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Saving Ourselves From Infection: A Theraputic Model of Peer Led Education

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Saving Ourselves From Infection:

A Theraputic Model of Peer Led Education

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Abstract

The purpose of this action research is to explore non-hierarchical peer led education as a means to end the Hepatitis C epidemic, promote empowerment and self-esteem in current injection drug users, and create a more global understanding of power structures that perpetuate opioid use so that those living with addiction are better able to educate, organize and fight for structural change. The current healthcare system is not able to test, treat or educate those most at risk for Hepatitis C infection or reinfection - people who inject drugs. The United States is currently in a losing battle with opioid addiction, with an ever growing number of people dying from opioid overdose each year. Dovetailing on this trend is a rise in Hepatitis C infections. Hepatitis C is a viral disease that causes fibrosis and cirrhosis of the liver and can lead to liver transplants and death if not treated in a timely fashion. Peer education has been used successfully around the world to promote other life-saving behaviors among those who inject drugs and many other populations. However, most peer education programs in harm reduction demand that people stop using drugs completely before they are able to work with peers. In addition, there are very few providers who actively teach patients how to safely inject IV drugs in order to prevent not just Hepatitis C, but also HIV, endocarditis, cellulitis and xylazine-related wounds. This thesis aims to promote action research on a peer educator program for people who actively inject drugs, or are maintained on Medication Assisted Therapies such as methadone and suboxone to educate their peers. Educators will be taught to teach peers about a number of issues related to Hepatitis C and its treatment, with the hope that like other programs, this program will empower educators to take more control over other aspects of their health and self care.

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Dedication

This is dedicated to my patients in Camden, NJ who seem to have a bottomless well of resilience despite years of living with a broken safety net. I hope that this will offer some a sense of empowerment and a drive to take back the conditions they are forced to live under.

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I would like to acknowledge several people for their contributions to this critical action research. I would like to acknowledge Jane McAlevey and her seminal work on labor organizing, Labor Notes, and the underground coalition of teacher union activists that came together through these channels. I would also love to acknowledge the Caucus of Working Educators who taught me to organize, fight, and speak truth to power. The collective lessons learned from these people taught me that when people collectively organize, they win. They also taught me that education happens everywhere, including the street.

I would like to thank the current staff at Camden AHEC and my boss Martha Chavis for their unwavering support of me completing this work and bringing this work to life in Camden, NJ in the future. I would like to thank my parents for assisting in a million ways to make sure that I could attend class regularly and complete the program, and I would like to thank my children for every single hour of mom time they sacrificed so that I could make a dream come true.

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Chapter 1

Introduction and Positionality

Before I became a teacher, I spent over a decade working as a registered nurse. In my first job I worked on the border of Mexico at a birthing center that provided free prenatal care to all women, regardless of their ability to pay, and regardless of their documentation status. At the time I watched an innovative nurse midwife try out a new model of prenatal care with our adolescent patients. Instead of scheduled individual visits with the midwife, she called them all in on Monday nights as a group. The pregnant patients would weigh themselves, check their own blood pressure and assess their own urine with the assistance of a registered nurse standing on the sidelines for support. They and their partners would sit in a circle as part of the prenatal visit, talking to the midwife leading the circle, and to each other, as if they were in a support group. The midwife offered a different topic on wellness each week, presented information, and the teen patients would discuss their response to this education. Sometimes they would nod their heads in agreement, sometimes they would share what their culture believed regarding healthy pregnancy. They often laughed. And hugged. It was a warm and friendly environment. It stuck with me as a model of how to engage a high-risk client group to take more ownership over their healthcare.

I worked for ten years as a public health nurse on the border, in the Mayor's Office of Emergency Management in New York City, East Harlem, and Norristown, Pennsylvania. I prided myself on my capacity to build relationships and self-esteem in my patients, and I cherished my freedom to care for my patients in ways that were both productive and creative. Then I decided to join the staff of the Franklin Learning Center in Philadelphia originally as a

Health Related Technology teacher. This was a program that prepared students for academic futures and careers in healthcare. It was tough to leave the warm and fuzzy support of public health to join a large public high school. Classes were short, administration was ruthless, and my filthy, hot clinical lab had been used as a janitor's overflow closet for years. Teenagers were to sit at assigned seats, ask permission to attend to basic biological needs and class time was used for strict bell-to-bell instruction. No circle time. No open dialogue about life issues. No warmth. No hugs. No laughter. And always verbal admonitions from administration that teenagers, left to their own devices, will use drugs, trash your classroom, and stab their classmates with any pair of scissors that can cut paper.

I believe that adolescents are truly young adults. I knew from experience that even at the age of 15, some teenagers had already seemingly lived through three lifetimes. I knew that all people thrived with group support, affirmation, and kindness. I knew that they needed each other desperately. But most importantly, I knew that people would rise to the bar of maturity that you set for them. If you treat them like children, they will act like children. If you treat them like they are ready to be empathetic, mature professionals, they will become professionals.

In 2016, and in direct response to the awful conditions my students were learning in, I joined a grassroots group of teachers looking to organize, build power, and create real change in public education – the Caucus of Working Educators. I had the privilege of helping organize members of the Philadelphia Federation of Teachers for the most competitive leadership challenge waged against the CB team since its inception. As a member of the Caucus of Working Educators I was schooled in principles of union organizing, principles we used to get 3000 teachers to vote for Working Educators in the 2020 election. In order to get a group of people to stick together and do hard things you have to follow a few steps. You need to take a step back and analyze who

your target audience is, map a location you are trying to organize and figure out who are the cliques, and who are the real leaders. You can always tell who a real leader is because they have followers. I was taught how to have an organizing conversation and convince colleagues to join together to flex our collective power. Shortly after, in response to years of a frozen contract, we convinced over one thousand PFT members to walk off the job in a wildcat strike that forced Mayor Kenney to push the School District of Philadelphia to end the negotiations stalemate and give us our first real raise in years. I learned that with strong organizing, and grassroots education, we can teach our colleagues and our community that we can do hard things. I also learned that it is not good for us or for our students to teach in a vacuum. It is our job as educators to call out the power structures that keep us and our students from thriving. We must fight against injustice, and our students must see us fighting. As our colleagues from Mexico say, "La maestra luchando, también está enseñando."

One year ago, I left public education and returned to public health nursing in Camden, New Jersey. Now I work with patients who are homeless, transient, and struggling with injection drug use. I find them to be just as deeply stigmatized as my teenage students in Philadelphia and was dismayed to hear a coworker remark that our patients, "are basically children". Thankfully, after 15 years as a teacher, I know that everyone is capable of surprising you when entrusted with confidence and support. My current job is to test my patients for many communicable diseases such as chlamydia, gonorrhea, syphilis, HIV and Hepatitis C. After testing patients, I link my patients to successful treatment, which can be particularly complicated when working with patients who have acquired HIV and Hepatitis C and require long term medical treatment. All of these conditions require regular medical check-ins and care from a healthcare provider. My patients rarely have home addresses or phone numbers, and following up with their medical care

is challenging to say the least. And unlike my students or my patients on the border of Mexico, my patients are beholden to absolutely no schedule except for the one dictated by their symptoms of withdrawal. They miss about as many appointments with me as they attend, and they very rarely follow up with healthcare providers in traditional healthcare institutions.

It became clear to me within one month of starting my job that over 90% of my clients who inject drugs are Hepatitis C positive, and that only one had ever successfully completed treatment. I also joined just as we were experiencing an explosion of new HIV cases. But these are merely challenges to achieving some bold public health results, and as I often remind my patients, together we can do hard things. Within my first two months of working in Camden, it was clear that some of my patients are the "real leaders" among their peers. They would bring in additional clients for services and spread word about the services we were providing. They knew many people who are homeless, where they spent their days and nights and could easily track them down. I have spent months trying to earn their trust through warm and patient interactions, open and candid conversations and connecting them to as many resources as I can find.

Slowly I have started training my patients how to dress a "tranq wound," a xylazine related wound covered in thick brown eschar choking the underlying tissue. I have given them cases of Narcan and educated them on the importance of rescue breathing. I have taught them how to inject safely to avoid bacterial contamination that can cause endocarditis. I have seen my patients take immense pride in teaching their peers how to prevent infection and sickness. While my patients are experiencing a wide range of health concerns, over the past year, I have really zeroed in on Hepatitis C. Hepatitis C has been one of the most destructive pathogens to hit the United States in the past 50 years and in term of infectious diseases, it is pretty recent. It was only discovered in 1989; previously it had been known simply as a non-Hep A or Hep B variant

(San Francisco Department of Public Health, 2024). Hepatitis C starts as an acute infection lasting about 6 months, but many people never even know they are infected as it causes so few symptoms. 15-40% of people with acute Hepatitis C will naturally recover from the virus after the initial 6 months. Everyone else goes on to have acute Hepatitis C, and here is where things get complicated. Of those patients, a third will manage to outlive serious liver damage, a third will have serious liver damage within 20 years, and another third can expect serious liver damage within 30 years. (SFDPH). The scarring and cirrhosis caused by Hepatitis C almost inevitably necessitates a liver transplant, and you know it is coming. Jaundice, the characteristic tell-tale symptom of liver failure, is a physical feature that represents the failure of the most expensive healthcare system in the world to provide even the most basic medical therapy to our neediest citizens. Hepatitis C is curable. Direct-acting antivirals currently on the market to treat Hepatitis C have never been less expensive or more successful. So why aren't my patients taking them?

In the Skid Row section of Los Angeles researchers successfully engaged groups of people experiencing homelessness to describe their biggest barriers for being treated successfully for Hepatitis C and used their input to design more successful tactics for outreach (Nyamathi, 2021). Overwhelmingly patients spoke about negative attitudes from healthcare providers, inability to make hospital appointments on time, and constant barriers to getting treatment completed. Patients who are unhoused often miss necessities for receiving healthcare like patient identification cards, health insurance cards and prescription plans. They do not have access to transportation to medical appointments, and they miss a significant percentage of those appointments with healthcare providers. But there is good news too. Studies have shown that those with Hepatitis C respond well to peer support from others with Hepatitis C. In one study in Britain, peer engagement of those testing positive for HCV led to 56% of those tested receiving

treatment. This is huge since normal treatment rates in Britain are close to those we have in Camden currently, an abysmal 5% (Surey, 2019).

A successful patient led and patient centered primary care intervention stands to benefit patients who have the least access to quality primary care and mental health services. By better integrating homeless voices into healthcare curriculum design and implementation, we can expect more engagement, better adherence to treatment protocols, and in turn, a much larger reduction in patients with Hepatitis C. We can teach patients how to inject safely and utilize the needle exchange to stop the spread of blood borne pathogens. I believe that by pulling patients into the process of reinventing their own healthcare, they will learn to overcome other major healthcare issues such as HIV, xylazine wounds, skin infections and endocarditis. I believe that the newfound power and self-esteem that comes from being leaders in their community will encourage them to try medication assisted therapies such as methadone, suboxone and Sublocade, and give them a reason to stay away from street drugs. In the process, we can teach patients how to organize and win better living conditions and resources to overcome the hardship and stigmatization of homelessness, poverty, and addiction. We can teach our most vulnerable population of Americans that they have value, that they can stick together and that they can do hard things.

Chapter 2

Thematic Concern, Conceptual Framework, Critical Lexicon, and Philosophy

Statement on Critical Action Research

Action research moves away from removed, hierarchical, dispassionate research in favor of research practiced in real time within actual working environments by the people and practitioners present in these spaces every day. It believes that we do not have to keep pushing forward towards universal truths, instead it is possible for more than one thing to be held as true within a space at one time. It does not believe that any one pedagogical technique or structure is always best at all times, or with all populations, and it calls upon educators to test out what is best for the population that they are currently working with. It trains educators to become their own researchers rather than be obedient followers of educational research created by those removed from their lived classroom experience. Action research implores educators to be constantly examining their work by creating ideas, implementing them, and then thoroughly reviewing how their intervention, project, or change in education style impacted their students. At its heart it empowers educators to be free thinkers.

Critical action research believes in the fundamental strategies of action research but focuses on using classroom research to push society and transform inequities. It combines critical theory with action research and is often grouped together with participatory research. At its heart, it believes that the process of action research is an inherently transformative and political act that will have profound impact on the participants in the research. As such, it calls upon researchers to actively involve participants in this process in the research. To make them not passive recipients of a research intervention, but active practitioners of the research who are

aware of what is happening to them and to society because of the research. This is huge for educational research. Our participants are no longer guinea pigs on whom we try out new elements of instruction, but fellow seekers in the process of gaining knowledge or a new way of seeing the natural world or society. It asks our students to be on a journey with us, not on behalf of us.

Thematic Concern Statement

This thesis will serve to demonstrate that current models for treating Hepatitis C are insufficient, and that there is a great need for community driven, peer led education that infuses the experiences of those currently injecting drugs in curriculum development, while educating them on principles of education, Harm Reduction ideals and organizing tactics.

Conceptual Framework

1. What are the roots of Harm Reduction? How did it evolve over time? Why does this matter?
2. What is a feminist, non-hierarchical approach to pedagogy and why is this especially important when working with a highly marginalized population?
3. What are theories of behavioral change and how can they be implemented into a peer education model to reduce Hepatitis C?
4. What is peer lead education and how does it differ from traditional methods of education? What are the effects of peer lead education on both the educators and the students?
5. What are the unique challenges of training peer educators that are unhoused and currently injecting opioids? What unique challenges are presented in getting patients to follow through with Hepatitis C treatment even when they understand its importance?

Critical Lexicon

This paper will reflect on various theories and concepts related to harm reduction, education, and public health. Here are a series of definitions that will assist with understanding many of these concepts, especially the ones that are more medically centered.

Constitutive Definitions:

Feminist Pedagogy	A non-hierarchical teaching structure that seeks to equalize relationships between the teacher and the student and center a strong respect for each other's unique background and need for respect in the classroom in order to learn.
Harm Reduction	Harm reduction is a set of practical strategies and ideas aimed at reducing negative consequences associated with drug use. Harm Reduction is also a movement for social justice built on a belief in, and respect for, the rights of people who use drugs. (National Harm Reduction Coalition, 2024) Within public health, lower case "harm reduction" means a series of strategies and tools used to mitigate the most harmful effects of illicit drug use. For example, needle exchange sites, safe injection education, and rapid testing for HIV and Hepatitis C.
Opioid Use Disorder	Opioid use disorder (previously known as opioid abuse or opioid dependence) is defined in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) as a "problematic pattern of opioid use leading to clinically significant impairment or distress" (Centers for Disease Control and Prevention, 2024).
Peer Led Education	First, researchers define a peer as, "A person who has equal standing with another as in age, background, social status, and interests" (Abdi, 2013). Paulo Freire states about peer-led education, "No pedagogy which is truly liberating can remain distant from the oppressed by treating them as unfortunates and by

presenting for their emulation models from among the oppressors. The oppressed must be their own example in the struggle for their redemption" (Freire, 1970).

