

**Department of Health Professions
Healthcare Workforce Data Center
“New Frontiers for Virginia’s Healthcare Workforce”
January 9, 2013
10:00 a.m. ET**

Dianne Reynolds-Cane: Well I'd like to start by welcoming all of you here today. Thank you for coming to today's meeting. And thanks to those on the phone listening in.

I am Dr. Dianne Reynolds-Cane, a physician and director of the Virginia Department of Health Professions which is the state agency hosting today's meeting entitled, "New Frontiers to Virginia's Healthcare Workforce."

Before I move on to my remarks, I am honored to recognize the expert planning and very hard work done by our agency's Director of Communication, Diane Powers. Diane, stand please, thank you, and by Dr. Elizabeth Carter, Director of our Health Care Workforce Data Center and their staff to ensure this is beneficial to all of the attendees and to the program participants.

Also I'd like to thank all the stakeholders and health care leaders in the room today who have an interest in all that we do at the Department of Health Professions.

Today's discussion will highlight data from some of the most recent survey reports compiled by our Agency's Healthcare Workforce Data Center specifically data about our licensed pharmacists, pharmacy technicians, dentists, dental hygienists and nurses will be discussed.

For example, did you know that 72 percent of Virginia's dentists are male or that 31 percent of Virginia's nurses are age 55 or older and that nearly 33 percent of Virginia's nurses are under the age 40?

And were you aware that almost 13 percent of Virginia's pharmacist plan to retire within the next five years? This and much more survey information will be shared with you during today's meeting.

Immediately following my remarks, you will hear from our keynote speaker, Virginia's Secretary of Health and Human Resources, Dr. William Hazel. His comments will be followed by those of Mr. Bob Gibson who is the Executive Director of the Sorensen Institute for Political Leadership at the University of Virginia.

Mr. Gibson has been with the Sorensen Institute since 2008 where the curriculum focuses on ethics and public service, public safety and campaign in advocacy skills. Prior to his work

with the Sorensen Institute, Mr. Gibson was a political writer, columnist and editor at the Charlottesville Daily Progress for 32 years.

There he specialized in covering local, state and national politics and received several state and national awards for his work. Mr. Gibson will monitor today's three panel discussions addressing pharmacy, dentistry, and nursing respectively. Panel discussions will then be followed by a question-and-answer session.

Now, I would like to introduce my dear friend and boss, Secretary Hazel.

Dr. Hazel is a great servant leader who often describes himself as a recovering orthopedic surgeon due to the fact that he has no time to practice medicine while holding his appointed position.

Before Governor McDonnell appointed Secretary Hazel as Secretary of HHR, Dr. Hazel helped found Commonwealth Orthopedics and Rehabilitation in Northern Virginia where he practiced for so many years.

He was also a team doc for the Washington Redskins.

Dr. Hazel graduated with a degree in Civil Engineering from Princeton University, completed his orthopedic residency at Mayo Clinic, is a past chair of the American Medical Association's Council on Legislation and has volunteered his orthopedic services in poverty stricken regions of Bolivia and Virginia.

As Secretary, Dr. Hazel helped create the Virginia Center for Health Innovation. He chairs the Virginia Health Reform Initiative. He's negotiated an agreement with the U.S. Department of Justice to improve services for individuals with developmental disabilities and sits on or chairs several other boards and committees in the Commonwealth.

With that, I present to you, Dr. Secretary Hazel.

William Hazel: Thank you, Dianne. Thank you for the kind introduction. I appreciate all of you being here today and on the phone. I think health workforce is an incredible challenge for us obviously.

And if you've been reading the newspapers, health care isn't even one of the top five issues in Virginia. Did you know that? We haven't figured that out yet in real life, but I think that what we'll find here is this is going to be a very interesting General Assembly for those of us interested in health care.

We have the whole prospect of Medicaid expansion bringing in maybe 300,000 people into 2014, 300,000 plus people with the promise of insurance. Bringing in another 100,000 plus into health benefit exchange, what will happen?

Now people are not expecting insurance in January of 2014. They're expecting health care. And therein lies the challenge that we have a short-term need because we have to meet these needs. We know that people have been continuously uninsured when they come in to insurance, use the system, use resources at a much higher rate as they would have if they have been continuously insured.

So if we do these expansions, we're expecting in January of 2014 an influx of people with pent up needs. So we have a very acute short-term issue and then we have a very difficult long-term issue.

And I think as we talk about health care, we like to think we have a great country. We're a very prosperous country. We have remarkable technology. We have remarkable people in the health care system, but when we look at the sum of the parts, the value of health care in this country, we got to ask ourselves, how is it working out for us?

Three numbers, 18, 11.5 and 3.5, this is an old medical training trick. Read my mind, what am I thinking? Let's put percentages behind that, 18 percent, the percent of the gross domestic product in the United States spent on health care. 11.5 percent, the percent of the gross domestic product spent on the second most expensive country in the world. Do you know what that is? Switzerland, 11.5 percent of the GDP in Switzerland is spent on health care. Oh and Switzerland covers everybody.

Now, an orthopedic surgeon on his fingers can figure out that's about 6.5 percent different in GDP. Why is that important? It's important because that's paid for either by taxpayers, through government or the other half, 50 percent is paid for by business through employee benefits. It's really where the money is coming from.

And what happens in these situations when the employers are paying more for health care than their competitors, what happens? They cut employee cost. And what do they do? Jobs go off short.

What happens in government when the taxpayers say, "We've had enough," and we're paying excess? It means we're not paying for education, transportation, not solving problems of poverty and homelessness. We're paying an excess premium for health care.

So to put this in perspective, the 3.5 percent of the GDP is in U.S. defense spending. So we're spending almost twice our defense budget, in excess of Switzerland on health care. So let's think about that and we're going to bring 40-50 million people in this country into insurance. We're expecting services.

What we are doing is not providing the volume. Now we could argue if our outcomes were better, if our life expectancy was better, if our prematurity rates were better, or if mortality rates were lower. We could argue that we are consistently offering better lives, better lifestyles and better ability to your life's work. We can't really argue that with the statistics we know.

So as we look at workforce going forward, we need to think about this if it's not working out for us really well, what will the need be going forward? So how do we take what we are doing today, solve an immediate problem because we can't transform the system overnight and then add value? It's almost like we're trying to do several different things at the same time.

And as we look forward clearly, as we try to reach the needs in 2014, we're going to have to look at our systems, teams of people who take care of people, people who are caring, people who are ethical, people who are well trained working in teams.

