DAY 3

Helping to End Addiction Long-Term (HEAL)
HEAL Prevention Initiative (HPI)
Year 3 Meeting

Wednesday, November 10, 2020
1:00 p.m.–5:30 p.m. ET / 10:00 a.m.–2:30 p.m. PT

HPI Strategic Area 3 : Prevention Intervention Development

HPI Strategic Area 3: Prevention Intervention Development

Facilitator	Dr. Ty Ridenour	RTI
Speakers	Dr. Kym Ahrens	Seattle Children's Hospital
	Dr. Lynn Fiellin	Yale University

4:20–4:50 p.m.

Key Takeaways

- Theme: Adaptability is a key function for effective prevention implementation development.
  - The intervention structure has to be adaptable to the intervention setting, such as the Seattle Children's Hospital work with the juvenile justice system.
  - It is essential to have members of the team have experience with the intervention setting to be able to more seamlessly adapt to changes.
  - Soliciting regular feedback throughout the process from key stakeholders was important to ensure high quality and efficiency of the intervention being implemented.
- Use of innovative technology to implement a prevention intervention can be successful if done methodically and with external feedback.
- Use of a wide array of focus groups (from the public to specialists) is key to being well informed on pertinent content and subject matter to shape intervention development.
- Intervention sites that have strong partnerships with developers and more participation in the intervention development process tend to have a better understanding of the scope and goals of the project, which aids in other facets of the work such as recruitment and cooperation.

HPI Strategic Area 3 : Prevention Intervention Development

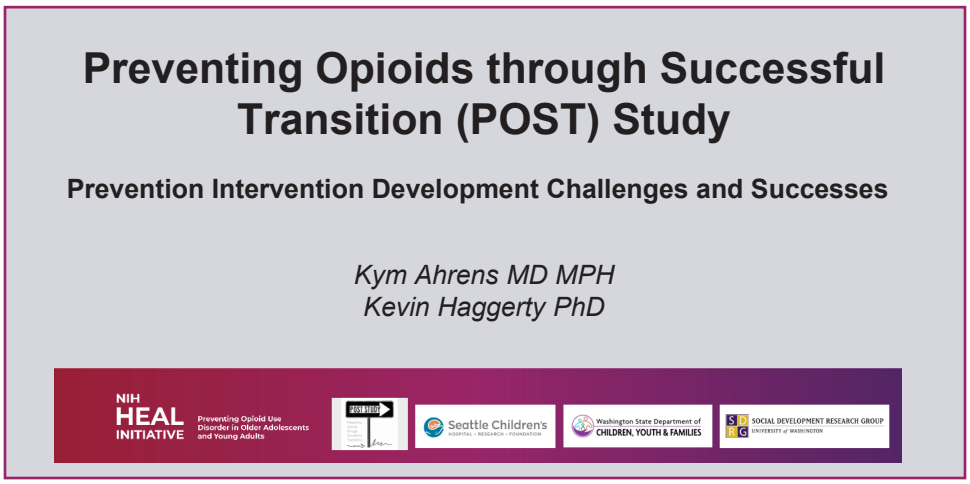
Summary

The session focused on work by the Seattle Children's Hospital (SCH) and Yale University. The SCH used various intervention strategies to prevent opioid misuse among youth transitioning from the juvenile justice system back into the community, regardless of the youth's present use level. Strategies used for the program included motivational interviewing, guidance for trauma-related education and therapy, and reinforcement approaches to treat substance use disorders and decrease use among youth. Active stakeholder engagement was key to the success of the project through cultivation and maintenance of partnerships with state and regional partners. Also, it is essential to have members of the team have experience with the intervention setting, in this case the state juvenile justice system. Soliciting regular feedback throughout the process from key stakeholders was important to ensure high quality and efficiency of the work intervention being implemented.

The team from Yale University presented their PlaySMART video game intervention, which aimed to both prevent opioid misuse and promote mental health in teens ages 16–19 in conjunction with their school-based health centers. The project included key stakeholder focus groups (students, treatment providers, implementation partners, and prevention specialists), which was integral to the games' success. The finding from the piloting of the game was that innovative technology does have a place in prevention intervention work and can be done successfully with major stakeholder participation. The game will be launched to a larger audience for intervention work.

RECAP

Ty Ridenour welcomed the group back to the meeting. He noted that the sessions have been compelling and interesting. He thanked the group for continuing and staying engaged. He introduced himself and stated that he is a multiple principal investigator of the HPI Coordinating Center. He stated that their role is to provide 10 outcomes studies with support, as they have the arduous task of rapidly developing evidence-based prevention programs to be ready for scale-up after only 5 years. This relatively new funding mechanism that NIDA is using to support these studies has two phases. The first phase funds development of an intervention, and the second phase funds the outcomes testing of that intervention. The next two presenters will offer a peek behind the curtains to learn the techniques that their teams have used to build their programs to prevention opioid misuse in two different at-risk populations of adolescents and young adults. Earlier that day, Captain Coady highlighted the need to both adapt programs to be most effective for the particular group it will be delivered to, and at the same time maintain fidelity to the intervention model. Both presentations will describe studies that are examples of meeting both of these objectives in developing their programs in collaboration with their stakeholders. Ty then transitioned the presentation to Kym Ahrens at Seattle Children's Hospital.



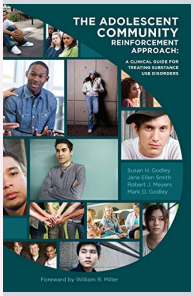
HPI Strategic Area 3 : Prevention Intervention Development

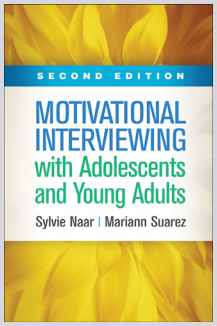
Kym spoke about the POST study (Preventing Opioids through Successful Transition). It is a case study of prevention intervention development and refinement within and in partnership with a state juvenile justice system.

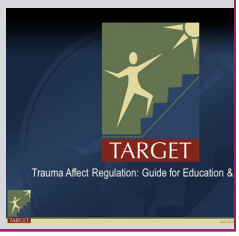
As Ty noted, each project has two phases. Kym's team had a 2-year planning and development phase and is one of two HPI grantees to move to the testing phase this year. The overarching goal of the testing phase was to perform a sequential, multiple-assignment, randomized trial (SMART experiment) to evaluate opioids prevention intervention strategies of various intensity levels among youth with and without substance use disorders (SUDs) who were transitioning from juvenile justice back to the community.

