Transcript
Achieving Competency-Based, Time Variable Health Professions Education
2017 Macy Conference Recommendations

Yasmine Legendre:

Hello and welcome to the webinar on the latest Macy Report: *Achieving Competency-Based, Time-Variable Health Professions Education*. This webinar is being recorded. I'm Yasmine Legendre, program associate at the Josiah Macy Jr. Foundation. If you're using social media during the webinar, please use the hashtag #CompetencyEd. For any questions, use the chat function on your screen. We will answer as many questions as we can at the end of the prepared remarks. If you need technical assistance during the webinar, please contact ReadyTalk at (800) 843-9166. And now I'd like to introduce our presenters, Dr. Catherine Lucey of University of California, San Francisco School of Medicine, and Dr. George Thibault of the Macy Foundation.

Dr. George Thibault:

Thank you, Yasmine. This is George Thibault speaking and I'm reporting to you on a very exciting conference, which was held June 14th to 17th in Atlanta, Georgia. First to give you a brief overview of a Macy conference, for those of you who have not participated, we bring together leaders, and in this instance, it was 39 leaders in medicine, nursing, and pharmacy education, as well as experts in educational theory, learners, and educational accreditors. We commissioned five papers prior to the conference that formed the basis of the discussion as well as a literature review. Conferees prepared comments on the papers prior to arriving that stimulated the initial discussion at the conference. We then engaged in three days of structured discussion in both plenary sessions and breakout groups leading to consensus recommendations. After the conference, recommendations are refined by the planning committee. They represent a consensus of all conferees and all conferees participated in the process and reviewed the final product. A [monograph](#) will be published in the next month which includes all of the commission papers and a summary of the conference discussions.

So why did we have this conference at this time? There are many challenges in both health professions education and health care delivery today, and there is a need for transformation of both. Ideally, these transformations will occur in conjunction with each other. True transformation we believe will require a fundamental change in the educational paradigm. The old paradigm that has used time as a proxy for competency is inefficient and does not meet our societal responsibility to ensure competency across the continuum of education and practice for each health professional. A competency-based, time-variable approach allows faculty to tailor education to the needs of learners and allows learners to use more or less time in different educational experiences as they achieve predetermined competencies. There is sound educational theory to support this approach and there are a number of pilot programs in health professions education to indicate the feasibility of competency-based, time-variable education. Therefore, the Macy Foundation decided that this was a propitious moment to engage in this important but difficult topic.

The conferees generated a vision statement. "With the achievement of competency-based, time-variable health professions education, we envision a health care system in which all learners and practitioners are actively engaged in their own education and continuing professional development to improve the health of the public. In this system, learners and faculty partner to co-produce learning, all practitioners are life-long learners, and all health care environments place a high value on learning."

With this vision, we can imagine a world where health professions education institutions continuously define and refine the competencies their graduates must achieve to meet the changing needs of society. In a world in which learners and practicing professionals routinely welcomed assessment to enhance their learning and help them achieve their competencies. Faculty are supported in their assessment and

coaching roles with knowledge, time, and tools. Transitions between stages of education and between different professional roles occurred when individual has achieved the level of reliable performance that predicts success in the next stage. Easy to use technology and tools support collection of data that document learning and readiness for transition. And educational institutions, care delivery organizations, accreditors, regulators, licensing agencies, and employers all work together to support the structures, policies, and procedures needed to support measurably excellent health professionals.

During the conference, many insights arose from the rich discussion that led to the recommendations that you're about to hear. A few of those insights are that existing educational strategies that are predominantly time-based, with little empiric rationale for the duration chosen. That in competency-based training learners progress once they have achieved the required competency, the outcome is fixed, the time is variable. The time variability does not necessarily mean that the duration of programs must become individualized. Learners who achieve competency sooner than expected in one area may choose to spend time on another competency, another activity, or on life events.

Competency assessment requires time for observation, feedback and coaching to truly change behavior. Multiple choice testing and grades are not sufficient, and in fact, in sometimes are counterproductive. Many programs across the professions have successfully moved to competency-based, time-variable training. But scaling up and broadening the scope will be challenging. All of this rich discussion and insights led to a number of recommendations in five domains. And Catherine, who so ably chaired this conference, will take you through those recommendations.

