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HEPATITIS C CARE THROUGH TELEMEDICINE TO PROMOTE ELIMINATION

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6/28/2022

Hepatitis C Care through Telemedicine to Promote Elimination

[video transcript]

00:08
Okay, it gives me great pleasure to introduce Dr. Andrew Talal. He is a physician scientist with more than 20 years experience in treating Hepatitis C virus especially among substance users. Dr. Talal is currently professor of medicine at SUNY University at Buffalo, where he's been the principal investigator on a seven year award from the patient centered outcomes research institute PCORI. To study a facilitated telemedicine model based Hep C treatment among patients in treatment for opioid use disorder. The study consists of 12 telemedicine sites across New York State conducting integrated treatment of Hepatitis C and opiate use disorder. Dr. Talal was also appointed by the New York Governor to a taskforce to develop a statewide Hep C elimination plan. And he also serves on the New York State Hep C Guidelines Committee. And along with Dr. Dharia. Today, we have Dr. Arpan Dharia, who is director of liver services, also at University at Buffalo, and contributed to this presentation. Happy to turn it over to you Talal.

01:16
Thank you very much for the invitation. And thank you all for joining today. These are my disclosures. Dr. Dharia did not have any disclosures. And the learning objectives are going to be a little the overall objective is to illustrate the successes of telemedicine for HCV OTPs. And the we're going to divide this into two presentations. One today, we'll discuss the objectives are the integration integrate telemedicine for Hepatitis C into substance use treatment facilities. To demonstrate some of the principles we've learned from that, to show how trust and empathy via telemedicine while fostering patient centered care can be achieved. And what I hope to leave you with is implement Hepatitis C care through telemedicine to promote to promote HCV elimination. The efficacy predictors and social determinants of health will be covered in a subsequent presentation when the primary analyses are completed for the study later this year or early in 2023. So let's go over a brief history of brief background data. See, I'm sure you don't need many of you don't need this. But just so everybody's on the same page. Hepatitis C progression is mostly asymptomatic for over 20 to 30 years. And so as shown on the on the left hand side of the slide, you have a normal liver, you can develop chronic Hepatitis over 20 to 30 years, you can develop cirrhosis, one can one with HCV infection can develop cirrhosis. Finally, liver cancer and stage liver disease and death. And as a hepatologist. We always are very concerned when we see small nodules, such as indicated here in the liver, indicating liver cancer, or the development of end stage liver disease cirrhosis. So who are the populations that are most at risk for Hepatitis C? Well, historically baby boomers. But as shown in this graph, beginning around 2010, the patients who inject drugs were the ones who are the primary age group that have been infected. And you can see that the rates of acute Hepatitis C by age group, really, between 2003 and 18. And so now it's primarily younger people who inject drugs living in urban areas. That's the that's really the sort of the bad news. The good news is that we've become tremendously effective, we've developed tremendously effective treatments. So that it's an we like to say it's come a long way. So that now over and you can see over the last

