INTRODUCTIONS

Gina: Good morning. My name is Gina Tapper, and I’m so happy to be here because this combines both of my lives as a nurse and [in a] business career. They call me at BDO, "nurse with a purse." So, we’re really excited to be here. I need to introduce two of my colleagues. Dr. Karen Meador is going to co-moderate with me. Karen leads our clinical redesign team at BDO. And Dr. David Friend, who is our chief transformation officer. Both are M.D. MBAs who got their MBA at Wharton. So, this is a Penn panel. The last one was Columbia. We have the dean here of Penn Nursing, the number one nursing school in the world if you check the rankings. So very excited to be here because as you can see in the prior presentation, care coordination is the whole future, and what’s going to transform healthcare. And we think nurses are uniquely qualified to take the leadership role on that. So, with the first question, I’d like each of the panelists to share some examples of where nurses were helpful in innovating an organization and how your specific organization—Penn Nursing, as the academic center, Becton Dickinson as one of the largest pharmaceutical, medical device companies in the country, and American Nurses Association—are doing to support nurses as innovators. And we’ll start with Dean Toni, as she’s affectionately known.

THE CURRENT STATE OF NURSING INNOVATION [1:39]

Toni: Sure. Thank you and thank you to BDO for organizing this and for giving us a platform to talk about nursing as innovation. I think when many people think about nurses, they think about the caregiver role, but they don’t think very much about us as
innovators, when in fact, we are the master innovators. We are problem solvers, solution builders. We work in interdisciplinary settings, and we’ve had significant impact on health and healthcare, at the individual, family, community and policy level. I can talk a little bit about Penn Nursing and what our strengths are in the innovation area, and that builds primarily from our research. We are the number one nursing school in the world, and we do have the most NIH funding of any school of nursing. Importantly, our research is impactful, and I can give you examples in two, maybe three areas. Like all nurses, we innovate both in terms of products and also in terms of processes to improve health and healthcare. We have a considerable portfolio and expertise in the area of care coordination. And just to continue with the theme here, one of our investigators, Mary Naylor, has been responsible for the transitional care model, which is now implemented in many hospitals across the U.S. in many forms. Her initial research showed that having an advanced practice nurse coordinate care for frail elderly as they were being discharged from hospitals to coordinate the care from hospitals to home, etc., was effective in decreasing readmissions, decreasing mortality and increasing patient satisfaction. It was interesting.

On a car ride today, we had an Uber driver who was telling us about how his son had had a head injury and how he was trying to manage his care. He was discharged suddenly on Christmas Eve. And I asked him, “Who’s coordinating your care?” And he said, “Nobody.” And so, I had to tell him, “This is what you need to be able to do. This is what you need to ask for.” But again, discharged without that type of information, left on his own. So, we have the work of Mary Naylor. That was also translated into a product by another one of our investigators, Kathy Bowles, who developed the decision support team to help determine discharge readiness. This is a product that was taken up and a company was formed, RightCare Solutions, that was then, because of its spread and scale, was sold to navHealth. So again, the research went into a process, went into a product and again is now being implemented. Dr. Bowles is working on another decision support tool to help coordinate the level of care that’s needed in the transition from care to home. So again, when we think about home care services and the areas that are growing there, does a person need home health aide? Do they need OTPT? Do they need somebody coming into their home to make sure that they have the correct mobility to get in and out, that it’s all safe? So again, another decision support tool.

In relation to care coordination, our faculty have also been responsible. Again, building on a nurse-led model, the PACE program, which [stands for] Programs of All-Inclusive Care for the Elderly, which actually originated here in San Francisco by Jennie Chin Hansen, is again taking care of frail elderly who are both Medicare and Medicaid eligible. Again, very frail elderly. [She] worked with CMS to develop a capitated program to take care of these frail elders. And in our model that we did at Penn, we had nurse practitioners who served both as primary care providers, as well as care coordinators. And in this model, we were able to cost-effectively provide care and also coordinate services by attending to issues in the home, by dealing with issues around transportations, by managing medications effectively. That program was so successful that it outgrew the school of nursing and we sold it recently to Trinity Health. Again, we remain good partners there in providing care and services and educational opportunities.

