BHW (Health Workforce)

Health Resources and Services Administration

Measuring the Impact of Interprofessional Education (IPE) on Collaborative Practice and Patient Outcomes

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Event: Measuring the Impact of Interprofessional Education (IPE) on Collaborative Practice and Patient Outcomes

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Event Coordinator: Stahl, Anne (HRSA)

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Audio: Universal Voice/ Conference Bridge

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Problems Encountered with Adobe Connect Pro

No Problems Encountered

Recording

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Attendees

Alice fornari
Alyssa Adams ECU
Amanda Gmyrek
Amy Vega
Andreina Fox
Ann Nevar
Anne Patterson
Anne Stahl
Annette Reboli
Barbara Brandt
Barry Porter
Beth Hribar
Bill Elder
Bob Konrad
Bonnie
Brittany
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Carla Terry
Carole B
Christina Hattenbach
Christine Riedy
Cincinnati Children's Hospital MC
Clare King
Craig Stevens
Cryst
Dan Coletti
Daniel
Darby Ford
David Sacks
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Debra Bogen
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Elizabeth Mercer
Erika Tait
Geri Tebo
Heather Miselis
Irene Sandvold
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Jean Carter
Jennifer Holtzman
Kate Ferguson
Katherine Mott
Keesha Goodnow
Kelly Karpa
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Kristin Baughman
Laura Hartman
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Laurene Enns
Mary Anne Vandegrift
Mary Crane
Mary Pileggi
May-Lorie Saint Laurent
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M Davis
Meaghan Ruddy
Meghan C
Michael Quinn
Nancy Douglas-Kersellius
Nancy LaVine
Nik
Nolan Simon
Oliveira
Rachel Werner
Ruth Heitkamp
Sara
Saundra Regan
Shenam Ticku
Shou Ling Leong
Skip Cummings
Stacey Gardner-Buckshaw
Stephanie Lackey
Steve Coulter
Svetlana Cicale
Tess Chandler
Tien Ha-Ngoc Jiang
Tim Crawford
Tom Bik
UC Davis
Vanessa Tunstall
Virginia Cronin
William Moran
Zoe Ginsberg

Chat History

Katherine Mott:	Contact Information Box just says: Hosts/Presenters are yet to set a Poll Question.
Katherine Mott:	Working now!
Erika Tait:	Great - thanks for the update!
Izzi Alder:	Are participants able to download the presentation files from today?
Amanda Gmyrek:	Today's meeting materials will be made available on the HRSA Web page and we will notify you when they are available!
Izzi Alder:	Perfect, thanks!
Alice Fornari:	Thank you for tow superb amazing sessions presented; Dan and Julie can you add your reflective comment on what we have learned as a leadership team trying hard to offer a quality product
Alice Fornari:	Specific to an IPE leadership team
Dan Coletti:	I lost connection. am back in listening
Alice Fornari:	Yes, advanced learners i.e., residents are teaching; students are given pre-work to get them ready for a session content
Dan Coletti:	I'm here!
Dan Coletti:	Sorry
Dan Coletti:	I hear you
Dan Coletti:	But [I] can't speak
UC Davis:	Question to Barbara: Could she please share who are the 2 sites that are part of the data repository in California?
UC Davis:	Great, thank you!
Bob Konrad:	Thanks for the great presentations

Polls

N/A

Q&A

Q/A Done Over the Phone

Transcript

Primary Care Training and Enhancement (PCTE) Program Evaluation Technical Assistance (TA) Webinar Series

Webinar #4 Title: Measuring the Impact of Interprofessional Education (IPE) on Collaborative Practice and Patient Outcomes
Date: Wednesday, November 1, 2017 at 1:30pm ET – 3:00pm ET
Meeting Details:

- **URL:** https://hrsa.connectsolutions.com/interprofessional_education/
- **Conference Number:** 1-800-593-9995
- **Participant passcode:** 7648580

[Please standby for Realtime captions] >> [Music]

Moderator: Welcome and thank you for standing by. This call is being recorded. If you have any objection, you gain disconnect at this time. During the question-and-answer period, if you would like to ask a question, please press star one. I would now like to turn the call over to Craig Stevens.

Craig Stevens: Thanks so very much and good afternoon, everybody. I'm Craig Stevens from JSI and I am the Project Director for the HRSA Primary Care Training and Enhancement, or PCTE, evaluation technical assistance contract. The overarching purpose of HRSA's PCTE program is to strengthen the primary care workforce by supporting enhanced training for future primary care clinicians, teachers, and researchers. The PCTE program focuses on supporting innovative training in three primary ways. One is to encourage high-quality primary care practice in underserved areas, another is to enhance diversity within the workforce, and the third is to produce clinicians who will practice in and lead transforming healthcare delivery models.

Thank you for joining us today for the fourth in a series of six PCTE evaluation technical assistance webinars. We are very pleased to offer this webinar series designed to provide evaluation resources aimed at increasing your capacity to develop and conduct

your evaluations. These educational webinars will focus on the application of evaluation topic areas and concepts of relevance to PCTE awardees, as well as anyone conducting workforce development programming. So right now, I'm going to turn the webinar over to my colleague Amanda, a member of the JSI/JBS evaluation technical assistance team, who will provide some details about the webinar logistics.

Amanda Gmyrek: Great. Thank you so much, Craig, and thank you again everyone for joining today's webinar. Again, like Craig said, my name is Amanda Gmyrek and I am with JBS International, and I'm part of the JSI/JBS evaluation technical assistance team. So, before we begin today, I have a couple housekeeping items to address. First, as the operator mentioned, at the end of today's presentation, we will have a question and answer session. Please hold all questions regarding the presentations until the end. When it is time for the Q&A, we will have the operator give you instructions on how to ask questions. You can also type questions in the chat box. Second, today's meeting materials will be made available on the HRSA webpage and we will notify you when they are available.

If you're having any technical difficulties with technical aspects of the webinar, please use the chat bar for assistance. Please type your questions into the chat box and push send. I, or our IT support will assist you as soon as possible. And finally, please note that there is a box on your screen titled 'Contact Information.' Please enter your contact information in this box by providing your name, discipline (for example, family medicine physician, psychiatrist, or nurse), your organization's name and your email address. This box will remain open for about the next five minutes, so please enter this information now. Thank you. I'm now going to turn the webinar back over to Craig Stevens, who will provide some context on the purpose and goals of this webinar and then introduce our speakers.

