



# Lummi Tribal Health Center Tackles Opioid Overdoses



A Stanford d.school Designing for Social Systems Case Study  
March 2021

On Washington State’s northernmost coast resides the Lummi People, a sovereign indigenous nation of approximately 6,600 people. For the past several years, the health of the Pacific Northwest fishing community has been threatened by opioid addiction. The age-adjusted mortality rate from opioid overdoses is more than 3.5 times higher among the Lummi People than in Washington State as a whole.



*Lummi Tribal Health Clinic*

Dr. Justin Iwasaki, former Executive Medical Director at the Lummi Tribal Health Center, was seeing the opioid crisis unfold everyday before his eyes. It was the nation’s most pressing health crisis before the COVID-19 pandemic, and it was further heightened within Lummi Nation. Yet his day-to-day role in primary care only provided one view of the opioid problem. As someone who had previously redesigned public health systems, Justin knew the importance of trying to understand the root causes of this systemic problem. But one big question loomed over his team:

***When the challenge is so expansive,  
where do you start?***

The opportunity to focus on this health problem arose in 2018, when Justin received a grant from the Center for Disease Control and Prevention (CDC) to develop opioid overdose prevention strategies for the Lummi Nation. Justin pulled together a four-person team from the Lummi Health System to attend the Stanford d.school’s Fall Designing for Social Systems (DSS) workshop—a team that would ultimately stay together for the duration of their opioid response program. The team included tribal member and current Executive Medical Director Dr. Dakotah Lane, Public Health Director Dr. Cristina Toledo-Cornell, and tribal member and Healthcare Administrator Tara Olsen. By the end of the Stanford workshop, they acquired critical design and systems thinking inspiration, tools, and mindsets that would support their journey ahead.



Dr. Cristina Toldeo-Cornell at the Stanford d.school Designing for Social Systems (DSS) workshop

## Taking a Human-Centered Approach to the Opioid Crisis

When they walked out of the d.school, one principle in particular resonated: *Let the people you serve guide the design*. The Lummi team realized that people experiencing opioid use disorder had to be included in the conversation about how to best design a response addressing their own problem.

### A DEEP DIVE INTO THE EXISTING SERVICES

With this new insight, the team began their immersion and ethnography work. In the next couple months, they visited inpatient and outpatient rehabilitation centers in the United States as well as 18 supervised injection sites throughout Canada. Supervised injection sites, also referred to as Overdose Prevention Sites in Canada, which are still seeking legal approval in the US, are safe spaces for people to use illicit drugs under trained medical staff.

The Lummi medical team appreciated the injection sites' markedly different approach to the rehabilitation centers found across the US. Many rehabilitation centers use an abstinence only approach, trying to wean those with drug addictions off of drugs all together. The injection sites, on the other hand, aim to understand the needs of the people they serve and create services that meet people where they are. In this case, it means helping individuals use drugs safely, believing that total abstinence is not a realistic goal for many people.

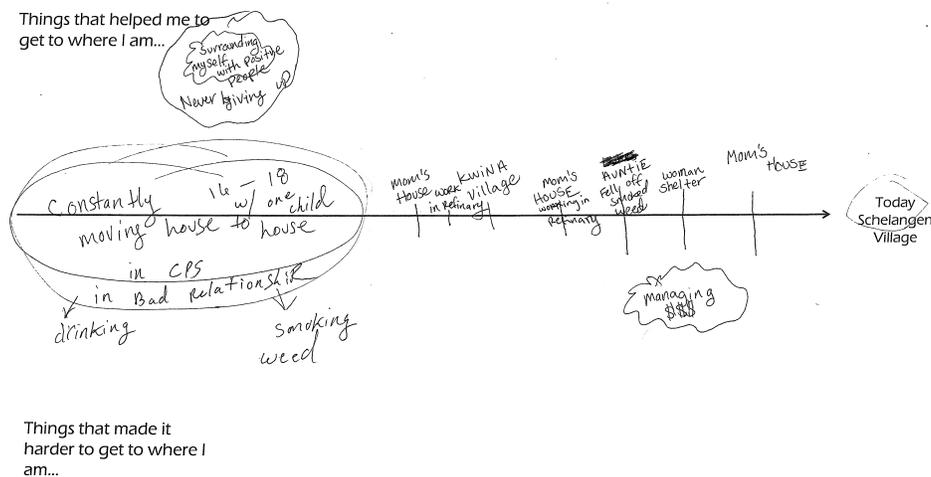
The Lummi team was interested in exploring this alternative to the rehabilitation model, especially Dakotah. Just months before embarking on this exploratory experience, Dakotah's brother, 22 years of age, passed away from a lethal overdose while seeking treatment in a US-based drug rehabilitation center. Seeing the injection sites first-hand was particularly emotional for Dakotah. "They really opened my eyes," Dakotah says. "The desire for abstinence in the United States is only one model for people with addiction issues, but like with any human endeavor, one model is never good enough. We all have different needs."