10 years or so, treatments now or we've had these treatments that are now over 95% effective, resulting in a sustained virologic response, meaning undetectable virus 12 weeks post treatment after the completion of treatment, really, which indicates an HCV cure, and so and so, this has created what we like to call the HCV therapeutic divide. So on the one hand we have all of the successes of HCV treatment with near universal efficacy, minimal side effects, short treatment duration, using all oral medication. But on the other hand, we have the HCV disease, which is HCV infections continue to rise due to ongoing opioid, the opioid epidemic of the 50% of individuals are unaware of their HCV infection. And there's a real shortage of HCV treatment providers. And so what this is really created is what we call the device, the the treatment device. And why does that occur? Well, when when substance users are seen in methadone programs, for example, or any drug treatment program, the off site referral model has really been the primary treatment modality. And this is really occurs because HCV providers are limited at OTPs. And you can see here the four sites that are participating in our in our ongoing study from the from the quarry, the barriers to care we'll discuss in a minute. But really these barriers really prevent a large number of individuals from going to seek care and offsite treatments and offsite locations. And what are some of those barriers? Well, what we found, there are a variety of real world barriers that really prevent treatment access. These are fear of stigma, I think this remains first and foremost are comorbid, psychiatric conditions, competing priorities, substance users have many, many competing priorities that outweigh HCV. Or at least they think so. Unstable addiction, and in many cases, poor health care provider relations. So as shown in a paper that we did, a few years ago, 770 8% of Hepatitis C infected patients are at addiction treatment centers are willing to get treated, but only about 5% will actually go for treatment, maybe in the DA era, that's up to about 20%, but still much, much less than what then what would be considered optimal. And so one way that we've been testing the model that we've been testing for the for the last several years as a way to overcome these challenges, and what we consider as the facilitated telemedicine and the model is really quite straightforward. We seek to bring HCV, the HCV provider using telemedicine to a familiar and comfortable location for patients, namely, and where we've done this most effectively, has been invested on programs here in New York state. So that the provider the telemedicine provides a bridge between the methadone treatment programs and the HCV. And the end provides the teacher thereby circumventing the need to go for off site referral. So OTP patients are are screened and the Opioid Treatment Program, those who are HCV, RNA positive, undergoing evaluation with a telemedicine a Hep C provider via telemedicine, and we may actually make an introductory video several years ago, and that's me with a patient demonstrating a model of liver cirrhosis. And we we really, we the model heavily relies on a several staff who will discuss in a minute, but most importantly, the case manager and the support staff and the staff of the opioid treatment program who support the entire intervention. So that's an example of a patient and a physician extender and an Opioid Treatment Program. And what we've been able to do is to have the HCV medications dispensed with patients with exist with their existing methadone dose. When they physically appear in the Opioid Treatment Program. We take all medications on days when they don't when they aren't appearing. And this is repeated until the end of treatment. And what motivated this actually was a meta analysis we can we published about 10 years ago in Clinical Infectious Diseases, which obviously took advantage of the interface of papers published during the interferon era. But I think the bottom line is that of all of these studies, treatment completion was 83%. And after adjusting for sex and CO infection, support services, increased HCV

treatment completion. And what we found was sustained virologic response obviously from all these studies, the pooled sustained viral response was about 55%. Again, remember, this was interferon, but after adjustment, as SVR increased with the presence of a multidisciplinary team, and what I'll show you or hope to show you over the next few minutes is really that what was true in the interferon era, as demonstrated in this meta analysis now remains even more so with some of the data we're generating from this telemedicine facilitated telemedicine model.

10:16
So, the initial work that we did was published a couple of years ago in two papers. And this was actually and as a pilot study, we took 45 patients who were enrolled at one clinic and offered again the on site medication dispensing, which increased the HCV medication adherence. And in that paper 93% of HCV of the HCV infected patients were cured via telemedicine and that was published in Clinical Infectious Diseases in in 2019. And in a separate paper in telemedicine and eHealth. A telemedicine journal 95% recommended the onsite treatment over in person referral. And so one of the considerations from that pilot work that I think really lends itself to thinking about the introduction of telemedicine into novel venues is Everett Everett Rogers theory of innovations, which was developed in the 1960s, I believe, to bide implementation of innovative, innovative interventions. And this is why people line up before or can it help explain why people line up the night before a new iPhone is introduced or other technological interventions. And these are some of the of the of the considerations I think which are particularly appropriate when considering an intervention, an intervention such as telemedicine and an opioid treatment program. So one needs to think about the relative advantage. In other words, the perceived perception by the end user of benefit or improvement over existing technology, the comparability? In other words, is it consistent with existing technological and social environment, the complexity, the perception of difficulty or implementation use or understanding. And in terms of some of the evidence that we found from when we asked people who had participated in early study, the idea that they preferred the one stop shopping, that the facility that the facility, the telemedicine was facilitated by an Opioid Treatment staff member as the tele presenter, the fact the trial ability, the ability to try something without total commitment and with minimal investment. So research participation was voluntary. And that was repeated cause as, as many times as was necessary, in order to in during the pilot study, in order to remind people that this was not something to which they weren't compelled. And finally, the observability or the visible the, or benefits visible to potential adopters, and really the fact that that telemedicine is very, very visible medium, I think helped in this in this domain. And the fact that no subjects discontinued their participation, either in the pilot study or in our larger ongoing study, I think speaks to the observability. The other thing that the other aspect that we learned, that was of some concern, and which really guided the, the development of this intervention was the issue of privacy and confidentiality. And these were important factors. So we distribute distributed and a something called the telemedicine satisfaction questionnaire in this pilot study, which asked at three different time points at the first telemedicine interaction when they started HCV treatment and SVR visit What did they have any concern that was the the they believe that the telemedicine intervention was both private and confidential, then you can see here that about 20% of individuals strongly disagreed with the statement early on at the first time point. But over time, this really decreased some a couple one person or two people at the last time point disagreed with this statement. But by and large, most people strongly agreed