Their hypothesis was that preventing and treating non-opioid SUDs by strengthening skills and social connections is the best way to prevent opioid use initiation and escalation. Their goal is to assess feasibility and develop and refine protocols and procedures, recruitment, engagement, and retention strategies—specifically, to perform a pilot SMART experiment with 31 incarcerated youth transitioning out of Washington State detention facilities.

The key in that is developing a second intervention strategy. Kym displayed the three intervention packages that they have incorporated into their intervention structure.

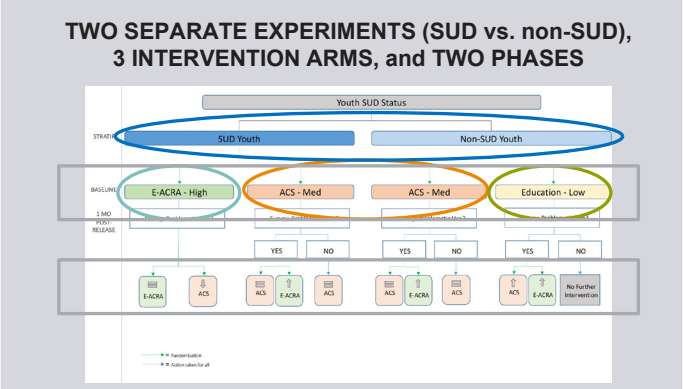






The Adolescent Community Reinforcement Approach is a package that has been studied for decades in adults and eventually adolescents. It is effective in treating SUD and decreasing the use of substances in adolescents and young adults. However, there have been no prevention studies looking at ACRA. The team chose this as the base package in partnership with the DCYF JR leadership, who have been interested in using this as an intervention package previously, but have been unable to accomplish it.

They also included motivational interviewing as a strategy to enhance initial and ongoing engagement of participants, because her mPI Kevin Haggerty has had significant success with it and there's good evidence in the literature that it enhances engagement. Finally, they sought to include some trauma affect regulation content (TARGET) because the average youth in the juvenile justice system has an ACES score of at least 4 out of 10. At least 40% of their youth—probably an underestimate—have DSM criteria for PTSD, and almost all of them have trauma exposure to some degree.



HPI Strategic Area 3 : Prevention Intervention Development

Part of the reason for the 2-year planning phase is the complexity of the design. They had two SMART experiments—one for youth who came in with a non-opioid SUD, and one who at baseline did not qualify for having a non-opioid SUD. They have three intervention arms. E-ACRA is the high-intensity intervention, ACS the medium intervention, and education as the low-intensity intervention. Youth with SUDs were randomized to either E-ACRA or ACS. Youth without SUDs were randomized to either ACS or education only. One month after release, they were re-assessed for problematic substance use, and they could then be re-randomized into a different intervention package. This is what a SMART design is—it is intended to figure out what works for whom, and when.

In terms of their intervention development process, they hired an intervention supervisor during their development phase to deliver the intervention during their pilot and give feedback on an ongoing basis to assist them in the development and modification process. They also had at least weekly intervention development meetings with the research team, as well as periodic meetings with the developers of ACRA and TARGET. Then they fluidly modified the intervention structure throughout the pilot to allow for testing of the modified content and structure.

And finally, they had participant feedback regularly solicited by their interventionist.

In addition to these components, the stakeholder involvement from the state partners was key throughout the process. The team devoted a large amount of effort to cultivating and maintaining active and equal partnership with state partners. They spoke in an earlier panel with one of their state partners who has been integral to the success of this project so far and also in the intervention development. They also had monthly meetings with the regional administrators who run the community facilities; they have 11 facilities in total—3 large institutions and 8 community facilities—spread out throughout Washington State. They met with institutional leads from superintendents to program managers. They had hired inside the agency to provide data and logistics support for recruitment, especially for intervention support to ensure that they are able to get to the youth and provide a space for them to have the intervention sessions, for example. Two of the three interventionists they hired for the outcomes testing phase are former DCYF JR employees, so they have a very deep understanding of the system, what the kids go through while they're in the system, and what it takes to maintain contact when they leave.

EXAMPLES OF INTERVENTION CHANGES MADE

Issue	Change made
Not enough time to deliver intervention before discharge; discharges sometimes happened early	Recruited/consented earlier to provide more buffer time before release
Medium & high intensity interventions were originally too similar; concern that with partial completion, content & dose would not be distinct enough	Modified medium intensity arm to include only goals & resources/case management (high intensity adds skills & social support)
TARGET skills overlapped with ACRA but used different language; difficult to figure out how to blend	Modified high intensity ACRA content to emphasize TARGET principles but using ACRA language

EXAMPLES OF INTERVENTION CHANGES MADE

Issue	Change made
Virtual sessions alone were not creating a strong enough interventionist-participant bond	Once prudent vis-à-vis COVID, we defined a minimum number of in-person sessions prior to and after discharge
Interventionist was losing contact with some participants after discharge	Offered participants cell phones (if needed) during the intervention; asked participants for social media, email, and family/friend contact information

Kym cited some examples of the intervention changes that they made throughout the outcomes testing process. One issue is that they initially did not have enough time to deliver all the intervention sessions before discharge, and sometimes the discharge dates were unexpectedly moved up. The solution was to recruit and consent participants earlier to give more buffer time before release and allow the interventionists to complete the necessary sessions.

A second change was made after the team quickly discovered that the medium- and high-intensity interventions were too similar as initially planned, and they were concerned that partial completion of the high-intensity intervention would look very similar to the medium-intensity intervention. They modified the medium-intensity arm to include only goals development and resources and case management. The high-intensity arm includes goals, resources and case management, skills, social support from a caregiver or other adult or peer, and the TARGET content.

Third, the TARGET skills also overlapped with ACRA in terms of the ideas behind them, but the language was different, so even when they initially had some actual TARGET skills, and instead of doing that they used the ACRA language and blended the TARGET into the ACRA more fluidly. So, they still get the same skills but using ACRA language.

