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SHINE LECTURE
COMMUNITY HEALTH CENTERS AND THE SOCIAL DETERMINANTS OF HEALTH
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>> DEAN GALEA: Good afternoon. Good evening, good morning. My name is Sandro Galea. I have the privilege of serving as Dean of the Boston University School of Public Health. Welcome to today's public health conversation.

These events are spaces to come together to discuss ideas that shape a healthier world. Through a process of free speech, open debate, and the generative exchange of ideas, we aim to sharpen our approach to building such a world. Guided by expert speakers we work towards a deeper understanding of what matters most to creation of healthy populations.

Thank you for joining today's conversation. Thank you to our school's center for health law, ethics and human rights for presenting this event. And thank you to the Dean's Office and the Communications team for their work putting today together.

Today's conversation honors the memory of Cathy Shine. Cathy Shine was a remarkable woman who turned an experience of trauma into a legacy of a healthier more just world. After being restrained against her will while in a hospital recovering from an asthma attack she went on to become an author and advocate for patient's rights. Before her death in 1992 she wrote a book published by the Sentencing Project on race-based discrimination in criminal justice proceedings. Her work brought her into contact with Professor George Annas, the Director of our center for health law, ethics and human rights.

Professor Annas would cite her experience when arguing in the New England Journal of Medicine for the rights of patients to refuse restraints.

Cathy Shine's legacy continues to help advance the conversation about supporting the health and dignity of patients. We are deeply grateful to the Shine family for helping us establish this lecture to continue the conversation.

Today's event is moderated by Professor George Annas. Professor Annas has been a Distinguished Professor of Health law, ethics and human rights at our school. He will introduce today's speaker, Dr. Cheryl Clark.

Professor Annas.

>> DR. GEORGE ANNAS: Thank you. It's my pleasure to introduce our Shine speaker today Dr. Cheryl Clark. Dr. Clark has a long title so I am going to read it if that's okay. She is the new Executive Director and a Senior Vice President of the Institute of Health Equity Research, Evaluation and Policy at Massachusetts League of Community Health Centers. She has lots of titles but this is her newest one and her newest work. I'll let her talk about that. She also Co-Chairs the Social Determinants of Health Task Force of NIH's All of Us Research Program which always seems to be teetering on the verge of becoming a genetics determinant of health, but she is going to make sure it doesn't do that, and the many, many determinants of health. She has her MD degree from Stanford Medical School and doctor of social epidemiology from Harvard school.

I got to looking at stuff in the community and I couldn't help myself. This is irrelevant, but it's actually not because I am going to sit here the whole time. Both of our fathers were electricians, and we were both raised in the Midwest. You can see how that influences us, or doesn't influence us. Dr. Clark calls her father a problem solver and says she takes after him with that problem solving ability and desire to solve problems. That makes a lot of sense to me.

She's also done an interview with Public Health Post, our local publication, and said some very interesting things. I'll just leave you with one long sentence of hers from that interview which I hope makes it a good introduction to the speak. She told Abby, our student, what we need more emancipatory research that can helps you with community participation and ownership of research and understanding that receiving health as a human right is fundamental to being able to conduct research that improves the wellbeing, dignity and respect that all people deserve.

I take it that's your goal and you do good work. And the title that she's using today is going to encapsulate that is Community Health Centers and the Social Determinants of Health.

Dr. Clark.

>> DR. CHERYL CLARK: Thank you so much, Dr. Annas. It is a real honor and very humbling to present on this occasion. I appreciate the very kind and gentle introduction for this particular talk I also wanted to mention I don't have any conflicts to declare.

My affiliations have been listed. It is also an honor to be able to give this talk on the occasion of what the U.S. Department of Health and Human Services has named National Minority Health Month as the topic of April. If you look at the sort of themes, you know, over the years, this year the theme is to the source for better health. To do that part of what the department recommends that we do is to learn more about social determinants of health and how you can take action in our own communities to improve health. And so let's do that. So I feel it's really fortuitous that the things that I love and care about are topical this month. So today's talk I'm hoping will do a couple things. One is to review and sort of think about this topic called social determinants of health SDOH and how they influence health. Then to look at a model of what they looks like in a clinical setting in Community Health Centers and to think about the Civil Rights origins of CHCs as part of that work and then to also explore a little bit about how CHC's are models for care for addressing SDOH. If there are any things to take away from this discussion I'd like us to be able to list the multiple paths through which social determinants affect health and describe the history of Community Health Centers and how health centers have approached it. Then after the lecture, should it stay with us, I hope that you will go on and do your own research and exploration on how the clinical strategies and clinical partnerships. We have the pleasure today of sitting at the School of Public Health. And I has the pleasure of having coffee with your colleagues across the street at the Medical School. And so how those worlds combine is the topic of our conversations today.