Syringe Service Programs The CDC defines a Syringe Service Program as, "Syringe services programs (SSPs) are community-based prevention programs that can provide a range of services, including linkage to substance use disorder treatment; access to and disposal of sterile syringes and injection equipment; and vaccination, testing, and linkage to care and treatment for infectious diseases."

Universal Design for Learning The Cornell Center for Teaching Innovation defines UDL as a "teaching approach that works to accommodate the needs and abilities of all learners and eliminates unnecessary hurdles in the learning process. This means developing a flexible learning environment in which information is presented in multiple ways, students engage in learning in a variety of ways, and students are provided options when demonstrating their learning." It has been shown to improve engagement across a diverse body of learners and is necessary for a group of learners from a wide variety of educational backgrounds.

Operating Definitions

For the purpose of this thesis the following terms will apply:

People Who Inject Drugs For the purpose of this critical action research, People Who Inject Drugs will mean those who are either still actively injecting an illicit drug, or someone who was recently using injection drugs within the past few months but is currently being maintained on Medication Assisted Therapy such as methadone or suboxone and may not be injecting daily as a result.

Philosophy of Education

I taught Career and Technical Education at the Franklin Learning Center in Philadelphia for 15 years prior to my return this past year to public health nursing. First, I taught Health Related Technology, but eventually I coerced the School District of Philadelphia to change my program over to Medical Assisting due to my belief that if students spent over a thousand hours working in one classroom, they should gain a meaningful certificate in return that guarantees them employment and postsecondary recognition. I loved teaching CTE. Students chose to be in my program, and everything I taught was based on authentic, real-world learning. I believed in a variety of pedagogical modalities to teach, especially project-based learning. I liked to base my content on what was happening in the greater world so that students could personalize the experience of other human beings that they may encounter as patients and treat them with a greater depth of compassion and dignity, and I like to have my students work collaboratively to improve their verbal communication and ability to work as a team.

I used a lot of educational technology in my classroom. I believed that, used responsibly, technology had the capacity to help students transcend barriers due to limited English proficiency and learning issues. Good technology encouraged greater engagement with material and greater creativity. I believe that keeping up with technology and current devices increased my student's engagement, but this must be tempered with human interaction as I was preparing students for a career requiring excellent interpersonal skills. To keep up with rapidly changing educational technology, when the ISTE conference came to Philadelphia, I embraced several of the teaching tools presented and quickly adapted my PowerPoints to NearPod, my vocabulary lists and test reviews to Quizlet, and my end of class review to Kaboom. Using interactive technology in my classroom allowed me to increase student participation and quickly assess if

students were comprehending the material. NearPod in particular gave me the chance to assess learning every few slides and see if I had to reteach the material immediately. I used technology to improve my existing pedagogy for delivering content to my students in a way that maximized learning and retention. In addition, I wanted students to have a large toolbox of tools at their disposal for creating art and using humanities to help them make sense of complex science and a complex and often nonsensical world.

I strongly believe that students will rise to the bar that you set for them and that if you empower them to take command of their learning, and create a space for them to exhibit professionalism and leadership, then they will do just that. Each year, after months of clinical practice, I asked my senior class to set up a sample clinic within the school under the supervision of the school nurse. My students performed hearing and vision screenings, checked blood pressure, and assessed height and weight. Students were challenged to set up their own methods for scheduling and intaking patients, scheduling staff, designing clinic flow and layout, and providing follow up education and referrals based on clinical assessments. This was all compatible with the Universal Design for Learning (UDL) guidelines to foster collaboration and communication, and at the end of each clinic day we would take a moment to reflect and assess where things went well and where students could improve the clinic. I am always astounded at the students' maturity and ability to call each other to task and improve their services. This is the very heart of strong CTE. Students know that they will be expected to perform what they are learning in class out in the real world. They are often reminded that mistakes have big consequences, and they take that very seriously. They embrace that one day they will be the professional at the medical office giving a patient education or medication and that intrinsic motivation is the secret to their success, and the success of my program as well.

But I no longer work with honors students at a competitive magnet school in Philadelphia. Now I work in Camden, New Jersey with some of the most marginalized people I have ever met in the United States. My patients are the people you see in the pictures of Kensington and Skid Row in Los Angeles. They are malnourished, they are often riddled with infections, and they are living on a daily clock assigned to them by the cycle of opioid withdrawal. They have lost faith in the medical establishment's ability to help them, they do not believe that the government cares about them and they have broken relationships with friends and family that do not understand how physically and mentally challenging it is to break free of opioid addiction. But worst of all, they have lost faith in themselves, and their own ability to conquer many of their challenges.

My philosophy of education, in this instance, is seen through the lens of a registered nurse. I believe that at its worst education is a force for reinforcing negative stereotypes of the people we are charged to love and treat. I believe that at its best, education can empower people so that they are, in fact, capable of taking control of their own health. I have never struggled with addiction in my own life, but due to addiction in some of those closest to me, I have often experienced a strong endearment for those who do. Paulo Freire stated, "The radical, committed to human liberation, does not become the prisoner of a 'circle of certainty' within which reality is also imprisoned. On the contrary, the more radical the person is, the more fully he or she enters into reality so that, knowing it better, he or she can better transform it. This individual is not afraid to confront, to listen, to see the world unveiled. This person is not afraid to meet people or to enter into dialogue with them. This person does not consider himself or herself the proprietor of history or of all people, or the liberator of the oppressed; but he or she does commit himself or herself, within history, to fight at their side."

So often, the patients that I work with are struggling with a fundamental lack of knowledge regarding how to access desperately needed medical care, or social services. In turn, I am seeking knowledge regarding conditions on the ground for my patients and to better understand the nature of opioid use disorder. The education I perform now occurs one to one behind a closed door and requires no "management" or administrative oversight. No longer does anyone walk into my teaching space to ask what my objectives are or check for 100% engagement. If they did, they would find the occasional person nodding off in my office, or too plagued by visions I cannot see to be able to participate fully in their care that day. But they would also see a robust conversation with most patients, and not a lecture. They would see me asking as many questions as I answer. I believe strongly that every person, every day, acts in a way that meets their most basic needs first even when those behaviors may compromise their health in the long run. And so, I constantly am seeking to understand.

Chapter 3

Narrative

One cannot teach a group of oppressed people while employing a patriarchal, demeaning method of curriculum. Therefore, at the forefront of any curriculum aiming to educate those who are currently or who have currently injected drugs must be a feminist pedagogy. The term feminist encompasses a wide swath of beliefs and ideologies from the deeply personal to the political. For this thesis's purpose, feminism will be considered primarily through its force as an emotional healer and builder of community and an agent of social change. This is best summed up by Gravett and Bernhagen (2018).

> Feminism is not bra-burning or man-hating. It is the interrogation of power, the honoring of perspective, the encouragement for reflection that makes us more aware of ourselves and our actions and more open and empathic to those around us. Feminism is challenging. It constantly demands consideration of who we are and how we got to be this way. It forces us to ask who we have left out and to uncover the spoken and unspoken reasons why. Feminism humbles; it pushes us to do better, with the full knowledge that, in a world of differences and attending inequalities, perfection is not possible. It forces the embrace of process as much as product. (p.18)

Central to this concept of feminism is a strong love ethic, a set of values that places human thriving and connection at its center. This is illustrated by bell hooks (2001), an academic who centers equality of voices in her own classroom spaces,

> Domination cannot exist in any social situation where a love ethic prevails… When love is present the desire to dominate and exercise power cannot rule the day. All the great social movements for freedom and justice in our society have promoted a love ethic. Concern for the collective good of our nation, city, or neighbor rooted in the values of love makes us all seek to nurture and protect that good. (p.87)

Hundle and Vang (2019), in their call for the dismantling of neoliberalism at UC Merced also stated, “Resistance at the university is shaped and driven by the antithesis of neoliberal

processes - care. This resistance takes form through sharing space, confiding in each other, and reminding each other that we are worthy of dignity, respect and safety" (p. 198).

Feminist pedagogy is a set of academic values that calls its learners in to learn from the instructor, the content and each other in equal measures. It recognizes that students bring their full selves into the classroom and that their lived experiences are invaluable to classroom conversation and inherently political. As argued by Stevens (2022), "Feminist pedagogy focuses on critiquing the wider, macro-structural realities that impact on gender inequality. A key aim is to empower students to consider how society might be differently structured" (p. 22). Stevens and MacLaren (2022) highlight their own classrooms which center the voices and contributions of women in the United States to the work of marketing new products and technologies, but also critiques the role of marketing within capitalism and environmental destruction. Stevens and MacLaren (2022) view feminist pedagogy as having three key tenets, "1) A focus on lived experiences; 2) encouraging collaborative forms of learning; and 3) minimizing hierarchical relations in the classroom by reconfiguring the teacher/pupil authoritarian model of didactic learning" (p. 4-5). Onufer and Munoz-Rojas (2019) also state that the main aspects of feminist pedagogy are content co-creation, community, empowerment and "examining course materials to ensure that the work and contributions of women, people of color, queer people and members of other minoritized groups, which are frequently left out of the curriculum, are centered" (p. 1).

Feminist pedagogy works beautifully alongside holistic nursing theories regarding patient care. Nursing theories center around a holistic view of the patient as a whole person impacted and impacting their environment around them at all times. Nursing theorist Dorothea Orem stated that nurses were primarily concerned with "the individual's need for self-care action and the provision and management of it on a continuous basis in order to sustain life and health,

recover from disease or injury, and cope with their effects" (Orem, 1995). This is in sharp contrast to the more traditional medical model that can be seen as removing a patient's locus of control and leaving them at the bottom of a medical hierarchy. According to Fawcett (2017),

> The primary characteristic of the allopathic medical model is regarding human beings as objects made up of categorical systems. The patient-physician relationship is hierarchical, with the physician making decisions for the relatively passive patient. Human beings are said to adopt the sick role when confronted with illness or disease, which exempts them from taking any responsibility for causingthe illness or disease and from engaging in usual role responsibilities. (p.4)

Non-patriarchal methods of health instruction and health care then segue beautifully with anti-patriarchal curriculum.

In addition to a feminist, anti-patriarchal basis for curriculum development, the model being utilized to improve reduction of Hepatitis C among those using IV drugs must also teach and implement strong theories of behavioral change, the very heart of creating specific tools to target barriers to behavioral change. For this reason, several models of behavioral change were explored as well as their utility considered in relationship to the specific patient population being targeted. The first is the Health Belief Model. The Health Belief Model was designed in the 1950's through the public health professionals at the US Public Health Service. They were trying to explore why patients would choose to not use sound strategies for the prevention of acute and chronic disease as well as avoiding screening developed for early detection of disease. At the center of this theory was the belief that patients had to have two characteristics to use preventative strategies against disease. First, patients had to have an innate desire to not want to get sick or to heal any illnesses that they may already be struggling with. Second, patients had to have faith that the treatment or intervention they used would mitigate the disease or health condition. Originally, this model had four key tenets but as research evolved, another two were added.

The original four key tenets included perceived susceptibility, perceived severity, perceived benefits, and perceived barriers (LaMorte, 2022). Perceived susceptibility refers to the individual level of vulnerability a person believes they have to a specific disease or illness. Perceived severity refers both to how dangerous a person believes a specific illness or disease to be, but it also refers to how serious they consider the social consequences are of having a specific illness. This would indicate that certain high stigma illnesses might have greater perceived severity not because of the feared illness severity, but because of the fear of the stigma itself. Perceived benefit refers to the degree that a person believes that a specific treatment or medication will make a measurable difference to cure or prevent an illness or disease. Finally, "perceived barriers" pertains to the degree to which someone believes it will be difficult to perform an action. This can be due to lack of access to a needed treatment, fears of dangerous side effects, or a belief that they cannot afford to obtain necessary medication (LaMorte, 2022). Recent research has shown that young suburban people who inject drugs in New Jersey, a large part of the target audience for this thesis proposal, lack understanding of what Hepatitis C is and that treatment is available, with less than half of study participants having sufficient knowledge of treatments available to cure Hepatitis C, but the vast majority stated they would attempt treatment once they learned it existed (Jost, 2019). The two tenets added later to this model of behavioral change were "Cue to Action" and "Self-Efficacy". Cue to Action represents a particular stimulus that might spark behavior changes in a person such as a positive test result, jaundice, or a total loss of energy due to liver damage. Self-Efficacy represents a patient's belief that they can do something about it. Low rates of self-efficacy and perceived benefits have been associated with a higher rate of Hepatitis C infection in injection drug users (Cox, 2008).

The biggest drawback of the Health Belief Model is that it is entirely theoretical and not prescriptive in any way. While pointing out crucial factors that may keep patients from engaging in healthy behaviors, it is not necessarily advising on how to mitigate any of these factors. It is not informed by social determinants of health such as poverty, lack of access to quality of healthcare or implicit racial bias within a healthcare setting. It also does not consider that all disease processes impact people differently, and those with daily habitual behaviors may have greater internal intrinsic motivating factors to be considered.

A more personalized model of studying an individual's response to behavior change is the Theory of Planned Behavior. This theory was initially titled the Theory of Reasoned Action in 1980. Its focus is that the patient's ability to make behavioral change is widely focused on two key things – motivation and behavioral control. It is concerned with six major things. The first is the attitude that a person has towards a particular behavior that may be harmful. It explores what a person believes will be the outcomes of their current behavior. It explores the strength of an intention to perform a certain behavior such as sharing a dirty needle, or getting blood drawn for a Hepatitis C assessment. The next, subjective norms, refers to whether the person believes that their peers or people important to them are judging the behavior they are considering either positively or negatively. The theory considers social norms, the common behaviors within a subculture. Finally, the theory asks to assess a patient's perception of their own power and of their level of behavioral control over a given behavior (LaMorte, 2022). This theory explores an individual's beliefs about their ability to create behavioral change in more depth, but it is still separate from a larger socioeconomic assessment of barriers that may be preventing behavioral change. This is especially essential when it comes to those struggling with injecting drugs, who are often living in poverty and struggling with homelessness.

Social Cognitive Theory takes a greater step towards individualism when considering factors that impact a person's capacity to change behaviors. Originally created by Albert Bandura as the Social Learning Theory in the 1960's, the theory was updated in 1986 and states that learning occurs in a dynamic interaction between a person, their environment, and their behavior (LaMorte, 2022). Unlike other theories of behavioral change, the social cognitive theory does not simply focus on how to get people to start a behavior, but also, how to get people to maintain that behavior. One of the main components of social cognitive theory is the idea of reciprocal determinism. This key tenet focuses on the reciprocal relationship between an individual, their external environment, and the dynamic impact of their behavior and how it is influenced by stimuli. It is impacted by a person's behavioral capacity to perform a skill and is impacted by their ability to apply knowledge and skills to the performance of that specific skill. This is incredibly important to the work of curtailing Hepatitis C infection. Poor injection practices, such as sharing needles or "works," contribute heavily to the continued infection and re-infection with this virus, and changing this behavior is just as important as getting treatment for curbing its spread. This theory believes that change occurs by observing the actions of others (observational learning), and whether their behavior has positive or negative consequences. These themes, along with the impact of their expectations, create a sense of self-efficacy within a client. Critics have stated the social cognitive theory doesn't consider enough social emotional factors. Critics also argue that the focus of the actual process of learning can minimize the importance of biological and hormonal predispositions that may impact behavior, regardless of past behavioral patterns. This is a key factor to consider when working with people who are struggling with opioid addiction, because the prolonged use of opioids can cause enormous

changes to a person's brain chemistry and responses to external stimuli, as well as decision making.