On the other end of the health spectrum, we have one of our faculty, Diane Spatz, who is a big promoter of human breastmilk and breastfeeding. If you talk to any pediatrician, anybody will tell you that the most effective intervention that we can have for our youth is for them to be breastfed for the first six months. And despite that worldwide recommendation, in the United States, only 19 percent of kids are breastfed for the first six months. The big intervention that was done to promote breastfeeding was baby-friendly hospitals. But even that didn’t address the issues of, again, neonates, for example. So, Diane Spatz developed this 10-step process in which to help facilities, NICUs, work with providers, provide the infrastructure that was necessary in terms of storage of milk, private spaces for breastfeeding. This was implemented at CHOP, the Children’s Hospital of Philadelphia, and the rate rose from maybe about 22 percent to over 86 percent. So, her 10-step process is now being implemented in many hospitals across the U.S. and globally. So those are, again, just a couple of examples of, again, contributions from Penn Nursing. But I think they’re emblematic of, again, the type of interventions and the type of processes and products that nurses have been leading.

Gina: Thank you. Kelly, do you want to give an example of how nurses assist an organization with innovation, and what Becton Dickinson’s doing to support nursing innovation?

Kelly: Sure. Thank you, Gina. I represent the perspective of the healthcare industry partner. And at Becton Dickinson, we very much regard nurses as, one, the leaders of care execution. So, you’re going to hear a lot from the three of us. We’re at the tip of the spear in terms of ensuring that we are compliant with orders that are arranged and orchestrated via physicians and other clinician partners. But that’s a very important role we want to reinforce. We regard nurses as the leader of care execution delivery. Number two, we regard nurses as advocates for their patients and their families. And these are pretty fundamental characteristics, but we feel like that’s a common denominator regardless of where nursing is practiced. You’ll hear about the care continuum, emerging areas of care, but that’s a common denominator theme, and that’s how we position, elevate and prioritize nursing when we look at our overarching strategies.
Now, at the beginning of our session, you saw a statistic. There are 4 million nurses in the United States. Let me add some clarification and color to that, that's 4 million registered nurses. We are by far the largest group of clinicians in the U.S. healthcare workforce. So, when you add upon that the number of LPNs, LVNs, advanced practice nurses, as well as nurse anesthetists, think of the power and the opportunity that exists within this group of clinical practice. You'll hear much more today and we're excited to share this with you, but in terms of some ways that we are prioritizing innovation, and really putting our money where our mouth is, we have a partnership with the ANA where we have an innovation award for nurses, both individuals, and nurse-led teams. And we are excited about that collaboration. We'll be announcing the winners of that later on this spring. So, stay tuned for that. But we very much regard nurses as leaders in healthcare execution. And in taking that approach, we position our nurses and our nurse partners, our nurse thought leaders, in terms of: “What can we do to prioritize how you are empowered as leaders, how you are positioned to educate, how can we partner with you as well as other entities within the healthcare environment to deliver success to nursing practice and also our patients?”

Gina: I think that’s an excellent point for this audience, which is the investor community, startups, entrepreneurs, the leadership role that nurses play in innovation, and how important it is to collaborate and bring nurses into your companies, and also invest in companies that are nurse-led. They come up with solutions as we’ve talked about. So, Karen’s going to allow some time at the end so that we can interact with the community and hear your experiences working with nurses, and where you see opportunity to collaborate to make money and be successful because everybody wins. Did you want to add anything, Bonnie? From the American Nurses Association?

Bonnie: Absolutely. So, thank you. From the American Nurses Association perspective, there are 4 million registered nurses. So that’s our sweet spot. We really work, kind of, in two different directions. One of them is that we work very hard to educate nurses about the fact that they are innovators. So, it’s interesting to us is that as we go around the country and talk about innovation, nurses tend not to see themselves in that light, even though they are natural innovators. It’s not uncommon when I speak to ask the room full of nurses, “Do you see yourselves as an innovator?” A couple of hands go up. If I ask them, “Have you done a workaround to provide patient care?” more hands go up. “Have you made any of anything to take care of your patient?” By the end of that, all of the hands are up. So, they just do not see themselves using that definition of innovator as what they do, yet they do it all the time.