I'd like to start, if you don't mind, with a bit of a question. And I don't know that we'll be able to see the folks who are on the Zoom but I'm hoping that the people who are here with me today are willing to raise their hands just to answer a couple of questions. So if you've heard of the World Health Organization and its framework and what it discusses as social determinants of health which of the following would you pick: That social determinants of health have structural and intermediary determination. They influence health through biological processes. And they're permanently due to poverty. Or D, all of the above. What makes sense? What would you pick. How many for A? And how many for B? C? And E? So these are really good -- (audio distorted)

But I would have you pick D, A and B. So the topic of our conversation is going to go through it. So let's talk about some definitions. What are social determinants and how do they influence health? This has become (inaudible) a buzzword. And in academic circles there are so many terms now used. I want to define a couple of these terms. Let's talk about a couple of definitions. I'll show you some of the recent literature that gives us a sense of this. So there are health related source of needs, that's sort of a term that has been popularized within clinical settings. So folks are interested in caring for patients as well as the understand the population they and contextual factors that influence health. These health related social needs are this individual's experience of their

adverse social and economic conditions that affects their ability to maintain health and wellbeing. Social needs start to run in the person's agency. What are priorities and how do you think about your own preferences and making sure the team incorporates your own preferences and priorities into that work. Social drivers is a determine that's been I think advanced because it's understandable. It doesn't sort of (inaudible) these things that can change so they influence our agency. But I am going to use the term "social determinants of health" to embody many of these concepts. Mostly because it's helpful and connects them to a framework that I'll share with you in a moment that I alluded to during the opening question. The World Health Organization's name which is described in a compendium called closing the gap on a generation, I think this is a still a very strong way of outlining this work. Because it reminds us that health is embedded in a health and human rights context. That social and structural inequities (inaudible) but even things that exist outside of us in our society get into our bodies and that our health is embodied through several pathways. So access to and using resources, our own biology, behaviors and social relationships. One of the tag lines for the WHO framework is why treat disease without addressing the causes that make us sick. This is harder to do than you might think. In part because I think it is necessary to have this broad framework when we are thinking about intervention. Typically clinicians often are thinking in this box. Material circumstances. To our patients have food to eat. Do they have a place to eat. These material circumstances. I wanted to show you or talk a little bit about a movement within healthcare to address that first term I talked to you about -- health related social needs and clinical care. The New England Journal of Medicine is one of our premiere journals, a journal we all sort of stay in touch with I think as we take care of patients. And the Accountable Health Communities randomize clinical trials, one of the largest trials that taken place so far in the U.S. to try to manage these social needs at scale. Dawn Alley and colleagues put out this piece to codify this term and also introducing the randomized trial that was performed called the Accountable Health Communities model. The AHC. The idea is that we ought to really focus in on making sure that the material needs of our patients are cared for as we provide their care. There were five core health related social needs that were managed within this randomized control trial. Housing instability, food insecurity, transportation problems, difficulty paying utilities and interpersonal violence. And there were two models to do this. One was assistance. So that you would screen your patients, you know, put together a valid survey and ask people about their needs, and then let them know and help them navigate them using a community health worker or some other model where there's a person helping people to navigate the system. The second went a step further. It was called "alignment." And that's where an organization called a bridge organization would bring organizations together and institutions to try to have conversations so that there's a bit more organization,

not just sort of an individual going out on their own trying to navigate, but so that the institutions that provided those social services would be in communication. And bridge delivery organizations could be a myriad, but they were responsible for doing this kind of work. So what happened? It achieved scale. So over a million, both Medicaid and Medicare beneficiaries were screened by twenty bridge organizations across the country. You can see them. But there were some interesting outcomes here. Only about fourteen percent of the health related social needs that were identified -- so fourteen percent over about three years right.