agreed or strongly agreed that there were no concerns for privacy and confidentiality. And we took this into consideration when designing the intervention. that we subsequently are. So these were preliminary data for a seven year study, initially five, but it recently extended to seven from the state Patient Centered Outcomes Research Institute, which was funded a study to integrate HCV treatment into opioid treatment programs throughout the state, the project recruited from between March 2017. And I'm very happy to say that we finished recruitment. Two weeks before the pandemic occurred, we reached 96% of our sample size and recruiting over 600 patients there were and really the reason we didn't fulfill recruitment was just because we micro eliminated HCV at the participating sites. You can see that on the diagram on the right, the map of the state of New York, the 12 sites, six were in New York City, one in Newburgh, one in Syracuse, one in the two in Rochester and two in Buffalo, shown in those circles on the west. And in this case, the integrated telemedicine model really removes time in place as obstacles from from delivery of high quality, cost effective health care. And it permits providers to treat patients statewide from the same location. So somebody sitting in one room can be treating somebody in the same morning in three or four different geographic locations, as we did as part of the study. The flow diagram for the study is shown here, as was recently published in January in contemporary clinical trials. And more information about the study protocol is available in that in that publication. But basically, the blue is the telemedicine arm, the orange is the is the referral arm. And what you can see patients who are HCV positive, underwent an initial telemedicine encounter. Afterward, blood was drawn NDAs were the direct acting antivirals that Hepatitis C medication were ordered and delivered on site. Patients began their treatment, they completed treatment. They then had a two week 12 week visit for to obtain their blood for to see whether the virus was still detectable, so called sustained virologic response, the absence of the virus in the blood indicated a cure. And we've been following people post treatment for two years. And that hit and because of the COVID related delays, in starting treatment in some individuals, we've we've been extended so we can complete that two year follow up in in the telemedicine arm in the off site referral arm, patients started treatment, they were referring off site as per the usual standard of care, patients completed off site treatment, post treatment follow up for sustained response. And then they were followed for six months, for 12 weeks to assess an SVR and then up to two years to look for reinfection. And one of the important aspects that we've learned from the implementation of this intervention at all of these different sites is and as we'll discuss in much more detail, are the individual roles of the people who really make the intervention work. So first, I'd like to, to acknowledge away SAS, the Office of Alcohol and Substance Abuse Services. And really, there are or are their new name, actually the office of addiction services and supports, and they really provide regulatory oversight for the over 1000 opioid treatment programs methadone and buprenorphine in New York State. They also were provided demographic data, which were required for the randomization during the planning phase of the study. They pay for medications that are used for opioid use disorder. They provide staffing ratios. So in terms of, of how many clinicians per patient, how many nurses per patient, how many counselors per patient, and finally, they as relevant here, they provide client treatment plans. So they tell who really