Dr. Catherine Lucey:

Thank you, George. A critical insight from this conference in addition to those that George has so effectively articulated is that moving to a competency-based, time-variable education system is not just a question of redesigning programs of assessment or using tools. In fact, it requires us to rethink our entire approach to health professions education. First, by putting the needs of our society for better health care and the type of care delivery that best meets their needs front and center and use those needs as a target for the design of our entire educational program. So curricula, learning environments, and faculty development will all have to be redesigned to achieve a successful competency-based, time-variable health professions education.

The action steps to achieve this first requires that we as a set of health professions education institutions need to continuously update the competencies that our graduates need to meet and to use the needs of society to address those competencies. Secondly, we need to begin to be more explicit about what competencies demarcate a readiness for transition between educational stages. For example, from nursing education into employment, from medical education into residency, and then from your terminal educational formal program into practice, using not time as our metrics but competencies. We also need to make sure that our curricula, programs, and methods of assessment are redesigned to ensure that learners can march through the milestones of competency development in order to meet the expected competencies at each transition point and to sustain competency during the course of their career.

Fully implementing competency-based, time-variable curricula needs a different type of faculty. It will need a workforce of faculty with many different roles and it will become essential for us to ensure that faculty time, rewards, and recognition are aligned with the work that we need them to do, which is not only to design a new educational system, but to work closely with students, residents, fellows, and other types of learners in our systems so that they receive the coaching and advising that they need to

advance their careers as health professionals. And we believe that this will be most effective if in fact health care environments are no longer viewed as separate places where learners go to work but as the core of the health professions education for all health professionals. This will require us to rethink the workflow of all who work in that environment, such that the training of the next generation of nurses, pharmacists, social workers, physicians becomes part of the work that we all do every day as we take care of patients.

In our second recommendation, we acknowledge that it is important for everyone who works within this environment, which includes health professions education systems, care delivery systems, those who accredit health professions education and regulate care delivery, as well as the employers who take on our health professionals once they've graduated, must actually embrace the view of health professions education as a learning continuum that spans both formal educational stages such as medical school, residency, and fellowship, but also incorporates clinical training and professional practice. There can indeed be no end to the education that our health professionals must engage in, and that education must be driven by assessments that identify areas in which a professional needs improvement.

The first step in achieving this goal would be to move away from the concept of time-based policies governing transition points. Accreditors, for example, in medical education require 130 weeks of curriculum a requirement that is historical without empirical basis and is actually stymieing opportunities for us to be more creative in the ways in which we transition people in a competency-based fashion. Other time-bound elements of education exist in board certification and often in licensing. We must also actively navigate the education, training and practice continuum with institutional support so that we can actually map careers and let people know what it is they're trying to achieve in terms of a readiness for transition to the next phase.

A critical element within our educational programs is to prioritize the types of educational experience that enable faculty and learners to establish continuity relationships because it is these continuity relationships that form the basis for the trust that is required for competency-based assessment to be fully operational. If a learner cannot hear critical feedback from a faculty, and if a faculty does not have time to provide that critical feedback based on observed performance, the end result of competency-based, time-variable training will not achieve our goals.

Critical to competency-based, time-variable training is collection of performance data and collection of performance data in an electronic portfolio that the learner can use to plan subsequent educational activities along with their faculty, but also that might pose the manner in which a learner demonstrates their ability to transition between educational points, whether it is graduating from nursing school, moving into a higher nursing profession such as certified nurse midwife or nurse practitioner, or when they're ready for independent licensing. We must, in order to achieve this, develop and implement an ethical and transparent governance system so that those who receive our learners at any stage of education and receive our practitioners in different forms of employment know exactly what competencies this individual has been able to demonstrate and can in fact align their roles and responsibilities of their subsequent positions appropriately.

Coupled with this, it would be important for us to think more critically about the processes and requirements for initial licensing across the country, reentry and retraining. A goal of competency-based, time-variable education when fully implemented is that life experiences that existed in previous components of your career or perhaps in other careers. For example, those who might change a career and go from pharmacy to medical school or from nursing to pharmacy or vice versa, would be able to receive time-based credit or competency-based credits so that they can shorten their overall training.

And critically important in any new venture is the provision of federal grants to support the design of research into competency-based, time-variable programs, grants which are woefully inadequate at this point in supporting educational research, despite the fact that our health professionals are the core of one of the largest industries in the United States and around the world.