Fourth, because of COVID, they had to do the sessions exclusively virtually at first, and for some youth having the virtual sessions alone was not enough to create a strong bond between the interventionist and the participant. Once interventionists were vaccinated, they moved to a minimum number of in-person sessions before and after discharge to try to enhance participation initially and maintain it after discharge.

The fifth challenge was that the interventionists lost contact with some participants after discharge. The team began offering participants cell phones while they were still in the institutions, and they also asked them for multiple sources of follow-up contact so they could keep in touch with them.

Kym discussed the final intervention structure. Stage 1 begins about 12 weeks before release and extends to 1 month after discharge (total of 4 months). For the low-intensity intervention (education only) they do a 1-hour online workbook. ACS, the medium intensity, is one in-person session at least seven phone and text check-ins, plus the education workbook. For the high-intensity, or E-ACRA, they do twelve, 30- to 60-minute sessions that are either virtual or in person, and they had a goal of at least three of them being in person, plus the education component. Stage 2 begins 1 month after release, after problematic substance use is reassessed. Participants may be re-randomized into a different arm. At that stage, there is no change to the education-only group. For ACS they are given at least eight more phone and text check-ins. For the high-intensity E-ACRA, they are given an additional eight 30- to 60-minute sessions, again with a goal of at least three of them being in person. Their definition of "full intervention" is getting at least 60% of each content type during each stage.

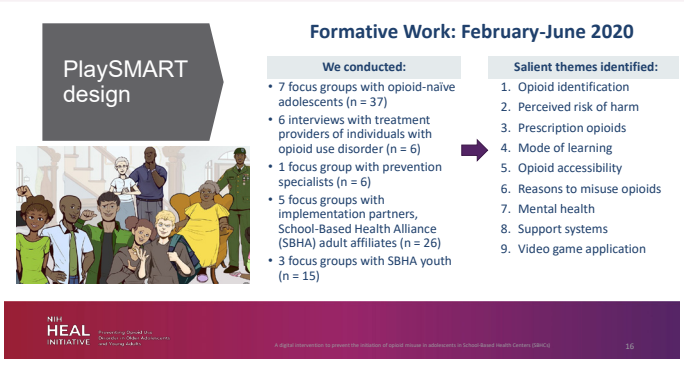
The main upshots are as follows. (1) They have to do iterative refinement of their intervention structure, and that was necessary to adapt to the justice system environment and to COVID, while also preserving engagement with youth. (2) It was essential to have team members in the intervention development and delivery team with experience within their state justice system. (3) It was also essential to solicit regular feedback on the intervention development and other study aspects from key state partners and stakeholders.

Kym ended by showing a slide with her team members' names.

Ty thanked Kym for her presentation and introduced the next presenter, Lynn Fiellin. Ty explained that Lynn's project is quite different because it is in school-based health centers, and the at-risk group is a bit different also.

Lynn started by introducing the PlaySMART video game intervention, which aims to both prevent opioid misuse and promote mental health in teens ages 16–19 in conjunction with their school-based health centers.

Lynn noted that the design and formative work took place from February through June of 2020. They conducted focus groups and interviews with several key stakeholder groups, including opioid-naïve adolescents, treatment providers, prevention specialists, and adult and youth affiliates of their partner at the School-Based Health Alliance. Part of the goal of engaging these different groups was to gain the input of different groups—such as people who have never tried opioids, those who have misused opioids, and those who had developed opioid use disorder and were now in recovery—so that they could incorporate the entire spectrum of people's experiences. The salient themes from those focus groups of interviews included opioid identification, perceived risk of harm, prescription opioids, different modes of learning, accessibility to opioids, reasons to misuse opioids, different issues around mental health, and support systems, as well as how to use a video game to address these issues.

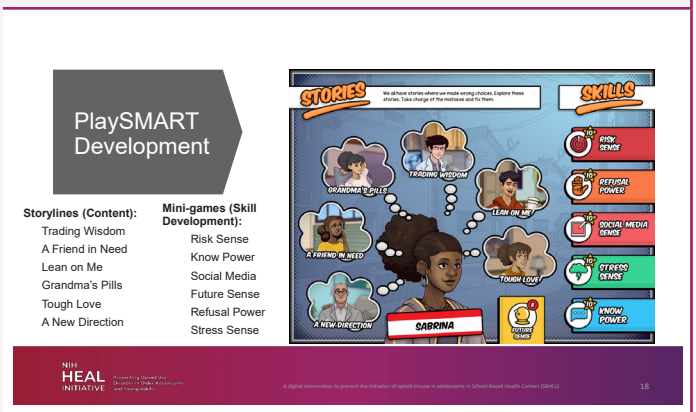


HPI Strategic Area 3 : Prevention Intervention Development

Equally important to identifying these themes was hearing the voices of those in their focus groups and interviews. For example, one teen suggested a storyline idea involving someone who has had a "good family, good life, good parents," but tried opioids anyway, to show that it could happen to anyone. Another interviewee who is in treatment for opioid use disorder explained that he had had a very tough childhood, experiencing bullying, anxiety, and depression. He started using drugs because it made him feel happy, and he liked being able to control the way he felt. He transitioned from cocaine to heroin because he was doing a lot of cocaine, staying up until 3:00 every morning, and he needed something to help him go to sleep. His sister's boyfriend offered him something to help him sleep. He didn't know what it was when he smoked it, but it included fentanyl. He described the feeling as "immediately being hugged by a blanket." From there he developed opioid use disorder, and his reason to use was to "get better" and not experience symptoms of withdrawal. These compelling voices helped to build the stories in the game.

The process of building these stories and mini-games was highly iterative. Lynn showed examples of some of their Google Docs, which were subsections of shared documents between their team and their game development team at Schell Games, a commercial game development team in Pittsburgh. The design and development process, which took 16 months to complete, was highly iterative between Schell Games, the project team, and team partners.

Lynn showed the PlaySMART home screen. It shows one of the avatars, for which the player can choose the demographics. Six stories present challenges that the player has to navigate through, and six skill-based mini-games are woven throughout the stories. All of the content, including the stories and the areas targeting different skills, came out of their focus groups, interviews, and input from other key stakeholders and their team working with Schell Games. The stories and mini-games focus heavily on substance misuse, primarily on opioid misuse, and on mental health.