One of the most common theories employed by public healthcare workers is the transtheoretical model of behavioral change. This model analyzes where an individual is along a continuum as far as their plan to change a specific behavior. The theory states that if you can accurately assess which stage of change a person is in regarding changing a behavior, then you can devise the proper targeted intervention. The stages include precontemplation, contemplation, preparation, relapse, maintenance, and termination. Individuals in a precontemplation stage regarding Hepatitis C treatment or safe injection practices might believe that the risk of treating Hepatitis C or the added work of injecting safely outweighs the rewards of trying either of these changes. Someone in precontemplation is seen as having no plan to try a new behavior for the next six months. When a patient shifts into the contemplation stage, they begin to weigh the pros and cons of the desired behavior more evenly and put more weight on the benefits. They may consider trying Hepatitis C treatment in the next six months even if they still feel ambivalent about the action. When a patient is ready to start a new behavior in the next thirty days, and starts to actively prepare for this change, they have moved into the preparation stage. The next steps include action, when a person has been trying to maintain a new behavior for at least six months, and maintenance is when a patient has managed to hold on to a behavior for longer than six months. There are several interventions that have been associated with moving people through these changes, and research has shown that they can be successfully targeted at a group of people depending on which stage of change they are currently experiencing.

Consciousness raising is the process of increasing awareness about the specific healthy behavior, such as informing patients about their risk of developing liver failure if they decide not

to treat their Hepatitis C. Dramatic relief is when you try to elicit strong emotions from an individual regarding the behavior change, whether negative or positive. Self-reevaluation is when you pause to have a client reflect on how this healthy behavioral change fits into their bigger goals and aspirations for their own life. Environmental reevaluation causes an individual to consider how their behavior may be affecting others who are present in their environment. Social liberation is the process of showing an individual that the larger society supports behavioral change, and self-liberation helps them believe that they can commit to it. Helping relationships is the process of having an individual find others who are uniquely supportive of their behavioral change – it is this intervention specifically that will be at the center of the intervention in this critical action research (LaMorte, 2022). The concept of counter-conditioning is when you help individuals replace negative or unhealthy thinking about an action with positive thinking or healthy behavior. Reinforcement management increases the rewards for positive behavior and further decreases the benefits of negative behavior. Stimulus control is when you make over an environment to remove cues related to a negative behavior and create cues that support positive behaviors. Working with homeless individuals presents an enormous challenge for this last intervention. Homeless individuals are exposed to many external factors beyond the control of any public health worker. We cannot mitigate those factors within this research, but we can steadily increase healthy relationships as a means of support for those considering getting treated for Hepatitis C.

Social norms theory is a theory that individuals are more influenced by what they perceive as normal behavior, than by what is the normal behavior for a group of people. For example, on college campuses students may base their alcohol or marijuana intake on what they perceive other students are using, and this may falsely inflate their usage. They may not

recognize that the actual amount of alcohol their peers are ingesting is significantly lower. The gap between these two things is a misperception. Since the numbers of active IV drug users in Camden that have been successfully treated for Hepatitis C is low, it can be hard to construe if this would be a successful campaign, but it might be successful at addressing the issue of safe injection. Overwhelmingly, IV drug users are fearful of the consequences of sharing needles and wish others would not share any of their needles or works.

For this thesis, a great deal of work went into considering many theories that make up the ideas behind peer led education. The first is social constructivism, or the idea of social psychologist Leo Vygotsky that learning happens primarily through social interaction and the ideas of others, and that learning cannot be constructed and assimilated independent of others, rather it was the process by which learners are brought into a community that already understands a specific idea or concept. Key to this is the idea of the zone of proximal development. As per Vygotsky (1930):

> The level of actual development is the level of development that the learner has already reached, and is the level at which the learner is capable of solving problems independently. The level of potential development (the "zone of proximal development") is the level of development that the learner is capable of reaching under the guidance of teachers or in collaboration with peers. The learner is capable of solving problems and understanding material at this level that they are not capable of solving or understanding at their level of actual development; the level of potential development is the level at which learning takes place. It comprises cognitive structures that are still in the process of maturing, but which can only mature under the guidance of or in collaboration with others. (p. 79)

Vygotsky (1930) realized that social and peer interactions were integral to learning and recognized that the degree to which someone learns is heavily influenced by both external and intrinsic factors, and that how much a person has an internal drive to learn impacts their level of learning new material.

Bandura built upon the model of social constructivism with his Social Learning Theory. This theory includes the idea of observational learning. He proposed that people observe something happening, but it does not necessarily mean they will absorb or imitate what they see just because of an observation. Before integrating this knowledge, some thoughtful cognitive work must occur, called the mediational process. These four key concepts are crucial to consider when maximizing learning through a socially constructed teaching intervention such as peer-led education. The first, and potentially the most challenging when working with folks struggling with opioid addiction, is to gain someone's attention fully. The learner must be cognitively present, so while it is necessary to create a space for active opioid users to participate, some parameters regarding where they can be in the cycle of use may need to be established to ensure patients are awake enough to hear the information. The second concept is retention. Whatever behavior the learner watches must leave a model or memory in their mind that they can refer to in the future. The third is similar, motor reproduction. A learner must be able to physically reproduce a behavior that they see taught to them, either through mental imagery or through actual physical practice of a motor skill in real time. It is one thing, for example, to give a lecture on safe injection skills. It is another thing to take out a phlebotomy arm and make learners practice the skills over and over. Finally, just like Vygotsky (1930) stated, a learner must have sufficient motivation to perform an action. The risks of not performing it must outweigh the benefits, and that must be made clear to the learner (McLeod, 2024).

Bandura believed strongly that people learned best through observational learning. He also believed that when using live models to perform a behavior, it did matter that those models were closest to the person who was learning the new behavior. When the learner can more easily relate to the person who is teaching the subject, it is easier for them to visualize themselves

performing the safe behavior. A medical professional who is currently not using opioids can lead a group session on safe injection practices, but if that same session is taught by someone actively using, it will be more likely to be integrated by the participants who are also actively using opioids, as per Bandura. They also must see something in this model that they admire and want to aspire to. This is why it is important that peer educators for the proposed program have had Hepatitis C, successfully cleared the virus through medication, and managed to avoid re-infection. The aspect of having had to take the current Hepatitis C drug regimen is especially important. This is because people are more successful at learning from models who owe their success to effort, and not due to intrinsic factors like innate talent (Weiner, 1979, 1985). 35% of patients with Hepatitis C will clear the virus out of their system without any medical intervention. These are not adequate role models, because they didn't have to complete the 2-3 month medication regimen in order to become Hepatitis C negative.

The Theory of Reasoned Action adds another key piece of thought to socially constructivist beliefs about how people learn and are motivated to change behavior. They brought in the idea of "subjective norms," or the idea that people consider the ideas of everyone in their life and whether they would want that person to follow a specific health associated behavior. For example, how do most people that matter to a person feel about a person smoking, drinking, or treating their Hepatitis C infection? This concept is broken down further into injunctive norms and descriptive norms. An injunctive norm is the belief a person has about what other people want them to do. A descriptive norm is what a person believes others are doing about a specific behavior. Descriptive norms may not always be based on actual reality. For example, a person with Hepatitis C can have a strong injunctive norm regarding Hepatitis C treatment due to family members clearly stating that they want this person to get treatment for

the virus. However, they may believe a descriptive norm that they do not know anyone who has been treated successfully for Hepatitis C. This is an important norm to address with a patient. A "normative belief" describes how much they think a person wants them to carry out a specific action. If they have medical professionals in their life that continue not to address their Hepatitis C after several visits, a patient can begin to believe that it is not important to their medical professional to treat the virus. A "motivation to comply" addresses the issue that a person may have someone close to them encouraging them to get treated for Hepatitis C, but that might not be someone that the individual respects or wants to make happy (Nickerson, 2023). This is a significant issue for many of the patients living in Camden with Hepatitis C. Broken or strained family relationships, inconsistent relationships with medical professionals, and a lack of friends can remove a sense of obligation to please those closest to them. In addition, some people living with Hepatitis C who are using opioids may already have a proclivity towards not wanting to comply with authority that makes the issue of "motivation to comply" a big concern. It matters who is asking those living with Hepatitis C to get treated, and it matters if it is triggering a person to try out a new behavior like Hepatitis C treatment.

Another crucial theory behind the design of a peer lead education program is the Diffusion of Innovation Theory. This theory proposes that innovative ideas do not spread simultaneously throughout a population. Rather, there are different sub-groups of people who jump early at an innovation, while others take a lot longer to catch on and give it a try. The theory establishes five categories of adopters as follows: Innovators, Early Adopters, Early Majority, Late Majority and Laggards. Innovators are the adventurous first folks to try out a new intervention. It is easy to get this first group of people to try out something new. Early adopters are opinion leaders. They have already bought into the idea that there is a problem that needs to

be fixed, and they often have influence over their peers. They do not need to be convinced to do something, and they can be used as leaders to influence others in their community. This would be the group of individuals to draw from to become peer lead educators. As stated earlier in this paper, how does one know who is a leader? They have followers. The Early Majority are not usually leaders, but they do adopt innovative ideas before the average person. They may need to see proof that the innovation works before they give it a try. Research and personal success stories go far in influencing this specific group. The Late Majority tends to be more dubious and wait until the majority have tried it before they give it a chance. It is most successful to target this specific group with evidence that the majority has adopted the innovation and were successful. Laggards are the toughest group to approach as they are the most skeptical of change, and they may require fear tactics, statistics, and peer pressure (LaMorte, 2022).

Compton (2011) beautifully summarizes the last theory of behavioral change being used to design the intervention in Chapter 4 stating:

> At the core of inoculation theory (McGuire, 1961a,b) is a biological metaphor. McGuire (1964) suggested that attitudes could be inoculated against persuasive attacks in much the same way that one's immune system can be inoculated against viral attacks. In medical immunization, weakened forms of viruses are injected into the body, and the body then reacts to this injection (e.g., through cell adaptation), protecting the body from future attacks from stronger versions of that virus. McGuire (1964) contended that by exposing individuals to a persuasive message that contains weakened arguments against an established attitude (e.g., a two-sided message, or a message that presents both counter arguments and refutations of those counterarguments), individuals would develop resistance against stronger, future persuasive attacks. (p. 2)

Sadly, in Camden one of the populations that individuals living with Hepatitis C must be inoculated against is the medical establishment. Stigma, false ideas around treating active substance users and general lack of knowledge of Hepatitis C treatment by primary care providers can lead to a lot of disinformation for patients.

Historical Origins of Peer Led Education

As a nation, the United States is failing at providing strong primary healthcare services directed at changing long term positive health behaviors that will improve health outcomes over a lifetime, especially with regards to Hepatitis C. When it comes to peer lead education, many of the most innovative programs have their roots in adolescent and college student health.

Research demonstrates that adolescents are more likely to adapt their personal health behaviors in direct response to modeling by adolescents from similar cohorts. According to Thompson and Nigg (2020), studies done on peer-to-peer education have shown that it can get students to eat more vegetables, exercise more, decrease drinking, delay intercourse, and improve the "physical, psychological, pubertal, and total quality of life of adolescents" (Diao et al., 2019). At the center of this adolescent support network is public pedagogy. While education for adolescents has traditionally been centered within the four walls of institutional public schools, there is great evidence that primary care centers that focus on education and peer support in order to promote better outcomes for adolescents are experiencing demonstratively higher levels of success. According to Abdi and Simbar (2013),

> Adolescents naturally tend to resist any dominant source of authority such as parents and prefer to socialize more with their peers than with their families. Research suggests that adolescents are more likely to modify their behaviors and attitudes if they receive health messages from peers who face similar concerns and pressures. (p. 1200)

They also go on to stress the dynamic nature of peer education, stating, "Since such programs seek to produce behavior change in a peer group (the unit of change) by the help of a peer educator or facilitator (the agent of change), they may simultaneously empower the educator and the target group by creating a sense of collective action."

In neighboring New Jersey, a pioneering program has been the model for strong peer education for decades. The HiTOPS program began in the 90s as a model program for training youth to become peer educators and target 9th grade students with education about healthy sexuality and relationships with a goal of reducing unwanted pregnancies. The successful model has now been replicated and evolved into the multi-state program known as Teen PEP. It is credited with assisting in reducing the teen pregnancy rate in conservative states such as North Carolina where education about sexual and reproductive health has traditionally been excluded from school programming. At the heart of this model is youth development theory. Layzer, et al. (2014) state,

> The positive youth development approach is grounded in the belief that all students have the capacity to succeed, but in order for students to recognize and attain their potential, they need safety, structure, supportive relationships, opportunities to belong, skill building, and self-efficacy. A core premise of youth development programming is that young people gain more from an experience when they are actively involved. Opportunities are continually provided for participants to develop and practice new skills as they learn to work together as a cohesive group. The skills taught in Teen PEP are not only essential for successfully navigating adolescence but are skills that will become lifetime assets. Participants articulate and clarify their values, learn how to make informed decisions, and learn how to set and achieve goals in a supportive environment. (p. 572)

While the spaces created by Teen PEP seem to adhere to several important organizing principles, such as collective wisdom, affinity spaces and shared spaces - a critical analysis of Teen PEP shows some serious flaws in the choice of who is considered an appropriate advocate. While TeenPEP creates an effective program for reducing sexually risky behaviors in adolescence, it might not be creating a space that allows peer educators to become effective spokespeople for their own collective liberation. One way that this occurs immediately in the program is through the process used to determine who is allowed to be a peer educator. Rather than allowing youth to self-select into these spaces, or allow peers to recognize their own natural

leaders - as happens in true organizing spaces - peer educators in the Teen PEP program are picked through a rigorous interviewing process. Layzer et al (2014) describe the process as such,

> All applicants are invited to participate in a group interview, in which they participate in activities designed to assess how they function within a group (e.g., share verbal space, show respect for others' opinions, willingness to share own feelings and views). Applicants then participate in a brief individual interview. Additionally, the names of all applicants are shared with selected school staff who are asked to rate each student using a five-point scale (poor to excellent) on their reliability, leadership, ethics, ability to be a team player, and attendance. Program advisors then meet to make their final selection. (p. 573)

The Young Lords of New York, in the late 1960's and early 1970's held a successive series of actions to target out of control public health issues and health disparities within the South Bronx, culminating in the takeover of Lincoln Hospital in the South Bronx in 1970. The Young Lords of New York were founded by two twenty-year-old Puerto Rican men and recruited many young, largely Puerto Rican members who joined starting as early as 14 years old. Having come from the community they would grow to serve and pushed into college by the pressures of avoiding the draft for the Vietnam War, founders Miguel Melendez and Juan Gonzalez also used data to make decisions about what public health issues were most important to target in their communities. However, their decisions regarding what to target also derived from their own lived experiences of lacking healthcare and watching fellow neighbors in the Bronx fall prey to tuberculosis, infant mortality and poor medical care from a shabby, poorly run local hospital.