Craig Stevens: Thanks, Amanda. So, I'm just going to briefly provide a little bit of context, really big picture, of why we are conducting this particular webinar. The first is just to acknowledge we've got a couple of different terms that have been used multi-disciplinary care, interdisciplinary care, and as we see these are being replaced by more contemporary terms, such as interprofessional practice. And what we hear in this particular webinar is interprofessional practice and education – or IPE but forgive us; we may use these interchangeably. But indeed, the language is moving toward interprofessional practice. As you all very well know, we are in the depth of healthcare reform, and there's a couple of items that I think really call out the need to look at IPE; and in terms of accountable care organizations [ACO], while those have started with hospitals and physicians, particularly primary care physicians, we do see them broadening to a network of professionals, including but not limited to mental health, and substance abuse, as well as health and human service agencies that may be addressing social determinants of health. Similarly, as ambulatory practices may become a medical home, they also may be part of an ACO and managing interprofessional teams within and between organizations. And so, what has been widely acknowledged and that we have known for some time is that any one profession in most organizations cannot provide all of the clinical and educational services that patients need in the new models of care. Instead, we are looking at reengineering interprofessional system of care to help patients become more successful in patient care.

One of the things that JSI and the JBS team did early on in this evaluation contract is we did a number of site visits and we also conducted technical assistance calls with awardees. So, we received some very valuable feedback. And hopefully, this webinar is reflecting that feedback and reflecting what has been communicated to us by many of you. So, I just want to touch on a few challenges that were really pervasive in terms of our conversations and our site visits, regarding evaluation. If they are addressed during

this particular webinar, fantastic, but we are also looking for additional insights during the Q&A period. If we haven't addressed this and you have some insights, please feel free to speak up. But we have heard from many people that PCTE trainees may have different longitudinal experiences and again, we're focusing on the evaluation versus program implementation here. The attribution of results to teams versus individual trainees has seen a significant shift and that's a confounding factor, with the idea that they may have different longitudinal experiences as well. Challenges with the selection of both process and outcome measures, so that we can identify early on what the successes are and re-triangulate the programming, in order to meet those outcome measures; and identifying in when to enlist mixed methods, so qualitative and quantitative evaluation approaches. And then finally, how to identify control groups and baseline comparisons. So, these are a few things that we may glean some insights from our speakers today, and if not, again, we would certainly love to hear from any of the participants.

So, any questions before I move on to our introduction? [Silence] Okay, well we will have time at the end, as was mentioned. Any questions that people have in terms of follow-ups can be sent to our contracting officer, Anne Stahl, and let's begin with some overview of our speakers.

So, I would like to introduce our guest speakers for today. First, is Dr. Barbara Brandt from the National Center for Interprofessional Practice and Education. As a quick aside, I've had many an opportunity to review the National Center's IPE Resource Center, and the breadth of resources and body of knowledge available through the Resource Center is extremely robust. That's whether you're doing evaluation planning, implementation, research, or even looking to connect with colleagues in this area of work.

We also have two speakers from Hofstra, Dr. Daniel Coletti and Julie DiGregorio. I also had the great fortune of being part of the Hofstra site visit team when this PCTE

evaluation TA project began, and not only were they incredibly gracious hosts, but they presented a very diverse and forward-thinking team of staff and faculty implementing some innovating programming and some very impressive evaluation approaches. So, we are incredibly thankful that we have these three speakers with us today.

A little bit more about our speakers: Renowned for her work in health professional education, and specifically interprofessional education and continuing education, Dr. Barbara Brandt serves as an associate vice president at the University of Minnesota's Academic Health Center, and she is responsible for the University's *1Health* initiative to build the interprofessional practice skills of students and faculty in a broad range of health professions. Dr. Brandt is also the director of the National Center for Interprofessional Practice and Education, a public-private partnership and cooperative agreement with the Health Resources and Services Administration, established in 2012.

Dr. Coletti is an Assistant Professor of Psychiatry and Medicine at the Ronald and Barbara Zucker School of Medicine at Hofstra Northwell in Hempstead, New York. He coordinates a program of integrated behavioral health services in the Northwell Division of General Internal Medicine and is Director of Evaluation for the Primary Care Training and Enhancement grant-funded project "IMPACcT," which stands for Improving Patient Access, Care, and Cost through Training.

Dr. Coletti is a clinical health psychologist and has been a member of the Division of General Internal Medicine since 2010. In his current position, he provides clinical treatment, teaches medical and behavioral health trainees, and oversees all research and evaluation activities within the Division. Originally trained as a Pediatric Psychologist, Dr. Coletti has also served as coordinator of a children's hospital consultation-liaison service, directed pediatric psychopharmacology clinical trials, and was an administrator of a pediatric rehabilitation system with oversight of all social service, research, and quality management departments. Dr. Colletti's own research

investigates health-related decision making and adherence to medication recommendations, and addressing the transitional care of young adults with special healthcare needs from pediatrics to adult medical systems. His research has been published in several peer-reviewed journals, including Schizophrenia Bulletin, the Journal of Child and Adolescent Psychopharmacology, the Journal of Evaluation and Clinical Practices, and the Journal of the American Academy of Child and Adolescent Psychiatry.

Our speaker Julie DiGregorio is Senior Research Manager for the Division of General Internal Medicine at Northwell Health in Manhasset, New York. She coordinates a comprehensive program combining both educational and clinical research and is Program Manager on a number of grant funded projects, including the Primary Care Training and Enhancement "IMPACcT" program.

Ms. DiGregorio is a Certified Clinical Research Professional and member of the Society of Clinical Research Associates and joined the Division of General Internal Medicine in October of 2016. In her current position, she supports general division research efforts through the development, implementation, coordination, and oversight of research projects, study design and protocol development, as well as pre-and post-award grant management. As IMPACcT Program Manager, Ms. DiGregorio collaborates with the Director of Evaluation and committee to develop successful evaluation measures and data reporting for a complex interdisciplinary, interprofessional education program. Prior to joining Northwell Health, Ms. DiGregorio managed clinical research programs at the Massachusetts General Hospital, Columbia University Medical Center, and Winthrop University Hospital in Mineola, New York, where she developed curriculum and served as a mentor for both a research education program for medical and physician assistant students, and an accredited fellowship program for physician researchers. Her research and continuing medical education activities are published in Advances in Skin and

Wound care. Again, thank you to all of our presenters for participating and now I will turn this over to our first speaker, Dr. Barbara Brandt.

Dr. Brandt: Thank you very much for that introduction and setting up my portion of the webinar. And thank you for inviting me today. I've entitled my particular presentation "Interprofessional Practice and Education: A Great Truth Waiting for Scientific Confirmation." What I'm going to talk about today is some of the issues in the field relative to research, relative – what is the evidence for interprofessional education. The field has a long-term history go – dating back 100 years, but certainly 60 years and I have to report that we – the evidence to-date is not very strong. And some of it has to do – I tell people is you can't evaluate what you haven't done, but really there's been a dearth of rigorous evaluation and research in the field, so that is one of the charges and the efforts of the National Center [for Interprofessional Practice and Education] that I will describe.