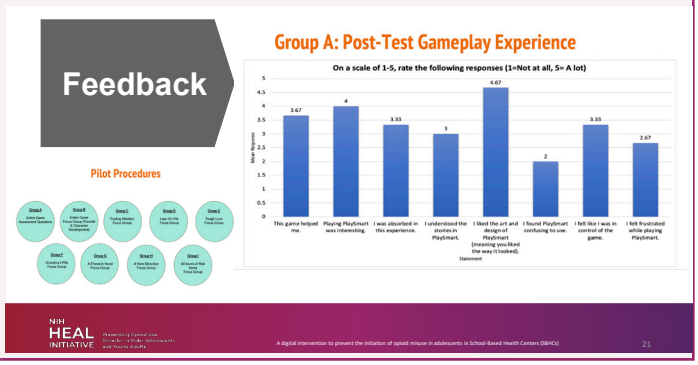


Lynn showed pictures of one of the stories, A Friend in Need. She showed screenshots of the story, as well as how there is a lot of interactivity between each of the stories and the different mini-games. The player navigates through the different stories, unlocking the next steps and the stories by engaging the mini-games, which helps them build skills like learning accurate information, refusing risky situations and risky people, reducing stress, and avoiding risk. The mini-games do the skill-building while they're incorporated into the overarching story. This specific story takes the player through how to help a friend who needs help with a mental health issue.

HPI Strategic Area 3 : Prevention Intervention Development

As part of the development, the team conducted a pilot study in April 2021. The pilot study was conducted entirely remotely. They enrolled 33 teens from around the country who pilot tested the game and provided feedback through focus group discussions. These nine testing groups ranged in length from 1.5 to 4.5 hours. They fed that feedback along with feedback from others to Schell Games to revise the PlaySMART game over the summer.

Lynn stated from the slide you can see some more details about the pilot work and the play testing. The nine pilot groups each had their own tasks and activities. They wanted to have one group (Group A) play through the entire game and give feedback on how it flowed and how it hung together. The other groups looked at very specific areas of the game with targeted discussion and questions. The slide shows data that they collected from Group A on whether they thought the game was interesting, whether they liked the art and the design, and whether they felt frustrated by the game. All of this feedback was given to Schell Games for final revisions of the game.



The PlaySMART game is now final. Anyone who is interested in playing can reach out to the team to receive a log-in. It is ready for use for their intervention's randomized controlled trial, which is they have started and will conduct in 10 Connecticut high school school-based health centers. The game is approximately 6–8 hours of unique game play, so the structure of their trial will be that kids will be assigned to either the PlaySMART or a set of control games, and will play over a time period of 4 weeks. They try to work around school schedules and follow the students' lead on what works best in terms of being in the schools. Lynn showed a brief video of one of the scenes from the stories, Grandma's Pills. In this story, the player witnesses the sharing of an opioid prescription within the family, and the scene depicts an overdose. Learning objectives of this story included that the player learn about medication safety and opioid overdose identification and how to respond.

Lynn ended by showing a slide of the team and thanked them and NIH funding.

Ty reminded the group that if people have questions to add them to the Q&A box.

Ty started the Q&A with Kym. He thinks in her project she's adding more sites than just the ones they've done the pilot testing with. He is curious about her thoughts on whether she thinks that working with sites during the program development phase might have a secondary benefit of them also having greater attachment to the study in terms of fidelity or commitment to making it work—that is, do sites that were involved from the beginning seem more committed to the intervention in different ways? Kym answered by noting a very interesting thing that happened during their pilot: they have such strong partnership with the state at critical levels that, whereas they had wanted initially to do the pilot with 3–5 sites, all 11 were interested in participating. Ultimately, they recruited 8 of the 11 as participants for the pilot. Everyone was engaged when they started the outcomes testing. The sites that had more frequent participants are farther along and understand the study better, and recruitment is easier there. That is one way in which having such a partnership made a huge difference and made things successful. They exceeded their goals in the pilot.

Ty's next question was for Lynn. She has successfully developed some of these "serious games" to prevent risky health behaviors of other kinds, not just opioid misuse. Earlier we heard evidence supporting the common liability model, which in essence states that the liabilities to different drugs have much more overlap than they do unique risk factors. He asked whether she found any unique risk factors or other aspects that they needed to build into developing the games that were distinct for preventing opioid misuse in comparison to the other risky health behaviors. Lynn answered by noting her previous development of SmokeSCREEN, a game that focuses on preventing both smoking and vaping in teens. One of the common themes, which the team didn't realize until they started working on PlaySMART, is that of misperception, or inaccurate perception, of risk of harm. For example, with smoking and vaping, kids definitely had a good sense of the risk of smoking combustible cigarettes but a very inaccurate view of the risk of vaping. The team saw the same thing in discussions with kids in the difference between prescription opioids and heroin. SmokeSCREEN had to target vaping particularly, because there was a ceiling effect about risk related to smoking. The same is true with prescription opioids and heroin. The team really has to connect the dots for kids to understand that a Percocet is equal to heroin is equal to fentanyl. That is one example where she thinks that there are common themes in the approach.

Ty thanked the presenters and introduced Phillip Graham to facilitate the last presentation.

HPI Strategic Area 4: Dissemination, Implementation, Scale-Up, and Sustainment of Prevention

Phillip introduced himself as a PI in collaboration with Ty on the HPI Coordinating Center. The development and testing of novel interventions is the first step toward reducing opioid misuse and other substance use. However, until we're really able to actualize this in Strategic Area 4—dissemination, implementation, scale-up, and sustaining efforts—we are not going to be able to move the needle in the way we want to. He then introduced the Oregon Social Learning Center to talk about these key areas: what happens after we prove that these interventions are effective ?

HPI Strategic Area 4: Dissemination, Implementation, Scale-up, and Sustainment of Prevention

Facilitator	Dr. Philip Graham	RTI
Speakers	Dr. Tess Drazdowski	Oregon Social Learning Center
	Dr. Ashli Sheidow	Oregon Social Learning Center
	Dr. Lisa Saldana	Oregon Social Learning Center

4:50–5:20 p.m.

