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Welcome to Yale Cancer Answers with doctors Anees Chagpar, Susan Higgins and Steven Gore. I am Bruce Barber. Yale Cancer Answers is our way of providing you with the most up-to-date information on cancer care by welcoming oncologists and specialists, who are on the forefront of the battle to fight cancer. This week Dr. Chagpar welcomes Yuna Lee, MD for a conversation about improving the quality of healthcare. Yuna is a PhD candidate in health policy and management at the Yale School of Public Health and Dr. Chagpar is Director of Breast Center at Smilow Cancer Hospital.

Chagpar Yuna, tell me a little bit more about your research and what you have been doing?

Lee Maybe I should take a step back and introduce myself. I am a healthcare management researcher, so what that means is that in my work I integrate health services research with insights from management and organizational behavior and in all of my work I study how healthcare organizations can manage their work environment, their team dynamics, healthcare professional dynamics to promote better patient health and care experiences and I think this is particularly interesting at this time in the industry when we are seeing a lot of policy and system transformation, so I have a lot of interests in this area, but specifically I am really interested in this concept of creativity which we hear a lot in everyday life and other industries, but I am really looking at exploring it specifically in the healthcare organizational space and you have called me at a good time, I have just ended my dissertation yesterday, so I am at the culminating point of my PhD, I have been working for many years and I plan to continue developing a research agenda on this work in the future.

Chagpar Congratulations on your PhD dissertation. Maybe you can tell us a little bit more about what work you did and what you found in your research?

Lee Sure. As you can probably tell from my accent, I am not from this country, I am from Australia. I moved to the States 10 years ago, first of all to do my NPH here at Yale, and what I have always loved about America is this embracing of novelty improvement and the desire to continue to evolve and regenerate and always sort of look towards new possibilities and that is very much being the conversation that we have been having in healthcare in the industry in the US and abroad for quite some time and I thought that perhaps something that we do not look at in too much research detail is what is the starting point for innovation. The definition of creativity is the generation of novel and useful ideas and I have had quite a bit of experience in the healthcare industry as a practitioner before this and I also have been studying healthcare management at the

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undergraduate and Master's level before coming to do my PhD. So I have been interested in this concept that actually healthcare organizations are already thriving organizational spaces for creativity and the generation of potentially promising innovation. So I was really interested in understanding what goes on in healthcare organization in this process where we can actually improve from within the organization, listening to healthcare professionals, who already in their everyday practice come up with many really interesting important promising and potentially useful ideas to improve patient care in the day-to-day practice or how can we create organizational environments where we can learn to find these ideas. So that was the intention. What happens with the dissertation is that you have to take a broad motivation and a broad problem that you see in the industry and translate it into something that is measurable and easily conceptualized and that can contribute to the research fields that you find yourself in. So as a healthcare management researcher, I am kind of at the intersection of health services research, also the business research and so forth, so I am being informed by a lot of disciplines and in my work, I was able to apply a couple of the techniques for measuring creativity in organizations from other industries to healthcare organizations, so my approach for my PhD specifically was I worked with a real life creative healthcare organization for several years. I brought together several forms of data, so some organizational, some patient data, some to do with the experience of staff, experience of communicating between staff and in-teams and so forth, brought that together to basically start to understand the dynamics of what creativity means in organizations, what happens to ideas when healthcare staff get together and discuss quality improvement and then what happens to the most creative of those ideas, do they get implemented, did they survive, did they fail, did they get rejected, and then eventually how does that impact outcomes that we care about? So in my work, I focused specifically on patient care experiences, how patients feel about their journey through the healthcare system and what could be improved in those interactions.

Chagpar This whole concept of quality improvement, patient experience, is really critical and a lot of providers, a lot of administrators of large healthcare organizations are really paying attention to those metrics, but many people feel that while there is an impetus to be creative and to be innovative and to think about how we can do things better, that oftentimes these institutions are old and get stuck in their own way of doing things. So what did you find? How are institutions able to generate new ideas and what did happen to those ideas?