So, we’re working with partners like BDO to recognize the work that nurses are doing. We also do spend a lot of time on education. Some of that’s around fun events like nurse pitch kind of events, hackathons, innovation labs, bringing them into that space and helping them cultivate those skills. The other part of what we do is really working with, kind of, corporate partners, industry partners, entities, to help them understand the importance of having a nurse in the conversations way back at the design and development stage. It’s not uncommon to actually have industry partners say, “Hey, would you look at this gizmo, gadget or device?” And I’ll sit down quite often, they’ll put it in front of me and start asking questions. And it turns out that they really didn’t have nurses involved, physicians probably, because the likelihood is that the go-to is physicians. Even though there are four times as many nurses as physicians, they tend to go to physicians. Physicians don’t understand the workflows that are associated with patient care from front door to exit. So, by not having nurses in those conversations, it’s absolutely an opportunity loss. So, I would continually encourage partners to bring nurses into those conversations much earlier in the process.

**WHY NOW? [13:05]**

Gina: I think that’s excellent because this audience is very familiar with the triple aim where you provide the care at the right time, right place, right cost and nurses touch the patient at every point in the continuum. They have education to do health screening, health promotion, patient teaching, care management, case management, especially of chronic diseases, which we talked about in the earlier panel. So why do you think now is the increased focus on nursing? What do you think are some of the forces driving that, “It’s now the time for nursing?”

Bonnie: It’s the perfect time. Why not? Nurses are very bright. There are 4 million of us. We’re out there. We are in all kinds of industries. So, what happens is people tend to focus on nurses in hospitals. That’s not where nurses exist anymore. They’re there and we’re in a variety of other places. So, we have a tremendous amount to offer to provide input, feedback, thought leadership around not only the development of processes, systems, devices, but also, we can really help mitigate some of the problems that occur when we’re not included in that upfront if you will. We can anticipate a lot of issues in terms of patient care, family dynamics. We talked in certainly the presentation before this, around aging in place. I think there are a lot of important ways that nurses can even help in that setting. And in fact, the more we can engage them, the better we’re going to be in the long run there as well.

Gina: Any others?
Toni: I think the issue is not so much why nurses, but why the issue of innovation. I think healthcare is probably one of the last big industries to think about innovation in a different way. As we change the payer system to value-based care, as opposed to fee for service, that really is the impetus for what we’re able to do—or what we have to do. I think the other component is that at least for us as educators, we have a different type of student coming in. Not just in nursing but all over. They don’t know the words, “I can’t do this.” Or they don’t see the barriers that perhaps we might see. So being able to create an environment in which all of our students have that entrepreneurial, creative spirit, but also creating that environment, but also giving them the tools that they need to innovate in this industry. So, in nursing, we’re really thinking deliberately, again enhancing already a great education by including design thinking in their area. We believe that nurses innovate at every level, not just in the research area. So again, design thinking, how that works in relation to solving problems, how we think about spreading and scaling some of the innovations, providing opportunities like the hackathons, like Story Slams, … to again prepare our students to be the innovators, whether it be with the family, whether it be with a community, whether it be on a policy area.

Kelly: Yeah. I think from our view, when we look at 4 million registered nurses as users, as stakeholders, as influencers in purchasing decisions across major health systems, that in and of itself is a formidable number. But right now, about 60 percent of those registered nurses are anticipated to stay in patient acute care practice settings for the next three to five years. Now when we look at the volume of those nurses against the 4 million, against how we market to our customers, how we develop products, like Bonnie mentioned, we want them involved early and often, that is a very important and empowered group of consumers. But if you also take a look at another component which is, what is innovation? How do we disrupt healthcare? It’s not just the traditional product development process. It’s how we commercialize, how we implement, particularly if it involves process change or technology, but also how we educate. Because if we’re setting processes, and tools and technology into practice and they’re disparate systems, or they’re not properly integrated, or the nurses just don’t like them … which can happen from time to time, you’re setting yourself up for failure, which is why we’ve expanded [to think about], what does innovation truly mean and where should we put our focus? And we want to include nurses in that early and often because it sets us both up for success and therefore, patient outcomes up for success as well.

LEADING INNOVATION [17:48]

Gina: Excellent. Karen, do you want to give some findings of the survey that we did with Penn Nursing?

