



# USE CASES

**2018**



# USE CASE

## Opioid Resources Application

## **Use Case Name: Opioid Resources Application Use Case**

**Use Case Description:** With more than 1,200 people expected to die from an overdose in Philadelphia alone this year, it may not be surprising that a new study by Well Being Trust, a national foundation focused on the mental health of America, ranked Pennsylvania's opioid overdose death rate as the sixth highest in the nation. According to the Drug Enforcement Agency, in 2016 overdose deaths in Pennsylvania rose to 4,642 individuals, or about 13 deaths per day. Governor Wolf and his administration are working to provide real solutions to save lives and help addicted individuals and their families get the treatment they need to live long, productive lives.

We have heard a great need from First Responders, Parents, Victims, and Providers for a very quick access to available resources. Information is needed for treatment facilities, recovery centers and safe schools and zones, licensed and reputable counselors, programs, individual and family support groups, etc.

### **Actors:**

- Parents
- Individuals in need
- Providers
- First Responders
- Community Support Groups

### **Triggers:**

- Not knowing all the support resources available and where they are located

### **Preconditions:**

- Not having the resources available to quickly give a victim while they are ready to accept help.

### **Post-conditions:**

- Provide access to care at the exact time of need.

### **Normal flow:**

1. An individual is looking for help. They access the app and immediately find the resources.
2. A parent, sibling or friend is searching for information to help. They pull up the app and quickly find the information they need to provide help to someone in need.
3. First responders and providers access the app and provide valuable information/resources based on the geographical area they are located at the exact time of need.

4. Someone is in a new area of the state, they access the app and find resources based on geographical information.
5. Someone is leaving the criminal justice system and needs information to get connected to support groups and people.

## **Summary**

By utilizing all available datasets, and any other information, create a mobile-optimized web site that pulls together the services that can be quickly accessed by anyone to supply resources/information to the person at the exact time it is requested/needed. Create an expandable app, so it can be built to provide resources/information for the entire Commonwealth of Pennsylvania.

Enable a community piece allowing citizens to add their own event and a piece for individuals/leadership to respond if the event is approved/legitimate providing testimonies to ensure a safe environment. Individuals can also leave reviews to help determine if this is the place to go.

Provide a spot for community/ leaders, front-line care takers, criminal justice to enter alerts.

Provide such things as the appropriate Single County Authorities (SCA's) available, where to buy Narcan, Narcan trainings, 12 -step recovery programs, recovery support groups, family groups, grief, support, young people recovery, smart recovery, women in recovery, safe schools, counselors, community events, who can help with insurance, etc.

Possibly connect with the use case named Opioid First Responders Communication Support Network App – review if this app could have a sign-in internal side for our First responders and licensed professions and community supports to connect and share current events, ideas and offer support.

Some Sources:

Open Data Portal: <https://data.pa.gov>

DDAP Get Help page - <https://apps.ddap.pa.gov/gethelpnow/>

PA Gov information - <https://www.pa.gov/guides/opioid-epidemic/>

Look at the Pittsburgh Homeless Application - <https://www.bigburgh.com/app.html#/who>



# USE CASE

**Opioid First Responders  
Communication Support  
Network App**

## **Use Case Name: Opioid First Responders Communication Support Network App Use Case**

**Use Case Description:** First Responders wish to communicate with other first responders/community support individuals in their hometown community and in other communities across the Commonwealth.

### **Actors:**

- First Responders
- Community Support Individuals
- Providers

### **Triggers:**

- Need for information
- Have a real time platform
- Proactive on where heroin supplies are
- Availability of Narcan
- Proactively deploy community resources
- Current events/challenges

### **Preconditions:**

- Lack of information
- Lack of quick Mobil way to communicate with other community support individuals

### **Post-conditions:**

- Easy way to communicate across the state very quickly
- First responders, community support groups and providers have an open line to other community's support individuals for everything from information to creating a real-time support network
- First responders receive information from other communities to proactively prepare themselves with knowledge and resources for what may be coming their way
- Offer support to each other as they deal with a lot of challenges
- Have real-time support and not feel alone

### **Summary**

Build a secure application for our Commonwealth Support Personnel, First Responders, and Providers to build a network of communication across the Commonwealth. Build a real-time support network of individuals who understand the challenges being faced by these dedicated personnel on a daily and hourly basis.