Lee That is a great question in terms of framing what is really the challenge for healthcare organizations. In this industry, the nature of healthcare is that we're really trying to protect patients, protect their safety and trying to minimize

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risks, but at the same time in this country we are facing this gap in quality, we are not where we want to be despite significant efforts and despite significant investment in quality improvement and so by saying that, we have this tension

between wanting to improve our quality, but also understanding that sometimes in healthcare we have a responsibility towards things like standardization, risk reduction, check list, clinical pathways and so forth and when we think about what creativity does, in many ways that is asking you to take a risk on something that has uncertain effectiveness and also to disrupt the way that we do things. So what I find in my work that was through a particular quality improvement initiative, over a long period of time generating ideas within the organization and they trying to implement them over time, that actually this process of implementing high creativity ideas was associated with a better patient care experience which is really that elusive thing that many healthcare organizations are trying to move towards, so that was really intriguing but paradoxically what I found also was that high creativity ideas were less likely to be implemented. I anticipated that there may be resistance to implementation of these potentially risky and disruptive ideas and indeed that was what I found in my research in my data, but what I also found was that it is not a hopeless situation that there are actually really behavioral dynamics and aspects about the staff that involved in that process that can steer the ship off course. For example, one of the first findings was that there were characteristics of the person that was implementing these creative ideas that made all the difference. So for example, if a person was considered as being in the organization for longer, if they were considered more influential in their social network and if they had more timely organization, they basically were considered as having a high status and also if they had more collaborative relationships, so able to push forward those high creativity ideas and get them implemented, what I also found was that those were the characteristics of someone who could push an idea through and get implemented, but those who were generating creative ideas were often those people that were maybe a little more on the periphery, so newer staff to the organizations, the professional roles of medical assistant or behavioral health provider and those who had been at the organization for a shorter amount of time and those who were actually more frustrated with work, so those who had lowest satisfactions scores, those were the people that were actually generating the creative ideas, so it was really interesting to think about what are those dynamics that are prompting people to engage in quality improvement and specifically generating these high creativity ideas that are trying to improve current practice to something different and possibly better.

Chagpar Tell me more about the impact of the organizations because you can imagine that individuals can come up with really creative ideas, particularly if they are particularly frustrated and they come up with an idea of "I can do this better, I've an idea and this will make life better, but that may be less likely to be adopted, because as you say they are on the fringe, they have not been there as well, but the people who have been 10:48 into mp3 file https://ysm-websites-live-prod.azureedge.net/cancer/2017-YCA-0423-Podcast-Lee_301569_5_v1.mp3there longer while they can push through an idea, it may not be the most creative idea and so did you find that there were aspects of the organizational culture, the leadership of the culture that could

foster or give credence to the weight of the some of the creative ideas and some other people on the periphery that help to balance things out?

Lee As you correctly pointed out, what I found in my first 2 papers actually was looking really at the characteristics of people, so sometimes that isn't always the most actionable strategy to identify someone who is more creative or more likely to implement, I mean from an actionable perspective that might be helpful for an organization because they can identify champions, so that they could identify people that have a high potential for creativity and they can create ways for those people to be more engaged and involved in quality improvement initiatives, but from the other side as you are mentioning there is something to be said about creating an environment where those people with promising ideas who might not usually think of themselves as traditional people to be called on for quality improvement have that opportunity. So when the last paper that I developed for my dissertation actually looked at the tactics that leaders can do to promote the kinds of creative outcomes that they are looking for and so I basically compared different types of tactics that leaders commonly employ in organizations, one of them was brainstorming time, one was setting meeting ground rules at the beginning to make sure you set the right tone and culture within the group and the final one was this approach which I have not really heard of where teams at the end of every meeting reflect upon the process of the meeting that has just occurred, talk about what they thought, what went well, what they could do better, and they give themselves a rating out of 10, and think about how they could work together from a process perspective better in the future. So I found that there are actionable things that leaders can do to promote creative ideas being generated, implemented, and also looking at how the process of team work to foster creativity can work in an optimal way all the time, but further than that, I think there is also room to think about things like mentoring programs and actually creating initiatives where basically staff can feel empowered to be solicited for their ideas and also to speak up with those ideas. Certainly, one think we hear about a lot in my research, but also working in healthcare organizations is that you hear all the time of oh, it was fabulous this person had these great ideas, but it was sort of that staff member or that health professional on their own, it is not something necessarily that is organizational wide. So we are really looking at opportunities for organizations to pick out those ideas and then make them organizational-wide initiatives.

Chagpar Fantastic. I can't wait to learn more about of all of these initiatives, but first, we have to take a short break for a medical minute. Please stay tuned to hear more from Ms. Yuna Lee.