Let's look at as opposed to licensing of individuals in the future, maybe it's the team outcome that matters more. It makes the difference. So I think we have to look differently at workforce in the future and how we define that and how we protect the public at the same time for allowing innovation. And this is going to be, I think a great challenge for us.

But the challenges don't just end with defining the workforce. It's getting the workforce into the areas where we need it. And I think when I attended the Virginia Workforce Development Authority a couple of months ago, someone from Southwest Virginia got up and said, "Our problems are two."

And so I said, "Really, only two?" And she said, "It's love and money." And as secretary, I assure you we're not getting into the love aspect. And I envy that. But the reality of getting workforce into areas that we needed goes beyond just having to train people. It's having meaningful futures for individuals in an area not just for themselves but their spouse.

Someone from Southwest Virginia goes to school at the University of Virginia where they attract the spouse, our mate for life and they go back to a rural area, but where is this electrical engineer going to work? What do we do? How do we address that problem?

And they're going to have a family. Where are their kids going to go to school? And is there going to be a future there for their children? So we have things that go well beyond just the normal nuts and bolts of education that we have to look at.

We also have to recognize that one size probably won't fit everybody. We want to make some choices when they go to different areas, workforce changes, the care rendered, the ability to deliver care and the volumes to breed proficiency change. So we have a very, very big challenge.

I think this is important information to have because if we don't know where we are, we can't get where we're going. We've got to chart a path and that involves from where we are today to where we need to be 2014 and beyond and getting this information here is very important.

So thank you for doing it and we appreciate your being here and your interest. Bob?

Bob Gibson: Thank you, Secretary Hazel.

It's my pleasure to be here as moderator of this panel discussion or three panels discussing health care issues with seven distinguished health professionals. We will have them present three at a time.

Normally we have this with political figures, selected officials or candidates for public office and ask a series of questions that sometimes they try not to answer too clearly. Today we're with health professionals in a rapidly changing environment. We want to shoot straight with the facts and discuss where their health professions and the health professionals they work with appear to be headed.

The Sorensen Institute actually trains political leaders across Virginia in ethics and bipartisan discussion, our public policy issues. We bring equal numbers of Democrats and Republicans together in all of our programs and help them learn to understand each other and work together.

Many of them actually like each other and find common ground on things on which they can agree. Bipartisan policy formation is still a hallmark of good governance in Virginia where our 22 members of the Virginia General Assembly, which starts at noon, are now alumni of Sorensen Political Leadership programs and believe in working across the aisle when they can. So we're about 100 local elected officials across Virginia.

Virginia's demographics are changing today as are the demographics as you'll learn today in our health care professions. For the first time in my lifetime and probably in most of yours, maybe all of yours, half of Virginians were not born in this state.

Four in ten Virginians were born in another state, 1 in 10 Virginians was born in a foreign country and these foreign countries have changed over the last 20 years. More than 40 percent of our Virginians living in the state today were born in an Asian nation.

About 40 percent are Latino. Thirteen percent were born in a European nation, 9 percent were born in an African nation. This is a big change and as you'll hear from our panelist today, there are big changes in the demographics of our health care. Allow me to introduce our panelists.

Elizabeth Carter has served as Director of the new Virginia Department of Health Professions Health Care Workforce Data Center since November of 2009. Since 2002 she has served as Executive Director of the Virginia Board of Health Professions.

Caroline Juran is Executive Director of the Virginia Board of Pharmacy, a health regulatory board within the Department of Health Professions. She's worked at the department since 2005 first serving as the board's Deputy Executive Director overseeing the licensure program.

Dr. Victor Yanchick was elected dean and professor of the School of Pharmacy at Virginia Commonwealth University in July of 1996. Prior to coming to VCU, he served for 11 years as dean and professor at the University of Oklahoma Health Science and Center, College of Pharmacy.

On the wall and joining us for the featured panels, Jay Douglas is a registered nurse and holds a certification in substance abuse counseling. Currently she serves as Executive Director of the Board of Nursing where she oversees the licensing and disciplining of more than 204,000 licensees and certificate holders including registered nurses, licensed practical nurses, advance practice nurses, massage therapists, nurse aides and medications aides.

Kimberly Carter is completing her 21st year on the faculty at Radford University. She has served as director of the School of Nursing and has returned to the faculty to fulfill her interest in research and is the research coordinator for the Lewis Gale Montgomery Regional Hospital.

Sandra Reen is in her 12th year of service as the Executive Director of the Board of Dentistry where she oversees the licensing regulation and discipline of dentists and dental hygienists as

well as registration of oral and maxillofacial surgeons, mobile dental clinics and dentist assistant II. She is currently managing the implementation of the emergency regulations in the state for sedation and anesthesia permits.

David Sarrett is dean of the School of Dentistry and Associate Vice President for health services, faculty affairs at VCU. He has led a successful accreditation process for the dentistry school's nine dental educational programs. He also serves as chair of the Board of Directors of Dentistry at VCU and continues to practice general dentistry.

Elizabeth, you are first.

Elizabeth Carter: Thank you all for coming. It's wonderful to see this wide variety of people here. And as Secretary Hazel indicated earlier we really are in revolutionary times. We need to help each other.

And so it's just a wonderful thing to see our three professions today highlighted, but I will also note that we currently have 20 different professional surveys in place and running. So we will be getting lots more data for the future. So hang in there. We'll tell you more.

But today let's focus on pharmacy first.

First, I wanted to go over the highlights of the demographics that we know and also introduce the idea that we need to have common methodology. It is essential for us to have that.

And so far generally what has happened in terms of measuring workforce it has been on an adhoc basis as it's been profession by profession, state by state. What we're striving to do here is to come up with the same set of variables that we can look at across all the professions.

One of the problems with methodology earlier too is that it had been relying almost entirely on just a number of licensees in a state, in a region, in a locality. That doesn't tell you very much.

What we've been able to do here at DHP HWDC is because of the license, the renewal process actually is an online thing now which is wonderful. It's quick and easy. We incorporate the surveys within that process. We also have the new ones coming on that relate to online application.

So guess what, it didn't cost anything for us to introduce this survey methodology here. So we're very blessed in having that. Also one of the key things is we have existing staff, so we're very lucky to have that.

One of the key things we need to think about too is that our workforce capacity is full time equivalency. You can use that. You know, when are you actually seeing patients? And that's one of the questions that cuts across all the professions and that's essential.

When you look at the workforce capacity for pharmacists, we talk about workforce size. Those are people who said that they're actually working. So we're looking at 6,600 of those, but the full time equivalencies are only 5,532. That's what you have to work with, the 5,532. And you'll see some more numbers for the other professions as well.