Thanks to their immersion work, the Lummi team was determined to offer their community members a wider spectrum of short and long-term treatments at a lower barrier to entry.

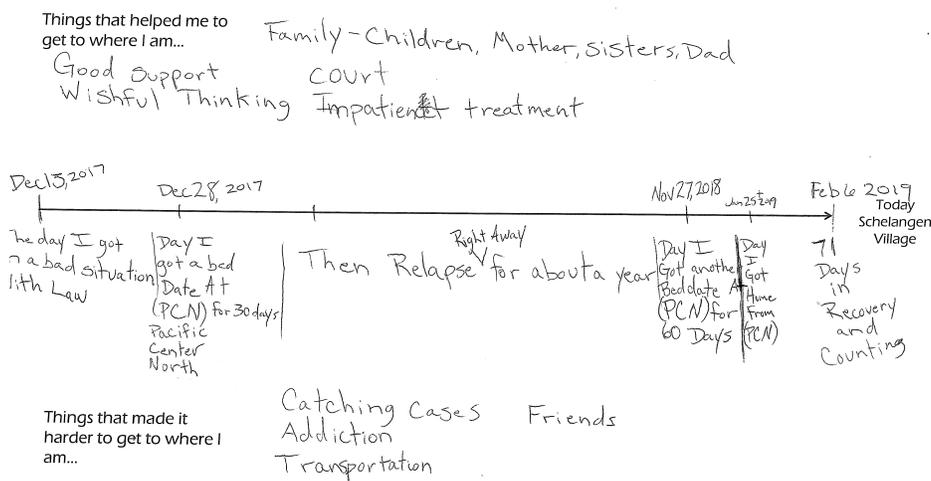
# ETHNOGRAPHIC RESEARCH AND UNDERSTANDING

Following the site visits, the team sought to better understand the individual stories of tribal members who had lived experience with drug addiction. In February 2019, the Lummi Clinic team set up a two-hour journey mapping and interview session with 35 members of a Lummi Sober Living Community, a community of tribal members who formerly faced opioid use disorder. Journey mapping, a tool which they learned from the Stanford DSS workshop, invited each person to draw out their “Journey to Recovery and Wellness Map”— a visual representation of people’s experience with opioid use. Although the Lummi team was initially uncertain of how the exercise would unfold, Justin shared: “I was shocked at how open people were with their struggle.” Below are some examples of the journey maps that were shared that day.

Journey to Recovery and Wellness Map



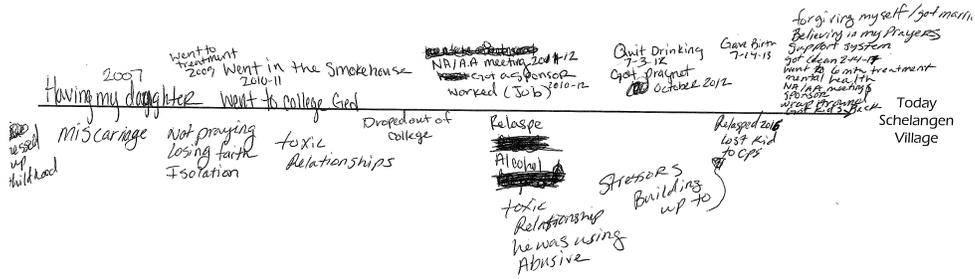
Journey to Recovery and Wellness Map



Journey to Recovery and Wellness Maps: a visual representation of people’s experience

## Journey to Recovery and Wellness Map

Things that helped me to get to where I am...