Key Takeaways

- Theme: Explore task shifting during project implementation.
  - Example: Researchers trained juvenile probation officers to deliver family-based clinical treatment as effectively as contingency management therapists.
  - Creativity of roles is particularly key in rural areas that lack addiction services and are harder hit by the opioid epidemic.
- Theme: Focus on the implementation and scaling up of a project.
  - Implementation: Task shift to use available resources/staff
  - Implementation: Offer virtual training and support
    - » Evidence shows that training and ongoing support can be done virtually with success.
  - Scaling up: The Pre-FAIR (Families Actively Improving Relationships) project was presented as an example of a project focused on broad scaling up and sustainment methods.
    - » Initial sites need to show fidelity over time before scaling up can occur.

HPI Strategic Area 4: Dissemination, Implementation, Scale-Up, and Sustainment of Prevention

Summary

The session discussed two research projects conducted in Oregon, with a focus on implementation and sustainability of outcomes produced. One study focused on contingency management (CM) for emerging adults through training juvenile probation officers (JPOs) in rural or under-resourced locations deliver CM. This approach is a task shift from the previous work of training therapists to deliver CM. CM implementation, focus groups, interviews, and compilation of results were occurring with emerging adults in two counties in Oregon. The researchers expect that, once the results are compiled, the next steps are to expand the project (implementation scale-up) and see the effects CM could have on substance use and recidivism outcomes.

The second project presented was an addition to the FAIR project, termed the Pre-FAIR project. The researchers discussed the successes from the FAIR project (implementation has been successful so far, active clinics are showing improvements in fidelity, improvements are being seen among the parents, and the Oregon Department of Human Services is highly engaged), along with challenges for prevention (referral agencies are struggling to meet treatment needs, some referred clients are found to be actively using substances, and there is a high number of pre-referrals outside the intended age range). Overall, the FAIR treatment process is demonstrating scale-up potential as the project continues: the initial sites seemingly have fidelity, which is key to expansion and establishment of additional site work.

RECAP

Tess Drazdowski and Ashli Sheidow, followed by Lisa Saldana, talked about these key issues and about what we need to do as prevention scientists to promote the uptake of these interventions.

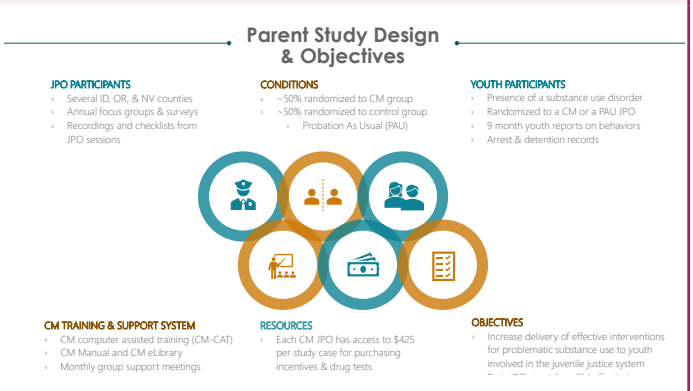
Tess thanked Phillip and introduced herself and Ashli as research scientists at the Oregon Social Learning Center. They discussed their HEAL Administrative Supplement, which focuses on task shifting and contingency management for emerging adults in the justice system. She acknowledged the funders and partners in the research, then transitioned the Ashli who talked about the parent study that is the basis of the supplement.

Ashli stated that over the past two decades, their team has worked with many therapists to help train and support them to conduct family-based contingency management (CM) for any type of adolescent substance use problem. Part of that is prevention of longer-term substance use problems and more extensive use of drugs. The parent is investigating whether they can do task shifting from therapists to help juvenile probation officers (JPOs) to deliver CM, especially in rural and under-resourced locations. As an example, many of the counties in the parent study are a 90-minute drive to the closest youth substance use treatment program.

Participants in the parent study, the JPOCM study, are JPOs in several Idaho, Oregon, and Nevada counties. They are randomized either to deliver CM or to continue delivering probation services as usual. The team is collecting both quantitative and qualitative data from the JPOs, as well as recruiting the justice-involved youth with substance use problems in those counties. The youth are also randomized to either a CM JPO or a probation-as-usual JPO. The team is gathering data, including arrest and detention records, over time from the kids and their parents.

The primary question for the parent study was, “Can JPOs who are not clinically trained (many of them in these rural areas only have a high school degree) actually deliver this family-based clinical treatment, especially in comparison to CM therapists?” The answer is yes. Surprisingly, they can deliver it even better than therapists (higher adherence).

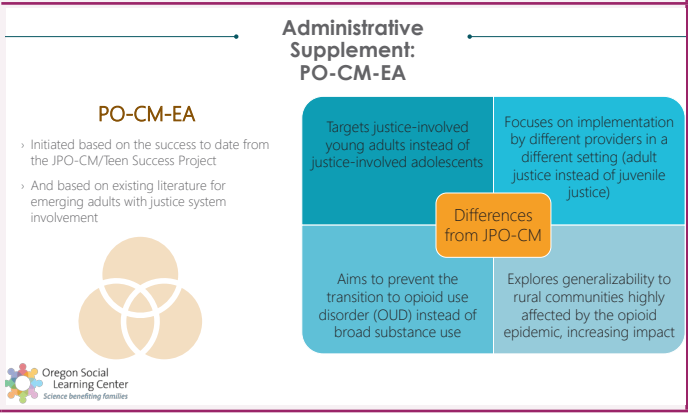
The team is still investigating the youth outcomes as well as moderators of CM delivery. Ashli then turned the discussion over to Tess, who spoke about the HPI administrative supplement to the parent study, which she is leading for the team.



HPI Strategic Area 4: Dissemination, Implementation, Scale-Up, and Sustainment of Prevention

Tess began with how, on the basis of the success of the current parent study and existing literature, they applied for a HEAL administrative supplement. We know that emerging adults, in particular in the justice system, are highly likely to use alcohol and drugs, and that individuals who report using opioids are up to 13 times more likely to be involved in the justice system. Broadly, this group of individuals has poor outcomes. Tess stated that emerging adults in the justice system have extremely low rates of formal service use. Even if they are able to access community-based treatments, it's unlikely that they are going to receive evidence-based interventions. Because POs work in every jurisdiction in the United States, the team thought that they might be ideal candidates for delivering effective interventions to emerging adults on probation who use substances, which could help prevent the development of more serious problems.