Possibly connect with the use case named Opioid Resources Application - maybe both use cases could be built into one application or 2 different teams could collaboratively work one part and add into one application. Be creative.

**Some Sources:**

Open Data Portal: <https://data.pa.gov>

DDAP Get Help page - <https://apps.ddap.pa.gov/gethelpnow/>

PA Gov information - <https://www.pa.gov/guides/opioid-epidemic/>



# USE CASE

## Opioid Public Facts Information



## **Use Case Name: Public Fact Information Visualization Use Case**

**Use Case Description:** Legislative representatives, citizens, media, families, advocates and others request information, facts, metrics for their districts and their hometowns to understand the complete picture of this epidemic to support and respond to this crisis in each of their special capacities and talents.

### **Actors:**

- Legislative Members
- Single County Authorities
- Media
- Families
- Citizens,
- First Responders
- All Pennsylvanians

### **Triggers:**

- Facts and Information is needed to understand how to support and respond to this crisis.

### **Preconditions:**

- Lack of information by district
- Time and effort to produce this information
- Lack of consistency
- Lack of reporting out of the metrics, facts of this epidemic to all interested parties

### **Post-conditions:**

- Information is quickly available when needed
- Consistent information is available for anyone involved in whatever capacity with this epidemic
- We all are playing a role and have been touched by this epidemic in some fashion
- Consistent information is geographically available

### **Normal flow:**

Interested party can quickly access the Opioid Dashboard that has been mobile optimized and accessed by phone anywhere, anytime.

It provides the top facts quickly on the state of condition for any geographical location.

## Summary

Be creative and offer ideas on how to turbo charge our current Opioid Dashboard.

<https://data.pa.gov/stories/s/9q45-nckt/edit>

How to provide user friendly visualization of top facts/metrics represented by different geographical entities. By utilizing available datasets, and any other information, create a mobile-optimized app that can be integrated with the current Opioid Dashboard in the Open Data Portal. This app will pull together all facts, important metrics, information pertinent to the opioid Epidemic. It will provide enough information to confidently understand the climate by geographical areas. The goal is to provide the same information to and from the Opioid Dashboard through the Open Data Portal through visualizations or other ideas to provide consistent messaging while making easy availability to the public.

Enable consistent messaging across all geographical regions, feeling confident in the data and providing complete knowledge of what is known to make data-driven decisions.

Include data for the county, municipality, legislative districts, on admissions, overdose deaths, Narcan use, etc., show the depth of the problem across communities.

Award: If DOH and DDAP like your idea and it gets chosen to be incorporated into the PA Opioid Dashboard we will feature your team picture in the Open Data Portal and maybe another surprise.

Some Sources:

Open Data Portal: <https://data.pa.gov>

DDAP Get Help page - <https://apps.ddap.pa.gov/gethelpnow/>

PA Gov information - <https://www.pa.gov/guides/opioid-epidemic/>



# USE CASE

## Prevention Targeting

## **Prevention: Identifying geographic or demographic focal points for substance abuse prevention strategies**

### **Use Case Description:**

The Department of Human Services is responsible for managing the Commonwealth's child welfare and child development and early education programs, as well as providing benefits to individuals who struggle with mental health and substance abuse issues, as well as various types of disabilities, including intellectual, developmental, and physical. The opioid epidemic has impacted people from all walks of life in Pennsylvania, and therefore has impacted each of these programs and benefit types. Children are being removed from their parents' care because of opioid abuse in increasing numbers. Children are being born with developmental delays because of exposure to opioids *in utero*. People of all ages are increasingly in need of substance abuse benefits to address addictions to opioids. The increased impact on individuals and families across the Commonwealth, along with the increased strain on DHS's systems and resources make a strong case for the necessity of preventing future exposure to opioids for the people we serve. Knowing where there is the most risk or exposure to opioids will help us identify where to focus our prevention efforts. DHS has traditionally relied on analysis of a few key data points to identify high-risk areas, but the time is right to bring our full data analysis capabilities to bear to determine where the most help is needed. By layering various data sets that could indicate risk of exposure to opioids as evidenced by high incidence of adverse consequences of opioid use and organizing that data geographically, DHS can identify places to focus prevention resources.