Demographics have been mentioned earlier by Dr. Cane that a large portion of our pharmacists are actually female. And it seems to be more so in the younger generations. Another thing that distinguishes the pharmacist from the other two professions, we talked about the aging of our health care.

If you look at the report, you see the bulk of our practitioners are indeed young.

Also our pharmacy technicians are primarily female.

So where they're practicing is out in the community. I think that's another fact that we need to be thinking about. And then also another – about 20 percent of the pharmacists, 11 percent are working in private hospitals and health systems. And then there are some other independent community pharmacies that are hiring that have 10 percent of pharmacists and 13 percent of the pharmacy technicians.

We're beginning to do mapping. And you can see where people are generally working, the pharmacists are in the top here, the darker areas are, as you would expect in the – in the central part of the state and throughout. It's surprising for us to see that there's a smaller concentration in Northern Virginia and actually in the south side, but this is based on what they told us which is interesting.

And you'll see a similar pattern for the pharmacy technicians, however there's a large concentration of them in the west central and southwest.

And I'm sure you'll have questions which we'll have at the end. I'm available for that at the end, but thank you.

Bob Gibson: Thank you. Caroline?

Caroline Juran: Thank you. With respect to the professional pharmacy like most health care pharmacies, this scope of practice has changed and evolved over the years. Traditionally pharmacists simply prepared and labeled the drug for dispensing purposes. There were no board registered pharmacy technicians.

Currently that has changed. We have board registered pharmacy technicians and an increased use of technology being utilized in the dispensing process. And pharmacists have taken more of a clinical approach. They are reviewing the prescriptions for accuracy, appropriateness, making recommendations to prescribers, counseling patients to achieve the patient's optimal pharmacotherapy.

They're offering clinical services to promote wellness and disease prevention. So just in the last 50 years, the scope of practice for pharmacists as well as pharmacy technicians has changed greatly.

In the past, the Administration of Immunization was not part of the pharmacy scope of practice. Today, I would dare say a number of you probably were administered your vaccine or immunization from a pharmacist. They are contributing significantly toward increasing the number of immunized patients here in Virginia and thereby protecting the public from various diseases.

Pharmacy as a whole is a highly regulated profession. And that's based primarily on the fact of the chain of custody which must occur and take place with respect to the possession of controlled substances.

However, through all of those regulations, we're fortunate in Virginia to have a statutory authority that allows the board to embrace innovation. Licensees can apply to the Board of Pharmacy through an innovative pilot program application.

Historically, these innovations have involved increased uses of technology and the dispensing function that may compose of robotics particularly in the hospital environment. It could encompass barcode technology but it allows the board to not be too tight to its regulations, to embrace innovation as Secretary Hazel mentioned it's so important in this ever changing health care environment. That allows the board to trial an innovation in a safe manner so as to protect the public.

Currently the Board of Health Professions is performing a scope of practice review of pharmacists. It is likely to conclude that project a little bit later this year. Dr. Carter may

want to speak more on that particular issue. And it's my understanding the Board of Health Professions is beginning its scope of practice review for pharmacy technicians which hopefully will also conclude later this year.

So it will be very interesting to see what recommendations come out of the Board of Health Professions. Future discussions, I suspect are going to continue to involve increased utilizations of pharmacy technicians as well as technology in the dispensing process, increased use of pharmacists in a team-based approach to optimize patient pharmacotherapy, improve medication adherence and prevent diseases.

Pharmacists have certainly been recognized as a very accessible health care professional to the public primarily based on that community pharmacy business model and yet pharmacists have been underutilized.

And so I think you're going to see a lot of focus on continuing to discuss where the scope of practice goes so that we can take advantage of the accessibility to the public and increase the patient's wellness, overall health by utilizing the pharmacists and pharmacy technicians probably a little bit more in a team-based approach.

Bob Gibson: Thank you, Caroline. Thank you. And Victor?

Victor Yanchick: Yes, it's my pleasure to be here this morning with you and to give you a little bit of a thumbnail sketch of where pharmacy education has come over the last 30 to 40 years.

As Caroline mentioned, the practice of pharmacy today is much different than the practice of pharmacy when I first graduated from pharmacy school. I was one of the last graduates in a four-year pharmacy program resulting in a baccalaureate degree in pharmacy.

So I was a pharmacist at the tender age of about 21. And during that four-year curriculum right out of high school, we were basically trained as chemists rather than clinicians. We were not even allowed by the code of ethics to tell the individual what the name of the drug was that they were getting. We were told they have to find that out from their physician or their prescriber.

So we have come a long way in pharmacy education from a four-year baccalaureate program that then developed into a five-year program still at the baccalaureate level. And then in 1997 our accrediting body said all future graduates must hold a professional doctor degree in pharmacy.

So now we have a minimum of six years in pharmacy education where some schools have a two-year pre-pharmacy program followed by a four-year professional program. All schools must have a four-year professional doctoral program to be accredited so that the students can become licensed.

We at Virginia Commonwealth University have a three-plus-four program and virtually all of our students who come in to our program come with the previous baccalaureate degree. So it is very similar to the dental degree and the medical degree as far as professional programs are concerned.

But the curriculum in our programs has changed dramatically from a chemistry focused to really a patient-centered care focus. And our curriculum because of the technology that has been developed in education allows us to do some miraculous things. Students are walking around with iPads and they have instantaneous access to all kinds of research articles that allow them to make decisions about drug therapy.

So what we're really trying to do in our curriculum is to educate our pharmacists to become valuable members of the health care team and have the responsibility for medication therapy outcomes as well as wellness as you hear from Caroline.

Pharmacists are the most accessible health care profession in the community. And about 60 percent of our pharmacy graduates do go into community-based practice. But what we are seeing now also with our graduates from their entrance, most of our students who come into our program are technicians. They have some experience in pharmacy. Probably 80 percent have had some technical training before they come in.

But when they graduate, we're seeing more and more of our students because they want to differentiate themselves and they see the opportunities in clinical practice beyond simply filling prescriptions which I think is going to be taken over by technicians and technology. That's where we're heading.

Pharmacists will have that responsibility for that prescription, but the pharmacists are going upfront. They're going to be directly involved in a team-based approach in a collaborative practice approach with prescribers and the patient to make sure that the medications that are prescribed are the correct medications and they're used appropriately.

When we look at the statistics for medication use, we find most people do not adhere to their medications when they're taking them. And many people who give prescriptions don't even have them filled. You can see the amount of white bags in your pharmacy that are waiting to be picked up. Many of those are never picked up.