Recommendation three. It is going to be critically important for leaders in our health profession schools and their health care system partners to champion and support robust programs of assessments that support competency-based, time-variable training and explicitly link educational programs to those improved health outcomes. This requires us not only to think about what competencies are needed by our professionals to optimally serve our public, but how will we make sure that those professionals have measurably demonstrated an ability to use those competencies in service to our patients?

This requires a systematic approach to assessment that aligns with desired educational and clinical outcomes, and it requires that assessment is optimally supported. It must be optimally supported by engaging those who have expertise in assessment and understand the unique ways that different forms of assessment can be designed to measure all competency domains, not simply medical knowledge and applied medical knowledge, but in fact domains of interprofessional education and teamwork, effective communication skills, systems-based practice, practice-based learning and improvement. And it's important that people who design those have an army, literally an army of faculty who are willing to work at the care delivery point and at the educational point to support learners as they're seeking to receive feedback on the performance that they're able to give and get insights into where they might be able to improve that performance. We've talked about the importance of tracking data and using a data governance system. But the importance of having that accessible to learners at all times so that they can plan their necessary educational activity cannot be overemphasized.

In an ideal system, learners in a competency-based environment in fact welcome the opportunity to be assessed because assessment is what allows them to improve and their improvement is what allows them to achieve competency-based promotion or advancement in a way much different than what we see today in our current environment where assessment is something people fear because it stands in the way of them perhaps achieving their goal of the desired next stage of training. So we have to move away from this idea that assessment only occurs at the end of a rotation where you get a grade and you either got a three or a four, which is a non-actionable set of feedback, and into an environment where learners expect and receive feedback on a daily basis to help them plan the next stage in their education and to help them achieve the goals that they themselves have embraced.

This requires the learners to not only passively receive the feedback but actively ask for feedback using the competency-based goals that have been provided to them by their faculty. Program evaluation strategies need to actually be embedded using the sciences of multi-method real implementation science and continuous quality improvement to make sure that the program of assessment is actually meeting our goals. And many institutions who are able to lead this work and can in fact be the pioneers in implementing this type of a program assessment have an obligation to do so and to disseminate those findings broadly to assist other institutions in taking this journey with them.

Health professions education and health care delivery institutions will require enabling technologies to implement competency-based, time-variable education and they must be willing to not only work on this themselves, but to find strategic partners who can tap into the incredible science of learning technology and administrative technology that currently exists in our countries.

Technology is going to be required predominantly because it must be able to acquire, catalog and curate data that can be used at the point of education and point of care for faculty and their learners. And by

learners, I want to also reemphasize the importance of people past the stage of their last formal education and well into practice who should be able to look at data they're accumulating in their practice and use that data to demonstrate competency for ongoing certification and licensure. That's administrative technology, when we talk a little bit about data collated for the purposes of demonstrating competency.

But instructional technologies will also be necessary and that is because as people advance through educational programs at a more individualized pace, not wholly individualized, but a more individualized pace, we need to be sure that the next phase of education is available to the learner when he or she needs it. They shouldn't have to wait for a new course to start in several months if they're ready to see the content of that course today, or for a new competency or skillset to be implemented down the road when in fact they're ready to be able to master that skill on their own. Instructional technology that digitalizes tools for learners to teach themselves will be a critical element of competency-based, time-variable education.

Most of this technology will not be developed by the health professions education systems in which we work. Most of it requires that we capitalize on strengths of partnerships with industry, with schools of engineering, and with schools of education who have in general broader expertise in the development and design of interoperable platforms. Our own health care systems may in fact be able to supplement this work with tools that they are using to demonstrate quality in their own environments. We know at UCSF, we've used tools from our quality and safety dashboard to build dashboards for our medical students. So that partnership becomes absolutely critical. And when we talk about partnerships with industry, we should recognize the strengths of aligning all health professions to identify tools both administrative and instructional that will be beneficial to us. Any individual health profession is going to be a relatively small market, and we recognize the power of amplifying our market force by joining forces across all health professions rather than trying to do this independently within a given health profession.

Central to effectiveness of daily assessment are real time tools such as handheld and mobile technologies where feedback can be dictated into an app that allows the data to be stored in a student's portfolio. That will not be the only way in which feedback is given because feedback really does require a dialogue between the faculty and the learner, but certainly making it easier to capture the dialogues that faculty and learners are having about their competency will be a critical technology need.