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the the clients or individuals treated in the opioid treatment programs need to have treatment plans and a way says really has the stipulation of what should be included or at least the

guidelines of what should be included in those plants. The study supported a case manager who was really very influential in in terms of enforcing the study principles, providing patient engagement and really facilitating or serving as a telemedicine liaison. The opioid treatment programs provide and and I'll discuss in a minute, they really served as a bridge between the program and the telemedicine provider. So the tele set medicine provider was the HCV specialist off site, who managed who provided the HCV management and manage the side effects. And in the opioid treatment program, we had the providers, the physicians, the nurse practitioners and the physician assistants, the nurses, social workers and counselors, who really provide an integral support for and played critical roles in support of the of the of the model. So let's discuss a little bit of what we've learned about how trust and empathy can be expressed. And I think this goes for telemedicine to a vulnerable population. And I think this goes beyond just Hep C, but really provide some insight into telemedicine for vulnerable populations in general. But let's focus first on the the HCV as as, as a use case here. So, each site site had a study supported case manager, as was published in this in this paper last year. And for this, this publication, we asked all the case managers to provide written descriptions of those that they consider to be interesting cases, even yes, that were subsequently discussed in a focus group. And we subsequently use qualitative techniques to develop themes that were extracted from the vignettes and the focus group. And what we came to understand was that the case manager really provides a bridge, the bridge of trust, so to speak, between the telemedicine provider and the patient in the party, the patient participant. And really, the this is under the umbrella of trust in the opioid treatment program. And really the case manager vignettes really allowed us to identify three themes which were first building trust, second, developing delivering personalized care, to enable participants to undergo or at least to mitigate substantially their competing priorities. And we asked really, participants to engage in three separate levels. With the case manager. The first was in research, many of these places had never conducted research, let alone a complicated design, such as the step wedge design, which we use in this trial. And then secondly, to undergo clinical HCV care, which was a second level and then for those in the telemedicine arm to undergo telemedicine, which was an intervention that they had really never engaged in. But one of the limitations of this work interesting as it may be, was the lack of a patient voice. And so to address that, what we did was we subsequently interviewed patient 25 patients in the telemedicine and five in the usual care to understand their experiences and meanings of this facilitated telemedicine model. And again, use qualitative techniques, specifically hermeneutic phenomenology to derive themes from these interviews. And these patients were interviewed, on average 19 months and at least six months post treatment cessation. And what we found from these interviews was that the facilitated telemedicine model for HCV in terms of three themes enabled them to face the many sides of stigma. And that's really what we found from the Opioid Treatment Program, done successfully integrating both medications for opioid use disorder, as well as behavioral interventions enabled them to face stigma, the and we and in this publication, we actually divide stigma into self stigma and external stigma. Self stigma is that of the addiction and that of Hepatitis C, the external stigma that of society and that encountered in conventional healthcare settings. We didn't we were able to integrate HCV treatment with an on site tellement with onsite telemedicine and finally being able to understand the meaning of an HCV cure and conceptually, what this really what this effect of the HCV, the facilitated telemedicine model does is it really directly directly addresses prominent barriers, as discussed prior, when I showed that the fear of stigma and the