So what we're trying to do with our program is to develop professional training. And at VCU we're not engaged in developing programs where from the very first year, pharmacy students, medical students, nursing students, dental students, allied health students are going to be in teams to be educated on how to take care of patients in a team environment, in the community, in the hospital wherever it might be.

So the curriculum in pharmacy now is very, very clinically based. Our students are very well versed in the use of medications and the proper side effects that need to be looked for and appropriateness in therapy.

And we're also moving I think in the near future to more of a personalized medicine type of approach where we're seeing now the genomics side of it being used to determine what specific drugs may work in hypertension. And not only that, what particular doses may be based on that patient's genome profile and that's where pharmacy is moving.

We're going to see less and less little white pills being dispensed and more and more biological products being dispensed that are not only expensive, but they're very, very specific in their use.

There are about 60,000 pharmacy students in the country in 129 schools of pharmacy. We have four programs here in Virginia. Ours is the largest and is the oldest and only state-supported school in Virginia.

Seventy percent of our students are women. As I said virtually all come in with previous degrees and some even with PhDs and every now and then we have a nurse and even a physician come into pharmacy school.

The whole area of pharmacy education has dramatically changed. And I think one of our major, major goals is to make that information about what pharmacists can do to help individuals with their medications and to work with their prescribers in guaranteeing to the best of their ability that the patients are going to be taken care of well by their prescriptions. To me that's the goal that we're setting for our program. We have a great inter-professional movement now in pharmacy education.

There are about 65,000 students across the country in pharmacy schools. About 28 percent of our students are Asian. About 10 percent are black, very, very small number of Hispanic students and the rest are Caucasian. And mostly Virginia residents, we have about 89 percent as Virginia residents in our program. And hopefully they will stay in Virginia to practice pharmacy.

Bob Gibson: Thank you, doctor. We have about 10 minutes left in the pharmacy panel for our discussion. Looking at the demographics of how the health professions are changing and changing in pharmacy with 70 percent women, what are you finding is the basic change in pharmacy education, Victor?

Victor Yanchick: We're seeing women being terrifically suited for the practice of pharmacy. And I hate to discourage the males in the school, but most of our leaders are women in pharmacy and they are great in communication and empathy. They understand a lot more about how to communicate with people. And they make excellent pharmacists.

We used to think that women pharmacists would get their degree and then get married and have children and not come back, but that's not really the case. They do come back. They do have their babies, but they do come back and practice whether it's part time or full time.

And the majority of our students who pursue post-graduate residency training programs are women.

So women in the workforce I think are extremely valuable for their ability to have the empathy and caring for patients. Not that men don't, but there's a difference that we see in communication skills.

Bob Gibson: You mentioned that the profession is seeing a switch to a team environment in terms of providing health care. How is it changing in terms of teaching a team environment, teaching the professions to work together?

Victor Yanchick: Well, we're relatively new at this, but from what the evidence is showing so far is that our students are very, very anxious whether they're dental students, medical students or pharmacy students to be involved in team-based care.

And I think it used to be – medical students used to think that they're always going to be the team leader and then everybody has to do what they say. And it's not the case anymore.

You know, certainly physicians are team leaders in most environments. But what we're seeing now is the understanding from all of our health professions that given the environment of that particular patient care team, it maybe a nurse who's the leader, it maybe a pharmacist who's the leader and/or it may be the physician who's the leader of that particular group of patients.

We've been very successful in hospital, acute-care environments to develop this team approach to health care. We've been doing this now for 30 to 35 years and that's where the

clinical practice in pharmacy has really come from. And it was because pharmacy schools invested in faculty to become clinicians in the hospital.

Now that is translated to the community where we're seeing residency programs now in Walgreens, in large chains and small chains. And we're seeing a much more patient-care focus as a team member in a collaborative practicing environment, in the community. And I think that's where we have to really, really focus.

Most people are community dwellers. They're not in hospitals. And that's where their needs are.

Bob Gibson: Thank you, doctor. Caroline, you mentioned that pharmacists are underutilized. How are our pharmacists underutilized? Can you give us an example of how they might be better utilized?

Caroline Juran: I think the underutilization that you are hearing being discussed nationally really stems from the idea that pharmacists, the majority of them, are in a community-based business model. That makes them accessible to the public, but it also removes them from other health care professionals.

And as a professional I believe we are all just beginning to try to figure out how to get over these impediments and immerse pharmacist into that team-based approach more successfully.

It's easier in the hospital environments and institutional care environments where all the health care professionals are located in the same building. It works very well, that team-based approach does there.

It's when you take it out into the community base setting where it gets a little more challenging.

Bob Gibson: Yes. You also mentioned that pharmacists are in a very heavily regulated profession. How are those regulations changing?

Caroline Juran: Well, I think you've seen changes that have already occurred in the past years with respect to pharmacists now being allowed to administer immunizations. That previously was not within the scope of practice of pharmacists but has certainly come on in the last decade in the majority of the states across the United States.

You see the implementation of collaborative practice agreements. Several years ago that statutory authority was placed where pharmacists could enter into a collaborative practice

agreement with a prescriber so as to better take care, if you will, of a specific patient who was also part of that collaborative practice agreement.

And I think you're hearing discussions, it would not be a surprise during the upcoming general assembly, if there are not continued discussions of how pharmacists could possibly expand their activities within a collaborative practice agreement. So I think we are still very much in an involving discussion as to how regulations need to change as well as statutory allowances.

Bob Gibson: Thank you, Caroline. Secretary Hazel has to get back to the General Assembly and has a few words to give before he takes off.

William Hazel: Actually, I have a question if I may, first. I guess, Victor, as we looked at the changing models of medicine in the community whether its patients in the medical homes or chronic disease management teams, et cetera. How does the pharmacist play a role in those teams?

I think, Caroline you were talking about having this sort of the separation in the community. But how does a pharmacist work in a patient center and medical home or will a pharmacist be more likely to be in say a chronic disease management home around endocrinology or rheumatology, something along those lines?

Victor Yanchick: Well, that's where I see our profession moving as a member of the team in a medical home or ACO. We see pharmacists through that collaborative agreement, having that responsibility for the outcomes and even the initiation of therapy in many cases based on a collaborative practice agreement with the prescribing physician or nurse practitioner.

I think that's the future for health care. When we see the number of individuals that we're now going to have to take care of through the Affordable Care Act there has to be a way in which we can get individuals among the health professions having greater responsibility and collaboration to manage that patient's health.

And with pharmacists I see that pharmacists whether it's in a confined environment or through the technology that we have contributing to a medical home as far as the medications that are being prescribed or being used and following up with that patient to make sure that the patient is indeed taking the medication as prescribed and getting benefit out of that medication.