### **Actors:**

- DHS prevention program staff
- Other Commonwealth agency prevention program staff
- Funders of prevention work

### **Triggers:**

- There is a limited amount of money to spend on prevention activities, which requires prioritization of target populations.

### **Preconditions for Use:**

- DHS or another Commonwealth agency applies for or receives funding for prevention activities that should or must be allocated according to priority

### **Post-conditions:**

- DHS or another Commonwealth agency determines the geographic locations where prevention dollars are most likely to yield positive results based on exposure to risk factors

### **Normal Flow:**

1. A Commonwealth agency applies for or receives funding for opioid use prevention-related activities.

2. The agency staff consults a heat map or assessment of at-risk populations to determine geographic or demographic areas in most need of prevention support based on data demonstrating a high incidence of adverse consequences of opioid use.
3. Agency staff focus prevention dollars and resources in areas of most need, getting the biggest impact per dollar spent.

### Summary:

Using the recommended and any other relevant available datasets, layer data that demonstrate adverse consequences of opioid use, such as overdose death, drug crime-related arrests, neonatal abstinence syndrome (babies who are born dependent on substances), overdose reversals, exposure to drug use among youth, child welfare system involvement, or receipt of an Opioid Use Disorder diagnosis.

Evaluate the layered data to determine geographic or demographic “hot spots” where the highest incidences of adverse consequences of opioid use are experienced.

Present the layered data in an easy-to-understand visual representation of geographic areas or demographic groups that experience the highest levels of exposure to adverse consequences of opioid use so that state officials or funding entities may target their prevention activities to yield the greatest results.

### Recommended Sources:

1. DDAP’s Youth ATOD surveys: <https://isra.hbg.psu.edu/ddapdashboards/Dashboards/tabid/2589/Default.aspx>
2. DDAP’s Arrest data: <https://isra.hbg.psu.edu/ddapdashboards/Dashboards/tabid/2589/Default.aspx>
3. Command Center NAS data: <https://data.pa.gov/stories/s/9q45-nckt/>
4. Command Center Overdose data: <https://www.overdosefreepa.pitt.edu/know-the-facts/view-overdose-death-data/>
5. DEA Overdose Death data: <https://www.dea.gov/docs/DEA-PHL-DIR-034-17%20Analysis%20of%20Overdose%20Deaths%20in%20Pennsylvania%202016.pdf>
6. Treatment admissions: <http://www.ddap.pa.gov/Agency%20Grant%20Information/Opioid-STR%2021%20Century%20Cures%20Grant%20Needs%20Assessment%20Data/Cures%20Opioid%20Treatment%20Demographics%20Rates.pdf>
7. Command Center naloxone reversal data: <https://data.pa.gov/stories/s/Rescue/dji6-fb2x>
8. MA individuals with OUD diagnoses: <http://www.ddap.pa.gov/Agency%20Grant%20Information/Opioid-STR%2021%20Century%20Cures%20Grant%20Needs%20Assessment%20Data/MAP%20-%20MA%20Indiv%20w%20OUD%20-%20Rate%20per%201000%2013%20July%202017.pdf>
9. PA Coroners Association report: [http://www.pacoroners.org/Uploads/Pennsylvania\\_State\\_Coroners\\_Association\\_Drug\\_Report\\_2015.pdf](http://www.pacoroners.org/Uploads/Pennsylvania_State_Coroners_Association_Drug_Report_2015.pdf)
10. Children removed from parents’ care due to parental substance abuse data (forthcoming on data dashboard in September)
11. General protective services reports of parental substance abuse data (forthcoming on data dashboard in September)



# USE CASE

**Maternal Home Visiting Programs  
for Mother's with OUD**

**Use Case Name: Maternal Home Visiting Programs for Mother's with OUD Use Case**

**Use Case Description:** In recent years, opioid use disorder (OUD) among pregnant women has escalated dramatically, paralleling the epidemic observed in the general population. The rate of neonatal abstinence syndrome (NAS) in newborns increased by 1,096% between 2000 to 2001 and from 1.2 to 15.0 per 1,000 newborn stays between 2016 to 2017. There was evidence of maternal substance use in 3,289 newborn stays in 2017. Of these cases, 58% of infants developed NAS. The burden of NAS stretches past the effect that it has on families. In 2017, NAS-related hospital stays added an estimated \$14.1 million in hospital payments (PA Health Care Cost Containment Council, 2018).