So, I always start my talks with the definitions of interprofessional education and interprofessional, collaborative practice. It is a World Health Organization definition, and so it might seem like this is overkill, but the term is used rather loosely these days as it's become more popular. So, interprofessional education occurs when two or more professions learn with, about, and from each other to enable effective collaboration and improve health outcomes. So, it is intentional. It is more than one profession working together, intentionality, directed towards effective collaboration and health outcomes.

And then the World Health Organization defines collaborative practice as occurring when multiple health workers – and the National Center includes "and students and residents" – from different professional backgrounds provide comprehensive health services by working with patients, their families, caregivers, and communities to deliver the highest quality of care across settings. So, we include students and residents, because what we are working on in the National Center is intentionally designing

systems that incorporate teams of students and residents, so that they're not just standing at the sidelines, but they're contributing to the health of the populations that we're serving. If we don't do that, health systems are going to continuously be retraining our students – if they're not engaged in the system.

This is our vision statement. I won't read it to you, but we are focused on high performing teams and we are focused on the Triple Aim, and importantly, we use the term "stakeholders in health," so not just focusing on health professionals; and studying and advancing the way we work and learn together. These are the funders – the founders and the funders of the National Center, with a cooperative agreement award by HRSA, and what has made this a historic implementation is that private funders came in to the funding of the National Center, even before it was awarded to the University of Minnesota. The funders are highly engaged, we talk to them quite frequently, and so they're very interested and committed to the success of the National Center.

We use the terms "The Nexus," and any of you who that have been on our website will see it all over the website. So, what we are focusing on is how do we align interprofessional education with the transforming delivery system today? So, we are trying to connect deeply an integrated learning system to transform education, care, and practice together at the same time. So, we are learning a lot about our – from implementation of projects all over the United States as to how to support and advance the development of this work.

When HRSA put out the funding opportunity announcement in 2012, they charged the National Center – and whoever received it – to have leadership, scholarship, evidence and coordination and national visibility to advance IPE. And the one thing I didn't underscore is that traditionally the acronym IPE has stood for interprofessional education. We promote the use of the term interprofessional practice and education, or the new IPE, because traditionally, IPE or interprofessional education, has been

classroom-based and preparing students in the classroom or in their pre-professional work and then expecting them to go out and to practice and make a difference. So, we, again, are working towards that integrated system. The other key phrase in the funding opportunity announcement is that we have been charged to be an "unbiased, neutral convener." So, we bring together many organizations, associations, accreditors and the like, and facilitate national conversations to really address the significant barriers in the field. So, one example that we're working on today is we are working with 23 accreditors, so pre-professional education, to come to consensus on a framework for IPE. It is clear this field is getting a lot of attention. Nearly every accreditor has written IPE into their requirements for accreditation. The issue is, however, they never coordinated that effort across accreditors. So, an example of our unbiased neutral convener role is bringing accreditors together to come up with a consistent framework and expectation.

These are our focus areas of the National Center, what I just described was thought leadership, so again that unbiased neutral convener. We have an education and training portfolio. Craig alluded to our NexusIPE.org; it is our community-generated, open-access Resource Center, where people upload their presentations, toolkits and the like, and so this is our supporting the field. Then what I'm going to talk about and focus on today is our – what we call our "Knowledge Generation," or our research arm of the National Center.

So, we've been collecting data for about the last three and half to four years, and we – through a network that we called the Nexus Innovations Network. It is up to about 107 projects to date, in 81 sites in 33 states. So, what we – what our consultants tell us is we've been in a lean startup mode. So, we've been collecting a lot of data, starting to do analysis and coming out with some early indicators. And as you will hear me describe, we're working towards a National Core data set to address, frankly, the problems in the field to date.

Some of them are – It's this particular field as Craig alluded to, has been plagued by terminology problems and concerns that the language is not consistent. Um, most of the research questions in the field have been concentrated on local or unique projects, implementation, they've been local evaluation, even though there is a 50+ year history of the field to date, most of the publication in the field has not been in mainstream publication, even though the amount of publishing over the last several decades has increased significantly. Therefore, there is also a lack of conceptual clarity or a framework, which really has been – made it difficult for us to really know what we are supposed to be doing in the field. There have been two Cochrane reviews and – with randomized controlled trials there's been very little evidence that has emerged out of that, mostly because the field is very – when you are developing these projects, it's difficult to actually do a randomized controlled trial because you're moving very quickly for implementation. But there are best evidence medical education reviews, which is however, starting to demonstrate some evidence as the field is taking off. And so, in the field, we're moving beyond randomized controlled trials, focusing on mixed methods, and particularly in the case of the National Center, comparative effectiveness research.

So, the title of this webinar is actually the exact title of an Institute of Medicine report that came out in April 2015, and I served on that committee. So, we looked at about 29 reviews of the field, and again all of the issues that I just described are in the report, which is readily available on the IOM or the National Academy of Medicine sites. But in that particular report, one of the issues we did raise was what we see as the misalignment between health professions education and health systems delivery today, as I've described. We put up this model, that we are using in the National Center both for program development, so we teach sites and groups that are implementing IPE, particularly with the community. We teach this particular framework and then we are now using it as the research framework for the National Center.

So, as we described, looking at the learning continuum and not just formal education, but informal workplace learning, we see that – we declared, which actually was trailblazing for the field, that students needed to be introduced to interprofessional collaborative practice from day one. That as students – it's been a controversy in the field as to when you introduce IPE or collaborative practice, and we declared that a student, while they are learning their uni-professional or professional identity, needed from day one to understand that they were members of a team. But that actually, the emphasis on interprofessional learning, interprofessional education increases, throughout a career in the continuing professional development and what we are seeing today is really rethinking even how we accredit continuing education and it's just a total redesign. And then through that education, what has been used in the field for a number of years is the modified Kirkpatrick model or levels of learning. And then through this design, focusing on health and systems outcomes. So, there's an intentionality to link the learning system with the health and system outcomes, and then considering the upper right-hand corner [of PowerPoint slide 8], the green [bubble], what are the enabling or interfering factors to making the system work? So, again, we take people through this framework, we help people design this program, their logic models, and now we are using it explicitly for conducting research in the National Center.

Before I leave that slide, and go to the next one, one of the issues that we identified in the IOM Committee was what we call the reverse megaphone, so what I described to you as actually IPE for the future or tomorrow, is again that the continuum advances for increasing the amount of interprofessional learning. And today what we find is that with introducing interprofessional curriculums, it's actually the exact opposite. The bulk of IPE that is being administered today is at the front end of the curriculum, and we're – we know that if our students are prepared in the classroom for collaborative practice, and if they go into practice environments where they do not see role models for this

type of practice, we call that the hidden curriculum on steroids. And so again, that reconnection of the design of education, design of curriculum, is really essential for the investments that we're making today in the field.