The development and implementation of competency-based, time-variable education holds promise for a whole new field of scholarly pursuit for those interested in the interface between education, informatics, data, and technology. So it'll be critical for us to develop and support educational scholars who have connections with and are actively partnering with data scientists to investigate the use of data analytics, which may be predictive for educational trajectories for different students and actually may be helpful to us in assessing workforce and meeting those workforce needs. And obviously learning communities are core to effective community building and digital learning communities around competency-based, time-variable education will certainly accelerate the uptake by learners who can reach out not only to their faculty for input, but to peers who are also pursuing the same type of educational trajectory.

Competency-based, time-variable health professions education programs have to be designed and importantly evaluated in relation to preparing graduates to advance important societal goals, including all of the Institute of Medicine goals for quality care, that it is safe, timely, effective, equitable, efficient, and patient-centered. We should be assessing and evaluating our educational programs not based on

the number of graduates we have and their scores on subsequent licensing exams, but whether the workforce we've prepared collectively and collaboratively, whether the community of physicians, nurses, pharmacists, social workers, dentists, psychologists, and other health professionals are prepared to meet the needs of our societies to improve the health of our communities and to alleviate the burden of suffering that our patients feel from illness and disease.

Program evaluation models must be able to track both individual, but perhaps more importantly, aggregate competency development trajectories and outcomes to see if, in fact, our expectations for what competencies might meet our society's needs are accurate and to what extent they need to be adaptable. This movement of competency-based, time-variable education requires us as educators to be much more nimble in the ways in which we design, redesign, and continuously improve curriculum. This cannot be an every 10-year process by which we survey the landscape, but we must be able to continuously and quickly respond to new issues as they arise, whether they be infectious epidemics like Zika and Ebola or non-infectious or contagious epidemics such as the opioid epidemic and the obesity epidemic. We need to be able to track educational metrics and associated outcomes of those individual learners to also ensure that at the individual level, people are able to achieve the level of competence that their patients expect and that we would've predicted based on the education that we have helped them acquire.

The outcomes relevant to a high-performing health care system within each of our institutions are a good place to start. And aligning our educational outcome with our institution's quality, safety, and patient-centeredness outcomes is, first, a good way to cement the relationship. If you are all working towards the same goals, it is easier to recognize the power of that synergy. Then, if we think education is something that happens outside of the health care system, and we only temporarily use that system for our education. So this requires educators to think differently about themselves and to recognize the power of signing on through their educational strategies to help their health systems achieve the goals that are critical for their communities.

Our accreditors and organizational standards must actually be willing to change their expectations to be more outcome-based and less process-based. Certainly, critical elements of process such as the learning environment, access to high quality faculty, and ongoing support for continuous improvement in education are important. But we need to begin to identify those metrics that by outcomes of our educational program really denote the highest quality programs and then use those metrics to advance the quality of all health professions education programs. And again, we cannot underestimate the importance of funding and following a national research agenda on competency-based, time-variable health professions education, not as purely educational work, but as part of the commitment to use science on behalf of society and continuously drive to have the best health care system we can in support of our patients.

So, in conclusion, and before we open it up for questions, we want to reiterate how critical we believe it is to improving the health and health care of our society, to engage in educational redesign while we engage in health care system redesign. We have to rethink the way our health professionals are trained, how they view their roles as learners, how they view their roles as teachers, and how they view education from the beginning on the first day they enter a health professional school to the day they hang up their stethoscope or white coat or other instruments associated with their profession.

We believe that the best way to achieve the highest quality health care system in the most nurturing and satisfying educational environment will require adopting a competency-based, time-variable education model for health professions across the continuum of their careers. This would be more

satisfying to practitioners because they will be actively engaged in the assessment of their own competencies and all of their assessment will be driven not to create hierarchies of expert professionals, but to raise all boats and to ensure that everyone who practices is always practice-ready and willing and able to serve our patients. The changes that we are asking for and recommending cannot occur overnight. Different institutions will be able to accomplish them at different rates. But we must begin the process now, following in the footsteps of the number of different pioneers that exist in many different professions. This is not uniquely owned by any profession at this point, and we have exemplars in each of our professions that we can follow and learn from and build upon their success as any good scholars might do.