conventionally poor relationships with external providers enables them to circumvent that to obtain an HCV cure versus off site referral, where patients often avoid health, health, health care, due to stigma and competing priorities. And I think this partially explains why off site referral doesn't work very well, or its efficacy, its effectiveness is really not very well. And in the usual care arm in the, in the interim, in the individuals with whom we when we did interview, what we found at least qualitatively, was that those individuals appeared to have pre existing relationships with the off site provider, and also to be it be further along in their recovery, such that they such that they were able to speak about addiction, as a disease, much more than as a moral failing. And, and as a as a no blame and self blame. So really, what this does from the patient perspectives, is the facilitated telemedicine model reinforces trust, leads to appreciate the creation, appreciation of methadone, and, and the counseling therapy. And some of the outcomes that we understood, we're mitigating self stigma, that of HCV, in particular, and also thereby promoting wellness. So, of course, we didn't, we didn't set out to look at these things. So it's hard to say in an evidence based approach, but at least we see trends towards this promotion of wellness, which is something that also I'll discuss in a minute comes from some of the staff interviews. So just some of the quotes from our from our patient interviews. HCV treatment was a catalyst for getting my life under control. HCV treatment made me feel like I was doing something good for myself something good for my health, prolonging life. So I think this may provide some food for thought as to how we can start to think about HCV treatment outside the broad in a broader context than just resolving the virus but also as an important step in treatment and recovery, as has been shown by several recent papers that have shown that when you when you treat opioid use disorder, and HCV together, you leads to better retention and care, better outcomes and better improvement in addiction recovery. So, let me turn now to talk about mixed method model paper which was just, which is now impressed in telemedicine and eHealth. Were high satisfaction with patient centered telemedicine for Hepatitis C. And what one of the questions that we sought to answer in this publication was whether substance users are satisfied with telemedicine compared to when in person consultation really remains unclear. And so we used the patient satisfaction questionnaire, a similar questionnaire slightly modified that we had used in the pilot study to look at complete cases. In other words, those where there were no deceit missing data, this time a two time points instead of three time points. And we investigated responses from those treated via telemedicine 238 compared to those treated via off site referral, and then conducted use the the interviews that the 20 and the 20 of the 25 participants who had been treated via telemedicine and from the questionnaires, what we understood was that patients were satisfied or highly satisfied 98.3 97% of the time, at each time points. And there were really there were no significant differences in satisfaction between those in the telemedicine arm and those in the usual care arm. And again, understanding using the qualitative techniques to understand what were some of the themes that came out? Were one communicating study information. So participants indicated in several occasions that they felt as though people were talking to them that enabled them to gain trust in the case manager and finally delivering patient centered care. When we looked at the sub scales now this PHQ has seven sub scales, and we use which I won't show here, but which is explained in the publication, we use some informatics approaches to identify those that have the subscales that were the most important. And the two that really stood out were the time time spent with a doctor that illustrated here, and the interpersonal manner of the telemedicine provider. And so what you see here are the sub scales for the seven of the seven different sub scales, with the

telemedicine provider in blue, the usual care in red at time point one and time point two, and I put a circle around those two that are the most important in terms of empathy. And what you can see is that there was really no difference in empathy, or in these two subscales between the interpersonal manner of those in person and those seen via telemedicine and even comparing over time, these are trends, we didn't do statistical techniques, because of the of the of the multivariate adjustment, that was the multiplicity of adjustment that would be needed because of so many different but a different tests that would be done, but what you can see is that the average the mean increases from time point one to time point two, whereas it actually decreases somewhat you have these outliers here, for time spent with a doctor in the usual care on again, trends, not statistically significant, but why significant was no difference between in person care and telemedicine, which is, I think, the important message of of its work. So,