Tess explained that this study differs slightly from the parent study. They are completing work with emerging adults, and they are working in the adult justice system instead of in the juvenile justice system. They are focusing on prevention of both opioid use disorder and other significant substance misuse. They are looking at generalizability to rural communities highly affected by the opioid epidemic, thus hopefully increasing impact.



HPI Strategic Area 4: Dissemination, Implementation, Scale-Up, and Sustainment of Prevention

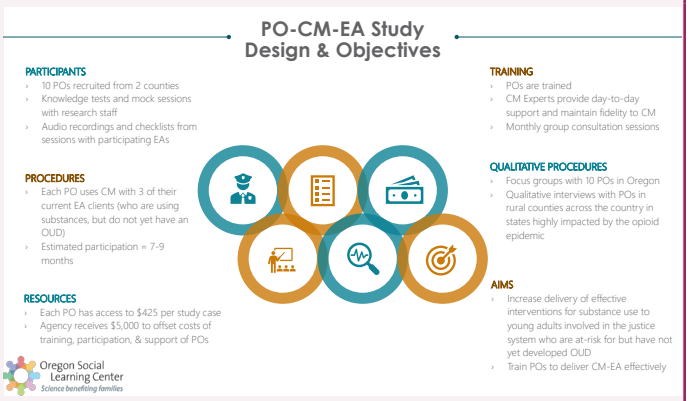
Tess continued that this is a small, mixed-methods study of feasibility. Broadly, they enrolled POs across two counties in Oregon that served rural and emerging adult clients with substance use problems. Their aims are to train them to deliver CM effectively, to assess the feasibility of this intervention and their research protocols generally, to gain a better understanding of emerging adults' substance use in rural communities, and to get feedback on their CM program in other states for future implementation. Their ultimate goal is to increase delivery of effective interventions for substance use to emerging adults involved in the justice system who have or are at risk of opioid use disorder.

Tess explained that their focus for both of these projects is task-shifting CM. On the supplement it is especially for supporting emerging adults in rural areas. CM is an intervention that they have been able to do with therapists. They want to know if they can do a task shift for low-resource environment like rural communities, if they feasibly can get POs to do similar work. The version of CM they use in the supplement is modified for emerging adults. It has both behavior modification pieces and cognitive components to build some efficacy and recovery skills. And importantly, it engages the social support network of the emerging adult.

Except for the initial training, the trial has been done during COVID. The team has been able to quickly pivot their research procedures and work with the POs to deliver CM under the restrictions and challenges that are still occurring. They have completed recruitment with 10 POs and 18 of their emerging adult clients. The POs have implemented CM with ongoing training and support from Ashli, Tess, and another co-investigator on the project, Mike McCart. The POs have submitted over 100 audio tapes and accompanying assessment checklists from actual client contacts. Tess has completed focus groups with the participating POs, and some of the themes that have arisen are that they like the CM intervention. They really thought it has helped increase motivation of and rapport with their emerging adult clients. POs have reported using the provided worksheets with clients other than the recruited participants and they continue to use these worksheets in their work beyond the study. They did note the difficulties of implementing the procedures along with all of their other supervision practices during COVID.

In addition to using CM in Oregon, the team has completed half of its planned interviews in states that have been highly affected by the opioid epidemic. So far, they've conducted interviews with administrative staff and POs in West Virginia and rural Ohio. Some of the themes that have come up are that these areas need more resources, particularly for substance use. Other areas that interviewees highlighted were resources for emerging adult men and men with families, as well as for those who are unhoused. Overall, there was a very positive response to CM for emerging adults. One person even said, "It's a lot of stuff we already do." There were some concerns about maybe a specific judge's reaction to the program, or how they would find funding for the program. For next steps, the team is planning a paper with the mixed-methods findings, and they plan to submit for a larger project in the upcoming year.

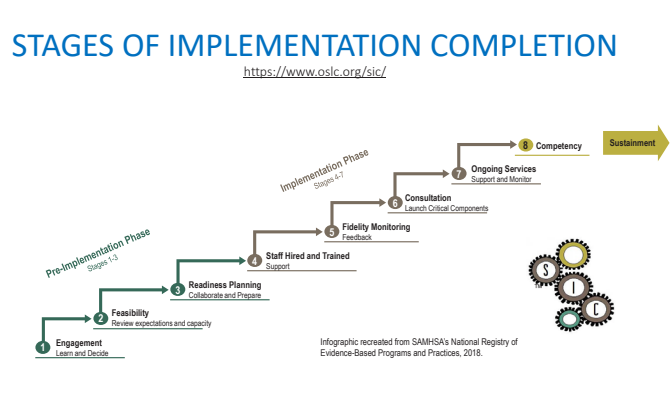
Tess concluded by explaining how this project relates to implementation and scale-up. This idea of task-shifting underlies this idea behind the work, particularly for rural communities that often lack addiction services, and in particular areas hit harder by the opioid epidemic, which fits squarely with implementation and scale-up questions in the future. They also found they can do this training over the web and via telephone, which could be scaled up across the whole country. They have done it for the parent study, and they have now created a web-based virtual training for CM for emerging adults that they can use in future studies. Also this work is aligned with the current administration's and NIDA's focus on increasing access to evidence-based substance use programs, particularly CM.



HPI Strategic Area 4: Dissemination, Implementation, Scale-Up, and Sustainment of Prevention

Phillip shifted to the last presentation, given by Lisa Saldana.

Lisa began by introducing Pre-FAIR. She showed a figure demonstrating the process when developing interventions and working toward dissemination and implementation. The EPIS model (Exploration, Preparation, Implementation and Sustainment) is off to the side. People on the call are interested in developing prevention models and disseminating them. A lot of times we focus on the preintervention and program work, and then think about dissemination and implementation as a separate line of work. But if we are trying to reach sustainment as an end goal, we want to consider the full continuum—thinking about implementation and achieving sustainment from the beginning of developing programs.



Lisa's team's project is FAIR (the Families Actively Improving Relationships model). Lisa began to develop this model in 2009 with a NIDA K award. One of the first things that she did was conduct many qualitative interviews with child welfare system leaders nationwide to try to identify their need. They are exploring what is the need, what is available, and where are the gaps. At that time there was a gap in being able to disrupt the cycles of substance use and child neglect, and to move families into achieving and obtaining evidence-based services, or even services at all, to be able to achieve both their proximal outcomes for their own family well-being and the distal outcomes for system well-being.