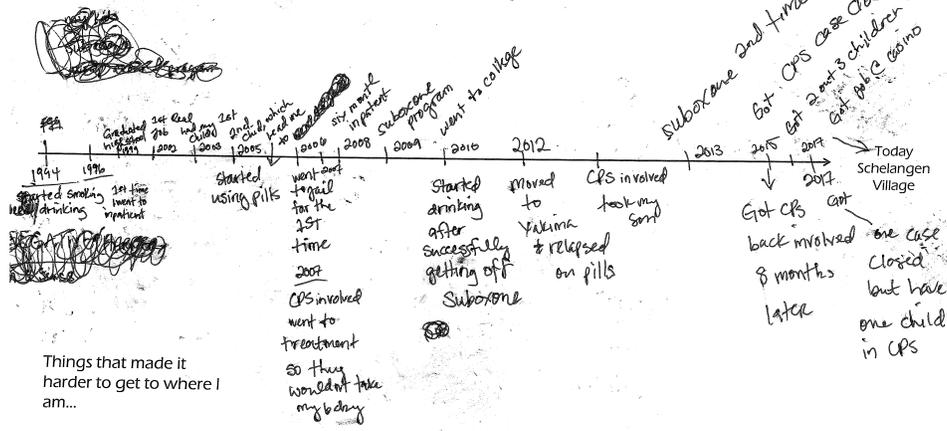


Things that made it harder to get to where I am...

### POSITIVE

## Journey to Recovery and Wellness Map

Things that helped me to get to where I am...



*Journey to Recovery and Wellness Maps: a visual representation of people's experience*

Each journey map and subsequent 1-on-1 interview helped attach a real, personal story to this massive crisis. The process helped the team see former opioid users at a human level, not just as victims or medical patients. Justin, who would become Director of the Opioid Overdose Prevention Program for Lummi Nation, would later lean heavily on these journey maps to bring other stakeholders along the learning journey. The more they listened to the people being served, the better they understood them as people who had to put their hopes, dreams, and talents on hold to deal with a disorder.

From these journey maps and interviews, the team learned about some of the barriers preventing tribal members suffering from opioid use disorder from seeking treatment. Treatments were available only in-person and during specific times, making it difficult for people to fit doctor visits into their schedules. Additionally, existing programs often required patients to return to the facility upwards of 5-6 times per week to receive medications for opioid use disorder, drawing heavily from an abstinence only philosophy. For many patients, this model of treatment felt punitive and eroded their trust, making them reluctant to go there for help.



Dr. Justin Iwasaki at the Stanford d.school DSS workshop

## NEW OPIOID TREATMENT & HARM REDUCTION SERVICES

From the team's deep study and engagement with those who had dealt with addiction, the team developed a three-pronged approach that transformed into the Lummi Clinic's new opioid use disorder treatment offerings.

The new approach involved:

- 1. Making the existing services more human-centered and accessible.** The team advocated for a service centered around sensitivity and empathy at the human level. To this end, the clinic launched a **low barrier medication assisted treatment (MAT) program**, expanding access to the medication that assists people with opioid use disorder. The clinic had previously relied on an external Opioid Treatment Program (OTP) to prescribe this medication, which required direct patient observation while taking the medication. Instead, the new MAT program prescribes the medication from the Lummi Clinic, available same day in-person or via telemedicine by one of the clinic's five doctors. Therefore, the patients can now take the medication on their own, tailoring their treatment schedule to their own needs.
- 2. Shifting from an individual to a community-based approach** with two changes.
  - They evolved the existing harm reduction program to a community-based model recruiting participants of the program to become active members of the team. Patients would no longer be obliged to visit the clinic to receive safer injection supplies. Instead, community members who access the fixed site harm reduction program would be provided sufficient supplies to provide to their existing networks. In addition, a group of 10 community members, many who have personal experience with opioid overdose, receive weekly education they can then share with their smaller communities. It was a fast and simple way to expand the program's reach and minimize harm among people with substance use disorder.
  - The clinic partnered with the Lummi Behavioral Health Program to **develop a peer counselor outreach service**. The service opens up informal avenues for people with opioid use disorder to comfortably discuss their problems with somebody they trust. Peer counselors are people with a history of substance use disorder themselves who can empathize with patients' problems. In coordination with local emergency medical services, peer counselors also receive an automated text message in the event of an opioid overdose, allowing them to quickly offer their support when needed. Even more, counselors check in on patients at their homes to make counseling as accessible as possible. It is a thoughtfully designed program that truly considers the perspective of the opioid user.