31:41
what we found is that so that the telemedicine addresses, pre existing barriers and results in high satisfaction with telemedicine delivering, and now what I'd really like to discuss is some of the data that we've learned from integration from staff interviews. And so this is work that that's about to be submitted. But what we did was we sought to investigate Opioid Treatment staff and administrators experiences and meanings of integrating the model for years after implementation. So we conducted these in year five of the study. And we conducted interviews with 45 staff members, 30 staff, and 15 administrators at the participating opioid treatment programs. And the staff included nurses, nurses, counselors, and clinicians. We use purposive sampling, meaning we looked at we tried to sample those who are most involved with the intervention. And from our thematic analysis, what we we've identified four themes. One understanding the OTP environment. So it is absolutely essential that when somebody is implementing an intervention such as this, you need to understand the environment, you need to listen to the stakeholders, the champions, in order to be able to develop the intervention and the workflows to fit into the local environment, integrating HCV treatment via telemedicine within the OTP collaborating as an interprofessional team, and finally considering facilitating telemedicine for the future. So if we look at theme two, and theme three, which I think are the most relevant to our discussion today, what we found was that the staff valued the convenience of the integrated care that they re they saw that the integrated care enabled their patients to feel empathy, to build trust and mitigate mitigate stigma. And important outcomes were the needs to have eyes on the patient. So staff told us in many different times, that you need a audio and visual connection with this patient population in order to understand the consequences of addiction to assess for sobriety, and that just an audio only solution really is substandard. And they also valued the cure and the outcomes of an HCV cure, replicating or or or confirming what we understood from the patient participants. And fine and in terms of theme three, understanding how our the study team integrated with the interprofessional team. It really reached the highest level of collaboration using a framework such as that developed for the Center for Integrated Health Services. Since, and we understood we've become to understand really fourth, four, four points, that case managers were integrated into the OTP functioning as the glue to assist the OTP team, similar to the bridge that I referred to a few minutes ago, that the counselors were able to incorporate HCV care into the treatment plan through education, and really played a role through education, recruitment, engagement and retention in care. The pas, NPS and physicians conducted physical examinations during the telemedicine encounter

and actually were able to implant it were an integral part of answering questions that came up during the encounter. And nurses really coordinated the medication dispensing storage and take home doses. So in terms of a graphical abstract, one needs to understand the challenges of the opioid treatment program. That the tell integrated the telemedicine facilitated telemedicine system, expresses empathy, builds trust and mitigates stigma. One engages the entire interprofessional team, that one needs to have eyes on this patient, the the staff perception was the need to have eyes on this patient population to value the outcomes of an HCV cure with increased job satisfaction. And finally, discussion of some plans for future care integration. And really, this leads to integrating HCV care in the OTP. I think in general, beyond HCV, just telemedicine, but any intervention that wants to successfully integrate, needs to consider these these and a few of the quotes. Why didn't we do this a long time ago, it makes so much sense to me, and has made me think about integration of other services. Like it's called location. But real integration. Consistency and familiarity between staff and patients has always been a very positive experience, which has helped with engagement, retention and treatment. And all of the folks did an amazing job of getting to know the clinics, the patients, the staff, the community. And that was key to the overall success. And and I'll have more to say about that in a minute. But let's discuss then a couple of in terms of from the standpoint of patience, and patient engagement. We've created this this mnemonic, which we call create the Create for patient engagement, which stands for culture, respect, endorsement, advantage, trust and engagement, and incorporates many of the points that I brought up earlier in the theory in the theory of innovations. In the sense that you need a local champion, you need support from all of the OTP staff, you need the respect, patients trust the OTP staff. The OTP staffs takes a patient first approach or a patient centered approach using different language endorsement patients become advocates, they share values with the peers, they they the embrace the peer, they utilize the peer pipeline, as we learned from our pilot study, they understand the advantage of one of one stop shopping, the integration of services OTP staff addresses patient concerns, minimizes stigma. And finally, that really leads to the engagement, education and updates and appreciation activities were very important. We tried to visit each site every year to provide updates on HCV education and feedback on the study. And we're preparing now in a separate manuscript that will discuss some of these points, and I'm happy to discuss them during our future. So finally, some of the implementation concepts, I think, are really important. I showed you that meta analysis that we published almost a decade ago, in which we showed that addiction support services, results in improved treatment completion and a multidisciplinary team results in improved SVR that was a meta analysis in the interferon era. And I hope I've I've shown you really that that those really still hold true that you really need this multidisciplinary team in order to result in improved treatment completion. And, and this is and really the foundation of the OTP mitigates stigma is considered a safe space by substance As users and the energy, it addresses the barriers of addiction and unstable recovery, and telehealth appears to be useful to deliver HCV care to individuals in OTPs. So finally, let's discuss, I'd like to leave you the ultimate goal. Let me leave you with a couple of slides about a practical application of how telemedicine released, they think we might think about telemedicine, eliminating the elimination to implementation of this model. And the ultimate goal really is elimination through the using this as a way to increase access to care for HCV for vulnerable populations. So from our staff, primarily administrator interviews, and this is another publication that's currently in in preparation, we really identified three factors that are important in terms of sustainability and