In the end, if we achieve this type of vision of a competency-based, time-variable education system, health professionals will be better prepared to meet their patient's needs and we predict more satisfied in their education in their chosen career. And, most importantly, health care will be more efficient, of higher quality, and society will be healthier. So, I'll stop now and turn the podium back over to George and Yasmine who will help us use the ReadyTalk chat function for people to provide comments or ask questions. George?

Dr. George Thibault:

Thanks, Catherine. That was an excellent summary. There's a tremendous amount of information there. Very, very exciting. I tried to develop an elevator speech for our conference recommendations. Think of it like this, that there are five buckets of recommendations each with rich recommendations within it. One has to do with systems redesign. The second has to do with redesigning the continuum of learning for each learner. The third has to do with improving our assessment of learning. The fourth has to do with technology as an enabler for this. And the fifth, importantly, has to do with assessing program outcomes with a particular eye to the societal outcomes that we always have to keep our eye on.

This is an exciting moment, and we know this can be done because we have examples of doing it in the US and abroad. But we also know that it is not going to be easy because it involves a tremendous amount of change in our usual way of doing business. We'll open it up now to questions. Yasmine will review for you again the way you can get your questions on our board and we'll try to take as many as we can.

Yasmine Legendre:

Great, thank you. If you have a question, please enter it in the chat function on your screen. Okay, we'll start with a question here. How do you recommend competencies be developed? We need a strong list of competencies in order to implement competency-based education. Is expert opinion enough for competencies?

Dr. George Thibault:

Catherine, do you want to take a crack at that?

Dr. Catherine Lucey:

Yes. Fantastically interesting question and I would make a couple of observations. One, is there is certainly a set of competencies that should actually be designed through the work of national organizations using experts in the field of health care delivery, of health care, of biomedical science, and

of each of our health professions. And those I would view as the overarching competencies that we believe are most appropriately aligned with the workforce that we need at a national level, whether your country is Canada or the United States or the Netherlands. But I also believe that there is a strong importance for doing work at the local level. Each community, at least within the larger countries, has unique populations and unique needs, and in fact, should have the opportunity to weigh in about the competencies that they feel are essential based on the populations in their environments.

At UCSF, we've actually used our geographic understanding of the diseases that affect our geographic environment, the different neighborhoods in San Francisco, to design a set of competencies that will make our graduates of medical school and residency practice-ready in the Bay Area. We actually talk about these as the UCSF 49 competencies, that draw upon the different diseases, conditions, and causes of suffering in people in our immediate environment. So I think it's both a set of expert derived competencies to begin with, then tailored, I think, to the needs of local communities.

Yasmine Legendre:

Great, thank you. Okay, next question. What lessons from competency-based, time-variable training or residency programs, i.e., GME, apply to undergraduate medical education? Can the successes of a competency-based, time-variable training for GME transfer quickly?

Dr. George Thibault:

Well, that's an excellent question and I think in different places, undergraduate medical education may be the driver and other places graduate education will be the driver. One of the case studies that were commissioned for the conference is from Canada where a whole institution is converting all of its graduate medical education programs to a competency-based, time-variable approach, which will drive what goes on in the medical school. Another case study is a combined effort in the United States at four academic centers that are combining undergraduate and graduate medical education in pediatrics to move through the continuum on a time-variable competency-based approach. So we don't think that one is necessarily going to be easier than the other. I think each will be informed by the other. But only if we do it across the continuum will it ultimately achieve its goal.

Yasmine Legendre:

Okay. Next question. Regarding recommendation five, did the participants explore how and if competency-based, time-variable education and practice may or should be linked to merit-based incentives?

Dr. Catherine Lucey:

That's another really interesting question. I'll just give you an opinion on that. We did not specifically look at merit-based incentives, but we did look at the broader concept of ensuring that the competencies were described in a manner that allowed people to have the right roles at the right time. And in fact, we talked quite a bit about the liberating function of competency-based, time-variable education might have to allow, for example, surgeons who are just starting off to continue to perfect their skills and procedures they've already done, but then work critically under the guidance of a more senior surgeon as a fully employed surgeon to master new competencies.