William Hazel: Do we have data into the country that indicates where pharmacists have participated in patient center, medical homes that would suggest ...

Victor Yanchick: We have data that shows that pharmacists have made significant contributions to a better control of diabetes, of hypertension, these types of chronic diseases. And that's where I see pharmacists in the future being primarily involved and that's the chronic, long-term care. And then if you look at our aging population, VCU has, I believe, the best geriatrics program in the country that focuses on geropharmacology and geriatric therapy.

We have a tremendous responsibility for our aging population to make sure that they're properly cared for and the medical home model is a terrific model to use.

William Hazel: Thank you.

Bob Gibson: Thank you Victor. Unfortunately, the time is up for our pharmacy panel. And now Caroline and Victor are going to move from stage right to stage left and we'll be joined at the panel table by Jay and Kimberly.

Now, we're moving from pharmacy to nursing.

Bob Gibson: We'll start with Elizabeth again.

Elizabeth Carter: Thank you. As before, we're trying to again show you the same sorts of demographic information and workforce information across the profession and as it's no big surprise when I'm breaking it down by gender in this particular case because a vast majority of nurses are indeed women. There are men that are there as well but it became such a small amount that we just moved forward.

What you see here for nursing, what's a nurse? In your mind, what is a nurse? Is it an RN? Is it an LPN? Is it a nurse practitioner? So we use the term nursing because both of those, particularly the RN and the LPN, have generally been interchangeable I think in the public mind. But they are two distinct professions.

One of the most interesting things that you see here – as we mentioned for pharmacists before it tended to be a younger group. Well, look at where the big lump is, if you will, in terms of the distribution particularly on the registered nurse side.

We're looking at your peak age group in 55 to 60 years of age. So again, not that we don't have a lot of other folks coming behind but that's pretty critical and that's part of the reason why the Healthcare Workforce Data Center is focused on nursing as one of their earliest reports. And so we have a second report here today.

The licensed practical nurse group you see is more uniform in the age group. So you don't see as much of a push in that direction. Be mindful of that because your registered nurses really have a much broader scope of practice than the licensed practical nurses do.

I think this is a nice question that the nurses asked that we put in the survey. We didn't put this among the others but we put it in there. How satisfied are you with your employment? And it was just a wonderful thing to see that 92 percent of the registered nurses are happy where they are and a big bunch of those are very happy where they are, and 94 percent for the licensed practical nurses.

I think that makes you feel good from a patient perspective to know that your nurse is happy in being there. The largest employers for registered nurses are hospitals. But the largest employer for the LPN group is the nursing home and extended care environment and fewer in physician's offices.

Distribution is a little bit different accordingly because where the hospitals are located is where you're going to see the nurses. So you see that central section there that's dark in central Virginia and a little bit of the west central is where the greatest concentration of registered nurses.

And it's sort of the opposite if you will for the LPNs because you have the assisted living and the nursing home environment spread sort of throughout the state. And I'll leave with that.

Bob Gibson: Thank you. Thank you very much. Jay?

Jay Douglas: Thank you. I've been asked to address the changes in the law that went in to effect, strange to say last year in 2012, governing the practice of nurse practitioners. One comment I want to make to you back on what Liz was talking about is that it's terrific I think that we have this data, workforce data on RNs and LPNs.

So much of what we see nationally and so much of what we hear is related to registered nurses only. So I think this is really giving some incredible information for people available in Virginia.

So the 2012 changes in the law governing nurse practitioners, you will notice in the nursing report there is some reference to nurse practitioners which was data that was collected as part of the RN survey. However, as mentioned by Dr. Carter we're now collecting more specific NP data and have a survey related specifically to the nurse practitioners which will be reported at a future date.

And today I'm going to address just the most significant changes in the law that governs the practice of approximately 7,000 nurse practitioners in the Commonwealth. And these changes represent a huge amount of work and the collaborative efforts of the leadership of the Virginia Council of Nurse Practitioners and the Medical Society of Virginia. And they should certainly be commended for their vision, hard work and contributions towards increasing access to care.

It's important to know that in Virginia, unlike some other states, several categories of nurse practitioners are licensed jointly by the Boards of Medicine and Nursing. There are 10 categories of nurse practitioners in Virginia and they do include family nurse practitioners, adult nurse practitioners, certified registered nurse anesthetist and certified nurse midwives. And I mentioned that because it is a little different than in some other states.

The changes in the laws certainly support nurse practitioners practicing to the full extent of their education and training as they provide essential health care in multiple advanced practice roles in a wide variety of settings.

And now I move on to some of the specifics of the changes. The major change in the 2012 law that was implemented is the elimination of the requirement for supervision for nurse practitioners. And nurse practitioners now practice in consultation and collaboration within patient care teams. And this is huge.

In some areas of the state certainly in the more urban areas, the supervision issue was not a barrier to care but in lots of other parts of the state and particularly in rural areas in different kinds of practices it certainly created some difficulties. So this certainly expands the access to care for people.

In the law, the patient care team within which the nurse practitioners practicing under the collaborative model, there is definition of patient care team which is a multidisciplinary team as health care providers actively functioning as a unit with a management and leadership of one or more patient care team physicians for the purpose of providing and delivering health care to patients or group of patients.

I think it's important to note when we look at this definition, it allows for a lot of flexibility. You know, the team can be small. It may be one nurse practitioner and one physician. The team may be 20 people. It may be multidisciplinary, it may involve multiple nurse practitioners and multiple physicians and could be in a primary care setting, could be in a hospital based setting.

So there is a lot of flexibility within this definition of patient care team that is included in the change in the law.

The patient care team physician actively provides leadership and management, but there is no longer a requirement for the physician to regularly practice in the same location as the nurse practitioner, once again, a significant change.

This collaboration and consultation between the team can be via telemedicine. The new changes represent also some changes in the ratios between team physician and nurse practitioner, change from four to one to six to one.

There is a requirement in the law for periodic review of patient records but there is no requirement any longer for site visits. They certainly may be conducted but there is no requirement.

And the practice agreement which was formally in place primarily for prescriptive authority, which defined the relationship between the supervising physician and the NP is now combined into one document called the practice agreement.

And the practice agreement does include prescriptive authority if that is applicable. Not all nurse practitioners have a separate license for prescriptive authority by their choice and CRNAs of course in Virginia who are licensed as nurse practitioners do not have prescriptive authority.

So this practice agreement that defines the relationship and also may outline the prescriptive authority is jointly developed between the nurse practitioner and the team physician. It can be a written document or an electronic document.