scalability of the model, one needs to consider the needs of the patients having a patient first or patient centered approach, of course, the financial considerations, appropriate billing and reimbursement, one needs personnel for support, and finally, space. So these are some areas where the telemedicine could be expanded, as understood from some of our

41:32
millennials from some of the administrators, and expansion to clinical conditions, was also mentioned, primarily HCV, primary HIV, primary care addiction and mental health. Some of this has already been done. But it was interesting that that the administrators vocalize support for treatment of these clinical conditions. And I'd like to leave you in the last for the last couple of slides. With some work we've done looking at elimination in Louisiana and Washington State with which are the only two states with funded PCV elimination programs, both that were initiated in 2018. And we've been working with both states through another project, looking at trying to understand some of the factors, the commonalities and differences between these two states. So there are many states, including New York State that now have publicly available elimination plans. But Washington and Louisiana have distinguished themselves because those are the those incorporated medication procurement, procurement as part of their treatment plans. And so some of the similar goals are promoting outreach, the awareness of HCV screening, improving HCV surveillance and screening, expanding treatment access and implementing harm reduction strategies. And so Louisiana has taken a more targeted approach, focusing on first initially on Medicaid beneficiaries and incarcerated individuals initially, and then and then remote and then moving to the rest of the state. Whereas Washington has had a more inclusive approach using the Department of Health as a backbone organization, and including all of these different stakeholders in the initial planning stages and implementation of the intervention. And so, you know, we weren't outcome data yet, although that that really been been been available in the middle of their of their implementation of their of the of the intervention, but be that as it may, the least the preliminary data have shown that both have done in a very nice job of increasing treatment uptake. And I think telemedicine can play a role in in implementing some of these approaches, and has played a role in some of these in some of these elimination procedures. So inclusion remember that the efficacy predictors and social determinants of health will be covered in a subsequent presentation. But what I hope I've shown you is that the OTP environment can promote at least the ones participating in our in our project to promote empathy, build trust and mitigate stigma. Telemedicine provides a way to bring specialty HCV care to the OTP environment. Telemedicine conducted in OTPs can increase with access without compromising satisfaction. staff appreciate the intervention is augmenting work satisfaction without interrupting workflow and actually can increase satisfaction. And I hope I've shown you that the model could be considered uttered as a cornerstone, or at least included as some tellement as a step in elimination. And with that, I'd like to thank all of the individuals who have played an important role at all of the sites. The main, the bill here at SUNY, downstate, start Clinical Directors network, outside Israel, which was participating site with three sites, the University of Rochester, and specifically to the Health Foundation. And thank you all very much for your opport for the opportunity to speak with you today. And thanks. And thank you to the organizers for the for the invitation. And now I'd like to turn it over to Jeff, to moderate the next session.

45:54
Thank you so much doctor to allow for that comprehensive presentation that I know is only one small part of the work that's been done over the past years in the large pakora study that you've led. I would like to invite participants to either put questions in the chat or the q&a box, or to raise your hand, we'd love to hear from you. And we'd be very happy to unmute you. If you raise your hand. And while we're waiting for questions to come in, just want to give you a chance. Dr. Dre, if there was anything you wanted to supplement Dr. To his presentation

46:36
with. Okay, you're on mute. Questions. Was there anything you wanted to add before we take questions? Dr. area?

47:06
Oh, no, no, nothing to add. I think Dr. Talal covered it all pretty much. But we welcome any questions.