I want to talk a little bit about where we are with our research program. Again, I described that we have been building a National Center data repository for the last several years, and we have really been working with these individual projects and helping them to support their research program, while we're learning what type of metrics make sense to collect in the field to address some of the challenges that I described. This year, our Research Team or our Knowledge Generation Team is now led by Dr. Connie Delaney. She's our Dean of our nursing school here at [the University of] Minnesota, but she is also a PhD informaticist. And those of you who are in nursing will know her for her leadership in nursing informatics and nursing big data. So, she's led a group of leaders, collecting big data across nursing and it's quite well known in the field. We're using the models that nursing has used for big data, national data – national collection and evidence, and, um, what the lessons learned, and Connie is leading into an engagement model, which – actually, I have to say our tornado sirens are going off in the weekly, the monthly testing, so I'm sorry if you hear some tornado sirens going off. So, Connie has taken over our team and I am going to describe a little bit more about where we are.

So, I can see the slide is – there is something missing from this slide, at least on my screen. But a little bit about the sites that I described. When we wrote the proposal to HRSA, we said that we were going to have the eight sites that were going to be implementing IPE and collecting data, and we said in our proposal that we might have up to 10 what we at the time called "incubators," but over time, we've had a number of programs that have joined us either as individuals in the case of HRSA, we have been working with collecting data across the grant program called the NEPQRs [Nurse Education, Practice, Quality and Retention]. But most recently within the last year, our

private funders – our four private funders – have awarded a grant to us called Accelerating Interprofessional Community-Based Practice, Education and Practice, and these are awards to nursing schools. This is the first time that we've had a cohort that started on day one, so we're working with them on both implementation and data collection across that particular program, and again continuing to learn more and more about the type of data and support that programs need in their implementation and research. This is our National Center data repository. We have gone through an upgrade this year, so people submit to us de-identified data, of both patient data, surveys, student data and the like, and it is combined for advanced analytics. We – and again – just went through a data reduction on what we have in the depositary now, and – repository, so this will be a development that we continue to promote as we want to have more and more data from a variety of projects.

So, what have we learned so far? We have a number of surveys that people fill out and we have a publication that it was a proof of concept of our design; so far, it's not rocket science, but very strong that the process of care is about changing culture. So, we use that and build into a training program that we have that is now called the Nexus Learning System. So, working with people to design – what are some issues or how – what are some strategies for addressing culture? Next, we are learning that a compelling vision is absolutely required to motivate people to understand the direction of the field, and then we're learning that resourcing IPE is absolutely critical and that is it's essential that senior leadership is involved. And what's interesting about the last two critical success factors, is this is aligning with best evidence medical education reviews that I described earlier. So, we are collecting the data. There are other reviews and systematic viewpoints of the field, and these are starting to align. And then finally, impressions of team training effectiveness are mixed. So, what we believe this particular finding is about is that today team training tends to happen in human resource departments or the like, and that this is really about learning and training within

practice, not sending groups of people off to do training and then come back. And the literature is quite strong, related to organizational culture and now, as of a Google study last year, psychological safety. So, we're looking much more holistically at the field, looking at that culture, looking at training within practice, and so again these types of data points, we're using and really scouring the field as to what is coming out to feed back into training and support of programs that are implementing IPE.

I alluded to this earlier. Early on, we had a model of expertise, where we worked individually with projects and I would say almost in a dependency mode. Some of it was because we ourselves were learning and bringing up really nascent programs, so a lot of people were just beginning, but now we are developing scaffolding and support and toolkits and the like, and we're working towards independence, so that projects are able to look at our tools that are on our website and the like and be able to bring up their own programs, accelerate them while they're learning to conduct research through standardization and engagement with the National Center.

This is – we've learned a lot about how to bring projects up into the research enterprise. Up until this year, we started with the orange block [on PowerPoint slide 14], where it says 'Organize your team,' so we took projects in and started working on research, and what you see here, we are – we've learned a lot about how to do memorandums of agreement or strict streamline agreements for de-identified data with the National Center, how to support IRB [internal review board] approvals; and then you can see we have a number of projects who are continuously giving us data into the National Center. Where we have come, and so these are just the – what I just put up there, the animation, is we've really worked this year on that research – streamlining the research timeline from concept to being able to collect data with the National Center. But what we have really have learned this year is that we actually had to back up and help people with the designing of their work or designing their projects. This field is extremely challenging and complex, as Craig alluded to through the site visits. There's lots of

different longitudinal implementations, different groups that are involved, and really a lot of people muddling through, trying to implement IPE. So, what we're learning is actually helping us to develop this learning system to support particularly academic community partnership development and most of our projects, I will say, is working with vulnerable populations. So, even the Accelerating Initiative funded by the private funders, a hundred percent of the projects are working with vulnerable populations and in underserved communities.

So, what we're working on, what we have been working on, through our data analysis this year particularly, is moving from comparing apples to oranges and apples to bananas to comparing apples to apples. And that's a special metaphor in Minnesota, the home of the honey crisp, where Apple research is very strong. So, we have a scientific team – scientific review team that has really looked at tools, they've looked at the data that we've collected, and we are coming up with recommendations for a National Core essential data set. So, the process that I showed you, the Candyland graphic, you know, people work on work plans that link their project to – we help them with PICOT [Population Intervention Comparison Outcome Time] questions for comparative effectiveness research, and really to design their project, but also to design the research around their project. So, what we're doing now is, again, I've alluded to data reduction based upon what we've learned. We have selected standardized measures. So, many projects have submitted HCAHPS [Hospital Consumer Assessment of Healthcare Providers and Systems] data and the like to us, we're actually looking at very specific elements of those standard processes or standard measures, and then also we have selected one teamwork tool, of which we're using across all of our projects. We will have access in real time to the data that is submitted for individual projects, and then as we work towards big data, individual projects will be able to do comparisons with other projects that are submitting data.

This is our learning system that I've alluded to, and again very much based upon what we're learning and the research – and the literature in IPE and taking a number of people through this process with tools to accelerate the work.

So, I'm going to shift at the last moments that I have with you to focus on the Resource Center. It is actually – I have to say, it's NexusIPE.org, and we frankly brought this up as a survival technique in the National Center. So, after being awarded the center grant, the center cooperative agreement, we were inundated with requests for how to implement IPE, because bringing up the National Center was concurrent with the explosion of interest in the field. I like to take credit for it, for the National Center, but I can't totally do that, but definitely we've had over 800 organizations contact us for information. So, the resource that we put up, I had some really smart technology folks make the recommendation. It is a community generated platform in which people put up their resources, toolkits, the National Center does the same, and there is a search algorithm that helps you to locate resources that are related to various resources that you might find. You can get lost in it very easily, so we have one-pagers that we provide to people on certain topics to help, again, find the right resources that you might need to support your work. So, we've had over 1 million-page views since its launch, with 150,000 unique viewers, but what's happening to us now is we have about an average of 20,000 new viewers each quarter now. So, the acceleration of use of this resource is significantly increasing.