And one of the sort of driving reasons for doing this within health care is that health air utilization should be improved if we address social needs. What we saw in many ways were some modest changes. So in sort of fee-for-service Medicare and Medicaid there were kind of small reductions in ED visits and about a nine percent reduction for fee-for-service Medicare for avoidable ED visits. So going to the emergency department when you don't need to. Why might that be so when we are focusing our attention in that top box around health related social needs? One of the participants and some of the qualitative data that was taken from the AHC sort of described it. You've got six hundred people on the waiting list waiting to get into housing. You've got fifty units across the country open every thirty days. So it is a trickle putting people that are homeless or chronically homeless into housing. We haven't addressed the structural barriers. One thing I should mention is even in the alignment track where the organizations and institutions were brought together there wasn't an additional payment and investment to increase the level of services it was more coordination at the organizational or institutional level. So very helpful and humbling in many ways that clinicians are thinking about stepping into the foray that we need a broader framework for guiding our work.

So how do we think about that? Many said all of the above is a possibility. But often when I have this conversation with my colleagues and clinicians we don't always understand the extent to which social environments are not only mediated through the way we use healthcare but it also settles in us. It becomes a part of who we are. How that is? What I would say is the biology is poorly understood. The limits and methods are limited. A lot of the data we looked at in our causal, both the exposures as well as the processes are physiologically complex and not linear. The exposures are all connected to each other. And when you are exposed your timing across the life course and some ways across generations and history matters. And it's hard to collect all of that in a regression model. So it makes it tough to do this work.

That said, I do think there are some nice frameworks that help us think about that. Tiffany Powell Wily she was a graduate of the Brigham Women's Hospital where I also trained has a pathway that helps us think about it at least in cardiovascular disease which could be helpful for thinking about this more generally that there are pathways from these social exposures and stressors that affect

our neural hematopoietic access. So the way that's stress and sort of activating the brain. So that function that processes our fear and flight response actually sets off a cascade that causes our bone marrow to increase actually the production of white cells that then go on to produce inflammation. A real hormonal access so that our quick fight and flight but also our chronic activation of our stress also contributes to glucocorticoid resistance and fat around the middle and clot. There are pathways that influence even the way that our bodies like our DNA, the building blocks of our personhood our tier meters are an example of repair. As well as the subcellular level DNA meth lacing as the ways we regulate our genes are all pathways. I wanted you to see a couple of papers that describe some of that.

There was a nice article in JACC that looks at the stress associated, sort of biological neurobiological and the pathway and neural pathways that we talked about that looked at, used an imaging technique called an FDG PET CT. Where you inject a person with dye and get a CAT Scan essentially to get a sense of what type of metabolism is happening in different parts of the brain and body. They were able to use the uptake to estimate a sense of the amygdalar activity. So that center of the brain that relates to fight and flight. They looked at a couple hundred people where they were able to get surveyed and census data to try to understand what exposures people have with respect to income and respect to crime. I can show you the income data today. Where we see that as income the medium income of the places we live increase your mental activity decreases. You also see that with arterial inflammation. So there is a pathway here that I think is sort of interesting or at least is suggestive.

I also wanted you to see a recent paper out of the lab of Michelle Evans and the healthy aging in neighborhoods diversity across a life span or handle study. Part of what has been centering in the field of aging is this understanding that we all age chronologically but physiologically we age at different speeds. And it may be possible to understand that by looking at patterns of DNA methylation. So looking at even if you were able to -- so DNA, so the way that's our genes are regulated are often tissue specific but there are algorithms you can use even to use white blood cell methylation and to look at CPG islands to try to understand those patterns to see whether there are changes over time that indicate a pattern or associations with multiple biomarkers of physiologic decline. Like waist circumference, etcetera. So there are scores. And one a the Evans lab is called the Dunedin Pace score that gives of a sense of what, basically gives us a sense of your physiologic age. They did a very interesting technique to disconnect that from chronologic age by basing out a Concord where they basically got everybody who was born in the same year and did the cohort that way. And the Handles team used that score within a cohort of folks in Baltimore to try to understand what the relationship was with respect to measures of income and other social exposures. And what they saw that was sort of interesting was that if you look at people who are

living in a place that is above a poverty level what you see is that the difference in two time periods between your chronologic age and physiologic age is increased for African-Americans compared to whites. They sort of looked at that. But when you look at folks below poverty you actually see quite a large increase between whites of low and high or above poverty status, but you don't really see that difference for African Americans. And there's something intersectional here about the experience of race as a social phenomenon and the experience of poverty. So these are all really sort of interesting and suggestive findings that I wanted us to know about. So the environment gets into our bodies and influences us.