You could certainly look at ways to use competency-based, time-variable education programmatically to say if you achieve a certain level of competency, a certain level of expertise, if you can demonstrate not only that you've attended a number of CME conferences, but your performance is measurably better, I think you could in fact begin to tie competency-based education to merit-based incentives. The biggest challenge with that however, is also the recognition of the critical nature of the teams and the context in which people practice. So recognizing of course that sometimes successes that appear to be based on individual competencies are really based on broader team-based control. But that's actually a nuance in merit-based incentives that we are still wrestling with at this point in time. So I think you could certainly do that, and being as explicit as possible about the competencies would allow you to tie role assignment and perhaps compensation and other recognition issues, for example, promotion and tenure to continuation and competency-based programs.

Yasmine Legendre:

Okay. We've seen a few questions asking us if we can share a few examples of successful programs moving into competency-based education, either domestically or internationally. How have they gone?

Dr. George Thibault:

So I mentioned a couple previously. But just to underscore them, the EPAC program, which is a pediatric training program that exists at four academic medical centers; University of California, San Francisco, Minnesota, Colorado, and Utah, that has successfully included students who declare for an interest in pediatrics early in medical school and have moved through the continuum of education and entered into residency program at a variable time depending upon their achievement of those competencies. The program is going very well, both from the standpoint of faculty and learners, and it's also in a very positive way brought together leaders of undergraduate and graduate medical education who have a shared responsibility for those learners.

Graduate education programs in Canada are moving to a competency-based approach, and the leader has been at Queen's University, they're converting all of their programs to that. That's still in planning stages. George Mejicano has reported on work at the University of Oregon Health Science Center that is moving to a competency-based, time-variable approach for all of their undergraduate medical students. And we know there are several examples in Europe. All of the residency programs in the Netherlands exist on a time-variable basis, with entry at variable times throughout the year, opportunities for less than full-time status and then a variable endpoint. As a former program director, I'm in awe that they can pull this off, but it can be done. Catherine, did you want to add any other examples?

Dr. Catherine Lucey:

I just wanted to perhaps add some color into one of the comments that you made. So at the Macy Conference, we had learners, one of the learners there was someone who had just moved from her medical school experience in the education and pediatrics across the continuum program into residency in a competency-based way from the University of Minnesota. We also have an EPAC program, which is the acronym EPAC, at UCSF. And one of the really powerfully positive experiences is listening to the students talk about how the competency-based assessment system where they know what competencies they need to master in order to move to the next stage of their career and are tremendously motivated to engage in activities that will help them and get the feedback they need to do that has been liberating for them. And that liberation in terms of embracing the ability to work with

faculty to improve their own performance is also augmented by the fact that those students actually are guaranteed a residency program in pediatrics at the place where they're training as medical students.

So really thinking creatively about why do we do the things that we do that are causing our students incredible stress about transitioning from one program to another and making them vie for honors not to demonstrate their expertise, but to actually compete effectively. It's creating a toxic environment for our learners that I think everyone in the United States is feeling. And it was really inspiring to hear these students who speak as members of these pilot programs talk about an entirely different educational experience, one where assessment is shared, where they welcome feedback and where they have no sense of perform or die, that sometimes pervades the other types of educational programs that exist because of the structures we are locked into at this point. So it was very inspirational to us to hear these students talk so compellingly about this. And it really impacted the way in which we saw potential to not only improve the health of our patients, but the learning environment for our students and faculty.

Dr. George Thibault:

Thanks, Catherine, and that was a powerful message. I want to add one other. The examples we've given have been predominantly from physician education. I want to acknowledge that important work is going on in other professions too. And at the University of Wisconsin, we heard of a wonderful program from Kim Litwack and Aaron Brower of a flexible option for the completion of a BSN degree that has allowed learners to move through on a variable basis, most of them while still working. So this is not just applied to the medical model of education.

Yasmine Legendre:

Okay, next question. Regarding competency-based, time-variable education for medical students, what thoughts do you have regarding incurring a greater financial burden for longer time in medical school?

Dr. Catherine Lucey:

That has come up several times. And I want to actually thank you for asking the question in that way because one of the things that we went into this conference thinking about was that one of the drivers for time-variable training was efficiency and perhaps reduction in debt. And in fact, as George mentioned, there are several medical school programs, UC Davis and NYU sort of pop into my head, who are looking at combined UME/GME programs that aim to decrease the total training time using competency-based principles.

But we have to be prepared for the fact that in fact some students take longer. And a competency-based framework may allow us to absorb that as part of the expected work that we do. And in fact, in doing so, might help us welcome in different types of people to the professions of medicine, nursing, pharmacy, dentistry, and other health professions who might otherwise, because of issues of educational disadvantage, have been steered away because they needed an extra year or maybe they needed to decompress over two years some of the really intense foundational science work that they do.