To end my conversation with you and make certain that I address the topic of measuring the impact of IPE, I'm going to talk about our focus on assessment and evaluation. And as you can see our mission is to promote the best practices in assessment and evaluation in interprofessional education and collaborative practice. So, almost from day one, the number one request of the National Center was how do I measure change or how do I know that my IPE program is effective? And so, we knew early on that we needed to address this request. So, what we did is in 2014, identified 26 instruments

based upon looking at other collections and the like and we curated them. [An] educational psychologist helped us identify those 26 tools. What we learned over the last several years is those tools might be popular, but they may not necessarily be the most effective or the best tools to be using for measurement in the field. Another issue that arose is that we have a number of people call us and say just tell us what to do and make it simple. And so, we have reviewed these, and they are readily available with individual tools; and now we have 48 tools that are readily available that you can use for your work. With, again, reviews in um, experts have reviewed them, that are very, very detailed so that you can select the best instrument. So, I'm going to end my presentation. These are our learning opportunities. Actually, the November 16 and 17th one is closed. We are well into moving towards that, but we have a resource on the website called 'Preceptors in the Nexus.' We will have an in-person training in March, and then we will be hosting a big data conference on interprofessional education and collaborative practice. So, with that, I'm going to stop and I will turn the presentation over to Northwell.

Amanda: Great. Thank you so much, Dr. Brandt, for that interesting presentation. And just a reminder, folks, to write your questions down and make sure you have for the end of the call today when we open the lines for Dr. Brandt to answer some questions. But right now, like Dr. Brandt mentioned, we are going to turn the presentation over to Dr. Dan Colletti and Julie DiGregorio. And, take it away.

Dr. Daniel Coletti: Thank you very much, and I just want to say it's an honor to follow Dr. Brandt. And we have been a consumer of the work of the National Center, and I'm one of the unique members of the people who have used the Nexus website, so thank you for all your hard work and for – we are but one of the many points of light trying to – that are ambitious and motivated and energetic, trying to implement IPE in our environment. And try to evaluate what we do so we can tell a story of what works. So,

what I would like to do today is – hold on. I am having trouble moving forward. Let me see. Okay.

The objectives of my presentation today will be to tell you about a little bit about project IMPACcT, Improving Patient Access, Care, and Cost through Training, which is our interprofessional primary care training and education program. I'll tell you about our framework and our strategies for evaluation, focusing on the ways we are trying to tell a story that mixes quantitative methods, mainly surveys and quality data, with qualitative methodologies, such as reflective exercises among all our stakeholders and the use of focus groups and interviews. And I'll also, at the end, try to describe ways we are trying to utilize data in the moment, in a timely fashion, to do continuous program improvement.

So, this is a – IMPACcT is a five-year PCTE grant, and it is a collaboration between the Zucker School of Medicine at Hofstra Northwell. I am on the faculty at the medical school and also part of the Northwell Health System where I work in the primary care practice here. Um, and the learners that are sponsored by Hofstra – the medical school are our medical students who, from first to fourth year, are rotating through our practice and our PA [physician's assistant] students. The Northwell Division of General Internal Medicine is the home for our residency training program, as well as our clinical health psychology externship program that we partner with local graduate schools in clinical psychology. We also are collaborating with the St. John's University College of Pharmacy, where we are working with faculty from St. John's, as well as advanced students on the way to their PharmD degree. [There are] three big objectives. Of course the big one is to increase the quantity and the quality of the primary care workforce, through a three-pronged approach, focused on education, broadly defined to create a clinic-based experiential didactic plus interactive training educational program to provide clinical care, that improves patient access, quality, and cost through the implementation of team-based interprofessional care, and through mentoring, both

within the profession and across professions, to increase the number of trainees, motivated and skilled to enter the primary care workforce.

So, I'll go over each component a little bit, and then go right into our evaluation strategies, so at least you know what we are trying to accomplish. So, when I mean education in this context, of course we're all – everything we're doing is IPE, but we have developed a set of educational curricula with two big umbrellas. One is a mini-didactic program that's been developed interprofessionally with our faculty and medicine behavioral health, our PA faculty and our pharmacy faculty, to do brief, case-focused, 30-minute presentations before – in the clinic setting, before our clinical sessions. All professions participate in the development as well as in the implementation of the didactics, and you see we have a… it's an ongoing curriculum. We're fine-tuning it, focused on interprofessional illness management of chronic conditions, population management topics such as social determinants of health, veterans' health issues and LGBT [Lesbian, Gay, Bi-sexual and Transgender] healthcare strategies.

As well as, we're increasing our library of special issues in primary care, where we found our interprofessional team can really take the lead in different aspects of these. My research background's in medication adherence and this has been a great opportunity for me as a behavioral specialist to partner with our pharmacy team in developing approaches to medication reconciliation and incorporate patient voice and behavioral approaches to promoting adherence, as well as getting a good sense of medication plans.

So, um, complementing these things that occur twice weekly, every Thursday and Friday afternoon before the clinical session, are our larger interprofessional retreats. These are half-day workshops. We have had approximately 50 to 70 learners from each profession, and we have now a curriculum of five workshops per academic year where we will now rotate specific topics within these five broader areas of interprofessional

leadership skills – and we just completed our first one for the year a few weeks ago – medication management, healthcare disparities and social determinants of health. I take the lead as the psychologist in a behavioral health topic. Last year we addressed motivational interviewing and behavioral approaches to promoting patient health behaviors, and we did an interprofessional review for the learners in PCMH [Patient-Centered Medical Home] principles. For some, they had had some background in what the components of the PCMH were, and [for] others this was introductory material. So, these retreats are very challenging to develop to engage all learners. And I'll tell you in a few minutes about how we're evaluating it and trying to optimize our approach.

Okay. So, the foundation, of course, is our IMPACcT clinic, where the learners conduct, under supervision by an interprofessional faculty team, provide care, over eight half-day sessions over the course of the work week, and will see approximately 10 patients per session. The care is interprofessional. We meet for 15-minute huddles before each session, and a key component of preparing for the upcoming session is defining roles and responsibilities of the different professions, based on patient needs. This has been a very exciting thing, a very challenging thing for the learners and sort of a work in progress, but when it works – and it is working more and more – it is very exciting, and we are getting lots of positive feedback, both from the learners and the patients.