There are also psycho-social patterns that we need to know about. We need each other deeply. When we don't have social connections we see that. The centers for disease control and the American heart control has gone as far as to declare loneliness is a risk factor that increases risk for heart disease and stroke. We notice not only do we need each other but when we don't treat each other well it also has consequences. There's a nice paper I wanted us to be aware of in Health Affairs that describes the odds of having at least one negative descriptor in our clinical notes when we talk about our patients. And the likelihood that we say something a little negative about our patients in the notes tends to be increased when we look at folks who are non-Hispanic Black, Hispanic or have Medicaid as their insurance. We also see this happens even at the end of life.

One of my colleagues has a nice paper that was out that even twenty three years after a compendium, unequal treatment has shown that doctors don't always do a good job thinking through what the needs of our patients are. That patients who have terminal cancer in the study tended at the end of life to get fewer daily equivalence of opiates for pain control if they were in a group that is either non-Hispanic Black or Hispanic. And that even at the end of life they have more drug screening during that time. So we don't always treat each other well.

We also need to think about these structural inequities. So we've talked a little bit about what happens at the individual level and how we treat each other. But these all happen within a context. And often we think about economic status as a threshold. So poverty. And many of us within public health recognize this very well, the White Hall Studies which were based in the UK and looked at the relationship between mortality and your position in society amongst civil servants. And several issues come up. There's something called a gradient in health where there's something about being perceived at the top of society versus being perceived at the lower end of society that gets into our bodies. It isn't just a threshold after which you are fine. There's something about inequity that tends to matter. And the Whitehall study looked at this with respect to the relative rate of mortality and showed that there were these sort of gradients in social class or social position and that those tended to flatten out as we got older but they were present. And I wanted you to see this in data within the U.S. There's something called the Gallup

Healthways survey that calls people every day and asks how are you doing. Do you have a cold, the flu, headaches, chronic diseases like pain? And you see the similar gradients in health with respect to education or income for things like infections, chronic disease. So you also see it for headache and for pain. It can be difficult in the U.S. to do these studies because we don't often have our health data and our social economic data in one place. And so it's really powerful to see this happen in places that do have these data.

This is the example of COVID-19 and severity of illness. So Sweden has a National Registry that collects both income data but also health care utilization data, so it's really interesting to be able to look at that. And the authors looked at the three waves of the COVID pandemic and looked at the relationship between income and the likelihood that you got admitted to the intensive care unit, that you were sick enough to get hospitalized. And you see that early on when none of us had sort of immunity that there were gradients that were pretty flat but as we got more immunity the gradients increased. You might be thinking it's access to care. You know, people aren't getting vaccinations so they looked at that and saw that even those who had not been vaccinated who were in the highest income categories tended to have a lower risk of getting admitted to the ICU than those who were in the categories that had been vaccinated even if they were low SES. So utilization is very important but there's something else that's going on besides just access to those medications.

Important still, in addition to understanding our socioeconomic position, is understanding the context that generates those positions. I wanted to talk to you about this concept of structural racism as a way of understanding one of those exposures where race is a social category that is based on markers of social difference. And I actually like the definition by David Williams. It's helpful in health care settings to think through structural racism and what that means as a system for organizing society where dominant groups use their institutional and structural power to allocate and rank people and allocate resources in that capacity. And there are five concepts that I wanted to review related to this. Just how foundational structural racism is to society. That you see it in our founding documents. This is just the Plessy versus Ferguson Supreme Court ruling that legalized segregation. And whether we are thinking about WEB in Philadelphia or Dolores Garcia who is a researcher in Boston that there's an enduring legacy that the same concepts are talked about over time, and that it's very difficult to do this work in part because there really isn't similar environments for groups that have this legacy. Dr. Acevedo Garcia has a famous paper in health affairs that looks at neighborhoods across the country. And she creates an index that looks at whether or not there are adequate schools and what the economic status is, and that there really aren't neighborhoods or census tracks in metropolitan areas where children according to race, ethnicity share the same environments. That all of these are possible because of these mutually reinforcing and interdependent concepts. So that some of the health related social

needs for example that we walked with like transportation, education, these are all mutually reinforcing in the sense that you can't just sort of intervene at one standpoint. Not having access to transportation makes it harder to get healthcare which makes it harder to get to your job on time which makes it harder to pay rent. So that is an important of that. It also doesn't require individual intent to discriminate. Unequal treatment helped us to think about that there is bias in the ways we treat each other. But even in our regulatory systems. Do we require use of interpreters. Those are all a part of that. And manifestations evolve over time and are shaped by political movement and change over our life course.