So there are different ways people have managed this. Some institutions, and University of Minnesota is one, have begun with a concept of single price for your educational program. So regardless of how many years it takes you, you pay one fixed total price, so you're not paying by the year or by the quarter. And in fact, in competency-based, time-variable education at one of the more detailed recommendations in our report, it talks about the need to rethink tuition structures that are all time-based, right? However

many credit hours or however many quarters that you're registered. So one way to avoid the increasing debt exponentially for students who need a little bit more time would be to change the ways in which we assign tuition expenses. And, on average, you might say some people will finish early and therefore the absolute amount of tuition they pay per year of instruction might be slightly higher and some may finish later and the amount per year of instruction will be lower. But net-net the community pays on average the same for their educational program.

The one last thing I'll say about moving away from the time constraints that lead to graduation decisions and also tuition decisions. We wanted to be confident in saying that time variability does not mean time indulgence. It isn't as though you could say it would be fine for someone to take 20 years to go through nursing school or pharmacy school or medical school. All of the successful pilot programs that have been implemented, for example, the Litwack programs at University of Wisconsin and some of the other programs in the Netherlands have actually put guardrails around a too long a period of time. So I think that the fear that many people had, which actually I think was realized in the Netherlands back in the middle part of the 20th century, that students might just ramble their way through a health profession's education and make it impossible for the institutions to manage classes, I think can be that fear can be mitigated with a min and max time that seems compatible with what we're trying to accomplish.

Yasmine Legendre:

Thank you, Catherine. Okay, next question. Time independent learning requires the ability to allow learners to individualize their educational activities, and this inherently disrupts learner cohorts. Was there any discussion at the conference around strategies to support the relatedness domain described in self-determination theory under this model?

Dr. George Thibault:

So that's a great question and we did discuss this. It's both the cohort effect and what others have also called dwell time of how much time it takes in ways that might not be measurable by direct competencies to understand what it means to be a professional and to acquire the full sense of a professional identity. So both the cohort effect and the dwell time are certainly factors to be considered in this. But nobody envisions a time, and the most staunch advocates of this approach do not see people just coming willy-nilly in and out of programs. There will be cohorts. The cohorts may be smaller, the cohorts may also change and evolve as they do now as people move from one institution to another. But the importance of the cohort effect and the importance of dwell time were very much talked about.

So that's why the principle take home message from this is not necessarily less time, it's how that time is used. And in many instances, because this argues for greater continuity of experiences, continuity of sight, continuity of teacher, mentor, and coach, it may actually reinforce in different ways the formation of relationships better than we have in our current system, which as we all know, involves a tremendous amount of fragmentation of the learning experience, but very important issue to be watched and studied.

Yasmine Legendre:

Okay. Next question. Detractors say competency-based, time-variable systems trivialize health care performance? How do you respond?

Dr. George Thibault:

I would say it actually emphasizes performance rather than trivializes it. It is in fact performance that will allow people to move through and I think a more explicit definition of what the performance is will be important and the tools and the settings in which that performance can be truly evaluated and assessed actually puts a higher value on performance rather than a lower value on performance.

Dr. Catherine Lucey:

Thank you, George for giving me a minute to get my thoughts together. I would add to that a couple of observations. One is that competency-based training really puts a priority on measuring all competencies that are important and by using different tools to do that. So rather than just sort of saying okay, you've passed your certification exam and generally your reputation is fine, it really demands that the professional demonstrate consistent performance. And I think many people think about competency-based performance as sort of a checklist like, "Okay, now I have to deliver bad news. Oh, I just delivered bad news. Check, I'm done." But in fact, all of these competencies in an ideally designed system can't just be accomplished in a one shot wonder kind of issue. I think what we recognize is in competency-based education, it's not only what you're able to do, but can you do the same thing at the same reliable level of performance in multiple different contexts, right?

So even thinking about a procedure, it's easier to put in a central line in a thin person with absolutely normal neck anatomy. And that doesn't necessarily mean you'll be able to do it if confronted with someone whose anatomy is somewhat less than ideal and a little bit more of an emergent situation. So really competency-based education requires educators to think about when will we be confident that this person's competencies that they can demonstrate are embedded and that person is capable of using them across a wide variety of contexts?