Finally, we have a mentoring program where each learner in our program is paired with a faculty mentor and we – after those interprofessional retreats, which get faculty from disparate locations together and they will meet with their mentor, usually for a structured, themed-based activity after the retreat, and then are sent their way throughout the course of the year to interact formally, informally. We're tracking the kinds of interactions they have, but they are free in-between to meet, to email each other, to text message, and we are – rather than dictate the process, we're going to track it and see what it does. And especially with the learners, with what they feel they need from their mentoring experiences.

Okay. So, the project – we are now in our 3rd year of the project – a five-year project. It just began. We had planned in significant needs assessment activities in the first stage – the first year, of the project, to create stakeholder buy-in, to comprise the team. We had worked together, but not in this context before. To recruit staff and the trainees, the clinical practice has a designated practice coordinator and medical assistant, two really integral parts of our team, conduct the huddles, and show our continuity and access within the project. And we spent a lot of time doing faculty development. In the spring, right before we started the practice in mentoring skills, interprofessional role identification, we had a lot to learn ourselves and we taught ourselves and then started implementing the clinic in the summer of last year, of 2016. That is when our learner evaluations began. And we're now, we're in the year two of the clinical implementation. And we're already talking about expanding beyond the walls of the IMPACcT clinic.

Okay, so now I would like to talk about the evaluation approach and I guess these are the three – the three tenets. We have – in our development phase, looked for the best available standardized measures and yes, we did use the Nexus website to identify the key ones, that also met our faculty teams' conceptualization of what we were hoping to accomplish in terms of learner attitudes, um, in terms of patient satisfaction. I'll show you how we are doing that. And so, to supplement the quantitative measures, with any qualitative data we can get our hands on: comments in the margins, any additional comments at the end of your survey, as well as structured and semi-structured methods to support – that would always support the quantitative data and describe, enrich, or give it a color and a depth. And finally, to provide the team, our faculty and our implementation team with ongoing – as "in the moment" as we can manage – analysis that would foster continuous quality improvement. So, we're always trying to top ourselves and advance. And really, this is really a quality improvement initiative and I think this is how IMPACcT applies continuous quality improvement techniques. We're often talking about "Plan, Do, Study, Act," cycles in terms of ongoing focused research

methods to improve particular needs, and we are trying to evolve as we – and get better even – as we continue to provide service.

You know, we are part of a Patient Centered Medical Home and many members of our faculty have really espoused a humanistic approach to training, as well as patient centered care, and I think we often talk about incorporating humanism into how we obtain information from all our stakeholders and how we honor their perspective and the context of CQI [continuous quality improvement]. One thing we've learned in the context of working together is about our scopes of practice, how they interact, the unique roles we can play, as well as the need to negotiate overlap. So, the need to apply professional standards in terms of best practices, but we are always striving to provide the best patient care and the best educational experience for our learners.

And I think in a constantly moving project like that, we are always using data and projecting data out there. We have certainly, we have a large context and Dr. Brandt talked about organizational culture, as a really key factor. We need to bridge concepts like organizational culture in ways that we can measure, and to put out the data that we are collecting and try to explain it in that context. Also, we are often doing 360 [degree] evaluations of similar program components. For example, I will talk in a minute about our interprofessional retreats and how we get learner data and faculty data to participate in the implementation and try to integrate that, but always using a databased approach.

Again, the dimensions of the evaluation involve looking at both process and outcome. So, the milestones – are we hitting our marks in terms of programming implementation? Are we meeting the deadlines? And then talking about program effectiveness and the quality of the clinical care and the education. As Craig had mentioned, a challenge is about assessing longitudinally and incorporating the diverse nature of the training of the learners, as well as the duration of their training experiences. I'll talk about it in a

second. So, we're looking at things pre- and post- a lot and trying to integrate different time periods and different intensities. We're also looking before and after episodes of patient care, and we're looking at change within each learner, as well as across professions. We're always looking for multiple stakeholders and our key players are, of course, our students, the patients, and the faculty and the other staff in our practice that interact with the IMPACcT team. And always using both quantitative and qualitative methods.

We developed this as sort of a visual graphic of key aspects of our evaluation plan, in which we have three – you'll see in the left column, we have three major stakeholders; we have the learners, we have the patients, and then we have the faculty. They are all a source of – we want their experience, we want their input, in the three key aspects of the program. So, each bucket reflects one stakeholder paired with one aspect of the program. So, I'll just give you some examples. For the education curriculum, we have a used qualitative focus group data in terms of planning it in advance, we did some baseline focus groups. We do post – after each retreat, interprofessional retreat, we do a brief, five-question, Likert-scale survey, but the focus is really on post-retreat reflective narrative of things learned, things that were still confusing, and open-ended comments on the afternoon. And we are also assessing learner perceptions of what they're learning during the many didactic programs. For – another bucket is right in the middle of the slide, is patient perceptions of care. We have – we are looking at quality improvement data and hoping to look at even cost-related aspects of care such as re-hospitalizations and ED [Emergency Departent] visits, continuity, and patient access to care. We're looking at common PCMH [patient-centered medical home] quality improvement metrics, such as colorectal cancer screenings, depression screenings, diabetes management, and we implemented a, sort of as a PDSA [plan, do, study, act], a patient satisfaction protocol over the summer, which was a combination of the patient insights and the use of teamwork surveys, supplemented by patient comments and

reflections on how they perceive team interactions and the care they get in our practice. So, this has been our sort of rubric by which we are always collecting data and trying to contextualize them, who it is coming from and from what aspect of training.

So, we've – here's, I guess, four areas that we can conceptualize as things we've found particularly challenging in our experience. The program is a moving target. It is ongoing, it's clinical, it's – we are working with multiple educational institutions and multiple learners who are coming in and out of this ongoing team. Every learner is providing direct care under supervision from the beginning to the end of their educational experience, as well as participating in the educational curriculum and the didactic training. Our learners are at different points in their training, so we have both internal medicine residents who are postdoctoral level at the final stages, as well as PA students, psychology students, and pharmacy students who have yet to obtain their degrees. So, the nature of the supervision is – we're always modulating.

And there are different durations and intensities of the training as well. This is just a function of how different professions train. For example, the internal medicine residents, of course, are full-time. Yet, they work a one – we have a 4+1 rotation schedule, so they will be one week out of every five weeks in our practice as the lead physician. I train a graduate student in clinical psychology who is here for 12 weeks – 12 months for an academic year, but only one day a week. So, trying to adjust how to incorporate her into the weekly schedule is a challenge. Also, and this has been a big challenge as an evaluator, but also a happy happenstance is that in terms of culture, the people's experience of the IMPACcT clinic in the larger resident practice has compelled leadership to want to start implementing a lot of the key components of IMPACcT across the board. So, while this is a wonderful, exciting thing, it also is a challenge to comparative research, where we might compare the IMPACcT enhancements to the traditional resident clinics; and we're trying to get as much data as we can on the larger

practice, as well as the IMPACcT practice before transformation occurs and then try to track that as well. So, these are all big challenges for us.