In my group we are currently working with leaders and front desk staffs within Community Health Centers and are doing interviews to try to understand what this looks like a bit more and have developed a model around structural racism where we draw from a framework, Lincoln Falen, that looks at these fundamental causes. And we've noticed three. So resource segregation, stigma dehumanization, and erasure, have replaceable mechanisms where you don't actually have to discriminate by intent. Just allocating resources by insurance, by where you live in terms of your geography, by practicing race-based medicine where you allocate treatments based on the social concept instead of measuring the biology, and continuing to not tell the stories and not to recognize the contributions of diverse populations in medical care tends to perpetuate this.

Some of the take home points I'd like to raise here are that the social determinants of health are these brought, social, economic, political conditions that shape our health care delivery. They have protective as well as adverse influences across a gradient of exposures. And they get into our bodies in multiple ways. But what do you do about any of this? You know, what do the models of care look like?

And what I would say is that one, part of the framework we haven't yet talked about is social movement. Social cohesion. Social capital. How do we think about what happens when we work together. Part of what doctors are often asked is should we be in the business of thinking about social determinants. And it's important to recognize we already have and have been.

This is 2024, the 60th anniversary of 1964's Freedom Summer. If you haven't had a chance to read about what that was like, John Detmer has a book called the Good Doctors that describes the ways that physicians were very active and very powerful within movements to both desegregate the south as well as to build new structures of care.

And I don't know if -- how much background that you have about that so I am going to tell a little bit about the story. You see the man on the side, they're both kneeling. One is Jack Geiger who you know very well. The other is John Hatch. They are standing in the framework of the mount Bayou center which is the first health clinic in the U.S. The general on the right, John Hatch, likes to tell the story of one of his influences. Just thinking about somebody who is

very powerful in terms of shaping social movements. A woman named Dorothy Boulding Ferebee who is an obstetrician -- she did her training at Simmons college and went to Medical School at Tufts and was not able to get a residency program so she wound up having to go to Washington, D.C. where she early on developed something called the Southeast Settlement House which provided, within the clinical care, recreation and daycare services for people who worked locally. So that folks who lived in Capitol Hill and that area could have places for their kids to go. She also developed a model called the Mississippi Health Project which incorporated these social factors around making sure there was good education and access to fruits and vegetables. A mobile unit to make sure that she could reach places where people had difficulty coming in and wound up vaccinating fifteen thousand kids against diphtheria and smallpox and wound up working closely with local share croppers, with the public health department with local senators, and got the attention of the White House and ultimately worked within national organizations to advance the cause of desegregating in housing, employment and voting. Later in her life was a part of the Freedom Summer movement and came to help register African-Americans to vote. So this idea of social determinants of health is very much embedded in the history of how physicians have done their work.

And Dr. Ferebee -- or Dr. Hatch was very influenced by the work of Dr. Ferebee and incorporated these principles in his work with Jack Geiger and added a component around faith based organizing and understanding that was an important social organizing principle within African American communities. And this was all very important when tragedy struck. Many of us know that last year was also the sixth anniversary of the assassination of NAACP field secretary Medgar Wiley Evers. And he had been investigating the murder of Emmett Till and it had drawn the ire of the local sort of segregationists and sort of organized resistance to that work had been assassinated on the evening that JFK had announced an intention to move Civil Rights forward. And he had also befriended Dr. Robert Smith and several African American physicians as part of this work. And the physicians, including John Holloway and Walter Leer who founded an organization called the Medical Committee For Civil Rights picketed and protested the American Medical Association to bring attention to the fact that organized medicine was also complicit in the struggle. And as part of that work, this organization transitioned to the Medical Committee For Human Rights and became part of one treatment. So it was impossible for the activists who were demonstrating that summer to get healthcare in traditional settings. So they set up field tents to provide medical care. But they also decided that there might be something more that could be done to provide care in a more comprehensive and lasting way. And that's how the Community Health Center movement was born.