The clinic staff credits Justin as “the brainchild behind the opioid response,” yet it wouldn't have been possible without the creative problem solving and hard work from the whole team. These solutions were created with the understanding that healthcare isn't simply about the medications, but the methods in which care is delivered to people.

# Identifying the Systemic Causes of the Opioid Crisis

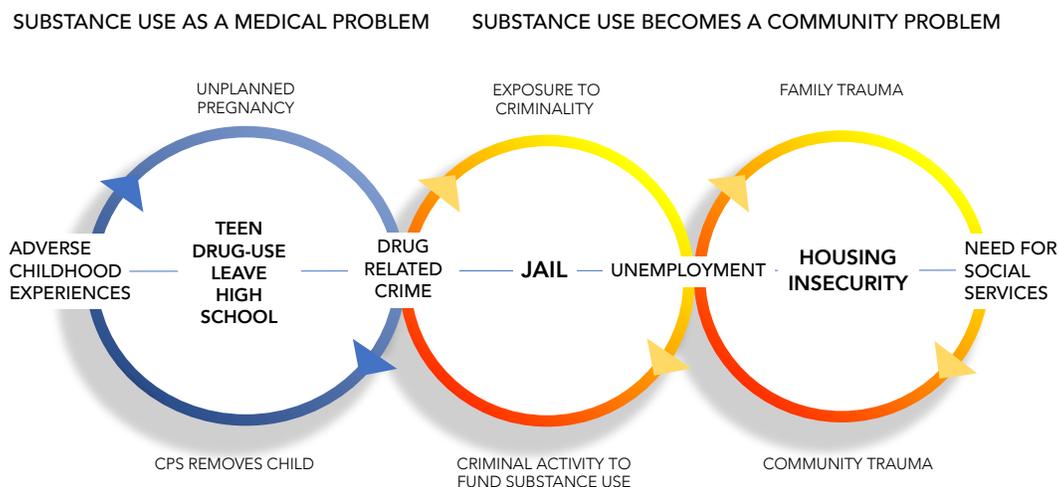
The new opioid addiction services were just one set of outcomes of the team’s human-centered design work. The team also integrated a systems approach to better understand the systemic causes leading to high opioid use disorder and overdose rates.

Information from the journey maps, along with other health data, showed that opioid addiction was the product of many challenges during a person’s life. It was part of a complex ecosystem involving cycles of risk factors and outcomes at a community-wide scale. It became clear that treating opioid addiction as an isolated medical problem would be ineffective. The challenge was a community problem.

When the team was studying the community members’ journey maps, one underlying variable was particularly interesting: tribal members’ visits to jail. Whether people were charged with illicit drug use, or simply possessed drug paraphernalia, there seemed to be an alarming relationship between incarceration and opioid use disorder. Not only was jail a common consequence of opioid use, but, critically, jail time was followed by an increased frequency of opioid overdose.

To better understand this linkage, the team conducted a deep dive into local jail data. After separating the incarceration data of the tribal members from the larger database, calculating the dates and length of jail time, and comparing that data to the tribe’s individual overdose records, the team found two startling conclusions. First, 4 in 10 Lummi adults had spent at least one night in Whatcom County Jail from 2013 to 2017—an incarceration rate 8 times higher than the nationwide rate. In addition, nearly 40% of fatal overdoses among Lummi tribal members occurred within 60 days of being released from Whatcom County jail. By merging ethnography findings with criminal justice research, they successfully backed up qualitative human experiences with quantitative data.

Based on data *and* the lived experiences of opioid use disorder survivors, the Lummi team created the following visual framework to explain the root causes and cyclical forces that lead to substance use.



This framework would be used to guide the Lummi Clinic’s Opioid Overdose Prevention Program’s subsequent initiatives. Based on this understanding of the key levers in the system, the medical team began focusing their attention on reducing drug-related crimes—a critical point in which individual substance use turns into a community problem. Addressing crime and policing is not work that is traditionally part of a doctor’s job description, but Justin and his colleagues knew that their mission was inextricably tied to the criminal justice system. The data showed how jail time, in many cases, leads to greater insecurity and criminal activity, both of which exacerbate substance addiction. Hence, the team sought to reform drug-related crime laws to help prevent opioid use from spiraling into addiction, and addiction from turning into a fatality.