Karen: So BDO collaborated over the past year with Penn Nursing to survey leaders in both clinical roles and in more business-focused roles. We categorized the clinical leaders as those who were C-level executives across hospitals, health systems, physician groups, NIPS, etc., and the business innovators as those who were C-level executives in other entities within the healthcare industry such as biotech, pharma, life sciences and medical device companies. And we asked a number of questions. Today, we’re just going to give you some highlights on two areas with more to come subsequently. So, the first question we asked is, “What are the key forces in nursing that are driving healthcare today?” And what you can see are the top rankings for each of the leader categories, and then in the middle, the four that were selected by both leaders. At the top was chronic care management, which Toni talked about at length as being so important. And then also mental health, innovation and population health. And interestingly, the business innovators did put innovation right at the top, and the clinical leaders put it as their fourth choice but clearly showing that innovation is important in driving the healthcare industry going forward with nurses leading that quite a bit. And then the next question was about the most important skills for nurses to have for going into the next phase of care. We’re moving from more fee-for-service care to value-based care, so there’s opportunity I think in that environment for more innovative-type thinking. And right at the top of this list was design thinking. And interestingly, I think we’ll elaborate more on this subsequently at the University of Pennsylvania Nursing School, one of the innovative course curriculums that was recently developed was a design-thinking course. And so, Penn is really leading the way consistent with what our clinical and business leaders are talking about.

Some of the other items that were identified as key focus areas are the interface of clinical innovation and tech, having excellent clinical acumen, and skills to develop tests and evaluate new innovations. So, turning to the panel, as you think about your own experiences in leading nursing and healthcare more generally, what are some of the skills consistent with what’s up here or different from what’s up here that you have seen that are most valuable to care delivery? Would you like to start, Kelly?

Kelly: Yeah, I can start. I think when we talk with our nursing thought leaders in the nursing community, what we are sensing with this momentum that’s been gathering around nurse-led innovation is really the necessity for nursing as a practice, as a
community, to strengthen and fortify our business acumen. And I think that basically involves moving from a qualitative, descriptive, subjective way of articulating the prioritization needs, the value delivered, the opportunities to be recognized towards the bottom line as well as the metrics and the benchmarks and the dashboards that our other non-clinical executives are subject to. We sit in a very powerful position when we balance the clinical acumen that you mentioned with that quantitative view on benefits. And we’re seeing this not only amongst requests that we get from our nursing community in terms of “Help us articulate the value of replacing our IV systems,” for example, with capabilities that allow for interoperability that enhances safety.

I think another thing is how nursing is partnering outside of traditional models, and I think you see it up here. If we want to achieve things and get things done, we need to stop focusing and functioning in silos. So, the nursing community is reaching out to healthcare partners and industry, to educational entities, to patient advocacy organizations to the benefit of their patients because that’s how we’re going to deliver the value and the disruption that’s meaningful to patient outcomes in the safest and the quickest way possible.

Bonnie: And I would agree with that. I would also add considering boundary spanning. And for us, that really means looking outside of nursing or healthcare per se across other industries to figure out what we can import and bring in. One of the things that we struggle with in healthcare is that we have these things called standards, policies, procedures. They’re written for a reason but they’re also man-made rules. So, we have a generation, especially in nursing, we actually flipped from a Boomer-heavy profession to a millennials-heavy profession in 2015. And what we’re seeing with millennials across the country is that’s there’s a whole lot more challenging of existing policies, procedures and standards, and I think that’s actually going to be very good for us. So, I think the more that we can push those boundaries and really try to understand why it is we do what we do and [asking if there] are ... better ways to do things instead of saying we have a policy that we have to stick with, I think that’s going to be very, very helpful. One of the reasons that nurses don’t identify as innovators, in fact, is that if you don’t stick to a policy or procedure and do something differently and get a better outcome you are certainly putting yourself at risk and, potentially, a patient. So, a lot of times when nurses work around the system, they don’t want to identify that out loud because it’s putting them in, potentially, a libelous or a risky position. So, I think the more comfortable we can be with pushing boundaries and finding ways to extend outside of our traditional industry and find better ways to do things and import that back, I think that’s a very valuable way to look at the world.

