds on the lessons learned to-date. CHC plans to continue on as the host site for the CHW Pilot. An additional goal for Year 5 is to provide at-home blood pressure cuffs and scales to all pilot participants.

Summary and What's Next

During year 4, the PPH project:

- Supported pneumococcal, influenza, and COVID-19 immunization efforts.
- Maintained Pierce County behavioral health resource repository, including our own nicotine cessation support groups, and launched a smoking cessation social marketing campaign.
- Reintroduced community standards of care efforts for heart failure patients, while also continuing to provide the specialized CHW pilot and broader Learning Collaboratives.
- Partnered with Public Health – Seattle & King County to secure access to the All-Payer Claims Database, data from which will inform future PPH strategy.

The ongoing and impending effects of the COVID-19 pandemic will only exacerbate the need for immunization, behavioral health, and chronic disease prevention/mitigation. In previous sections of this report, we have outlined more specific next steps for each strategy. For this upcoming year more broadly, we will:

- Collaborate with Pierce County Fire and Rescue to identify areas within the PPH zip codes that have the most preventable hospitalizations so that we may better focus our initiatives.
- Revamp the Third Next Available Appointment (TNAA) access reports to ensure the data is as useful as possible and standardized across healthcare partners – ultimately informing access improvement strategies.
- Develop or maintain partnerships with related TPCHD programs, including Black Infant Health, Tobacco-free Places, and Communities of Focus, among others.
- Continue assessing the impact of PPH initiatives and produce an annual evaluation report.

Finally, the PPH project is currently funded through June 2023. The team will prepare a funding proposal to extend the project beyond the current completion date. Within that proposal, we will consider expanding the project's focus area to include the 98499 zip code, which has some of the highest rates of preventable hospitalization in Pierce County.