So if competency-based education devolves into the old, "I've seen one and I'll do one and then I'm out of here," yes, that would trivialize the health professions. This isn't about just thinking about how do we make sure that somebody can put an IV in. This is actually a much more holistic review and requires a lot of demonstration across many different contexts. But as the questioner is appropriately asking, the devil is in the details. If done poorly, it could drive a race to the bottom, as people have said. But done well, I think it really is a race to the top.

Yasmine Legendre:

Okay, next question. Assessment in a competency-based, time-variable system continuously considered as formal and continuously entered into the student's record? Or is most assessment informal, formative, and not recorded and only rarely is entered into the student's record at the fine time points?

Dr. George Thibault:

Catherine?

Dr. Catherine Lucey:

I can take that one, George. This is a really interesting topic as well and speaks to issues of safety when the learner's sort of revealing, "I don't know this, can you help me learn this?" In a true competency-based environment though there isn't as bright a line between formative and summative as we may think there might be. For a safe learning environment, the safety becomes a direct relationship to the trust they place in the people who are giving them the feedback, whether that's the single physician or

nursing professional who's supervising a learner or multiple who they have a longstanding, trusting relationship with.

Some of the work done by Cees van der Vleuten out of the University of Maastricht really reminds us that multiple low-stakes assessments, if recorded and if showing the same pattern, could actually be a decision on which a high-stakes assessment is based. It doesn't mean you start out to use formative feedback where you're giving coaching as a way of measuring their current readiness to transition. You're looking at those episodes of formative feedback as a readiness to move to the next day with something a little bit more complicated to try. But we can use accumulations of low-risk formative feedback to begin to recognize this person's pattern of performance is such that we think they're ready to move to the next stage.

So there's a spectrum between purely formative and high-stakes transitional summative. And in order for us to actually recognize those patterns, it probably makes most sense to at least record briefly even formative feedback. Many people have gotten around the sort of safety issue by having learners use what some people would call in the arts a practice portfolio, and then have a coach help them identify when they are ready to submit a performance portfolio to another panel for assessment about transition or high-stakes exams. So my message would be, I think we're better off with multiple data points. That's what actually gives us the strongest and most reliable program of assessment. We can protect the student's trust, both by assigning relationships of continuity. And if we want to go to the next stage, we would sort of say, well, let's actually have people who are doing the formative assessment help the students populate their practice portfolio. And another set of professionals are the ones who judge that portfolio for a high-stakes decision.

Yasmine Legendre:

Thank you, Catherine. All right, this will be our last question. What actions is the Macy Foundation prepared to take?

Dr. George Thibault:

Well, the first action we took was to have the conference because we wanted to call this issue to everybody's attention and get thought leaders together. We understand how complicated this is. This is not a simple off/on switch. The papers we've commissioned we hope will contribute to the literature that will be published in our [monograph](#) that will come out. But we've also had the additional opportunity to create a special issue of *Academic Medicine,* which will include some aspects of the papers commissioned for this conference and additional papers on the subject that we think will both generate more discussion, but in an important way add to scholarship and knowledge in this area.

We already have been involved in supporting some of the pilots that we've referred to, and we'll be continuing to look for innovative pilot programs that will enhance our understanding of the application of this principle in a variety of settings. As I emphasized, this cannot happen overnight. It's not simple. There are always potential downsides to every change. It needs to be done carefully and thoughtfully, and we want to promote that kind of approach while also promoting increased scholarship in the area.

Yasmine Legendre:

Great. Thank you, George.

Dr. George Thibault:

I want to thank you all for your interest in this. We're very gratified that this subject has generated a lot of discussion already. Please look for the special issue of *Academic Medicine*, which will be coming out, and for the [monograph](#) of the conference will be coming out both in the next couple of months. And we welcome your interest. We invite you to continue to use our website to generate and continue this important discussion. And we thank you for your participation and for what you're doing in your own institutions to promote educational innovation.

Yasmine Legendre:

Okay. This concludes the webinar on the latest Macy report, *Achieving Competency-Based, Time-Variable Health Professions Education*. The video and slides will be available on our website in the next week. You can find the [report](#) on our website at macyfoundation.org. You can also sign up for periodic email alerts from us. Thank you for participating, and have a good day.