And another is that as before this practice agreement had to be submitted to the Board of Nursing. A new one had to be developed and submitted with changes of employment and there is no longer a requirement for that to be submitted to the board.

So the professional is part of the team, develops the practice agreement and it's in place certainly for anybody to reference at any time but there's no requirement that it would be submitted to the board. Nurse practitioners and physicians sign that agreement and that is in place and describes the practice and how that collaborative arrangement is going to work.

There are definitions now in statute for nurse practitioners. There's a definition of team physician. And I encourage you to look on our web site where these laws are posted for the

detail of this because I'm just certainly addressing the highlights today and there's a lot more detail that should be looked at.

I just want to mention what didn't change because I find as I get the questions about what other changes, I also get the questions of, what didn't change? So the regulatory oversight by the joint Boards of Nursing and Medicine did not change. That's still in place and that group is comprised of three members of the Board of Medicine and three members of the Board of Nursing.

There's some myth out there that this law changed the licensure requirements for nurse practitioners and the licensure requirements in eligibility to be licensed as a nurse practitioner did not change. We still have the same number of categories of nurse practitioners.

Certified registered nurse anesthetist and nurse midwives are still licensed in Virginia as nurse practitioners. And the requirement for supervision for CRNAs did not change. Due to some federal requirements certified nurse anesthetists are still required in law to have a supervisor relationship with a physician.

And there were no changes in titles for people, the continued competency requirements remain the same and the reinstatement requirements for somebody whose license may have lapsed or may be coming back and reentering the workforce.

So I'm just giving you the highlights of the changes. We're in the process of the implementation phase of all of this. There are a lot of questions but I think what's important to remember as you go back and look at the codes that it does allow for a lot of flexibility. And really what these changes have done is increase the access to care in many areas and certainly allowing the nurse practitioner to practice at the full extent of their education and training. Thank you.

Bob Gibson: Thank you, Jay Douglas. Kimberly Carter?

Kimberly Carter: It's an honor and privilege to talk to you about nursing education perspective as they relate to fulfilling the needs for the health workforce, especially in rural areas. Whereas pharmacy has come a long way in going from a baccalaureate to enter the practice to a doctorate, nursing has struggled with that over the 100 and so many plus years of the history of our profession.

And so what we have are a variety of entry points into the practice of nursing. Licensed practical nurses may start in high school and complete a program in high school. They may go to a post high school program and earn a certificate or a degree and then they are eligible to sit for licensure as a licensed practical nurse.

Registered nurses have three different ways to enter practice, three plus. I'll speak to the three primary ways. The first way is to earn a diploma in what typically has been a hospital school of nursing. That's actually how I started my education many years ago within a diploma program. There are still some in Virginia. That's one entry point.

Another is through an associate degree program. And the third way is through a baccalaureate program. There are also ways where you can go entry level at the masters and doctoral level as well. But the diploma, associate degree and the baccalaureate degree are the largest volume of nurses entering practice to be eligible to sit for the registered nurse licensure exam.

And then at the graduate level, there's the nurse practitioner, the clinical nurse specialist, a wide variety of specialization programs. Nursing has broadened in the last 10 years, to now have a doctor of nursing practice which is a clinical doctorate. And those are growing throughout the state as well as the nation, those programs, are variety of ways that they're being implemented as we're trying to as a profession figure out what is most effective in reaching the students and bringing them to that level of practice.

But the goal from the American Association of Colleges of Nursing and the ANCC was that graduate practice would come at the doctoral level. And that goal was set to be reached at 2015. Indications as best as I can tell from attending meetings in the American Association of Colleges of Nursing is kind of backed off on that goal ever so slightly.

And so we will continue to be vigilant to see if we can achieve a doctoral degree as our entry to advance practice, graduate level practice. But right now you can enter advanced practice or graduate level at the masters or the doctoral level.

Educational perspective to get such a large volume of students, as you can see how many are licensed there are many, many that we have to educate to get to those licensure levels. And we are allowed by the Board of Nursing to have up to 20 percent of our education be in simulation. And so that is really a wealth of instructional opportunities for our students.

And so as an example, the state appropriates funds to Radford University and we are a regional simulation center and we serve seven schools of nursing who all come to our simulation center for a significant portion of their nursing education.

It's a very wonderful, rich, educational experience for the students where if you're going to kill the patient it's far better for that patient to be a simulator than to be a real patient laying in a bed. And those patients die – they breathe, they cry, they talk; you can take their heart

rate, their pulse. The scenarios unfold based on previous decisions that the students have made. And so it's a very rich educational experience.

And you'll find that there are simulation centers all throughout the state. For a rural area to have a simulation center is nice because many schools can be served at many different levels, associate degree and baccalaureate degree and in the case of our simulation center to reach a large number of students for that type of education and maximize the use of resources. And it takes significant resources to run a simulation center well.

You'll hear some schools of nursing say they have simulation centers and what that ends up being is a mannequin and a bed. And that's very different from the type of simulation center that I'm talking about where it's a truly rich educational experience.

One of the things that I was struck by when I looked at the data was what Dr. Carter also pointed out and that was the age of the nurses. And I want to transcend some other data points for that. If you look at the data from this survey you'll see that there is a significant drop in renewal of licensure after the age of 59.

And the median age of those nurses responding was 47. So if you take those two numbers and put them together, I think we can fairly safely predict that within the next decade we're going to see the beginning of a significant drop in renewal of licensures of nurses as they enter the retirement age.

This would essentially affect rural areas because those nurses already tend to be older. And so a lot of them are just waiting for the economy to settle out. The good thing for nursing would be if the economy doesn't settle out because they would just keep working until they die. But that's not good for the individual nurse.

So when the economy does settle out, we'll start seeing nurses who will take the retirement that they have been waiting for and planning for. We'll also see the younger nurses who are delaying childbearing no longer delay the birth of their families. And so that will affect the workforce as well.

The American Association of Colleges of Nursing also has released data that says that the average age of retirement of nursing faculty is 54. And we didn't see that in this data but that's significant because if we're going to see a decline in the nursing workforce and we're going to see very soon a decline in the faculty, we're going to have a major challenge in educating the next generations of our workforce. So we need to be very vigilant of that.

One of the things that my experience coming from a rural education and a rural academic program is that I see some programs say well we're going to help the rural problem by taking our students from our settings and give them a rural experience and then they'll go back to a rural setting to work.

But I think what we have to remember is what's unique about the programs who are located in rural areas. Our students primarily come from that area or are committed to that area and stay in that area. And so we're educating them for a population that they are truly committed to. It's not just a rural experience and a let's go back to where pay is better. It is an experience that it's truly rich and focused on where their practice will most likely occur.