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The American Cancer Society estimates that there will be over 75000 new cases of melanoma in the US this year with over a 1000 of these patients living in Connecticut. While melanoma accounts for only about 4% of skin cancer cases, it causes the most skin cancer deaths. When detected early, however, melanoma is easily treated and highly curable. Clinical trials are currently underway at federally designated comprehensive cancer centers, such as Yale Cancer Center and at Smilow Cancer Hospital to test innovative new treatments for melanoma. The goal of the specialized programs of research excellence in skin cancer or SPORE, is to better understand the biology of skin cancer with a focus on discovering targets that will lead to improve diagnosis and treatment. This has been a medical minute brought to you as a public service by Yale Cancer Center and Smilow Cancer Hospital. More information is available at YaleCancerCenter.org.

Chagpar Welcome back. This is Dr. Anees Chagpar and I am joined tonight by my guest, Dr. Yuna Lee. We are talking about creativity and this whole concept of how you can really use creativity to improve the quality of healthcare in healthcare organizations. Yuna, right before the break you were telling us about processed measures, things that leaders do in organizations to really see whether these could help people to come up with innovative ideas, creative ideas, implement those ideas, and you mentioned a few tactics. What did you find, did you find that these tactics worked, I mean are these things that we should be implementing in our health care teams?

Lee I was really surprised by my work on leadership to discover that different tactics promote different aspects of creativity which may actually be useful for organizations because not all organizations have the same goal. For example, I found that the tactic of brainstorming time, so whether leaders actually carved out time in meeting minutes in the meeting to rapidly ideate on a certain topic was associated with very high creativity, very high creative ideas, rapid implementation, and less discussion on the idea itself, but sort of a lot of discussion the logistics. So there might be something about getting people together and really focusing on ideating while suspending judgment and criticism, basically allowing people to share radical wild ideas without being too worried about owning an idea. There might be kind of freeing and may be helpful for organizations that are really seeking disruptive change quickly who sort of say that their existing approach is maybe insufficient and want to look at something that is improving but different to what we have before and in contrast, I found that the other significant result was that this intense tactic of reflecting together as a group on

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process which was a very long-term tactic, it required a lot of shared identity in the group, it required the group to really put their egos aside and work together as a group together and where they owned the process. This was associated with not necessarily creative ideas but ideas that were implemented and ideas that kind of took a long time to be implemented. So these were ideas

that sustained long conversations over many weeks, sometimes over months and these conversations were very analytical. These ideas evolved slowly overtime and so this type of tactic for example may be more useful for organizations that really want to unpack a complicated problem that really want to not necessarily have a quick high creativity solution, but really have to understand the edges and understand how to implement something and understand something that requires a lot of details. So those might be 2 different kinds of processes that require different tactics from a leadership perspective and I think it is important to note that leaders face so many different kinds of challenges during the day and they have to be sort of thoughtful about how they want the team to be positioned to provide that participation and to provide the kinds of ideas that may be useful for that particular problem.

Chagpar When I think about healthcare organizations now and a lot of the problems that they are facing, I mean particularly in the current healthcare climate where you know, whether you are a hospital CEO or you are a physician in private practice, you are looking down the pike and thinking how do I provide the highest quality of care for the lowest cost with the best patient outcomes, the highest patient satisfaction and oh by the way, how can I start thinking about population health which will be you know would be other leg to the stool and so there is a lot of complex ideas which will be in my view, a radical change from how healthcare has been practiced in the past where it was I provided service, I get paid for the service which seems to lack some of that creativity that you were talking about in terms of how to change outcomes and how to think about healthcare in an unique way. So did you find in you research that as you look at organizations generating these creative ideas and starting to implement creative ideas, that they could really impact those outcomes and were there factors that were associated with how successful they were in doing them?

Lee So the fundamental first result of my research that really laid the foundation for me to be able to sort of go down this path was that I found that there was a positive and significant association between the implementation of high creativity ideas in these organizations and improved patient experiences and then we used a survey that is commonly used in all healthcare organizations around the country, called CAPS. This is sort of a valid and reliable way of measuring patient care experiences. This was very promising to understand that something within organizations and something that the healthcare staff are doing could actually be followed through with and be felt at the patient level and that is really the connection that we are trying to think about as