So they have more gray hair I think than when they were sort of sitting in that room in Greenville. But Jack Geiger -- and you will see Count Gibson -- she is pictured sort of in the circle -- and John

Hatch were the folks working in Boston. Robert Smith, Aaron Shirley, L.C. Dorsey, and James Anderson worked closely with the great society programs and worked closely with folks like -- actually Dr. Rumsfeld and others to put together the packages that were ultimately funded with Ted Kennedy to create the authorization for the health center model. It was a broad structural as well as social model that provided several intermediate strategies. Community Health Centers continue to be economic drivers in their community. Eighty five million dollars annually in the communities where they operate. They're edge employers and they try to employ people full-time who live within their communities. And they are a payer, no matter if you can -- they take care of you whether you can afford to pay or not. This slide might be older. It's 31.5 million across the country.

One of the adages and this is information provided by the national association of Community Health Centers is that if you have seen one health center you have seen one health center. But there are themes. You will see many of the social determinants of health and structural determinants that health centers provide span several categories around education and job skills, even voter registration. And there are a couple of examples I wanted you to see. Aaron Shirley, in addition to helping to found one of the first Community Health Centers in Jackson Mississippi developed the Jackson Medical Mall which incorporated issues or relationships with community development to help with home ownership. So that they worked very closely to be able to buy land and to build houses to create rent to own models. For rents that are about $600 a month or so, over a fifteen year period you could sort of pay in and actually own, you know, the home after you were done with that. And that there were all sorts of kind of wrap around supports as part of that. And in addition to the community development corporation, the actual mall itself has all sorts of commercial businesses and commerce. You can get many things that you need. Expert cancer care, arts. Just a real sort of creative space. And it is a model for how we can think about social determinants and how one might do that.

Locally there are several Community Health Centers, even many that we can visit in a short drive from here, that address some of these social determinants including education and economic ability. Codman Square has the first health care associated with the health center. And they're expanding into Randolph. Many of us are aware of the commercial pharmacy closures that are happening locally. And in terms of access to care how critical health centers for having onsite pharmacies to take on some of that burden. Whittier street health center is an example of that. In terms of community and neighborhood context and how we need each other, the Dimock Center has a program where they're teaching young people to take blood pressures and be health ambassadors and work with under elders to build that partnership.

I think one of the biggest tests was the most recent social movement, the COVID pandemic which happened alongside of the murder of Ahmaud Aubrey, Breonna Taylor and George Floyd. And Community

Health Centers were essential for providing services during the pandemic. Twenty two million COVID vaccinations. Sixty nine percent of those went to people of color. As well as increasing capacity for mental health and substance use disorder or SUD care. And made it possible for Telehealth services to be provided both. Both in-person visits as well as Telehealth visits during the pandemic.

So I would say that outside of the CHC model increasingly we're all being incentivized to take on this idea of social determinants. The sort of federal 15 demonstration waivers are providing resources to provide services. Typically those are either housing, nutrition, transportation, case management. But I think it's important to remember where we've been as well as where we currently are to increase our imagination about what's possible.

As you think about other models, the National Academy of Medicine has provided a framework of A's to help us think through being aware. How do we adjust our care plans. How do we advocates. But the Community Health Center model I think is an important example for how that is currently done.

So thank you. I wanted to summarize by saying that I hope that you've taken away that social determinants of health have multi-faceted influences on health. And that health centers are a model for thinking about how we can address both the structural and the intermediary social determinants. And certainly this requires multi-sector investment. But I think clinicians have a role to play. And that public health collaboration, alongside, you know, our colleagues down the road, will be helpful.

So there are some resources. The physicians I talked about have written this. Richard de Shazo, Robert Smith, etcetera, have at least two articles. I think they have one or two citations. So I encourage all of us to make sure we are aware of this history. And our team at Brigham has a website. Ourhealthstories.net that is compiling some of these stories to increase awareness and remove the erasure of this history that I think stifles our imagination.

Thank you so much for trusting me with this lecture and I look forward to our conversation.