47:16
So the first question is, what was the SVR for the Hepatitis C patients in the facilitated Hep C telemedicine model.

47:23
So we we have not yet with that's still under analysis and will offer me an opportunity to advertise our subsequent presentation that will take place later this year.

47:37
Okay, thanks for that teaser for our upcoming webinar. We're hoping that Dr. Tila will be doing a follow up webinar in the fall, maybe around November, where more data will be presented and certainly understand the interest in that. I wanted to ask if any of the telemedicine was done post March 2020. And you know a little bit about what impact COVID had on the work.

48:09
So thank you, Jeff, for that. And for that question. We thankfully, we had completed recruitment, right two weeks before, which was incredibly lucky. And so we were the impact really was delay in treatment. But people stuck with the study, we implemented a variety of interventions to keep interest and retain patients, I have to thank all of the case managers who were calling patients who were doing, following up with them texting them. And so we were able to treat them and start treatment, usually, in most cases about three or four months after the lockdown. And we're continuing follow up until now. So the follow up phase will conclude around November of this

48:58
year. Thank you for that. Um,

49:03
so I would like to add to that a little bit. So after the COVID pandemic, a lot of the sites that were participating in this study, they were changing their schedules for directly observed therapy for

methadone, but giving the telemedicine aspect we were still able to keep up with all of our appointments, because the OTP staff worked so well and integrated the case manager and the studies into their workflow. So it did not feel like extra work. It just kind of flowed really well, even with the pandemic.

49:45
Thank you so much for that. So, still invite questions and also, you know, an invitation of anyone on the call would like to share you know, the work they're doing potentially around Hep C telemedicine or or an interest in incorporating telemedicine into your work? We would we would love to hear about that. Is there? Is there anyone on the call who might be willing to share that with us, please? Either put it in the chat or feel free to raise your hand.

50:42
Okay, we're not getting any more questions or oh, here we go. Thank you for this. I'm a physician in Arizona, who's offering Hep C care to my patients in an OTP setting, wondering how you billed for visits and setting settings in which you were not employed.

51:03
So in order, thank you for that question. In order to do telemedicine, one has to have credentials in the setting in which the patient is being seen as well. So you have to be a credential provider, which really has the positive benefit of being able to say then that you are affiliated or a part of the workforce of that site. And and that does has several advantages. One, it allows you to one billing specialist to enables the site to actually claim in all honesty, that you are part of their of their team and builds trust with them. And I think this helps to facilitate the interview the interaction with the case manager, and I wonder Arpin whether you want to comment as having been a case manager and having been on site, you know, how, you know, some of the ways in which you as a case manager sort of went the, you know, the, the extra mile to address some of the privacy and confidentiality issues, at least around the first visit in particular.

52:19
So, working with the billing team is part of the sustainability aspect of it. So, for sites that may not even have telemedicine and are interested in utilizing telemedicine, they can they can benefit from some billing education, to the billing team for you know, so that they can build telemedicine properly and accurately, and then the reimburse the reimbursement would would come without any issues. So providing that education to the billing team would be the first step.

52:58
Thank you for that. I run the Hep C telemedicine program at Banner Health in Phoenix, Arizona. We treat 200 to 300 patients per year via telemedicine since September 2019. Telemedicine has been very effective for hep C therapy and SPR outcomes. So that that sounds like an example of treating patients through your health system using telemedicine which is another model. In addition to the model, Dr. Talal was presenting of working with a outside partner. So you know, thank you for sharing that. So just in closing, let everyone on the call know that. We have a working group going in New York state where we're updating a Hep C telemedicine toolkit that was put out early, I think was the summer of 2020. And we're currently updating that

to be more reflective of innovative models of hep C care and treatment through telemedicine that have emerged over the course of the pandemic. And we're also hoping that something we'll be able to introduce later this year. I want to thank Dr. Talal and Dr. Dharia.

[End Transcript]