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healthcare management research, and also of course everyone working within the healthcare system, how do we manage a very complex organization that has so many parts, as you say quality involves the clinical aspect, it also involves patient care experiences, the organization that we all work in is ambidextrous that needs to be this element of flexibility, but there also needs to be this element

where we are learning from evidence and past experiences and so forth. So we both need to be able to integrate the information and the science of what learned in the past and integrate clinical expertise, significant expertise, technological innovation, but then we also have to pay attention to more human aspects of care, which is what I find really interesting. My previous role before I came to the PhD was as working with the chief operating officers office at the New York City Health Department and managing what seemed to be a very large budget and looking at sort of the finances, operations, and so forth. I marveled on how much failure or success in terms of initiatives at the public health as well as at the healthcare level from the patient or citizens perspective had so much to do with how people relate to one another in organizations and so you could see how relationships at the CEO level, at the administrative level, and so forth, you really have to attend to things like social networks, organizational behavior, culture, coordination, integration, relationships between organizations. So there needs to be this balance between science and the human elements and all of those are really the responsibility of everyone in the healthcare industry today because of the rapidity of change and complexity that we face every day. I think that often when we think of healthcare innovation, we think of things in biomedicine and then we think of technologies, electronic medical record, we think of these innovations being sourced from Silicon Valley, all labs, and so forth, but if you want to just illustrate an example, common innovation is obviously the electronic medical record, but an example of a quality improvement innovation may be also those aspects of care delivery around that electronic medical record that may enable healthcare staff and patients to more appropriately interact and meaningfully use that electronic medical record. So simply the product nor the invention nor the technology itself is really sufficient. I am really interested in those creative ideas that will enable the care delivery system to work in a more optimal way that takes into account the relationships between healthcare providers, patients, and their families within the organizational context and obviously then we think about the system how healthcare organizations relate to other related organizations that provide healthcare and public health. So I am really looking at the care delivery innovations and quality improvement innovations and these are happening all the time in healthcare organizations on the front lines. There have been so many efforts to the improvement in healthcare organizations. We have the rise of the patient experience department, for example in healthcare organizations, there has

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been less focus on articulating creativity in this realm as being an important and valuable sort of effort and there has certainly been not very much research in this area. I was not able to find even one published paper that empirically looked at creativity in the healthcare organization, so that is really what I am trying to do with my research.

Chagpar The other thing that I think touches on your research and I would

be really curious to see if you looked at this, this whole idea of physician and staff engagement that so many healthcare organizations these days are trying to battle, because of how engaged your workforce is, really dictates how well they work together and how well they deliver care to patients. Did you look at that and what you find?

Lee So that was a really interesting sort of byproduct of this work and that is really what I would like to get into next as I push forward this research. I think what many organizations do not realize is that engaging healthcare staff in quality improvement and in the development of quality improvement innovation has this wonderful aspect of engaging healthcare staff and it is really an arena where healthcare organizations think and say when we think about healthcare professionals and why they entice to go into the field in the first place often, they have these really important sort of meaningful intentions for why they entered the field and something about the way that healthcare has evolved, has sometimes made the nature oppressive, it means that you often do not have any opportunities for expression of improvement or flourishing or you have an idea, there is not a place for you to submit it or you have an idea of how to shape things in a way that is sort of more empathetic or respectful for the patient that does not have the time or the opportunity to sort of explore that, so quality improvement I think is an area where we really can utilize the spaces and opportunities for improvement organizational wide by engaging healthcare staff, physicians, medical assistants, and so forth to really partner with the organizations and I really see it is a win-win, because people when they are asked for their opinion, I really think that it makes so much sense to actually ask the people who were doing the work of patient care.

Chagpar I think we have seen this in healthcare organizations, in other organizations, and even in the populous, the idea of ground up, grassroots efforts of the swelling of ideas from the bottom up rather than the top down and I wonder whether you looked at that and the impact that the different organizational cultures have simply on creativity, if you are in a bottom up kind of organization, do you find that those are more creative than those that are more top down?

Lee I only looked at organizations that are very creative from the bottom up, so I do not have that mode of comparison, but I will say that I think many organizations are

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cognizant that creativity is not appropriate everywhere, it is really appropriate in certain conditions and really a place where healthcare staff can uniquely opine on improvement is in areas where they have unique understanding of work processes and problems and aspects of service delivery because they are right there with the patient customizing individual care.

Yuna Lee is a PhD candidate in health policy and management at the Yale School of Public Health. If you have questions, the address is canceran-

swers@yale.edu and past editions of the program are available in audio and written form at YaleCancerCenter.org. I am Bruce Barber reminding you to tune in each week to learn more about the fight against the cancer. You are on WNPR, Connecticut's public media source for news and ideas.