Therefore, you have to think about where we draw our population. And our population comes from that rural area. The challenge is that we know the poverty level for people coming from a rural area is higher. So this is our pool of applicants into a rural nursing school.

Our pool of applicants already comes from the more impoverished population. And one of the things in the data that was released was that the primary way that nurses who continue their education, to finance that education is from personal and family resources. Those are very, very slim for the rural person.

Also note that 93 percent of the nursing workforce is female. And so that also encompasses the challenge as we try to assist those women to finance their education. But ongoing education is something that nurses are very well familiar with. And the Institute of Medicine recently released a report called the Future of Nursing.

And in that report there was some pretty strong mandates to the profession that we need to do these things to clearly move health care forward. And one of those was to practice at the scope of our profession and I was very, very pleased to see that nurse practitioner laws are moving down that way so that nurse practitioners can practice to the full scope of their education and licensure.

But we also need to look at that for the licensed practical nurse and the registered nurse because as pharmacy changes and dentistry changes, the scope of practice from the other professions will be changing as well. And so we need to be making sure that nurses are educated and prepared to practice at the school – at the full scope of their profession.

The other mandate was to come up with more innovative ways to educate our nurses. And so schools throughout the state are looking at how to do that. For example, in the western portion of the state, we have started something called the Southwest Virginia Initiative. And

in that initiative we are bringing together chief nurses from all of the health care institutions and all of the educational settings and we're collaborating and discussing.

We brought people from Richmond, from the boards, from the Virginia Nurses Association to discuss with us what we need to know. And then we are spending a significant amount of time planning to try to meet the unique health care needs that we see in our rural area.

I think that we have many challenges. But I think that one of the thing that's really significant when you look at maps and you see a map that's divided into regions that are stated in different colors that is taking the whole region into one. And what we have to remember is that the parts within that region may not be reflective of an entire region.

And I think the valley region is a really excellent example of that. When you look at Bath and Highland County who are in a very well distributed colored area, and you look at them and they're so very different from the other parts of that. So it's important when we're looking at rural because of the low numbers of population and population diversity. All of those things are very difficult to look at on maps sometimes and really get a complete picture of what that rural area means.

Rural in and of itself is a very complex and confusing thing to define because most of our rural, or what we would consider if you drive through some places, don't know this is rural. It's not when you look at different definitions and maps and data. So that doesn't mean that that individual nurse doesn't have a challenge.

I know nurses who are driving from the border states, and they're driving two hours to work in Virginia. I drive an hour and a half to go to work. But resources are more limited when you live in the rural area. So the salaries are lower. The support for that community is lower.

So those are all things that when we look at these maps and this data we try to send, translate that for the rural population, we have to take into consideration.

Bob Gibson: Thank you, Kimberly Carter. Elizabeth Carter, we heard a lot about nursing shortages and I know you want to address it. Let's begin by addressing it in terms of what types of nurses and what regions and types of regions.

Elizabeth Carter: I'd like to address Dr. Kimberly Carter's question about the mapping first because I think that will help inform us all.

Bob Gibson: Sure, and then we'll open the panel to the shortage question.

Elizabeth Carter: OK. As I mentioned a little bit earlier, we're kind of rudimentary in our maps at this point. But we are moving by our relationship with the Virginia Health Workforce Development Authority. They have this wonderful tool called a Health Chart Book.

And what we're trying to do as part of our work together is to pull the supply data together with some of the demand data and get down to the level of individual localities. We'll be able to actually have a sort of a dynamic mapping and that will answer the questions that you're talking about in terms of whether that meets the needs better than what we can do right now. We're very primitive if you will at doing that.

But we're very hopeful that this will move forward pretty quickly and be able to help everybody a little bit. We actually have what is called hot spots that we're starting to develop. It will actually get to the point level of information, so with that extra support from the Virginia Health Workforce Development Authority and others, it will help us greatly.

And we'll be able to share that information as well in the future.

Bob Gibson: Jay, also, where are nurse shortages in terms of the types of nursing and where are the greatest opportunities in terms of the types of nursing people getting into the field?

Jay Douglas: Wow, that's a big question. And it kind of gets back to what Dr. Kimberly Carter had said in that you'll hear people say, well, I can't get a job in Northern Virginia. But new graduates saying that doesn't mean there aren't jobs. There may be special expertise that's being looked at and different levels of licensure but then there are pockets within those areas that there's need.

There's certainly and I'm sure our friends in the audience from the Virginia Healthcare Association can attest to in terms of long-term care. As you saw, the LPNs are certainly the majority of the workforce in long-term care. And in some parts of the state, attending necessarily workforce is not an issue. But even within a region there can be difficulties.

So it's some – I think we've got a lot more work to do to really – I'm not sure we know the specifics on that. And what we get at the board level of course is anecdotal kind of information. We have nurses calling, can you help tell me where I might get a job or where I might go.

So it's not – yes, I don't think we certainly have a good handle on that really at this point. But it's coming.

Bob Gibson: Kimberly Carter, you've been 21 years on the faculty of Radford University. What changes have you seen in those entering the student ranks in terms of pursuing nursing as a career?

Kimberly Carter: I think that students are a little bit older, perhaps we see more students coming from other majors, other careers. They've fulfilled a career and they decided that it wasn't fulfilling to them or they've been involved in a career and that wasn't fulfilling to them. And so they've decided nursing is where they would truly find value and joy.

And so we see people coming in as a second career. One of the biggest changes I think I'm seeing in nursing now is the movement for more and more education. And this is being driven by the health care institution themselves as they're targeting the goal of Magnet designation which is a designation to the American Nurse Credentialing Center that only 5 percent of the hospitals in the country hold and that represents nursing excellence.

And one of the indicators for nursing excellence, those identified by Magnet but also identified in 2002 and published by Linda Aiken and her colleagues in JAMA, in the Journal of American Medical Association was that significant patient mortality reductions occur when you have a baccalaureate prepared nursing staff. And so I'm seeing health care institutions hospitals especially embraced that knowledge and that goal and are encouraging their staff to return to school to pursue the next step of education, if it's an LPN, it's to become an RN; if it's an RN with an associates or diploma, it's to get that baccalaureate degree.

So I'm seeing a wave of students returning at various levels in their career. They have families, they need online. So we see nursing a tremendous online education movement and online education is something that I went into kicking and screaming knowing that I was going to hate it and I was going to prove that I was going to hate it and as soon as I did it, I loved it and I'm convinced. It is not just sitting in your pajamas and looking at a talking head. It's a truly engaged and interactive learning process if it's done correctly. And so I think that is a big thing.