When thinking about planning for implementation from the start, Lisa knew that many different factors contribute to parental substance use and the transgenerational and cyclical natures of patterns of addiction behaviors, particularly within families. They know that this increases even more with families that are system involved. They knew that the strategies that they were going to be coming up with were likely very complex. She showed the general model, which is a four-component model comprising evidence-based parenting strategies, evidence-based mental health strategies, evidence-based substance use treatment strategies (CM strategies), and addressing social determinants of health through their ancillary needs. They knew that FAIR was going to be complex, yet require flexible scheduling; that treatment sessions were going to be nontraditional; and that they were going to be using engaging efforts with traditionally difficult-to-engage families.

From an implementation standpoint, they realized that the model requires partnerships with their ODHS (Oregon Department of Health and Human Services) systems, collaborations with community serviceproviders, and, critically, how they can deliver CM (which comes with an incentive-based system) when they are building Medicaid. One way that they were able to overcome that barrier with previous work was that they relied on community donations of things that helped families create safe, sober, and stable households. That also requires the development of community partnerships. Lisa recognized John Radich, who is their community co-I on this project and was on the call. He joined the project 10 years ago as an initial partner and has worked with them ever since as they have tried to establish methods for scaling up these types of themes.

Eight stages are necessary to implement evidence-based practices. The pre-implementation phase includes engagement, feasibility, and readiness planning. Next, the active implementation phase comprises hiring and training staff, monitoring fidelity, conducting consultation, and delivering ongoing services. The last stage, ideally, is achieving competency in service delivery so they achieve sustainment. Pre-implementation is critical for scale-up. Removing pre-implementation severs their ability to achieve competency and eventual sustainment. What they're left with is this active implementation phase, where they do a lot of work but aren't able to sustain their programs. This is something many projects experience in the first period of their work. She showed a graph from work that they did tracking 800 implementations of evidence-based practices worldwide, demonstrating that even the best work at the active implementation phase, if done without a quality pre-implementation phase, will not achieve sustainment.

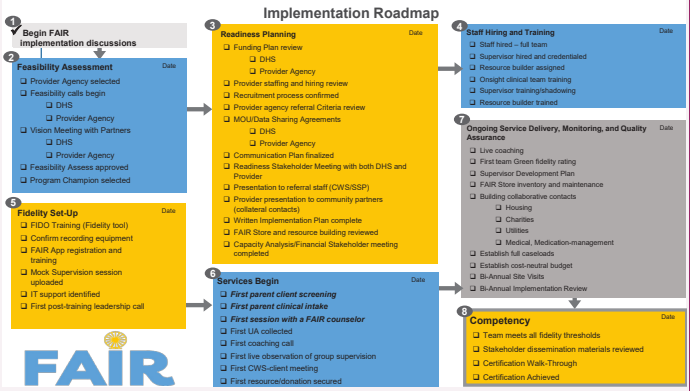
HPI Strategic Area 4: Dissemination, Implementation, Scale-Up, and Sustainment of Prevention

To engage in strong pre-implementation behaviors for complex interventions requires a multilevel yet parallel process. So for them, they first started with partnerships in the G Phase of their program, and was in partnership with the Oregon state-level Department of Human Services. What they wanted to do was identify regions where there was a high need, because many families were entering the child welfare or self-sufficiency programs systems, with opioid or methamphetamine addiction, and also had very low service access. For instance, in Portland, there are issues with substance use but also a lot of services. They ended on an area in south central Oregon along the Interstate-5 corridor. They started off working with their state systems, but the parallel process moved them to the county-system level. At that point their state system is less involved, and they had an existing FAIR program that they could build from in one of these communities and counties.

They then partnered with one of their provider clinics. Now the state level, still involved but much less so, the county system level, and the provider systems work together to identify where they are going to be able to house the new clinics. They ended up with one on the coast and one farther up between Portland and the existing clinic. They are launching another one that is farther south.

As they move forward, they see the individual activities that come from the stages of implementation completion measure. In the feasibility phase, they have a parallel process where they are doing feasibility at both the regional level and the provider agency level. This order flips at the readiness stage. At readiness, now the provider clinics are bringing along the system county as part of their readiness process. That then shifts and eventually, it is just the provider clinics that are preparing themselves and getting ready to provide these types of things. These are real activities that they do in their implementation process to build the community partnerships.

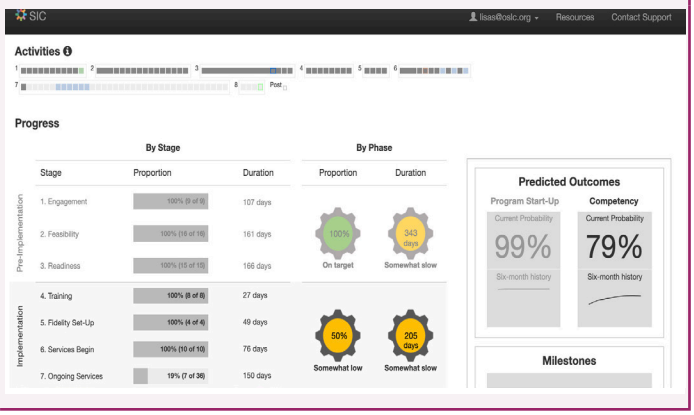
Lisa showed a picture of their roadmap. There are a variety of different implementation strategies. It is not a simple process and it takes a lot of collaboration between themselves, the providers, the county, and the state partners. Each of the individual components entail complex issues. For instance, the funding plan involves contracting with Medicaid, looking at reimbursement, looking at mileage, trying to secure donations, and more—all components that are key to being able to achieve sustainment. In active implementation, there are strategies that involve, for example, on-site trainings, coaching, fidelity modeling, and leadership calls, among other activities.



A dashboard allows them to see their process. Lisa showed a slide of the dashboard for one of their programs that was able to start and currently has almost 80% probability of achieving sustainment. The next slide showed the two clinics that they started with—one in Newport, on the Oregon coast, and one in Albany. In October 2021, for the first time, the Albany clinic broke even with Medicaid reimbursement, which is a huge factor in achieving sustainment. Two other clinics are coming online—one in Eugene and one in Roseburg.