In contrast to TeenPEP, where degreed adults in authority train and work with teens to implement a specific agenda, the teens and young adults of the Young Lords set their own agenda. Adolescents did not have to prove that they were obedient enough to relay the initiatives of the Young Lords, they just had to be committed enough to the cause to learn. Learning sessions were held in the evenings at members' homes. Strict codes of conduct were put in place

to prevent violence or harm to any member, especially female members of the group who served on the front lines with their male counterparts. After deciding as a group that they wanted to attack the tuberculosis epidemic consuming their community, they sought out progressive physicians to acquire tuberculin, the substance used to screen folks for tuberculosis. They also sought assistance in learning how to administer a PPD - a test that determines if you have been exposed to TB. They trained fellow adolescents in the process, and went door to door in the community, targeting over 900 residents for screening. They collectively organized and demanded that a mobile x-ray truck used to screen PPD positive patients come daily to East Harlem. When the city ignored the request, they forcibly took over the truck and forced it, and the technicians, to park in East Harlem and screen long lines of PPD positive patients who needed a chest x-ray. Other teens viewed the Young Lords as the place to be and admired their strength, their maturity, and their tactics because they were derived from within their own community, not pressed on to the community from outside. Members were never afraid to bring their whole selves into the process.

The Young Lords burned with a very bright flame for five years. An intense attempt to take over the mismanaged and decrepit Lincoln Hospital in the South Bronx marked the pinnacle of their success. They managed to get a mobile x-ray van stationed permanently in East Harlem for years, and they managed to get New York City to build a new Lincoln Hospital in the South Bronx. The strength and advocacy of the Young Lords produced visible changes in the community's health in a brief time. However, the intensity of the process took a toll on the young organizers and three years after the takeover of Lincoln Hospital, much of the energy for the movement was spent, the organization broken by in-fighting.

While peer education groups like TeenPEP can persist for decades due to their alignment with the goals of government, established non-profits and academic centers, grass roots peer education groups like the Young Lords often are bearing the stress of disapproval from these same groups. An inherent distrust of organizing by young people of color lead to harassment and surveillance rather than combining with their efforts to produce efforts on shared goals. COINTELPRO's aggressive work to break up the Young Lords sowed the seeds of discord that eventually destroyed the organization. Instead of working jointly with an effective public health advocacy group that successfully moved hundreds of Puerto Ricans in New York to get treated for tuberculosis, the government instead chose to destroy it.

The 1960's and 70's also saw a change from traditional didactic instruction around health education, and a move toward peer education as a tool to improve buy-in from the young people most impacted by the social determinants of health. In 1975, the University of Florida began a novel program called BACCHUS - Boosting Alcohol Consciousness Concerning the Health of University Students – aimed at curbing dangerous alcohol-related behaviors on campus. BACCHUS utilized a unique model of peer education that trained young adults to educate their peers about the dangers of alcohol poisoning and chronic alcohol abuse, sexual reproduction (Arnold, 2015).

In 1995, the Workshop Chemistry Project was started at the City College of New York to use theories of social constructivism and the zone of proximal development to improve chemistry understanding. Peers who were quicker to grasp concepts in the general chemistry classroom, a notoriously challenging college space, were tasked with leading peer constructed workshops to review material with other students. This idea of Peer-Led Team Learning, and it produced tangible results (Gosser, 1998). Successfully implemented programs using the Peer-

Led Team Learning method utilized at their core, six central principles. First, the course was centered around the Peer-Led Team Leadership approach. Next, all the workshop leaders were taught to be strong educators. Faculty from the college were a part of the instruction, and materials created were made to be collaborative by nature. In successful programs, the spaces used to perform this type of education have adequate space and reasonable noise levels in order for group work to happen and the programs took place in institutions that had bought into this form of education on a larger scale (Dreyfuss, 2013). While many of these principles for creating a strong peer-led environment apply to the peer-led approach to teaching about Hepatitis C in this paper, there remains an enormous question to answer. How does this happen with the unhoused? With those who are uneasy about institutions, coming inside and authority figures?

In the 1980's an emergency room physician named Jim Withers was consumed with the burgeoning homeless population in Pittsburgh, Pennsylvania. After demeaning jokes made about a patient who froze to death outside, he committed himself to do a better job of engaging with those living outside through the harsh Pittsburgh winters. His first goal was to create a relationship with a homeless man who promised to take him around the spaces along the river, underneath the bridges of Pittsburgh where the homeless congregate. His early contact with these patients pushed him to create a new field of medicine, "Street Medicine," and he formed the Street Medicine Institute in 1991. The Street Medicine Institute helped create a series of principles centered around doing clinical outreach with a homeless patient population. This is based on the purpose of clinical outreach as, "to extend clinical services in an environment that is familiar and accessible for those who face barriers in seeking or following-up on their care. Clinical outreach seeks to address many of the most common barriers facing underserved populations, including limited or lack of transportation, lack of familiarity with the health

system, and prioritization of day-to-day survival over health maintenance." (Health Outreach Partners, 2015). They helped create the following priorities for building better client engagement as set by the National Health Care for the Homeless Council:

1. Get to know the individual's personal story.
2. Build a consistent presence in the community.
3. Follow up and follow through.
4. Support people as they set personal goals.
5. Let the client lead.
6. Celebrate small steps.
7. Move at the client's pace.

(Knopf-Amelung, 2013)

Need for Change in Approaches to Hepatitis C Treatment

It is noticeably clear that the current way we are treating and preventing Hepatitis C infection is not working. According to the CDC, "The rate of new hepatitis C cases reported to CDC among persons aged 18–40 years has increased steadily each year since 2013 to 2.8 cases per 100,000 population in 2019, above the 2019 target rate of 2.1 per 100,000 population. Injection-drug use is the most common risk reported for persons with new hepatitis C virus infection, and increases in hepatitis C incidence, particularly among persons aged 18–40 years, are temporally associated with increases in this risk factor" (CDC, 2021). However, this is based on very faulty data, and the actual number of those suspected of having Hepatitis C could be 13.9 times this actual number tracked in the national database (CDC, 2021). A recent study from Baltimore by Falude-Nwulia (2020) had the following findings regarding Hepatitis C Treatment among people who inject drugs:

> Of the 418 PWID with HCV, the median age was 49 years and most (88%) reported recent injection drug use (IDU). Overall, 23% had been evaluated by a provider for HCV treatment, 17% initiated DAA treatment, and 13% were cured

> of HCV infection. Treatment uptake doubled between 2015 and 2018. In multivariable analyses, HIV infection, current employment, having a primary care provider, and longer duration of IDU were positively associated with HCV treatment. PWID with a lower annual income (≤$5,000) were less likely to have initiated HCV treatment (p. 2407)

Another recent study of PWID in Baltimore with Hepatitis C infection found that most participants had been diagnosed for over 5 years and very few had received treatment for their Hepatitis C. Many patients had never followed up with a specialist who can treat HCV. They stated that they did not know who to see or had never received a referral from their PCP. The greatest reason that patients who had actually visited an HCV specialist, but had not received treatment, was that they did not have evidence of occurring liver infection. They also had insufficient insurance to cover the cost of the medication, a specialist who was unable to follow up with them regarding treatment, and a need for additional testing that they were unable to access (Falade-Nwulia, 2020).

Studies find that most PWID were aware that there were new medications available to cure HCV infection, but only one third of these patients knew that these medications were not injections, and that they had minimal side effects (Falade-Nwulia, 2019). A research study indicated that patients have heard many negative anecdotes about Interferon from their peers and as a result they are fearful of trying Hepatitis C medications since they are not aware that the new medications have way fewer side effects (Childs et al., 2019). Many specialists are reluctant to provide DAA's to PWID with Hepatitis C because they believe that their patients will turn around and catch Hepatitis C again after treatment. This translates into many practitioners not treating patients based on current drug use, lack of housing, other existing diseases and mental health issues (Pearce et al., 2019). Patients perceived this barrier as well with half of the patients in one study stating that they believed those who were currently injecting drugs would not be

treated for Hepatitis C because of the fear of reinfection (Mittal et al. 2011). Patients who currently inject drugs also fear that they will be unable to adhere to treatment and consider themselves ineligible for taking current Hepatitis C medications (Bryant et al., 2019; Mittal, Kosinski, & Stopka, 2019; Skeer, Ladin, Wilkins, Landy, & Stopka, 2018). Those who were willing to initiate treatment often found themselves blocked by insurances or healthcare providers that insisted on a sobriety period prior to initiation of treatment (Skeer et al., 2018). Finally, a general feeling of being stigmatized for being someone who injects drugs permeated several potential Hepatitis C patients (Madden, Hopwood, Neale, & Treloar, 2018).

Providers were more likely to initiate treatment with DAA's when they understood how effective the treatments were, even in the event of inconsistent treatment, how short the treatment duration was, and how few side effects there are (Goodyear et al., 2020). Stressing to physicians that they have a moral obligation to treat Hepatitis C has impacted rates of physicians who are willing to prescribe the medication and has had a positive impact on patients who successfully complete treatment. Hepatitis C treatment completion is tied to increased trust between physicians and high need patient populations. (Marshall et al., 2020)

But even if competent, trained, compassionate providers are available to treat Hepatitis C, there remains a clear gap in connecting people with Hepatitis C treatment after a diagnosis. In New Jersey, where this proposal will be implemented, there are some specific concerns. To see a Hepatitis C practitioner, a patient must have a current ID, a current health insurance card, and visit a clinic multiple times over months to access care. Hepatitis C medications are not available from pick up from local pharmacies, they must be shipped to patient's homes. All these issues are huge setbacks for a population of patients that is largely homeless. The other major

concern is what happens after a patient completes treatment for Hepatitis C. There is a true lack of quality education on safe injection practices that is centered on harm reduction practices.

Finally, without strong access to harm reduction supplies the potential for HCV treatment as prevention is limited—it is not possible to "treat your way out" of a rising HCV epidemic. To prevent new HCV infections, both primary and reinfections, local efforts without a comprehensive national approach will not be sufficient to affect the epidemic when there has been a dramatic increase in acute HCV infections in PWID, particularly a new generation of young individuals. In a recent meta-analysis, HCV reinfection rates after successful Direct Acting Antiviral Agents were highest in PWID with recent injecting drug use and lowest in those receiving Opioid Antagonist Therapy such as Suboxone. Maintaining low reinfection rates with a sustained national harm reduction approach will go a long way to reducing provider stigma about treating HCV in PWID (Trooskin, 2020). The philosophy of Harm Reduction has its roots in the HIV/AIDS crisis. While harm reduction services are ubiquitous today across the United States and internationally, they have their roots in radical grassroots activism aimed at reclaiming healthcare and dignity for those most at risk of contracting HIV. The National Harm Reduction Coalition has summarized this into four key tenets that are essential for centering work for this project moving forward:

1. Public Health = Social Justice
2. Ending inequality and oppression, fostering health and liberation
3. Racism, stigma and criminalization cause harm
4. Leadership of the most impacted is key to transformative change

(Melgarejo, 2023)

Impacts of Sustained Opioid Use on Neurobiology

All of our bodies produce their own naturally derived opioids. They link to mu-opioid receptors on the surface of neurons, specialized cells inside of your nervous system. When they connect, it converts ATP (adenosine triphosphate) into cAMP (cyclic adenosine monophosphate) which in turn releases noradrenaline which helps to maintain alertness, muscle tone and adequate breathing. When heroin or other opioid drugs enter the body, they block the enzyme that converts ATP into cAMP. Because there is less cAMP produced, there is also less NA (noradrenaline). This causes a drop in alertness, muscle tone, and breathing, a danger for those who are using illicit opioids, increasing their very real risk of overdose, and decreasing their ability to stay awake and pay attention.

Over time, neurons can respond to opioid use by increasing their levels of enzymes and ATP molecules. This will allow cAMP to produce normal levels of NA, even when opioids are present, and users will stop experiencing the early effects of opioid use. When opioid use stops, the drug's inhibitory impact is lost. The neurons operate at normal efficiency but have increased levels of ATP and converting enzymes, causing an excess of NA. This throws a patient into withdrawal (Kosten and George, 2002).

Darke (2016) states that opioid withdrawal is an intense physical and mental experience involving "dysphoria, insomnia, pupillary dilation, piloerection, yawning, muscle aches, lacrimation, rhinorrhea, nausea, fever, sweating, vomiting and diarrhea. For short-acting opioids, such as heroin, symptom severity peaks typically at around 2–3 days" (p. 199). However, withdrawal symptoms begin as early as 6 hours from the beginning of their last administered dose. The timing of an opioid high, especially from heroin or fentanyl, is a big consideration for the timing of any program that infuses and works deeply with the participation of those who are actively injecting. After injecting, a typical user will experience a high from using for 4-6 hours

and then will start to experience withdrawal symptoms about six hours after the experience's completion. This leaves a thin window to meet opioid users for learning, conversation, etc. that is not marred either by the side effects of recent opioid use or withdrawal symptoms.

As this proposal for a peer led educational program on Hepatitis C for those who are currently or recently using injection drugs progresses, it is crucial to consider the fundamental ways that sustained use of opioids impacts and alters the neurobiology of the user. Over time, opioid use creates an inability to regulate dopamine transmission, and also disrupts the functioning of the frontal part of the brain. The frontal lobe of your cerebrum is key to emotional regulation, good judgment, and planning (Tolomeo, Gray, Matthews, Steel & Baldacchino, 2016). Even after several years of being in recovery, cognitive impairments continue in the brain of those who had sustained use of opioids (Ersche, Clark, London, Robbins & Sahakian, 2006). These cognitive impacts can cause difficulty adjusting to a new situation or processing new information, both necessary for learning to take place (Darke, McDonald, Kaye & Torok, 2012). Also, sustained use of opioids decreases the amount of time someone takes in their decision-making process and inhibits their capacity for complex problem solving (Tolomeo et al., 2016). Other recent studies suggest that those using opioids have a decrease in cognitive empathy, or an ability to recognize the intensity of emotions that those around them are experiencing, potentially disrupting interpersonal relationships (Kroll, et al 2018).