Despite the prevalence and the burden of OUD among mothers, there are minimal treatment options available for pregnant women. Providers are often uncomfortable delivering medically assisted treatment (MAT) to mothers and many home visiting programs are only offered to low-income women. One promising intervention is Project Embrace, a maternal wraparound program available to all pregnant women with OUD who live in South Jersey. This program provides free intensive care management and recovery support services to women during pregnancy and up to one year postpartum (Southern New Jersey Perinatal Cooperative, 2018). Existing home visiting programs offered in Pennsylvania include Nurse Family Partnership, Early Head Start, Parents as Teachers, and Healthy Families America (DHS, 2017).

While Governor Wolf's administration is working to provide real solutions to help mothers with OUD, further information is needed to determine the feasibility of a maternal wraparound program in Pennsylvania.

**Actors:**

- Mothers
- Providers
  - Obstetricians and Gynecologists
  - Pediatricians
  - General Practitioners
  - Community Based Organizations
  - Hospitals
- Researchers
- Government

**Triggers:**

- Stigma associated with mothers with OUD.

**Preconditions:**

- Lack of resources for mothers with OUD.

**Post-conditions:**

- Mothers with OUD have access to adequate resources at the exact time of need.

**Normal flow:**

1. A mother screens positive for OUD at her OBGYN appointment. She receives unstigmatized care from the provider and is referred to a maternal wrap around program. Her and her baby feel supported.
2. A mother is looking for help. She can easily find resources and is accepted into a program regardless of income level.

### **Summary:**

Create a budgeting model to determine what it would cost to adopt a universal home visiting program for all women with OUD in Pennsylvania. This could be based on a statistical analysis of data from PA Health Care Cost Containment Council (PHC4), the Command Center, and Massachusetts NAS data.

Extrapolate a complete estimate of how many pregnant women in PA have OUD to predict how many women will have OUD in the future based on a trend analysis.

Analyze components of various home visiting models and associated budget information to make a recommendation regarding which program in Pennsylvania would be the best candidate for universal application, based on policy and budget.

Some sources:

Open Data Portal: <https://data.pa.gov>

American College of Obstetricians and Gynecologists: <https://www.acog.org/Clinical-Guidance-and-Publications/Committee-Opinions/Committee-on-Obstetric-Practice/Opioid-Use-and-Opioid-Use-Disorder-in-Pregnancy>

PA Health Care Cost Containment Council (PHC4):  
[http://www.phc4.org/reports/researchbriefs/neonatal/092716/docs/researchbrief\\_neonatal\\_2000-2015.pdf](http://www.phc4.org/reports/researchbriefs/neonatal/092716/docs/researchbrief_neonatal_2000-2015.pdf)

[http://www.phc4.org/reports/researchbriefs/neonatal/17/docs/researchbrief\\_neonatal2017.pdf](http://www.phc4.org/reports/researchbriefs/neonatal/17/docs/researchbrief_neonatal2017.pdf)

Massachusetts NAS Data Dashboard:

<https://www.mass.gov/guides/neonatal-abstinence-syndrome-dashboard>

<https://cognos10.hhs.state.ma.us/cv10pub/cgi-bin/cognos.cgi/repository/sid/cm/rid/i52F1713856BF460093E5C97D64EA10C4/oid/default/content/mht/content>

State of New Jersey's Department of Human Services, Division OF Mental Health and Addiction Services:  
<http://www.state.nj.us/humanservices/providers/grants/rfprfi/RFPfiles/DMHAS%20Maternal%20Wraparound%20Program%20RFP.pdf>