(Applause)

>> DR. GEORGE ANNAS: Thank you. That was terrific. That's a lot of history. And I couldn't agree with you more that one of the tragedies of our current health care system is we've forgotten our stories and we've lost deep connections with each other. And we've turned healthcare into a business. I don't have to tell you. You didn't mention that and that's good. It's one of the determinants of health that unfortunately means money. And when reading about the history a little bit I found out what everybody, lots of people know I'm sure but I didn't know this. That the majority members of the boards of Community Health Centers have to be from the community.

>> DR. CHERYL CLARK: That's right fifty-one percent of those who are federally qualified health centers are from community spaces. That is right.

>> DR. GEORGE ANNAS: Does that make a difference?

>> DR. CHERYL CLARK: I think it does. It's interesting, so you mentioned that I'm now joining the Massachusetts League of Community Health Centers which is the trade association and it's the technical assistance body for health centers. Part of what has been really exciting as we launch our Institute for Health Equity Research, Evaluation and Policy is making sure that we own up to this idea that you mentioned emancipatory research, embedding the research in places that are actually committed to doing the work. And you have to have community leadership to be able to do that. And part of what has been really fulfilling is having members of the board join us and provide that leadership and provide that expertise. So we've had one meeting. It was a good one. You know, but it's -- but seriously, it's, it really is both humbling, you know, as well as just it fills the heart to be able to have these kind of connections and to have the advice and expertise that comes with that lived experience. So that leadership from the board is very important.

>> DR. GEORGE ANNAS: Is there anything, any residue, there must be a residue of basic problem with research on minorities?

>> DR. CHERYL CLARK: What I would say is that it has been interesting. I did have a slide which I didn't wind up including that there has been I think attention from some of the funding organizations. For example, the National Institute of Health is the primary body in the U.S. that funds health research. And you can see that there is a bit of an increase. So I think it's up to 5.4 or 5.6 billion that has been tagged as funding health disparities is what it's called. Or equity research. We definitely see there is a movement and understanding. But I think there is more that can be done to make sure that the funding actually invests in the structural issues that are the root cautions of the inequities. And that we think about, even in a research context, making sure that we fund the organizations to do the work that they will ultimately be responsible for implementing. And so part of what the institute is designed to do is to build that infrastructure, to bring people together who are interested in the problems, and to work collaboratively to do that. I'm really excited that we have our first research project in that space funded in Springfield, Massachusetts. About forty percent of the opiate deaths in that county are within the City of Springfield and there's a lot of work and also a Community Health Center called Caring Community Health Center that have resources and are dedicated to providing substance use disorder care, medically assisted therapy to provide care for people. And I'm excited that we were able to get a foundation grant rise in May is an organization in Massachusetts that is dedicated to eliminating opiate deaths. And we have our first project to work collaboratively with community organizations to try to close that gap between community and clinical. So that there are safe trusted spaces for people on come and get care. So thank you for that question. Active work in that space.

>> DR. GEORGE ANNAS: Thanks for that answer. That's the kind of work you are anticipating doing?

>> DR. CHERYL CLARK: Yes.

>> DR. GEORGE ANNAS: At specific Community Health Centers?

>> DR. CHERYL CLARK: Yeah. So in Massachusetts, and our mandate really is the state. So it's the Commonwealth. There are several sort of locations. But about fifty or so, fifty two sort of direct entities that partner with our Massachusetts League of Community Health Centers. And I have been really excited to have been welcomed by the CEOs and directors of those health centers. And we've had individual conversations with quite a few and have been able to get instruction and direction on what would be helpful and useful and what sort of priorities are important to patients and to the communities that they serve.

>> DR. GEORGE ANNAS: Yeah, that's obviously important not to come in and tell them what their problems are.

>> DR. CHERYL CLARK: So that would not be an emancipatory approach at all.

>> DR. GEORGE ANNAS: We can open it up to people here if that's okay with you?

>> DR. CHERYL CLARK: My pleasure.

>> AUDIENCE MEMBER: I really like your emphasis on the interrelationship of multiple factors going into social determinants. And I was particularly struck by the emphasis on how its expressed biologically. But some of the examples are, that are expressed biologically have roots in reality I guess. And I remember, this morning's paper had a report on a study of medical debt and organizations that are relieving medical debt and evaluating thereafter how people feel. And the researchers were surprised to learn that people didn't feel that much better. Well that doesn't really surprise me. Because if you can't pay your medical bills, which are probably higher than well insured people, you probably are having trouble with your rent and your utilities and transportation and the other factors. And I hope that that kind of conclusion to research doesn't discourage people from attempting to do what they can with one input for fear of abandoning the effort. Do you have, have you seen other examples of where people are encouraged or discouraged with research to pursue social determinants of health responses?