Lisa concluded by stating there are many challenges, including trying to get referrals for prevention and not just treatment. They are treating individuals in the clinics for opioid abuse and disorders. They are trying to get in the door more referrals for the Pre-FAIR.

They have had successes in implementation, and they have communities that are mobilizing in how to think about addressing their opioid addiction and methamphetamine addiction issues in different ways.



Phillip praised the presenters and relayed a question from the chat about CM as a prevention intervention, and how the model has adapted as prevention rather than a treatment model. Ashli answered that what they were proposing in the supplement was to prevent the development of opioid use disorder. The population that they were targeting was the emerging adults involved in the adult justice system, who needed services and targeting of substance use, but had not yet developed opioid use disorder. They could be using any array of substances, including opioids, but not had yet progressed to opioid use disorders. So it was intervening in substance use that they already had. Phillip asked whether Ashli thinks CM can be an effective strategy as a more upstream prevention approach. Ashli answered that the parent study is teaching POs to deliver it, but that is for the teenagers that are in the justice system that have substance use problems of any kind already. In reality, the version of CM that they have is family based, involving the parent in helping them help their kids, has behavior modification aspects, and has cognitive behavioral aspects. It could target any behavior. In fact, when they train therapists, they train them to target any behaviors using the same tools and strategies. It could be used as prevention of substance use problems. She referenced that someone talked about aggression as a predictor earlier in the day, so the model could be used to target aggression in the hopes to prevent substance use.

Phillip continued with a comment from Kevin Haggerty: we had looked into CM along with ACRA and some evidence was that there wasn't a value added. Kym added that evidence showed that not only was value not added, but also the effects were diminished. Kevin added in the chat that it's similar to charting in the family, and getting family involved makes a lot of sense in terms of CM for behavior management and teaching this to parents. Kym added in the in the chat that she agrees with the use of POs as interventionists since sometimes they are the most consistent presence in a youth's life. Danica Knight and Evan Holloway agreed, with Evan added that the juvenile justice system is supposed to be rehabilitative, and that many JPOs get training in motivational interviewing and have a quasi-clinical role anyway. Jessica Cance also agreed and referenced Craig PoVey's comment about workforce development, in that we need a strong prevention workforce for fidelity.

To address Kevin's comment, Ashli stated that she would have to look at how it was done. One thing to look at is the way that CM is done and delivered, and whether it is delivered by the family or someone in the system. For example, juvenile drug courts have mixed findings, and often use CM, at least the behavior modification aspect. But when the person is out of the juvenile justice system, there's no longer that behavior modification aspect because the system was delivering it instead of teaching the family to deliver it. Lisa added that they do a different form of CM in FAIR, but they do use the idea of contingencies, positive reinforcement, negative reinforcement, and so on. They find it to be a positive because it generalizes across the different areas in which they are trying to help support their parents. They might learn CM as part of their substance abuse treatment, but then that process can generalize the parenting to other things. Lisa does think there are many advantages to CM. Kym clarified that she believes in CM as well. She stated that there is a hypothesis that ACRA and CM are too at odds with each other in terms of their mechanisms; either one works well but the combination does not. Kevin appreciated that the parent focus, rather the system focus, is very important. Tess added that that's why, for the emerging adult version, they brought in that social support piece, because they are finding that it is so important for the juveniles.

Phillip referenced how Lisa mentioned competency as a key piece that disappears yet influences sustainability and scale-up of projects. Early on many folks talked about "work force, work force, work force." For example, Tess and the team are using POs as a ubiquitous work force in delivering their program. He asked about the intersection of how they convince that population that they can take the tools and use them effectively, and what we have to do more in terms of elevating the importance of competencies in terms of the sustainment of and scaling up of our work.

Tess answered that they are trying to investigate to see whether the POs can deliver the program. They have some preliminary results from the parent study that they can and can do so with more adherence than therapists. Part of their choice for CM was that parts of that model are already what they do in both the juvenile and adult system. For example, giving drug tests, and an incentive or sanction for the results, is something POs already do. Highlighting pieces of the model that is already consistent with the work that they did helped with feasibility, and increased buy-in and their self-efficacy that they can do it. That then translated to them convincing others (parents, social support network) to become involved in more cognitive behavioral skills. Some sites have broadened these skills, especially in the juvenile justice system, but then other sites were newer.

Ashli added that there is an old-fashioned dissemination-implementation concept, trialability; they pitched CM as "You are already doing some of these; we're just going to put some structure on it and add some tools to your toolbox." The way they trained was specifically geared toward building up ability and shaping their behavior to be able to deliver it. The other aspect is that POs are the front line of wanting to help this population and not having

access to services or tools to be able to help. The team was tapping into what was already there and giving it in a way that was digestible, and supporting Pos, not doing a one-and-done training. They have a few papers in press about their qualitative work with juvenile justice workers, which are presenting new ideas.

Lisa wrapped up by stating that for us to get to sustainment, we want to sustain programs that are being delivered well. One of the challenges with implementation is that often we might get something to sustain but it's not necessarily what we want to have sustained. Before we can start thinking about sustainment, we need to make sure there is competency, that what we want delivered is being delivered as intended. Part of that means achieving the clinical outcomes associated with the intervention. All of this should be defined in the pre-implementation process. What she demonstrated was engagement, assessment of feasibility, and readiness planning—the three stages of pre-implementation. Within those three stages, in particular Stage 2 (feasibility assessment) and Stage 3 (readiness planning), there are key things that predict what needs to be in place to establish competency. For example, expectations for fidelity, who needs to be the ones delivering, what type of supervision is going to be available, what type of policies need to be in place at the particular clinic or organization. It is many faceted, but all of the inner and outer context variables coming together, examining them, and really looking at, for this particular intervention, how to do each of the implementation strategies thoroughly.

Concluding Remarks

Phillip closed by thanking the panelists for informing the work in the prevention field. Barbara Oudekerk thanked the panelists as well. She thanked all of the presenters and said how great it was to hear how far the research has come in a short amount of time. She looks forward to seeing how the projects go in the next few years and hopes to bring the group together in the future. She stated that the goal for the day was to provide a high-level overview of the work that is being funded through the HPI, and she encourages attendees to reach out to the projects for more details. Part of the day was also about stressing the importance of prevention and addressing the opioid crisis.