The Changed Set Point Model posits that chronic use of opioids resets the pleasure creating centers of the brain. The ventral tegmental area of the brain (VTA) is responsible for several important processes including reward processing, aversion, stress modulation, drug addiction, learning, and memory" (Cai & Tong, 2022). The locus ceruleus in the brainstem is involved with physiological responses to stress and panic (Provencher, 2021). Dopamine

neurons in the VTA and noradrenaline neurons of the LC are associated with the initial stages of withdrawal and abstinence. The Changed Set Point model posits that the mesolimbic reward pathway is set to release enough dopamine to create a typical level of pleasure in response to pleasant activities such as taking a warm shower or enjoying a good meal. This theory suggests that opioids decrease the release of dopamine when "normally pleasurable" activities take place and there are no opioids present and increases the release of noradrenaline, thereby strengthening the symptoms associated with withdrawal. This makes it difficult for opioid users to experience pleasure from anything other than opioids, and to experience withdrawal when they stop taking opioids (Kosten & George, 2002).

Positive Impact of Peer Led Education on People Who Inject Drugs & Their Providers

An argument could be made that the world of addiction has always been centered around peer education and mentoring. At its core, organizations such as Alcoholics Anonymous and Narcotics Anonymous have always been centered on peer support and education in a group context. According to some recent, large, controlled studies showed that while many therapies for alcoholism may result in 15-25% abstinence rates from alcohol, AA was able to achieve rates of 22-37% and is completely free. The greater participation a person has in an Alcoholics Anonymous support group, the more likely they were to remain abstinent (Frakt and Carroll, 2020). This is credited to the group support present at these meetings.

In the world of harm reduction, the most common role for people with lived experiences with addiction to play was in the role of harm reduction education. Within this role, the most common topic of focus was HIV prevention, with Hepatitis C education taking a far distant second place (Marshall et al, 2015). A widespread literature review looked at over 100 models of programs that used people with lived experience with addiction and placed the programs on a

spectrum using Pretty's participation typology. This typology ranks programs based on how integral those with experience with addiction had within the programs themselves. The highest levels of involvement were interactive participation and self-mobilization (Marshall et al, 2015). These were described by Cornwall (2008) as such:

> Pretty's last two categories evoke some of the professed goals of those who promote and use participatory approaches in community development . 'Interactive participation' is described as a 'learning process' through which local groups take control over decisions, thereby gaining a stake in maintaining structures and resources. The last category is of 'self-mobilisation', where people take the initiative independently of external organizations, developing contacts for resources and technical assistance, but retaining control over these resources. Self-mobilization was, and to some extent remains, very much the nirvana of participation in the 1980s and 1990s, before talk of 'participatory governance'– and a very different way of figuring the state into the equation– changed the frame (p. 271)

A comprehensive assessment of programs that involved peers found that an organizational level, there were several factors that acted as obstacles, and others that acted as facilitators. As per Marshall (2015) obstacles included, "exclusionary attitudes, exclusionary policies and programs, inadequacies in training and support systems for peers in their work, failure to ground programming in the lived experiences of drug users, and disregard for the social determinants of health." Facilitators also included, "the direct participation of people who use drugs as outreach workers, peer involvement in the governance and management of the program or research project, the use of culturally relevant programming, flexible models of service deliver which are open to change, the provision of training and support to peers in their work, the inclusion of structural interventions which address broader issues."

When it comes to peer education for those struggling with Opioid Use Disorder, many researchers have focused on peer support from those who used to inject drugs but are not currently injecting. These studies, set in emergency room settings, tend to try to prove that those

seen by a peer support counselor in the ER setting are more likely to initiate treatment with MAT, and more likely to show up for follow-up visits post discharge from the ER. This was the focus of Indiana's POINT group based at a few local emergency rooms. Peer Response Counselor's target people who inject drugs when they enter the emergency room and set up a space for them to access related follow up services for Hepatitis C, naloxone, or Medication Assisted Therapy at an outpatient center within 1-2 days. Of the patients who consented to the counseling, 50% followed up within 1-2 days for additional services. While this is a statistically high number of patients who inject drugs to have access to follow up services, the goal of these peer counselors is to transfer people who inject drugs into primary care from those who are not necessarily their peers. Peer counselors do not do education or run teaching sessions (Watson et al, 2020).

There are several studies that have demonstrated that peer led education among those who still actively inject drugs, while challenging, has several positive impacts. In Montreal, a program was created specifically to train people who inject drugs how to use naloxone to resuscitate someone in the event of an opioid overdose. PROFAN recruited six people who use drugs to serve as peer educators. They attended a one-day training where they were fed and instructed thoroughly on overdose prevention, naloxone administration and resuscitation. After completing the training, all trainers were required to turn around and teach the same workshop to others who are currently using opioids. The trainers reported that they experienced a great feeling of empowerment as a result of leading these sessions over a five month period. They appreciated that they were given increased control and autonomy to lead the sessions over time, changing their social identity into becoming a peer trainer and educator rather than a consistent recipient of these same services. Peer trainers reported a greater sense of connectedness to others

in their community, an increase in self-esteem, and a new consideration of whether they should reconsider returning to school to achieve careers in emergency response. It altered participants' thinking about the future and inspired hope (Marshall, 2017). All of this is in-line with a framework for personal recovery known as CHIME. It covers the most important components across research literature for successful interventions and services aimed at recovery: Connectedness, Hope, Identity, Meaning and Empowerment.

Another program that has shown remarkable success using peer led educators is taking place in Haryana, India. There, people who inject drugs are trained by public health workers on the principles of safe drug injection and safe sex practices and made into peer educators. They are chosen based on their leadership skills and communication skills and are often nominated by their peers. They go to meet other people who inject drugs in hot injection locations, private residences, and harm reduction centers. They perform 15-30 minute teaching sessions to an average of 5-6 people/day. According to Jain (2014), their services also include, "the provision of disposable needles and syringes (sometimes on a daily basis), condom promotion and provision, STI/abscess management, oral substitution therapy and referral for detoxification, HIV testing, and anti-retroviral therapy for HIV-positive people" (p. 2). They are supervised by public health workers out in the field and required to maintain data on their work. The results of the program indicated that it had a statistically significant reduction in IDU among those targeted, especially those who had the heaviest injection drug use, and that the drop correlated with the number of peer-led sessions that an active drug user received. It found that peer led educators were better at locating those at highest risk for contracting HIV, and that rural educators, who had less clients to visit, had longer training sessions and a strong rapport with the clients that they visited (Jain, 2014).

Finally, a program in Ukraine was built around greater mobilization of current active opioid users to use peer education to curb the explosion of HIV that happened there in 2015, and it reduced new infections in those who use by 41%. Pebody (2015) states the intervention involved, "being trained to recruit and educate their peers on harm reduction practices. The training, led by the outreach workers, was scripted and involved role-play exercises. Each of the 'peer leaders' who had received the training was asked to bring two further drug users they knew to the program. The intervention was based on ideas of social learning, social identity, social norms and social diffusion" (p. 23). This combination of education along with role play exercises is strongly aligned with principals of union organizing and the organizing conversation, a conversation meant to mobilize people around a common purpose rather than just educate them around a concern. Peer educators were screened for drug use to prove they were still active users of opioids, since only active opioid users could take part in the program. It was noted that peer educators were excellent at targeting those most at risk for acquiring HIV, and most out of reach of the traditional healthcare system.

Moving forward, peer led education has the potential to help alleviate many of the health-related concerns connected to opioid use, especially Hepatitis C. In addition to assisting with the eradication of Hepatitis C, improving peer led education around safe injection could also decrease rates of endocarditis, osteomyelitis, and abscesses related to MRSA and Xylazine. Other programs that could be considered as adjacent to the work of peer led education around Hepatitis C and safe injection include those that target getting patients on medication assisted treatment for Opioid Use Disorder. This involves targeting patients for one of the most popular opioid replacement medications out there - methadone, suboxone and a new injection called Sublocade, an extended release of buprenorphine. Use of methadone was shown to have a

highly protective effect against reinfection with Hepatitis C (Nolan, 2014). While peer led education efforts have successfully targeted many of the physical comorbidities associated with injection drug use, current efforts stop there. There has not been a sustained push to both educate current drug users about how to improve their physical health and improve the societal conditions that contributed to these illnesses in the first place. Moving forward into the design of a new user-centered, peer education focused program on Hepatitis C it is important to remember that those getting trained must not only understand the origins of Hepatitis C and the efficacy of its treatment, but also be trained to see their role in fighting to improve the social determinants of health that lead to an explosion of opioid use here in the United States.

Chapter 4

Design

Purpose

The purpose of my proposed program is to organize a peer led education program for and with people who inject drugs with the goal of eliminating Hepatitis C within a specified location. Building on the successes and failures of other similar ventures, this program will be built with a few core goals in mind:

1) To eliminate Hepatitis C within a specified community.
2) To maintain Hepatitis C elimination through thorough, hands-on and peer led instruction on safe injection practices and connection to syringe service programs that will supply clean, sterile injection supplies.
3) To create a peer led model of education that takes into consideration all the extremely specific needs of those who inject drugs and maximize retention of knowledge while moving patients towards behavior change.
4) To create and train peer educators to be leaders within their community.
5) To teach organizing skills to peer educators so that when they are seeking out new students for the program, they are also using effective organizing conversations to build power and mobilize against poverty and homelessness.
6) To build a sense of efficacy and self-esteem among participants in the program.

It is important to make sure the goal is Hepatitis C elimination, and not just Hepatitis C control. Elimination is defined by the National Institute of Health as, "the reduction to zero of the incidences of infection in a specified geographic area." This bold goal contrasts with the CDC

goals of reducing new infections, including those among PWID, but no goals have been stated as to how many people with Hepatitis C they would like to see treated, or concrete plans made for how to connect PWID with Hepatitis C treatment and preventative programs to stop reinfection. I believe this is because Hepatitis C has previously been seen as too challenging to contemplate for elimination.

The target audience for this program are people who currently have Hepatitis C and are actively injecting drugs or on MAT for injection drug use. This is a group that providers consistently refuse to treat and so must be taught how to access treatment outside traditional healthcare institutions. In addition, this is a group that will need to be taught how to prevent reinfection from Hepatitis C, and therefore will require on-going education about how to perform safe intravenous injection. Peer educators will be chosen from within this group. All peer educators will have to represent the group that they will be educating and therefore must be currently injecting drugs or using MAT to assist with injecting drugs, and they must have successfully completed Hepatitis C treatment. They will be identified from within the community by their peers and by practitioners from within the harm reduction community who identify them as leaders. Peer educators will gain extensive knowledge about Hepatitis C and safe injection, but they will also gain leadership skills, organizing skills and learn how to educate effectively and develop curriculum.

Content & Method

My curriculum must include some specific information, including both basic physiological and medical content. However, the curriculum also must teach peer educators basic principles of education, behavioral change, and curriculum design as they will be responsible for designing the program to teach their peers. The curriculum will also teach basic

organizing principles as well so that the community of people who inject drugs can proactively manage any concerns that may come up in their fight to rid their community of Hepatitis C. I would outline the topics as follows:

1) Why Hepatitis C?
    a) What is your liver? Why is it so important?
    b) What is Hepatitis C? How is it different from Hepatitis A and Hepatitis B?
    c) Why should you care that you have Hepatitis C?
    d) What will happen if you do not treat Hepatitis C effectively?
    e) How is it transmitted?
    f) What happens if someone has HIV and Hepatitis C at the same time?
2) How do you treat Hepatitis C?
    a) What are the most common medications used to treat Hepatitis C?
    b) How effective are the medications used to treat Hepatitis C?
    c) What are the side effects of the medications used to treat Hepatitis C?
    d) Where can someone get treated for Hepatitis C?
    e) What is required for someone to get treated for Hepatitis C?
    f) How long does treatment take?
    g) How can you solve breaks in treatment due to life instability?
3) How do you inject safely?
    a) What are the parts of a hypodermic needle?
    b) Where are the best places to perform an intravenous injection?
    c) How do you assess if a vein is good for injections?
    d) How do you assess if the tip of a needle is in a vein or in subcutaneous tissue?

e) What is appropriate tourniquet use?

f) Why does it matter that you use a sterile needle and sterile water for injections?

g) How easily can Hepatitis C get into a needle? A water bottle? A cooker?

h) Why is it important to clean the area with an alcohol pad?

i) How do you know if a site is infected? When should you seek medical treatment?

4) How do people learn?

a) Zone of Proximal Development

b) Bloom's Taxonomy

5) What are models of behavioral change?

a) Health Belief Model

b) The Theory of Planned Behavior

c) Social Cognitive Theory

d) Transtheoretical Model of Behavioral Change

e) Social Norms Theory

6) How do we teach a hands-on lesson?

a) I do, we do, you do

b) Gradual Release

c) Universal Design for Learning

7) How do we organize to affect change?

a) Identifying Real Leaders

b) Power Mapping

c) Learning the Organizing Conversation

There are several supporting curricular materials that could assist participants with this series of workshops to prepare them to be peer educators, but many things must be kept in mind. PWID come from a wide variety of educational backgrounds, and that includes many who may not have graduated high school or fully mastered literacy. There is a high correlation between not completing high school and substance use disorder (Fothergill, 2008). There is also a high correlation between ADHD and substance use disorder with an estimated 25% of those with SUD suffering concurrently with ADHD. Materials chosen for this series of workshops should be thorough in their content but should also be targeted at an appropriate reading level, especially since several participants have not read academic related content in decades. Information must also be available to participants in multiple formats other than reading materials to ensure that all participants understand, even those with low literacy levels. Information should also be as interactive as possible in order to remain engaging as some peer educators will need assistance maintaining focus if feelings of withdrawal start to kick in.

Every workshop will need to be interactive, non-hierarchical, and allow space for all participants to demonstrate their understanding of the content in a deeper, more meaningful way. This will have to involve two major pedagogical techniques throughout the workshops. The first is Universal Design for Learning, a form of pedagogy meant to be inclusive for all levels of learners from younger learners to older, more mature learners. It is focused on engagement and inclusive teaching methods to make sure that all styles of learners are included in both learning and in how they express their understanding of content.

The second major pedagogical strategy will be project-based learning. This style of learning allows students more space to demonstrate what they have learned and to have freedom to determine how they would like to learn. I believe that this style of learning is essential with

this particular community both to build feelings of self-efficacy but also to increase engagement with the learning material. A series of courses with mini projects will eventually build up to the final project which is a plan for how the peer educator would like to actively sway and educate their peers about Hepatitis C and the importance of taking Hepatitis C medication.

I enjoy using simulated technology to help my students practice real world skills they will need to use as a medical assistant. We use software that creates an entirely virtual electronic medical record filled with simulated patient records, and students are able to practice these skills on Chromebooks along with me as I demonstrate them on a SmartBoard at the front of the class. Students learn about the basic vocabulary of health insurance and the differences between an HMO and a PPO, but it is an entirely unique experience working with a student actor as a patient with a simulated insurance issue in her electronic medical record.

These clinical skill simulations and lessons can also be formatted to fit the principles of UDL. I can provide options for perception. Students can assess blood pressure with augmented stethoscopes if they have hearing impairment, and they can use computer assistive technology to voice what is happening within the electronic medical record if they are visually impaired. I can also provide options for understanding language and symbols within medical text such as medical terminology inside a patient's chart. The Smart Board makes it easy for me to put up a piece of medical documentation while giving my students guided notes to translate them - first together as a class, and then individually. I can circle abbreviations for students to translate and repeat the translation to students who then can practice reading the text repeatedly.