So, now I'm going to explain three different kinds of strategies we've used, in terms of the larger evaluation plan and how we have filled up those buckets that I described in that matrix. The first one will be a formative evaluation strategy that we conducted prior to implementing the actual IMPACcT program, a mixed method evaluation of how we are looking at learner attitudes and experiences, and then finally, and with a PDSA process, showing how we refined a component of our didactic training.

Okay. In the development phase of the project, we conducted five focus groups with multiple stakeholder groups in parallel during March and April of last year. We had a learner group comprised of current residents – this is prior to program implementation – medical students from the medical school, the current psychology extern working in the traditional practice, and pharmacy students and a PA student interacting about working together, their prior experiences, and then what they would want in an educational program. We ran a faculty group, again across – all the professions within our PCMH interacting together around IPE and about patient-centered care. And then we did three patient groups in rapid succession, one of which was conducted in Spanish to ensure we had a diverse sample of voices, as well as using a special episode of our PCMH as a patient advisory committee and they've often given us input into new program components, and so we conducted a special committee to get their – to get their, sort of, big picture input on engaging in IPE within the larger division.

We did qualitative content analysis and tried to find, uh, commonalities and different points of view among the three learner groups. These were the – this graph shows the seven major themes that we identified within the transcripts of the groups. Very rich information and so many commonalities in terms of – I'll give you some examples. Scope of practice, I think we had, and this was mentioned in the faculty group, about

concerns that patients would be confused and concerned a) about working with students and then working with students from different professions and working together and how to communicate that to patients and get their buy-in. It was actually the patients in the focus groups who expressed a tremendous openness to an interprofessional processes, very impressed with the concept, some had had some experiences and they were generally positive and they wanted to share that. But, and in terms of involving patients in medical education, they wanted to know as much as possible about levels of training, about what does a pharmacy student do, and how does a pharmacist work in a primary care clinic. As long as roles were clearly explicated, they were all for it.

Faculty were more concerned about navigating the process, of making sure they could teach their learners in an IPE context. I think we're all a little bit concerned about precepting across professions. This is the first time I really got to hear a medical resident's conceptualization of a case and try to give feedback within a common primary care framework, so that has been very exciting. But we were a little concerned about it. So, we actually took some of these focus groups and turn them into real recommendations for program implementation. We now have an ongoing live document, that's a IMPACcT handbook that describes roles, responsibilities. It has lots of pictures, so everybody knows who everybody is. We have incorporated training on available patient resources, so to expand the clinic out to the community, to make sure people are well connected. There was lots of talk about needing to explain high-value, cost-conscious care, and that is part now of our didactic training program. It was interesting, it was patients who thought that was really important, and so we heard their voice and incorporated that into the learner training about cost of medication, procedures, efficiencies in care. We communicate the roles and the scope of the practice of the care team to patients, what are they licensed to do and how do they

work together, and we create opportunities for faculty and learners to share their passion, which was identified very early on.

We talk about the learner evaluations. We have a set of surveys that we ask patients – err, learners to do, both before and after their training experiences. We have the ISVS [Interprofessional Socialization and Valuing Scale], attitudes to primary care, and looking at learner's perceived competence, using the ICCAS [Interprofessional Collaborative Competency Attainment Survey]. We've also developed scales to assess levels of interest and intent to work in different settings prior to and after the experience, as well as qualitative reflections.

I just want to show you some of our data from a – I think we did this at the six-month point. Using the ISVS, you'll see some key items. We did see a difference between the medical residents and the non-licensed students, in terms of ability to interact within a team setting and comfort in leadership roles. This is something we're trying to address in our didactic training and in our precepting. We also – this sets the stage in how we will be able to move the dial in terms of the setting learners want to work. We saw that, in fact, the unlicensed students were much more interested at baseline in working in a primary care setting than the residents who were a little bit more on the fence. But at the bottom of this figure, you'll see the residents actually have great interest in teaching and we found that that has played itself out in many parts of our project. So, that, I do believe is a good sign for the development of IPE as an academic discipline and to implement it in a scholarly, empirical way.

Our unlicensed learners largely had not heard of quality improvement in a healthcare context prior to this experience, and so we've had to supplement their training. And also to give the academically-oriented residents more of a teaching role in sharing their experiences with the unlicensed learners. And so, quickly, the take home messages from that have been that attitudes generally are positive, but there are interprofessional

differences in comfort level and experience with being in a team role and with leadership. Unlicensed learners are more interested in primary care careers, but less interested in teaching or academia, and also the experience gaps in QI [quality improvement].

Finally, I will talk a little bit about how we have worked on our interprofessional retreats. I explained them a little bit earlier. Each retreat is evaluated by the learner and faculty survey, and a reflective narrative exercise. We are constantly – I'm about to unroll the data from our last retreat, and we will discuss, deliberate, and refine for the next time. We track this at every retreat, one of the things we found was – after a behavioral health workshop, residents didn't want to role-play. That's often been an aspect of our initial retreats. They wanted advanced skills, so there were interprofessional differences. And we've been trying to meet the needs of all the learners. So, we've used this as an opportunity to improve and to learn, using some of our qualitative comments, including some of the challenges that people may see. The faculty see how hard it is to meet the needs of all learners. They did say we were trying to do a little bit too much, so we've tried to streamline a little bit, and also people are noting that they're getting better and we are learning from our experiences.

So, quickly, we have actually learned with each successive of the five workshops to date that we are hitting the middle line between meeting the needs of the early learners and the more experienced learners, mainly by giving the experienced learners a teaching role. We are doing less role-play, but more actual case-based interaction, and we are engaging them in presenting their quality improvement projects as sort of guest faculty, so they can teach the other learners and the faculty what they have done in their own PDSA cycles. And that's what we're going to try for next year as our new QI format.

So, for the future, we are about to do a deep dive of our data in the upcoming weeks – and that is my project to do next time, and Julie's, we're going to work on that together

– to look at the pre-/post data on the different learners to see if there is an interaction with intensity of experience and perceptions of the IPE. We will analyze our patient satisfaction data and we do have a plan to do follow-up focus groups with those stakeholders in the spring. The program has been asked to incorporate other professions and we are trying to figure out how to do that. Other primary care sites within our health system are expressing wanting to implement a team-based approach. We're piloting new workflows constantly, and also partnering with the other primary care disciplines in our health systems, such as pediatrics and family medicine.