Centers for Disease Control and Prevention:

<https://www.cdc.gov/mmwr/volumes/66/wr/mm6609a2.htm>

Southern New Jersey Perinatal Cooperative: <http://www.snjpc.org/what-we-do/project-embrace.html>





# USE CASE

**Real Number of Opioid Deaths**

**Use Case Name: Real Number of Opioid Deaths** Use Case

**Use Case Description:** Friday evening in the Emergency Department – a call comes in that Emergency Responders will be bringing in an 18-year-old male with a gunshot wound to the chest. The patient arrives unresponsive. For 60 minutes Emergency Department personnel try their best to keep him alive, through intubation, intravenous lines placed, blood transfusion and an immediate thoracotomy, which opens the chest by incision and exposes the heart and lungs, all to no avail. He is pronounced dead. When the police arrive, they report the patient is a victim of a heroin drug deal gone bad. Two other young men with the patient had also been shot and taken to nearby hospitals, but their injuries were not life-threatening. This man's death is a result of the opioid crisis. Individuals participate in increasingly risky behavior when looking to obtain drugs (e.g. driving while under the influence resulting in accidents, assaults, gun shot and stab wounds, etc.).

Current reporting of opioid death rates does not include death associated with traumatic injury caused by opioid use. Increasingly, providers, academics, and researchers are interested in having a more complete picture of the opioid epidemic's effects on communities.

**Actors:**

- Providers
- Coroners
- State Trauma Foundations
- PA PDMP
- Academics and Researchers

**Triggers:**

- Opioid death statistics do not currently include victims of traumatic injury due to opioid use

**Preconditions:**

- Not having a complete picture of the opioid death rate in Pennsylvania

**Postconditions:**

- Work with State Trauma Foundations to include real numbers of traumatic injury due to opioid use in state statistics

**Summary:**

Provide a means for organizations such as the state trauma foundations to share data (in real-time) for opioid death rates to include information on traumatic injury due to opioid use.



# USE CASE

**Evaluate the Effect of Shutting Down  
Pill Mills in Communities in Pennsylvania**

**Use Case Name: Evaluate the Effect of Shutting Down Pill Mills in Communities in Pennsylvania** Use Case

**Use Case Description:** In Pennsylvania, there have been several incidences of physicians prescribing an inappropriate amount of prescription pain medications to patients. In efforts to combat the Opioid Epidemic, law enforcement officials continually do a tremendous job in seeking justice for these physicians. However, arresting providers who overprescribe has an unknown effect on the community.

Cracking down on pill mills could lead to various unintended consequences, especially for patients with a medical need for opioids. Unfortunately, if you remove the supply for opioids, the demand will not miraculously disappear. The DEA staff in Miami "is horrified to hear the heartbreaking stories of cancer patients, hospice patients, surgery patients and legitimate pain patients being forced to endure needless suffering." Withholding appropriate pain medication from patients could result in the procurement of illicit drugs, suicide, or an overdose (Orlando Sentinel, 2015). Although arresting physicians' who overprescribe is an appropriate first step, more information is needed to determine what support is then needed for the community.

Further research is necessary to determine the effect that the busts have on the surrounding community. Is removing pill mills reducing overdose deaths, or just overdoses from prescription opioids? Can you see a change in opioid prescribing in that area, or are those patients with OUD moving onto other doctors in the area? Are those with a medical need for opioids suffering? What is the community impact?

**Actors:**

- Researchers
- Community Partners
- Physicians
- Patients
- Family Members of Patients
- The Drug Enforcement Administration (DEA)
- The Pennsylvania Department of Drug and Alcohol Programs

**Triggers:**

- Physicians overprescribing prescription pain medications to patients.

**Preconditions:**

- Lack of research on the effect that pill mill busts have on communities.

**Post-conditions:**

- Adequate research on the effect pill mill busts have on communities to inform future approaches to shut down pill mills.

**Normal flow:**

1. Researchers will determine the effect that pill mill busts have on the community. Researchers will recommend strategies to minimize the unintended consequences pill mill busts impose on communities.