## Advocating for Criminal Justice Reform

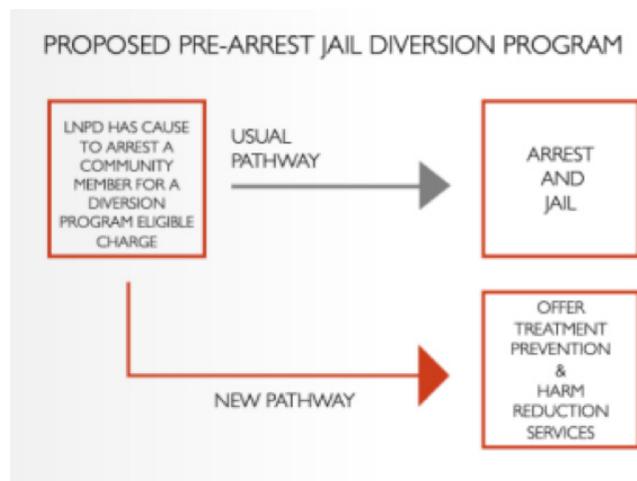
As the team advocated for criminal justice reforms, they brought the journey maps with them to their meetings. Sharing stories of deeply human struggles helped communicate a difficult topic to members of the Lummi Nation’s police force and tribal government. Ultimately, their advocacy work resulted in the successful decriminalization of drug paraphernalia on the Lummi Reservation. Decriminalization of drug paraphernalia ensures that individuals are not incarcerated for these minor crimes, hence reducing their risk of entering a more lethal cycle of addiction and overdoses upon release.

With the goal of keeping people out of jail, the team is also working to implement a pre-arrest jail diversion program based on elements from King County’s Law Enforcement Assisted Diversion (LEAD) and the Portuguese model of drug decriminalization. Instead of jailing people who have been arrested for illicit drug use, the proposed program would focus on offering treatment as a more long-term solution to substance use.

## Addressing Adverse Childhood Experiences

The team also found that a root cause of opioid use disorder was the high number of Adverse Childhood Experiences (ACEs) experienced by Native youth. These challenges during the formative years of a person can kick start their relationship with drugs at a very young age.

A person’s risk of health problems, including substance use disorder, can be estimated by an ACE score, a tally of different types of traumatic and abusive experiences during the person’s childhood. These adverse experiences include physical, emotional, or sexual abuse; physical or emotional neglect; and household dysfunction including incarcerated family members, substance abuse, parental divorce, and any exposure to violence. Data shows that adults with an ACE score of 4 or more are 11 times





*Tara Olsen at the Stanford d.school DSS workshop*

more likely to inject drugs in their lifetime. 28% of Native Americans have an ACE score of 4 or more, compared to the nationwide average of 15%. Indigenous peoples face disproportionately high ACE scores due to several factors, including the forced removal of Native American children from their homes to Euro-American boarding schools. It was a legalized crime by the US government that took place just a couple generations ago and has resulted in lasting family separation and intergenerational trauma. As Dakotah said, “opioids are a symptom of that trauma.”

In response to high ACE scores in Lummi Nation, the clinic started a program in 2020 that helps families and mothers-to-be meet their basic needs. Impact data from this new project is not yet available, but we look forward to learning about the team’s progress and the program’s impact in the months and years to come.

## An Ongoing Commitment to Tackle This Challenge at the Human and Systems Levels

Justin, Dakotah, Cristina and Tara’s work to combat the opioid crisis is far from over. They credit the Designing for Social Systems program with giving them some of the tools that helped them understand a complicated community problem and find ways to address it. The team was able to move between zooming in to individual people’s stories and zooming out to visualize the larger ecosystem at play—a subtle balance that is necessary to address complex, systems-level challenges.

By applying design thinking and a systems analysis, the healthcare team maintained a human-centered approach while also acknowledging and addressing deep-seated root causes that have perpetuated an overwhelming opioid crisis. The road to solving this challenge is long, but by actively addressing this challenge on many levels, they are increasing the possibilities of long-lasting, systemic change.