Toni: So, I think one of the things to take a look at is, again, we have a number of innovative programs in nursing, and there’s an organization, an honorific organization, the American Academy of Nursing, who has a program called the Edge Runner program. And this is a recognition for nurses who have developed solutions that improve health and healthcare that are evidence-based and that are cost-effective. And if you go to that website, you’ll see maybe two dozen, three dozen programs in care coordination and population health as you go across. The problem that we confront is the spread and the scale. Some of it is related to the business acumen and not thinking about that up front. So, at Penn we’re trying to, with our researchers, trying to have those conversations with end users and developers and business companies sooner rather than later. But on the other hand, there are also issues—I think in the last session, we talked about policy-related initiatives that really prevent sort of the reimbursement in scale.

One of the items, it’s not on this, it’s not listed here, but I had a sneak preview of the results, and that is a factor in moving some of these nurse-led models is scope of practice, scope of practice for advanced practice nurses as well as scope of practice for RNs. As an RN, for example, I will tell you—this was a personal experience. My mother died. She died at home, and we had a hospice nurse that came out on a Friday night. She was not able to declare my mother dead and sign the death certificate. She had to get the coroner or somebody else in the system who would never see my mother to say it was okay to sign the death certificate, so six hours, Friday night, before the funeral home could take her. That’s a limitation in the scope of practice that makes no sense. So, again, those are policy-related issues that our community, ANA, others and many in the consumer-related area are working hard on. CVS has been a great champion of looking at expanded scope of practice. But there are policy barriers that prevent some of, I think, the best cost-effective solutions in terms of moving forward. So that’s what we need to be able to work on as both a business community as well as a professional community.

BARRIERS TO INNOVATION [27:39]

Karen: Toni, you’ve led off describing some of the barriers. What are some other barriers, maybe starting with Bonnie, that particularly issue leading an organization with 4 million nurses, how do you instill a spirit of innovation and opportunity with them?

Bonnie: Yeah. So, for us, I think sometimes these are not always the easy things to talk about, and they’re sometimes a little bit delicate, right, but let’s be honest. There are nurses, and there are physicians. So, we certainly see ourselves as equal but different roles, right? Yet when you’re having conversations with people that are looking to advance technologies or new processes, quite often, they want to really zero in on the physician. That’s a barrier in that it doesn’t give nurses that platform, and it doesn’t get them involved. So, of course, our approach is let’s be really
assertive about this. Nurses have a whole hell of a lot to offer. So, we want to make sure they’re engaged in those conversations, and they’re there, so encouraging that to happen is really important. The other thing, too, is that nursing is a 90 percent female-dominated profession. We have 10 percent male. So, we’re really looking at ways—and some of this sounds very old school—but we have to continue to empower nurses and get them at the table to have these conversations.

So, the mere fact that nurses don’t see themselves as innovators, they’re already behind the curve, right? So, we have to get that education out there, help them see themselves that way and then make sure that they’re getting into the conversations that we need to get them at. In the same vein, people like you all, as well as tech companies and others that we work with, have to have the knowledge that says we want to go out and actually reach a nurse and pull them into our conversation, whether it’s to help us develop a gizmo, gadget or device or provide feedback, or whether it’s to sit on our board or advisory board. And in fact, there’s a really great organization, Nurses on Board Coalition. You can go out as any company, and you actually can go to [their] website. … It’s a matchmaking service for nurses and companies where you can get nurses on your board or on your advisory board to provide input. So, for us, that’s really the biggest barrier is getting nurses out there to be assertive enough to participate, [and] giving feedback, their intellect and their talent.

**Kelly:** I think if I were to add to that, I would say, quite candidly, as a nurse, that we can be barriers to our problem by not—and this ties on to what Bonnie was saying—requiring a seat at the table when policy, process and product decisions are being made. We might be consulted, but we’re not necessarily involved in part of the onus and the ownership. And quite frankly, the paradigm shift that needs to occur is nurses owning their power. I think another thing is nurses also understanding the way that business segments them but also business being open to the fact that a nurse does not always apply. What a CNO values and looks for is not going to be the same thing as a service line leader, is not going to be the same thing as the chief nurse informatics officer or her or his organization, as well as frontline nurse and nurse management. So, it’s really important to understand the different needs, the different drivers in terms of, “Is this going to make my job easier? Is it going to introduce a new level of safety within my organization? Is it going to give me the data that I need to drive process change?” I also think that’s another thing I would add to nursing, is nurses need to use more data to articulate, justify and position for their needs, as well, in terms of areas where we can improve and are gaining meaningful traction.

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