**Summary:**

Analyze county data in counties that have had a pill mill bust to determine the impact that the bust has had on the community. If unwanted consequences are prevalent, develop recommendations to minimize the burden on communities.

Some Sources:

PA Open Data Portal: <https://data.pa.gov/>

PA News Sources:

<http://www.pikecountycourier.com/apps/pbcs.dll/article?AID=%2F20160727%2FNEWS01%2F160729960%2FFeds-arrest-Milford-doctor-in-pill-mill-bust>

<http://www.poconorecord.com/news/20180526/state-busts-pill-mill-operating-across-17-counties>

[http://www.phillytrib.com/news/state-busts-pill-mill-operating-across-counties/article\\_211cf715-1536-544e-b691-e55a6b0dcbb2.html](http://www.phillytrib.com/news/state-busts-pill-mill-operating-across-counties/article_211cf715-1536-544e-b691-e55a6b0dcbb2.html)

<http://6abc.com/news/doctor-receptionist-charged-in-pill-mill-operation/495924/>



# USE CASE

**Breaking the Chains  
of Stigma Around  
Substance Use Disorder**

## **Use Case Name: Breaking the Chains of Stigma around Substance Use Disorder**

**Use Case Description:** Words have immense power to wound or heal. The wrong words can fuel stigma against individuals with Substance Use Disorder (SUD). Stigmatizing labels, such as “addict,” “alcoholic,” or “clean/dirty,” can convey that people are not worthy or are incapable of recovery, fuel self-destruction, and prevent or postpone help-seeking. Furthermore, the notion that addiction is a “choice,” not a medical disease, communicates that SUD is a moral failing and a character flaw. Even stigma against evidence-based treatments, such as medication-assisted treatment (MAT), can prevent individuals from seeking or receiving an appropriate treatment that can lead them down the road to recovery.

According to the Surgeon General’s 2016 “Facing Addiction in America” report, it’s estimated that one in seven people in the United States will develop a SUD at some point in their lives, and only one in 10 will receive treatment. Stigma is, no doubt, a driving factor in these statistics.

Let’s expand knowledge across our Pennsylvania communities to better understand and communicate the disease of addiction so we can make an impact in the healing process. Words and attitudes determine the social institutions that will lay claim to SUD, and whether people with SUD will find themselves in systems of compassion and care or systems of control and punishment.

We must untangle the “stories behind the statistics” of SUD and widen the doorways of entry into recovery. We must banish demonizing, non-person-centered language that sets the stage for our sequestration and punishment. Instead, we need a message that clearly and passionately conveys the hope and healing of long-term recovery from addiction.

### **Actors:**

- Community
- Families
- Individuals
- Providers

### **Triggers:**

- Lack of understanding of this disease
- Using improper, non-person-centered vocabulary
- Not knowing how to help
- Imposing misconceptions and biased attitudes

### **Preconditions:**

- Lack of information
- Individuals with Substance Use Disorder disease feel unworthy or unwilling to seek help

### **Post-conditions:**

- Marketing campaign that expand information and shows support to individuals who suffer with this disease
- Raising awareness about addiction as a disease
- Offer support to each other and families as they deal with a lot of challenges

## **Summary**

Build a marketing campaign that can be widely distributed throughout all of Pennsylvania through all social and media outlets. Make it simple but informative so everyone remembers it and it infiltrates our daily lives. Make it stick in our minds when we meet someone with this disease, or speak with a family who is helping a loved one or has lost a loved one. Help us to empathize, so we offer compassion and genuine support.

## **Some Sources:**

Open Data Portal: <https://data.pa.gov> – Opioid Dashboard and Hotline information

DDAP Get Help page - <https://apps.ddap.pa.gov/gethelpnow/>

PA Gov information - <https://www.pa.gov/guides/opioid-epidemic/>

SMART Recovery - <https://www.smartrecovery.org/how-to-end-the-stigma-of-addiction/>

Rehabs American Addiction center - <https://www.rehabs.com/about/addiction-stigma/>

Stop Stigma Now - <http://www.stopstigmanow.org/about-us/>

Research Recovery Institute's "Addictionary": <https://www.recoveryanswers.org/addiction-ary/>