As you can imagine, the options for physical action within a Medical Assisting classroom with a clinic attached are endless. Students can practice giving injections and drawing blood from mannequins, test blood pressure on a robotic arm or run an EKG on a fellow student.

Speakers connected to a mannequin for assessing blood pressure can be turned up to increase a student's ability to hear Korotkoff sounds. Students having issues auscultating an apical pulse can use on-line resources that play typical cardiac sounds for an ideal patient or a patient with a murmur. Students can practice using a simulated blood pressure program on-line if they are getting stuck when performing blood pressure on a fellow student.

I also strongly believe that arts and creativity within my classroom improve student engagement and give them a sense of fun while learning what could be a very dry subject. This also promotes the UDL standard of providing options for expressive skills and fluency, and giving options that promote individual choice and autonomy. For example, I created an interdisciplinary project with our instrumental music teacher that both taught students the principles behind reading an EKG as well as bucket drumming. Students learned percussion basics, and after learning the principles of an EKG strip, they were able to transpose an EKG strip with a specific arrhythmia over to sheet music and practice bucket drumming the final work. This resulted in students being able to demonstrate through percussion what they might struggle to describe verbally. Also, students could create a video showing the importance of an N-95 mask to prevent respiratory transmission in the film genre of their choosing. This technique recruited interest as per UDL guidelines. I would like to translate these successful methods over to the workshops I am designing for this project.

Organization

Curriculum will be organized based on the learning and socioemotional needs of the adult participants. It will not be discipline specific as it will cover topics from within both the world of science and the humanities and therefore must employ strong teaching tactics used by both. It will be culturally specific in that it will always focus on the specific culture around those who

inject drugs with a focus on how this is impacted by homelessness. It will always call in questions about how teaching and learning will be impacted by homelessness, poverty and drug use. It will also recall the central principles of harm reduction:

1. Public Health = Social Justice
2. Ending inequality and oppression, fostering health and liberation
3. Racism, stigma and criminalization cause harm
4. Leadership of the most impacted is key to transformative change

It will be structured to focus on the most basic content first and move upwards along Bloom's Taxonomy from the acquisition of basic knowledge about the liver, Hepatitis C, and injection techniques into deeper, more complex learning regarding using that knowledge to create an effective, public health education lesson that actively gets PWID to seek treatment for Hepatitis C. It will then take the teaching one step further into considering how receiving treatment for Hepatitis C reflects the greater set of societal issues plaguing those living with addiction and poverty and to consider what steps they could take to improve these conditions.

Workshop 1: Making Sure You Want to Do This

Outcomes: Participants will assist with defining what a peer educator is within the community of PWID. They will learn about the goals of this specific program, but assist with determining community expectations for peer educators, community expectations for program creators, and determining a personal set of goals for what they hope to achieve from becoming a peer educator on a personal level.

Materials:

1) Large paper for groups to write down what they think are fair expectations of peer educators from within the PWID community.
2) Worksheet for Setting Goals for program (Appendix I)
3) Markers

Technology:

Teacher laptop
SMART Board
Computers
Webcam
Digital camera
Video camera
Scanner
Color printer

Prior Learning Connections:

Opening discussion questions will ask about participants' experience with peer educators and with harm reduction. What was it like? Did they enjoy the process?

Differentiation/Accommodations:

Required differentiation and accommodations to be arranged with all group members during Workshop #1 and protocols to be adhered to.

Special Concerns:

Food, water and a full bathroom in close proximity must be provided to ensure maximal engagement. It is super important to make sure that the space is open at least 30 minutes prior to the start of class for attendants to have time to address all of their personal biological concerns. It must be stressed that the one requirement is that participants are able to stay awake and participate during the session.

Assessment:

Formative Assessments:

Group check-in regarding understanding of the six pillars of harm reduction. Completion of worksheet either written or verbally that helps participants explain real world of examples they may have experienced of the six pillars of harm reduction.

Summative Assessment:
Participants will be asked to create a list of personal goals they would like to achieve through being a peer educator.

Procedure:

Before the lesson:
Opening discussion questions will ask about participants' experience with peer educators and with harm reduction. What was it like? Did they enjoy the process?

During the lesson:

1) Begin with a circle time for questions regarding prior knowledge of the subject matter.
2) Create a group norms for the workshop process. What is it fair to expect from participants? How do we help everyone feel safe and productive in this space?
3) Distribute and read aloud the six pillars of harm reduction from SAMHSA:
    a) Harm reduction is led by people who use drugs (PWUD) and with lived experience of drug use
    b) Harm reduction embraces the inherent value of people.
    c) Harm reduction commits to deep community engagement and community building.
    d) Harm reduction promotes equity, rights and reparative social justice.
    e) Harm reduction offers most accessible and noncoercive support.
    f) Harm reduction focuses on any positive change, as defined by the person.
4) After each pillar, pause for reflection from group members to consider how harm reduction strategies that they have seen embraced or didn't embrace that specific pillar. Write answers down in front of the group.
5) Ask participants to come up with a group definition of what it means to be a peer educator. Most importantly, what does it mean to be a peer? What does it mean to be an educator? Ask them to take some minutes to consider the following questions. Could you be considered a peer? Could you be considered an educator? Who were your favorite educators? What helped you learn something and remember it? What skills do you need to be a strong educator? Make sure to clarify that educators are more than just teachers.
6) Have students individually present their answers to the questions. Make it clear that this is a judgment free space regarding presenting and that all feedback has to be constructive and thoughtful.

After the lesson:
Students will be asked to complete a worksheet (Appendix I) that outlines goals they have for themselves as workshop participants.

UDL Guidelines Utilized in This Lesson

CHECKPOINT 1.1
Offer ways of customizing the display of information
CHECKPOINT 1.2
Offer alternatives for auditory information
CHECKPOINT 1.3
Offer alternatives for visual information
CHECKPOINT 2.1
Clarify vocabulary and symbols
CHECKPOINT 2.2
Clarify syntax and structure
CHECKPOINT 2.3
Support decoding of text, mathematical notation, and symbols
CHECKPOINT 2.4
Promote understanding across languages
CHECKPOINT 2.5
Illustrate through multiple media
CHECKPOINT 3.1
Activate or supply background knowledge
CHECKPOINT 3.2
Highlight patterns, critical features, big ideas, and relationships
CHECKPOINT 3.3
Guide information processing and visualization
CHECKPOINT 3.4
Maximize transfer and generalization
CHECKPOINT 4.1
Vary the methods for response and navigation
CHECKPOINT 4.2
Optimize access to tools and assistive technologies
CHECKPOINT 5.1
Use multiple media for communication
CHECKPOINT 5.2
Use multiple tools for construction and composition
CHECKPOINT 5.3
Build fluencies with graduated levels of support for practice and performance
CHECKPOINT 6.1
Guide appropriate goal-setting
CHECKPOINT 6.2
Support planning and strategy development
CHECKPOINT 6.3
Facilitate managing information and resources

CHECKPOINT 6.4
Enhance capacity for monitoring progress
CHECKPOINT 7.1
Optimize individual choice and autonomy
Empower learners to take charge of their own learning.
CHECKPOINT 7.2
Optimize relevance, value, and authenticity
Connect learning to experiences that are meaningful and valuable.
CHECKPOINT 7.3
Minimize threats and distractions
Foster a safe space to learn and take risks.
CHECKPOINT 8.1
Heighten salience of goals and objectives
Set a vision for the goal and why it matters.
CHECKPOINT 8.2
Vary demands and resources to optimize challenge
Rise to high expectations using flexible tools and supports.
CHECKPOINT 8.3
Foster collaboration and community
Cultivate a community of learners.
CHECKPOINT 8.4
Increase mastery-oriented feedback
CHECKPOINT 9.1
Promote expectations and beliefs that optimize motivation
CHECKPOINT 9.2
Facilitate personal coping skills and strategies
Develop and manage healthy emotional responses and interactions.
CHECKPOINT 9.3
Develop self-assessment and reflection

Workshop 2: What is the big deal about Hepatitis C?

Outcomes: Participants will be able to answer all of the following questions in order to effectively educate their peers regarding the importance of Hepatitis C treatment:

- What is your liver? Why is it so important?
- What is Hepatitis C? How is it different from Hepatitis A and Hepatitis B?
- Why should you care that you have Hepatitis C?
- What will happen if you don't treat Hepatitis C effectively?
- How is it transmitted?
- What happens if someone has HIV and Hepatitis C at the same time?

Materials:

1. Coloring Page Liver and Surround Structures available at (https://www.exploringnature.org/db/view/Liver-Function-Organs-Labeled-Coloring-Page#google_vignette)
2. Worksheet for WebQuest
3. Colored Pencils

Technology:
Teacher laptop
SMART Board
Computers
Webcam
Digital camera
Video camera
Scanner
Color printer

Prior Learning Connections:
Opening discussion questions will ask about participants' experience with liver failure. Do they know anyone with liver disease? How did the person appear? What symptoms did they have? Did they need a transplant? What factors complicated that process?

Differentiation/Accommodations:
Required differentiation and accommodations to be arranged with all group members during Workshop #1 and protocols to be adhered to.

Special Concerns:
Food, water and a full bathroom in close proximity must be provided to ensure maximal engagement. It is super important to make sure that the space is open at least 30 minutes prior to the start of class for attendants to have time to address all of their personal biological concerns. It must be stressed that the one requirement is that participants are able to stay awake and participate during the session.

Assessment:
Formative Assessments:
Completion of coloring page
Completion of WebQuest, with group check-in regarding answers

Summative Assessment:
Participants will be asked to create any promotional piece that answers the central questions of the lesson, in whatever form they choose. Options include:

1) A flyer
2) A commercial
3) A slide deck
4) An elevator pitch

Procedure:

Before the lesson:
Learners will reflect on their personal experiences with liver disease, especially advanced liver disease. They will be asked to comment on what they already know about the liver. They will also reflect on what they already know about hepatitis and the difference between types A, B and C.

During the lesson:

7) Begin with a circle time for questions regarding prior knowledge of the subject matter.
8) Place a large piece of butcher paper on a table near the group and ask them to write everything they already know about the liver.
9) Distribute coloring pages of liver and surrounding structures with a set of colored pencils for participants to color in separate sections.
10) Bring up liver on SmartBoard in front of the group and review the various sections and what they do.
11) Hand out WebQuest (Appendix I) to students with a list of questions to explore for this week's session and ask students to view a few different sources for answers. Students may write answers on the WebQuest worksheet with a pen. Alternatively, students may use a Flip file to hear the teacher ask questions and record themselves giving an answer verbally if they are not comfortable with their reading and writing skills.
12) The class will meet together and review answers with the instructor to check for individual understanding.

After the lesson:
Students will be asked to share the information that they learned in an engaging way that will have an impact on their peers during presentations. Participants will

be asked to create any promotional piece that answers the central questions of the lesson, in whatever form they choose. Options include:

1) A flyer, hand made or made using graphic design program like Canva
2) A commercial filmed using on-site cameras and edited with provided software
3) A slide deck created using Google Slides
4) An elevator pitch done entirely without technology

UDL Guidelines

CHECKPOINT 1.1
Offer ways of customizing the display of information
CHECKPOINT 1.2
Offer alternatives for auditory information
CHECKPOINT 1.3
Offer alternatives for visual information
CHECKPOINT 2.5
Illustrate through multiple media
CHECKPOINT 3.1
Activate or supply background knowledge
CHECKPOINT 4.1
Vary the methods for response and navigation
CHECKPOINT 4.2
Optimize access to tools and assistive technologies
CHECKPOINT 5.1
Use multiple media for communication
CHECKPOINT 5.2
Use multiple tools for construction and composition
CHECKPOINT 5.3
Build fluencies with graduated levels of support for practice and performance
CHECKPOINT 6.2
Support planning and strategy development
CHECKPOINT 6.3
Facilitate managing information and resources
CHECKPOINT 7.1
Optimize individual choice and autonomy
Empower learners to take charge of their own learning.
CHECKPOINT 7.2
Optimize relevance, value, and authenticity
Connect learning to experiences that are meaningful and valuable.
CHECKPOINT 7.3
Minimize threats and distractions
Foster a safe space to learn and take risks.
CHECKPOINT 8.1
Heighten salience of goals and objectives
Set a vision for the goal and why it matters.

CHECKPOINT 8.2
Vary demands and resources to optimize challenge
Rise to high expectations using flexible tools and supports.
CHECKPOINT 8.3
Foster collaboration and community
Cultivate a community of learners.
CHECKPOINT 9.2
Facilitate personal coping skills and strategies
Develop and manage healthy emotional responses and interactions.

Workshop 3: How Do You Inject Safely?

Outcomes: Participants will be able to verbally and physically demonstrate safe injection practices.

- What are the parts of a hypodermic needle?
- Where are the best places to perform an intravenous injection?
- How do you assess if a vein is good for injections?
- How do you assess if the tip of a needle is in a vein or in subcutaneous tissue?
- What is appropriate tourniquet use?
- Why does it matter that you use a sterile needle and sterile water for injections?
- How easily can Hepatitis C get into a needle? A water bottle? A cooker?
- Why is it important to clean the area with an alcohol pad?
- How do you know if a site is infected? When should you seek medical treatment?

Materials:

1. 33.Size 27 Gauge, ½", 1 mL cc hypodermic needles
2. Phlebotomy Arms
3. Electronic Vein Finder
4. Hand-Out of Red, Yellow and Green Areas for Injection (Appendix C)
5. Tourniquets
6. Sterile Water
7. Cookers
8. Towels
9. Food Dye
10. Alcohol Pads
11. Clinical Check Off Sheet for Safe Injection Demonstration (Appendix D)

Technology:

Teacher laptop
SMART Board
Computers
Webcam
Digital camera
Video camera
Scanner
Color printer

Prior Learning Connections:

Ask group at beginning of workshop about their experiences with injections. Did they feel they were good at it? Did they ever get an infection related to injecting? Cellulitis? Endocarditis?

Differentiation/Accommodations:
Required differentiation and accommodations to be arranged with all group members during Workshop #1 and protocols to be adhered to.

Special Concerns:
Food, water and a full bathroom in close proximity must be provided to ensure maximal engagement. It is super important to make sure that the space is open at least 30 minutes prior to the start of class for attendants to have time to address all of their personal biological concerns. It must be stressed that the one requirement is that participants are able to stay awake and participate during the session.

Assessment:
Formative Assessments:
Watch students as they practice safe injection techniques with small groups at lab tables.

Summative Assessment:
Participants will be asked to individually demonstrate that they have mastered the skill of safe injections by showing the group leader a demonstration of the skill with 95% accuracy as per as distributed rubric.