That is all I have for you today. This is our team at our annual kickoff party. I would like to special shout out to – these, we have a large, very active leadership team. And Dr. Joe Conigliaro is our principal investigator and Dr. Alice Fornari from Hofstra is our coinvestigator and I'd like to thank them especially for their support and mentoring. Okay. I think that is all I have for today.

Amanda: Great, thank you so much, Dr. Coletti. We are now going to transition into the question and answer portion of our webinar. Sarah, our operator, can you facilitate that portion for us?

Sarah: Absolutely.

Amanda: And, sorry Sarah, for folks who are on the Adobe Connect portion only and not on the audio conference, you can type your questions in the chat box and I will read those for our presenters.

Sarah: We will now begin our question and answer session. If you would like to ask a question, please press star one from your phone and unmute your line. Speak your name clearly when prompted. If you would like to withdraw your question, please press star two. One moment as we wait for the first question.

[Silence] Our first question comes from Katherine Mott. Your line is now open.

Katherine: Hi, thank you so much. I have a question for Dr. Coletti. You talked about the challenge of hitting that middle line between the advanced learners and the less advanced learners, which is definitely a challenge that we've faced in our own interprofessional clinic, which does include first-year medical students, as well as second and third year residents. And so, I was wondering when you found that your less advanced learners were lacking knowledge, like when they didn't have exposure to QI, do you have to, sort of do like "catch-up education" separately that didn't include the residents or the advanced learners? And if you did sort of combine them, how did you manage that, so that the advanced learners thought it was still a good use of their time?

Amanda: Dr. Coletti, are you on the line? If you want to unmute, maybe. I'm not sure if you're muted at the moment. Or do we have Julie on the line?

[Silence]

Barbara: This is Barbara Brandt. First of all, I am blown away by the evaluation at Northwell. I thought that was an amazing project, but looking at their data, it would seem that, you know, their advanced learners want to teach and it's a real opportunity to teach authentically in practice to the other learners. Again, I am very, very impressed with this multi – mixed-methods evaluation, so I think some of the answers could be in the data they presented. I do not know where they are, but that would be my observation.

Katherine: Thank you, Dr. Brandt.

Sarah: We have no other questions in the queue.

Amanda: Okay, so Sarah? Dan Coletti lost his connection. Can we promote him to speaker again?

Sarah: Just one moment, let me get him.

Amanda: Thank you, and sorry for the technical difficulties.

Sarah: Oh, no worries.

Amanda: Oh, great. Dan, are you on the line again?

[Silence]

Sarah: I am not seeing him in yet. Wait, I think I have him.

[Silence]

Amanda: Hold on one moment. Sorry for the technical difficulties.

Sarah: There we go, I got him. He should have an open line.

Amanda: Hi, Dan, are you back on?

Dan: Can you hear me?

Amanda: Yes!

Dan: Oh, I am so sorry.

Amanda: No problem.

Dan: I apologize.

Amanda: Sorry for the technical difficulties. Did you hear Katherine Mott's question?

Dan: I am sorry, I did not. [Laugh]

Amanda: Okay, no problem. Katherine, do you mind repeating?

Katherine: Sure, I'll just rephrase it quickly. Dr. Coletti, I was just wondering if you could talk about how you implemented, sort of that "catch-up education" for your less advanced learners, like when they did not have experience with QI, but the residents and the

advanced learners did. Did you do like a separate educational thing or did you have the residents teach? How did you handle that?

Dan: We've done it in a couple of ways, and it is still a work in progress. It seems that – and I think because we are a clinic-based educational program, we will probably get more bang for our buck from an experiential project-based experience in QI. Many of our students have research methods training, so it's less about methodology and a lot more about, "Alright, let's talk about healthcare problems. Let's talk about QI unique methods for trying to examine them, to fix them." So, what we decided to do, there will be additional didactic training, but beginning a few weeks ago, we came up with an interprofessional team-based QI project that will look at medication review for all IMPACcT patients. We're experimenting with an intervention that would involve medication reconciliation led by the pharmacist, but including other learners prior to the patient visit, to see if we can do a better job at resolving medication discrepancies, get them actually implemented into the medication plan, communicate them to the rest of the team. So, all learners will be part of delivering the improvement, as well as now, we're going to do workshops with them, workshops to look at, "Okay, so we've got data. Let's talk about what we're learning." The learners will help with data collection and analysis. And we think that's probably the best way, given this diversity, to handle the different experience levels.

Katherine: Thank you so much.

Dan: Sure.

Amanda: Great. Then we also have a question and some comments in the chat. Thank you for two superb, amazing sessions presented. Dan and Julie – Can you add your reflective comment on what we have learned as a leadership team trying hard to offer a quality product, specific to an IPE leadership team?

Dan: I love being part of our faculty team. They are some of the most committed, passionate, ambitious for all the right reasons, people. We are – we always are struggling to integrate our thoughts. I have never been part of a team that did so much effort in trying to respect each other's points of views. Sometimes it can be different. And to keep moving forward in a way that respects everybody's point of view. It hasn't always been the most efficient process, but it has been collegial at all times, and I think we are learning as we go. I mean, we come with – I have done interprofessional work before. It's something I've always been very passionate about. I have never done it this way. So, I feel like a learner as well as a faculty at all times. And I benefit from different experiences of all the other people on our – all those people in that picture in the last slide. [Laugh]

Amanda: Great, thank you so much. Sarah, do we have any other questions from the audio portion?

Sarah: No, there were no further questions in the queue.

Amanda: Great, and I just want to open it up to folks on the line from HRSA/JSI/JBS to ask any questions or to our speakers from Hofstra and Barbara Brandt to offer any closing comments as we are wrapping up today.

Barbara: This is Barbara Brandt, thank you for – first of all, I learned so much from Dan, your team's presentation, the work you're doing is amazing and I could actually talk about you're living the life, you are doing amazing work, very impressive. Thank you for inviting us to present today.

Dan: I am very flattered, thank you.

Amanda: It looks like we do have one more question incoming on the chat, so let me just wait for that, and the question is for you, Dr. Brandt. Can you please share who are the two sites that are part of the data repository in California? The speaker asks, or the question asks.

Barbara: Wow. I would have to look. [Laugh] It could be an off-line quest – or answer.

Amanda: We will make a note of that and we can work with you to get to that information.

Barbara: I actually gave a presentation at UCLA on Friday to 300 researchers, so I think there's a lot of people who are committed to research and evaluation, wanting to become involved.

Amanda: Great, well if we do not have any additional questions at this time, we would like to say a huge thank you to Dr. Coletti and Julie DiGregorio and also Dr. Brandt, for their presentations today. We really appreciate them. They were interesting and informative. And we want to thank everyone for attending. Thank you, all.

Barbara: Thank you.

Dan: Thank you.

Sarah: Thank you for your participation in today's conference. You may disconnect at this time. Speakers, please stand by for post-conference.