>> DR. CHERYL CLARK: I would say two things. You know, one is I'm really glad that you mentioned that. Particularly during the pandemic there are several sort of U.S. surveys that show that medical debt and the inability to get care because you can't pay the medical bills that you have, you know, increased. So that's been an important issue. I think that we've seen some improvements since the pandemic there.

I have noticed an increased sort of likelihood or I should say an increased receptivity to this concept that real life, you know, is something that we ought to think about as we both pursue our science and as we set up models of care. I had the privilege of being one of the chairs of what's called the Social Determinants of Health Task Force for a Gallup research program which is the largest study funded by the NIH. The goal was to enroll a million people for the study of

what's called precision medicine. So making sure that we understand people in their context. Their lifestyles so to speak but also how does the biology and the exposure sort of connect, you know, and how do you do that kind of work. And we're very strongly supported by the program and that our survey was prioritized and we were able to get it out and so far have more than two hundred thousand folks who have taken it is and have pretty reliable data. So I think not only is there an increasing acceptance or at least conversation, you know, around this idea but there are also resources that help us to try to explore some of those questions. Yeah.

>> AUDIENCE MEMBER: Thank you again. It was a beautiful framing, re-framing really of what we so casually call SDOH and the historic roots so thank you. And I really loved your mention of when you got to the real, true structural piece and you mentioned the Jackson Medical Mall as an example. And I wondered, you mentioned a few incentives that are current that CHCs are able to address. Things like housing through waivers. But those are still very much on the individual level right. So I wondered if you could say more about anything you are aware of either on the barrier side or the incentive side to creating what I think we could all believe is the need for CHCs to be at the center of more neighborhood-based things like the Medical Mall that really can take on structural issues beyond the individual level.

>> DR. CHERYL CLARK: I have to admit I think I'm going to lean into listing some of the problems, you know. And I also I understand that there is a primary care crisis I think is maybe one of the ways of thinking about it. That it isn't specific to Community Health Centers. You know, that it has been very difficult to organize both the workforce as well as the way that's we pay for care to support robust primary care. Even our movements toward value-based care doesn't provide the resource, you know, that we need to really do a good job. And so in many ways just the fundamental problems of trying to put the resources that we have in place to keep our hospitals and health centers and clinics staffed is a primary issue, you know, that I think we're facing around the country and certainly in Massachusetts. It's been very difficult to even get a primary care clinician. So those are some headwinds I think that we experience. I do think there are models, and even if they're outside of healthcare, that are worth thinking about. Los Angeles I think has been a leader. And other institutions in California have been leaders in thinking through how to work closely with unhoused and undomiciled populations. Working either both at the individual level to put county-level resources in place to work with those communities to either use housing first sort of practices or to work with people where they are to stabilize them. A woman named Dr. Heidi Beffors is somebody I might recommend you read in terms of like what the great sort of structures are for doing that. And then I think there's also interesting history. The Jackson Medical Mall used one strategy but in Boston, you know, for better or worse I think the model that everyone points to is the Dudley Street neighborhood initiative. The

land trust right. Where it wound up being impactful right. In the 1980's Mayor Flynn at the time wound up being able to create the trust so that of a (?) Organization used the land under Winthrop Estates so that the homeowners own the land as well as the home. And it allows us to build wealth in that capacity. So there are others in other sectors that can describe what that looks like, but there are I think models for doing this if we, you know, if we were creative. Yeah. Thank you.

>> DEAN GALEA: I want to keep us on time so I'm going to stop us. I know there are a lot of questions on Zoom. Sorry we didn't get to them. We had an outstanding presentation. I really thought that was the clearest social determinants presentation I've ever seen and the linking to health centers was fantastic. Thank you for joining us. Thank you Professor Annas for bringing us together. And thank you to the audience both here and on Zoom. Everybody have a good afternoon, good evening, and good day. Take good care.

(Webinar concluded at 2:02 P.M. ET)