Procedure:

Before the lesson:
Ask the group at the beginning of the workshop about their experiences with injections. Did they feel they were good at it? Did they ever get an infection related to injecting? Cellulitis? Endocarditis?
Instructors should have already set up stations for safe injection practice prior to meeting with phlebotomy arms and all necessary supplies.

During the lesson:
1. Begin with a circle time for questions regarding prior knowledge of the subject matter.
2. Instructor will demonstrate the concepts behind safe injection using hypodermic needles, phlebotomy arms, works and tourniquet, sterile water, and alcohol pads.
3. Instructor will hand out step by step directions on how to inject safely and read over them with the group. Instructor will also hand out a worksheet indicating safe and unsafe spaces for injection.
4. Instructor will inject one drop of red dye into sterile water to represent HCV and make it clearly visible how easily HCV can pass from one needle to water and into another person's vein even if they aren't sharing needles.
5. Participants will move to tables and practice safe injection using step by step directions and peer guidance for support.

6. Participants will decide when they are ready to demonstrate in front of the instructor by moving over to the assessment table. Instructor will guide them through the process, if they do not pass the first time, they will keep working with them until they do.

After the lesson:
Ask participants to start considering how this lesson could look out in the community. Where would peer educators set up? Where would they store equipment? How will they know if someone actually learned the content?

UDL Guidelines Utilized in This Lesson

CHECKPOINT 1.1
Offer ways of customizing the display of information
CHECKPOINT 1.2
Offer alternatives for auditory information
CHECKPOINT 1.3
Offer alternatives for visual information
CHECKPOINT 2.1
Clarify vocabulary and symbols
CHECKPOINT 2.2
Clarify syntax and structure
CHECKPOINT 2.3
Support decoding of text, mathematical notation, and symbols
CHECKPOINT 2.4
Promote understanding across languages
CHECKPOINT 2.5
Illustrate through multiple media
CHECKPOINT 3.1
Activate or supply background knowledge
CHECKPOINT 3.2
Highlight patterns, critical features, big ideas, and relationships
CHECKPOINT 3.3
Guide information processing and visualization
CHECKPOINT 3.4
Maximize transfer and generalization
CHECKPOINT 4.1
Vary the methods for response and navigation
CHECKPOINT 4.2
Optimize access to tools and assistive technologies
CHECKPOINT 5.1
Use multiple media for communication
CHECKPOINT 5.2
Use multiple tools for construction and composition
CHECKPOINT 5.3
Build fluencies with graduated levels of support for practice and performance

CHECKPOINT 6.1
Guide appropriate goal-setting
CHECKPOINT 6.2
Support planning and strategy development
CHECKPOINT 6.3
Facilitate managing information and resources
CHECKPOINT 6.4
Enhance capacity for monitoring progress
CHECKPOINT 7.1
Optimize individual choice and autonomy
Empower learners to take charge of their own learning.
CHECKPOINT 7.2
Optimize relevance, value, and authenticity
Connect learning to experiences that are meaningful and valuable.
CHECKPOINT 7.3
Minimize threats and distractions
Foster a safe space to learn and take risks.
CHECKPOINT 8.1
Heighten salience of goals and objectives
Set a vision for the goal and why it matters.
CHECKPOINT 8.2
Vary demands and resources to optimize challenge
Rise to high expectations using flexible tools and supports.
CHECKPOINT 8.3
Foster collaboration and community
Cultivate a community of learners.
CHECKPOINT 8.4
Increase mastery-oriented feedback
CHECKPOINT 9.1
Promote expectations and beliefs that optimize motivation
CHECKPOINT 9.2
Facilitate personal coping skills and strategies
Develop and manage healthy emotional responses and interactions.
CHECKPOINT 9.3
Develop self-assessment and reflection

Workshop 4: How do People Learn?

Outcomes: Participants will be able to explain two major ways that people learn new information, focusing on Zygotsky's Zone of Proximal Development and on Bloom's Taxonomy

Materials:

1. Large paper for groups to write down conversation
2. Markers
3. Lesson Plan Templates to Complete Lesson

Technology:

Teacher laptop
SMART Board
Computers
Webcam
Digital camera
Video camera
Scanner
Color printer

Prior Learning Connections:

Ask students when they come in to remember something they learned to do when they were in Kindergarten. How did they learn it? How long did it take? How did the teacher teach it?

Differentiation/Accommodations:

Required differentiation and accommodations to be arranged with all group members during Workshop #1 and protocols to be adhered to.

Special Concerns:

Food, water and a full bathroom in close proximity must be provided to ensure maximal engagement. It is super important to make sure that the space is open at least 30 minutes prior to the start of class for attendants to have time to address all of their personal biological concerns. It must be stressed that the one requirement is that participants are able to stay awake and participate during the session.

Assessment:

Formative Assessments:

Participants will clearly use understanding of the Proximal Zone of Development to teach the class a lesson on how to do something a kindergartner can do.

Summative Assessment:

Participants will be asked to think about how the Proximal Zone of Development, and scaffolding, will impact how they will teach their peers about Hepatitis C and safe injection.

Procedure:

Before the lesson:
Ask students when they come in to remember something they learned to do when they were in Kindergarten. How did they learn it? How long did it take? How did the teacher teach it?

During the lesson:
1. Begin with a circle time for questions regarding prior knowledge of the subject matter.
2. Create a group norms for the workshop process. What is it fair to expect from participants? How do we help everyone feel safe and productive in this space?
3. Ask participants to break down how their favorite teacher taught. How did they help them learn? How did they make it easy to learn?
4. Write a challenging math problem on the board for students. Ask them to pair up and solve it. After several minutes, check to see how they are doing. Ask them to reflect on why they are struggling. Ask them to list all the things they needed to know first in order to solve the problem.
5. Show participants the video "Zone of Proximal Development and Scaffolding"
6. Lay out several basic life skills that people need to know to make daily life easier. Tasks can include, "How do you get from Camden to Philadelphia using public transportation?" or "How do you get a social security card if you have had yours lost or stolen?" Allow participants to pick one they are more comfortable with teaching. Ask participants to think about Zygotsky and make a written or oral list of every step in the process. Have them prepare to come up and share with the rest of the group exactly how they would teach this process to another person. Have group participants consider whether or not they missed a step. Ask participants if they way they were taught felt clear.

After the lesson:
Participants will be asked to reflect on what are the most important things a person needs to learn in order to understand why they need Hepatitis C treatment, and to inject safely. What do they need to learn first? Second? Third?

UDL Guidelines Utilized in This Lesson

CHECKPOINT 1.1
Offer ways of customizing the display of information
CHECKPOINT 1.2
Offer alternatives for auditory information
CHECKPOINT 1.3
Offer alternatives for visual information
CHECKPOINT 2.1
Clarify vocabulary and symbols
CHECKPOINT 2.2

Clarify syntax and structure
CHECKPOINT 2.3
Support decoding of text, mathematical notation, and symbols
CHECKPOINT 2.4
Promote understanding across languages
CHECKPOINT 2.5
Illustrate through multiple media
CHECKPOINT 3.1
Activate or supply background knowledge
CHECKPOINT 3.2
Highlight patterns, critical features, big ideas, and relationships
CHECKPOINT 3.3
Guide information processing and visualization
CHECKPOINT 3.4
Maximize transfer and generalization
CHECKPOINT 4.1
Vary the methods for response and navigation
CHECKPOINT 4.2
Optimize access to tools and assistive technologies
CHECKPOINT 5.1
Use multiple media for communication
CHECKPOINT 5.2
Use multiple tools for construction and composition
CHECKPOINT 5.3
Build fluencies with graduated levels of support for practice and performance
CHECKPOINT 6.1
Guide appropriate goal-setting
CHECKPOINT 6.2
Support planning and strategy development
CHECKPOINT 6.3
Facilitate managing information and resources
CHECKPOINT 6.4
Enhance capacity for monitoring progress
CHECKPOINT 7.1
Optimize individual choice and autonomy
Empower learners to take charge of their own learning.
CHECKPOINT 7.2
Optimize relevance, value, and authenticity
Connect learning to experiences that are meaningful and valuable.
CHECKPOINT 7.3
Minimize threats and distractions
Foster a safe space to learn and take risks.
CHECKPOINT 8.1
Heighten salience of goals and objectives
Set a vision for the goal and why it matters.
CHECKPOINT 8.2

Vary demands and resources to optimize challenge
Rise to high expectations using flexible tools and supports.
CHECKPOINT 8.3
Foster collaboration and community
Cultivate a community of learners.
CHECKPOINT 8.4
Increase mastery-oriented feedback
CHECKPOINT 9.1
Promote expectations and beliefs that optimize motivation
CHECKPOINT 9.2
Facilitate personal coping skills and strategies
Develop and manage healthy emotional responses and interactions.
CHECKPOINT 9.3
Develop self-assessment and reflection

Workshop 5: What Are Models of Behavioral Change?

Outcomes: Participants will be able to demonstrate how using one model of behavioral change applies to getting peers to get treated for Hepatitis C and avoid getting reinfected. They will draw from the following models:

- Health Belief Model
- The Theory of Planned Behavior
- Social Cognitive Theory
- Transtheoretical Model of Behavioral Change
- Social Norms Theory

Materials:

1. Lesson Plan Template
2. Pens

Technology:
Teacher laptop
SMART Board
Computers
Webcam
Digital camera
Video camera
Scanner
Color printer

Prior Learning Connections:
Participants will be asked to consider a time they were convinced to do something. Who or what convinced them? How? What information presented actually changed their mind?

Differentiation/Accommodations:
Required differentiation and accommodations to be arranged with all group members during Workshop #1 and protocols to be adhered to.

Special Concerns:
Food, water and a full bathroom in close proximity must be provided to ensure maximal engagement. It is super important to make sure that the space is open at least 30 minutes prior to the start of class for attendants to have time to address all of their personal biological concerns. It must be stressed that the one requirement is that participants are able to stay awake and participate during the session.

Assessment:
Formative Assessments:
Groups will present the specific model of behavioral change they chose to the group. They can present this to the rest of the group by any means. This includes a slide deck, video, commercial, written report that is read to the group.

Summative Assessment:
Participants will form small groups and based on the presentations, pick a model of behavioral change that they think is most effective for PWID. They will then begin to design an information campaign, teaching tool, TikTok video, TV commercial, Instagram ad utilizing principles of the specific model of behavioral change and prepare to create it with their partner in the next workshop.

Procedure:

Before the lesson:
Participants will be asked to consider a time they were convinced to do something. Who or what convinced them? How? What information presented actually changed their mind?

During the lesson:

1) Begin with a circle time for questions regarding prior knowledge of the subject matter.
2) Do a short review of each of the following models of behavioral change:
   - Health Belief Model
   - The Theory of Planned Behavior
   - Social Cognitive Theory
   - Transtheoretical Model of Behavioral Change
   - Social Norms Theory
3) Ask participants to pick which model they would like to present to the group. If more than one person, put people into pairs.
4) Have students create a presentation that includes all of the following information. They can present this to the rest of the group by any means. This includes a slide deck, video, commercial, written report that is read to the group.
   - Name of the model
   - What does the model say about people? How do people decide to adopt or change a behavior?
   - Who has used this model to create a successful public health campaign?
5) Ask participants to form small groups and based on the presentations, pick a model of behavioral change that they think is most effective for PWID. They will then begin to design an information campaign regarding Hepatitis C. This could be a teaching tool, TikTok video, TV commercial, Instagram ad utilizing principles of the specific model of behavioral change and prepare to create it with their partner in the next workshop.

After the lesson:
Students will be asked to create a list of resources/materials they need for their information campaign. They will make a plan for how they will secure these needed items/ people/ places.

UDL Guidelines Utilized in This Lesson

CHECKPOINT 1.1
Offer ways of customizing the display of information
CHECKPOINT 1.2
Offer alternatives for auditory information
CHECKPOINT 1.3
Offer alternatives for visual information
CHECKPOINT 2.1
Clarify vocabulary and symbols
CHECKPOINT 2.2
Clarify syntax and structure
CHECKPOINT 2.3
Support decoding of text, mathematical notation, and symbols
CHECKPOINT 2.4
Promote understanding across languages
CHECKPOINT 2.5
Illustrate through multiple media
CHECKPOINT 3.1
Activate or supply background knowledge
CHECKPOINT 3.2
Highlight patterns, critical features, big ideas, and relationships
CHECKPOINT 3.3
Guide information processing and visualization
CHECKPOINT 3.4
Maximize transfer and generalization
CHECKPOINT 4.1
Vary the methods for response and navigation
CHECKPOINT 4.2
Optimize access to tools and assistive technologies
CHECKPOINT 5.1
Use multiple media for communication
CHECKPOINT 5.2
Use multiple tools for construction and composition
CHECKPOINT 5.3
Build fluencies with graduated levels of support for practice and performance
CHECKPOINT 6.1
Guide appropriate goal-setting
CHECKPOINT 6.2
Support planning and strategy development
CHECKPOINT 6.3

Facilitate managing information and resources
CHECKPOINT 6.4
Enhance capacity for monitoring progress
CHECKPOINT 7.1
Optimize individual choice and autonomy
Empower learners to take charge of their own learning.
CHECKPOINT 7.2
Optimize relevance, value, and authenticity
Connect learning to experiences that are meaningful and valuable.
CHECKPOINT 7.3
Minimize threats and distractions
Foster a safe space to learn and take risks.
CHECKPOINT 8.1
Heighten salience of goals and objectives
Set a vision for the goal and why it matters.
CHECKPOINT 8.2
Vary demands and resources to optimize challenge
Rise to high expectations using flexible tools and supports.
CHECKPOINT 8.3
Foster collaboration and community
Cultivate a community of learners.
CHECKPOINT 8.4
Increase mastery-oriented feedback
CHECKPOINT 9.1
Promote expectations and beliefs that optimize motivation
CHECKPOINT 9.2
Facilitate personal coping skills and strategies
Develop and manage healthy emotional responses and interactions.
CHECKPOINT 9.3
Develop self-assessment and reflection

Workshop 6: How Do You Teach People a Hands On Skill?

Outcomes:

Participants will model the following educational concepts by creating a strong lesson plan that educates people about Hepatitis C and how to avoid re-infection.

- I do, we do, you do
- Gradual Release
- Universal Design for Learning

Materials:

Hypodermic Needles
Works
Cookers
Sterile Water
Phlebotomy Arms
Sample Hepatitis C Medication Boxes
Images of the Liver
Projects created in last workshop
Lesson Plan Template
Pens

Technology:

Teacher laptop
SMART Board
Computers
Webcam
Digital camera
Video camera
Scanner
Color printer

Prior Learning Connections:

Can you think of a recent time you had to learn something? It has to be something you needed to learn while you were actively injecting. What was it? What made it easier to learn? What made it harder to learn?

Differentiation/Accommodations:

Required differentiation and accommodations to be arranged with all group members during Workshop #1 and protocols to be adhered to.