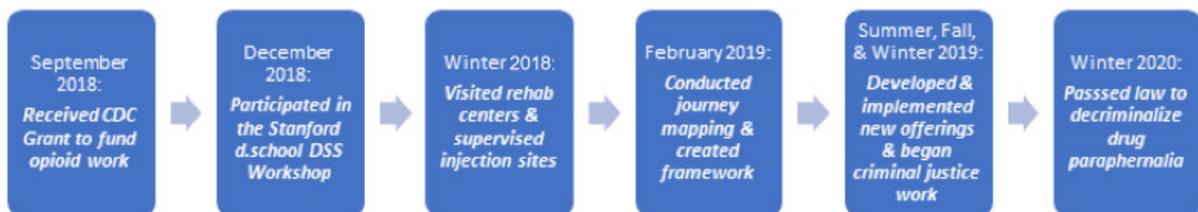
# Questions & Answers

After reading the case study, a few DSS alumni shared their questions for the Lummi team. Below are Justin's responses:

## 1. How long did this process take?

Below is a rough timeline of our approach from the beginning till now:

### TIMELINE OF THE LUMMI TEAM'S OPIOID WORK



## 2. How did you settle on journey maps for your ethnography work?

The sober living community members we worked with each had a story to tell. After learning the usefulness of a journey map at the DSS workshop, it seemed natural to use journey maps as a way for people to share their story, starting from where they are today, and working backwards.

## 3. How did you build trust to lead such an effective journey mapping activity session?

It's infinitely easier to start with trust. We've been working in the community as physicians and/or tribal members for a long time, so we were never really seen as outsiders.

## 4. How did you synthesize the journey maps to create the visual framework?

It all happened in the week following the journey mapping activity. We began by identifying and manually tallying common terms (e.g. "jail", "CPS") across the raw journey maps. Doing so helped us see the themes that would become key elements of the framework we developed. Then, we used the interviews to pinpoint the cyclical forces and linkages to help us draw the wheels of the system.

## 5. How did you synthesize the local jail data?

We went through a manual process that was intensive but well worth it. First, we got access to a dataset of every individual that had been incarcerated in the local jail in the last 7 years. From there, we filtered out all non-tribal members. With the remaining individuals, we looked at two variables: the frequency of incarceration and the total number of days in jail. My team's goal was to provide quantitative data to support our hypothesis that jails were disproportionately incarcerating Lummi tribal members. In fact, that was not only true, but it became evident that jail time was feeding into the cycle of opioid addiction and overdose.



*Dr. Dakotah Lane at the Stanford d.school DSS workshop*

**6. In what ways did you struggle along the way?**

Our decision to take a harm reduction approach meant that we are always at odds with the dominant existing philosophy—the abstinence approach. Just trying to propose our offerings is often difficult because it goes against what is familiar and commonly accepted. It’s been especially difficult to get buy-in from the police force regarding our jail diversion program, so we are constantly re-evaluating if we should keep pushing, or move on. After all, restructuring the criminal justice system is a feat so big that we are unsure if we can pull it off. *Are we trying to reform the system, or simply provide a model that others can act upon?* It’s a question we are still grappling with.

**7. At what points did you re-align with your North Star?**

All the time. Our North Star has always been to decrease overdoses and improve the overall health of the community, but the means of getting there is always evolving. We are constantly changing direction, pivoting strategies, and discovering new things at every phase.

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*Designing for Social Systems (DSS) is a program of the Stanford d.school. The purpose of Designing for Social Systems is to empower leaders and practitioners in the nonprofit, philanthropy, government, and social impact fields to work in more effective, human, and strategic ways. In collaboration with these practitioners, we aim to redesign how this work is done, develop more effective interventions, and advance the sector as a whole.*

*To learn more about our work or how to get involved, visit [dss.stanford.edu](https://dss.stanford.edu) or reach out to us at [dss@dschool.stanford.edu](mailto:dss@dschool.stanford.edu).*

*The mission of the Lummi Tribal Health Center is to raise the health status of the Lummi people, other American Indian, and Alaska Natives to the highest possible level. To carry out this mission, the LTHC will provide comprehensive health care including hospital, outpatient, medical, dental, mental health, preventive healthcare and public health services.*