Special Concerns:

Food, water and a full bathroom in close proximity must be provided to ensure maximal engagement. It is super important to make sure that the space is open at least 30 minutes prior to the start of class for attendants to have time to address all of their personal biological concerns. It must be stressed that the one requirement is that participants are able to stay awake and participate during the session.

Assessment:

Formative Assessments:

Ask students to define, in their own words, the meaning of gradual release and the general principles behind the Universal Design for Learning.

Summative Assessment:

Participants will create their dream lesson for the best way to teach a lesson about Hepatitis C and safe injection to peers who are currently using.

Procedure:

Before the lesson:

Can you think of a recent time you had to learn something? It has to be something you needed to learn while you were actively injecting. What was it? What made it easier to learn? What made it harder to learn?

During the lesson:

1) Begin with a circle time for questions regarding prior knowledge of the subject matter.
2) Introduce the concept of gradual release or "I do, we do, you do".
3) Introduce the flip side of this idea or "You do, we do, I do". Discuss the concept of productive struggle.
    a) What is a productive struggle?
    b) Why would a productive struggle to learn something be helpful to someone?
    c) Would peers who inject drugs benefit or not benefit from adding productive struggle into the lesson?
4) Introduce participants to the concepts behind the Universal Design for Learning by giving them individual access to this website: https://udlguidelines.cast.org/. Read the page out loud to the entire group.
    a) Ask participants to reflect on the general ideas behind UDL
    b) Ask participants to reflect on why UDL might be important to consider when working with PWID
5) Ask participants to consider how they would use these principles to teach their peers about Hepatitis C and safe injection.
6) Participants will create their dream lesson for the best way to teach a lesson about Hepatitis C and safe injection to peers who are currently injecting. Offer them a template for how to build a lesson based on UDL principles. Tell them to be creative, use resources made by classmates if they want, think outside the box, consider models of behavioral change, and have fun.

After the lesson:
Students will be asked to continue working on their lesson plan.

UDL Guidelines Utilized in This Lesson

CHECKPOINT 1.1
Offer ways of customizing the display of information
CHECKPOINT 1.2
Offer alternatives for auditory information
CHECKPOINT 1.3
Offer alternatives for visual information
CHECKPOINT 2.1
Clarify vocabulary and symbols
CHECKPOINT 2.2
Clarify syntax and structure
CHECKPOINT 2.3
Support decoding of text, mathematical notation, and symbols
CHECKPOINT 2.4
Promote understanding across languages
CHECKPOINT 2.5
Illustrate through multiple media
CHECKPOINT 3.1
Activate or supply background knowledge
CHECKPOINT 3.2
Highlight patterns, critical features, big ideas, and relationships
CHECKPOINT 3.3
Guide information processing and visualization
CHECKPOINT 3.4
Maximize transfer and generalization
CHECKPOINT 4.1
Vary the methods for response and navigation
CHECKPOINT 4.2
Optimize access to tools and assistive technologies
CHECKPOINT 5.1
Use multiple media for communication
CHECKPOINT 5.2
Use multiple tools for construction and composition
CHECKPOINT 5.3
Build fluencies with graduated levels of support for practice and performance
CHECKPOINT 6.1
Guide appropriate goal-setting
CHECKPOINT 6.2
Support planning and strategy development
CHECKPOINT 6.3
Facilitate managing information and resources
CHECKPOINT 6.4

Enhance capacity for monitoring progress
CHECKPOINT 7.1
Optimize individual choice and autonomy
Empower learners to take charge of their own learning.
CHECKPOINT 7.2
Optimize relevance, value, and authenticity
Connect learning to experiences that are meaningful and valuable.
CHECKPOINT 7.3
Minimize threats and distractions
Foster a safe space to learn and take risks.
CHECKPOINT 8.1
Heighten salience of goals and objectives
Set a vision for the goal and why it matters.
CHECKPOINT 8.2
Vary demands and resources to optimize challenge
Rise to high expectations using flexible tools and supports.
CHECKPOINT 8.3
Foster collaboration and community
Cultivate a community of learners.
CHECKPOINT 8.4
Increase mastery-oriented feedback
CHECKPOINT 9.1
Promote expectations and beliefs that optimize motivation
CHECKPOINT 9.2
Facilitate personal coping skills and strategies
Develop and manage healthy emotional responses and interactions.
CHECKPOINT 9.3
Develop self-assessment and reflection

Workshop 7: How Do You Use Your Time With Others to Organize for Power?

Outcomes: Students will be able to demonstrate how to use these lessons on Hepatitis C and Safe Injections as a space to build power and organize for change. They will learn the following techniques:

a) Identifying Real Leaders
b) Power Mapping
c) Learning the Organizing Conversation

Materials:

1. Papers that contain the steps in an organizing conversation
2. Paper with explanation of how to identify that someone is a real leader among their peers
3. Large paper and markers for power mapping

Technology:
Teacher laptop
SMART Board
Computers
Webcam
Digital camera
Video camera
Scanner
Color printer

Prior Learning Connections:
What is something about your current situation that makes you mad? What would help? How do you think you could get people in power to listen and help make change?

Differentiation/Accommodations:
Required differentiation and accommodations to be arranged with all group members during Workshop #1 and protocols to be adhered to.

Special Concerns:
Food, water and a full bathroom in close proximity must be provided to ensure maximal engagement. It is super important to make sure that the space is open at least 30 minutes prior to the start of class for attendants to have time to address all of their personal biological concerns. It must be stressed that the one requirement is that participants are able to stay awake and participate during the session.

Assessment:
Formative Assessments:
Participants to demonstrate an effective organizing conversation.

Summative Assessment:
Participants will demonstrate the lesson that they created the week before for the class. They will add in pieces about how they will include an effective organizing conversation into the lesson.

Procedure:

Before the lesson:
What is something about your current situation that makes you mad? What would help? How do you think you could get people in power to listen and help make change?

During the lesson:
1) Begin with a circle time for questions regarding prior knowledge of the subject matter.
2) Create a group norms for the workshop process. What is it fair to expect from participants? How do we help everyone feel safe and productive in this space?
3) Introduce participants to the concept of organizing and collective power. Why does power matter? How does one gain power?
4) What is a real leader? Why do they matter for organizing? Read "Organic Leaders, the Key to Scale" by Jane McAlevey.
    a) Do these same rules apply to the homeless?
    b) How can we tell if a peer is an organic leader?
    c) Why does it matter that we convince them to join us on this mission?
5) What is an organizing conversation? Review this resource from Labor Notes available at https://www.labornotes.org/sites/default/files/22AnOrganizingConversation_0.pdf
6) Have participants get up an practice an organizing conversation. Consider the following things:
    a) What makes people angry about Hepatitis C treatment?
    b) What would it take to improve access to Hepatitis C treatment in Camden?
    c) How can we get everyone to get treated so no one has to get a liver transplant?
    d) What else makes you angry?
    e) What would you like to organize around in the future?

After the lesson:
Students will be asked to complete a worksheet (Appendix I) that outlines goals they have for themselves as workshop participants.

UDL Guidelines Utilized in This Lesson

CHECKPOINT 1.1
Offer ways of customizing the display of information
CHECKPOINT 1.2

Offer alternatives for auditory information
CHECKPOINT 1.3
Offer alternatives for visual information
CHECKPOINT 2.1
Clarify vocabulary and symbols
CHECKPOINT 2.2
Clarify syntax and structure
CHECKPOINT 2.3
Support decoding of text, mathematical notation, and symbols
CHECKPOINT 2.4
Promote understanding across languages
CHECKPOINT 2.5
Illustrate through multiple media
CHECKPOINT 3.1
Activate or supply background knowledge
CHECKPOINT 3.2
Highlight patterns, critical features, big ideas, and relationships
CHECKPOINT 3.3
Guide information processing and visualization
CHECKPOINT 3.4
Maximize transfer and generalization
CHECKPOINT 4.1
Vary the methods for response and navigation
CHECKPOINT 4.2
Optimize access to tools and assistive technologies
CHECKPOINT 5.1
Use multiple media for communication
CHECKPOINT 5.2
Use multiple tools for construction and composition
CHECKPOINT 5.3
Build fluencies with graduated levels of support for practice and performance
CHECKPOINT 6.1
Guide appropriate goal-setting
CHECKPOINT 6.2
Support planning and strategy development
CHECKPOINT 6.3
Facilitate managing information and resources
CHECKPOINT 6.4
Enhance capacity for monitoring progress
CHECKPOINT 7.1
Optimize individual choice and autonomy
Empower learners to take charge of their own learning.
CHECKPOINT 7.2
Optimize relevance, value, and authenticity
Connect learning to experiences that are meaningful and valuable.
CHECKPOINT 7.3

Minimize threats and distractions
Foster a safe space to learn and take risks.
CHECKPOINT 8.1
Heighten salience of goals and objectives
Set a vision for the goal and why it matters.
CHECKPOINT 8.2
Vary demands and resources to optimize challenge
Rise to high expectations using flexible tools and supports.
CHECKPOINT 8.3
Foster collaboration and community
Cultivate a community of learners.
CHECKPOINT 8.4
Increase mastery-oriented feedback
CHECKPOINT 9.1
Promote expectations and beliefs that optimize motivation
CHECKPOINT 9.2
Facilitate personal coping skills and strategies
Develop and manage healthy emotional responses and interactions.
CHECKPOINT 9.3
Develop self-assessment and reflection

Chapter 5

Assessment & Evaluation

When it comes to providing PWID with access to the tools they need to maintain their physical health and fight infection, our healthcare system lacks the necessary education, resources and personnel to help them successfully navigate infection – especially when they are infected with Hepatitis C. Patients do not consistently receive comprehensive education or treatment for Hepatitis C even when they are visiting a primary care provider or inpatient , they are not able to access Hepatitis C even when they advocate for it, and they are overwhelmingly denied liver transplants when their Hepatitis C progresses. All of these issues have real consequences as they contribute to rising levels of Hepatitis C infection and comorbidities such as HIV infection. Traditional programs for treating and educating patients about Hepatitis C have been extremely limited in scope.

Success can be defined by a series of evaluation measures both qualitative and quantitative. First, did the target population (PWID and have successfully been treated for Hepatitis C) attend the workshops? Did they last through all seven workshops? Qualitative interviews should be had with every person who attended the workshop series. All of the following questions should be asked of those who participated:

1) Did the workshop meet your learning needs? Were you able to focus? What could have been better about the environment?
2) For those that made it all the way through, what kept you going? What enticed you to stay?

3) Do you feel prepared to go and talk to your peers about Hepatitis C and safe injection? Why? Why not?
4) How do you feel after attending all eight workshops? Do you feel motivated? Confident? Intimidated? Overwhelmed?
5) Are you proud of the work you produced? What would have helped you produce work you were most proud of? Technology? More knowledge about a specific subject?
6) Do you feel your voice was heard? Do you feel included in the planning of this peer led education program? Do you think what was created truly reflects the needs of PWID?

Further assessment should include a series of quantitative studies on the success of the work of those who went on to educate more of their peers around Hepatitis C and safe injection. These surveys should give hard data regarding how many patients received education and successfully received Hepatitis C treatment from a local healthcare provider. Credit should be given for patients who seek out follow up treatment and discover that they successfully cleared the virus independently, they still moved forward with accessing Hepatitis C treatment. A series of interviews as well with the peer facilitators that were more intimately involved with the creation and production of this project would also facilitate understanding about what was impactful for participants, and what would improve future participant experience, if it is even deemed worthy of reproduction by the student members who participated in it. This can be done through focus group interviews with the participants who elect to participate in this research as facilitators. In my mind, the program will be a success if it creates a cadre of empowered people that are strengthened by in-depth knowledge and tools to push for better education, medical

treatment, and institutional policies that help reduce Hepatitis C infection and prevent re-infection. Participants should also be tracked to see if participation in this program improved their own self care practices and willingness to utilize the healthcare system for a variety of reasons.

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Appendix

APPENDIX I - Workshop 2 WebQuest

1. What is your liver? Why is it so important?
   Consider using:
   a. TedEd, "What Does the Liver Do?" available at: https://www.youtube.com/watch?v=wbh3SjzydnQ
   b. "The Liver and Its Functions" available at: https://columbiasurgery.org/liver/liver-and-its-functions

2. What is Hepatitis C? How is it different from Hepatitis A and Hepatitis B? (You might want to consider making a little chart for yourself!)
   Consider using:
   a. "What's the Difference Between Hepatitis A, B and C?" available at: https://columbiasurgery.org/liver/liver-and-its-functions

3. Why should you care that you have Hepatitis C? What will happen if you don't treat Hepatitis C effectively?
   Consider using:
   a. "How Untreated Hepatits C Can Affect Your Body?" https://www.webmd.com/hepatitis/hepatitis-c-no-treatment

4. How is it transmitted? What happens if someone has HIV and Hepatitis C at the same time?
   Consider using:
   a. "HIV & HepC (Deadliest Combo)" available at: https://www.youtube.com/watch?v=9uwNW1DSUnU

Organic Leaders— The key to scale

McAlevey argues that a movement needs serious power to win serious outcomes, and this power comes from engaging organic leaders who already have influence. This specifically contrasts with the approach taken by most NGOs, and many unions, who engage with people McAlevey calls “activists” who already support the cause but don’t necessarily have a following.

Instead of taking the shortcut of working with activists (which might be sufficient for a mobilising approach and low concession costs), No Shortcuts suggests doing the deeper, harder work, of winning over organic leaders.

The reasoning for this is twofold. Firstly, building majority power in a “bounded constituency” (such as is required for a strike) makes it necessary to reach out to every person in that constituency, regardless of their “preexisting interest in the union”. Real power means a committed majority, and that can’t be achieved by only working with an activist minority that already supports the cause: “because the goal is building majorities of a bounded constituency, organizers are constantly forced to engage people who may begin with little or no initial interest in being a part of any group”. Secondly, it’s worth taking the time to identify and win over “organic leaders” because they already have influence in a workplace. Rather than find people who are supportive and work to build their influence, you find people who are influential and work to build their support. McAlevey argues that developing these leaders is more valuable than training “random volunteers”, as they start “ with a base of followers”. “They”, she notes, “are the key to scale.” So, although organic leaders don’t necessarily support the union (or the cause), they are a natural target because they have influence in the constituency and will shape the views and behaviour of other constituents.

Is this concept relevant outside union organising? While it makes sense to speak of leaders in a workplace, or in a faith community, does it make sense to talk about leaders in civil society in the same way? Outside the shop floor, are there community member who are also organic leaders—who are influential, with a base of followers?
The answer, probably, is yes. But more importantly, the key distinction here is between activists who may display commitment and “leaders” who can move others to act. Recruiting activists is not the key to scale and, in fact, limits scale. If you are using resources to train and coordinate activists who are very supportive but can’t move others to act, you won’t be able to create the sort of distributed leadership structure that mean you can scale up the operation without saddling a few professional staff with an ever-growing workload.

Being able to identify leaders, distinguish activists from leaders, win over leaders and develop them as necessary, is the key to building majority power—because leaders build your capacity to grow to scale.