One of the things that I think is not understood very well in Virginia is that we have, throughout the state, many, many – we call them post-life – or oriented BSN educational programs. They're very affordable and the students can move through those programs very quickly. Many of them are online, so they can also do them at their own pace.

But, you know, I think that there is some misunderstanding that we have to go outside of the state to bring in educations that can offer these programs and those programs exist throughout the state already.

Bob Gibson: Thank you, Kimberly. Jay, you get the last word on the nursing panel.

Jay Douglas: Well, just to mention for the audience that in Virginia, we have 161 nursing education programs and unlike the other professions, the board does oversee those programs. It's important when you're looking – talking about workforce and registered nurses is that the majority of those programs prepare nurses of the associate's degree entry point that Dr. Carter was talking about. So depending on your perspective, your educational preparation and then where you are geographically in the state, you may have a perception of difficulty in obtaining employment that may be related to your educational preparation.

When you talk about the Magnet facilities and look at wanting the baccalaureate it's certainly moving to the majority of the workforce being at baccalaureate levels, so I think this whole issue of three entry points into practice for registered nurses that licensure is certainly an issue to Virginia Action Coalition, the Virginia Nurses Association and Virginia Chapter of ARP has a taskforce that's looking at a lot of these educational issues and the articulation programs and the opportunities. There is also, I think, a lot of work going on related to that but I think there's some significant differences there with the nursing profession that we're really going to look at.

Bob Gibson: Thank you. Thank you, Jay, and thank you, Kimberly. It's time to switch to our final panel on dentistry and we'll have Sandra and David come over.

Diane Reynolds-Cane: And, Bob, while the panel switches, I have another comment. All that happens at the Board of Nursing is quite important of this agency. One of the many reasons why the data that's been presented today about nursing and so forth is important is because the majority of licensees at this agency fall into the Board of Nursing. This agency licenses, certifies and registers 350,000 health care practitioners.

Bob Gibson: OK.

Diane Reynolds-Cane: And as Jay mentioned earlier, more than 200,000 of those individuals are governed by the Board of Nursing. Thank you.

Bob Gibson: Thank you. And now, again, Elizabeth Carter.

Elizabeth Carter: I think one of the striking things that you see in terms of the age and gender pyramids here for dentistry is that overall, of course, the majority are male instead of female as we've had earlier with other panelists. But look at the age again; we are looking at a huge group that is actually in their 50s to 60s. That's the bulk of your dentists right now. That's pretty significant.

And we are starting to see in younger age groups some change, if you will, by females. Clearly, the vast majority of our dental hygienists certainly are females. This is an up and coming profession, it looks like, in the younger age groups.

In terms of the employment situation, here is where it's very important to realize that information about our health care is limited when you look at the federal level because their labor statistics looks at employees. That's the information that you get when you look at anything that they have and that sounds all well and good as long as you're an employee. But if you're a proprietor of your practice, you're not counted at all. And we see that 49 percent of our dentists and 51 percent of our dental hygienists work in solo private practices or in a group practice, 35 percent for your dentists and 41 percent for the others. And then it just drops off tremendously down to the federal government as being the next largest area of employment.

As with the majority of the other professions, you tend to follow the major metropolitan areas and that's what you'll see for the dentists and because the dental hygienists work for the dentist, they follow suit.

Bob Gibson: Thank you, Elizabeth. David.

David Sarrett: As Secretary Hazel was speaking, I looked up a few notes about some other information because he mentioned the Affordable Care Act and I thought most people may not be aware of what if or any effect that may have in oral health care.

And basically, probably not an awful lot from both patient and dentist perspective. There is a requirement for a basic children's dental health coverage for any insurances purchase to the exchange and frankly, people are really unsure of what even that would mean in terms of demand for care from dentists and dental hygienists. There is an expectation that the Medicaid expansion will probably send about 3 million more children into the dental area and so that's not an awful lot really if you look at the size of that program now. So we don't expect the Affordable Care Act to have a major impact on affecting the delivery and the models of dental care.

Some other facts that I looked up because I was happy to participate as discussing similar kinds of programs like this but on a much larger scale with the American Dental Association on workforce issues and how dental care is paid for. So I'm just going to share a few facts with you.

Roughly in this country, there's about \$350 per person per year expended on dental care and that doesn't sound like an awful lot because if you go for a visit, to get your teeth looked at and have a cleaning and X-rays, you can run up pretty close to that kind of bill. What that's reflecting is there are a huge number of people who are not seeing the dentist every year.

Since 2005, the utilization of dental services by adults has been declining and that has had obviously an impact on the health of people as well as on the practices of dentistry and what dentists are saying in their office. On the flip side of that, the demand for children's services has increased as more children are getting to see the dentists and that's almost exclusive because of increases and government support for dental care for children in the form of Medicaid.

Private dental insurance coverage has declined amongst people. As I said, Medicaid has increased primarily for children. In the state, there's virtually no coverage for dentistry for adults under Medicaid. And the number of uninsured people overall for dentistry has increased and so forth.

The other thing that's starting to impact the profession as well is what we're doing in education for the whole relationship between oral diseases and other diseases of humans and I'll just relate one thing to you to show you an example that this has been studied now for about 20 years but some things are actually starting to go into practice. There's one medical insurance company that's recently decided that it would – after looking at this data, they found that their patients who are diabetic who saw a dentist twice a year and had regular dental cleanings and evaluations had far less expenditure for diabetes treatment to the point that they're now paying for diabetic patients to go to dentists in order to save money on the overall care. So I think those are the kinds of things that will start to really impact how we practice.

The educational path in general, most of the dental students who come to our school, we are the only dental school in Virginia at this point, most of them have bachelor's degrees and many cases, extended beyond at masters degrees or other training before they actually are admitted to dental school. After that, it's a four-year curriculum to conclude in the doctor dental surgery.

Dental hygienists on the other hand can go a couple routes; you have the majority of them being trained in the community college program, associate degree programs and then a limited number of bachelors programs such as our school. The training is essentially the same. They're based on accreditation standards and I think that some of the data that the full

report shows that roughly half of the hygienists have associates degrees and half have bachelors.

My guess is though just like VCU, many of our students come to us already with a bachelor's degree and are seeking a second bachelor's degree to go into dental hygiene because they are changing their career.

Something is happening in the state with hygienists as a pilot program that is run through the Virginia Department of Health, started originally in Southwest Virginia, allowing remote supervision through the Department of Virginia Private Health Dentist of Hygienist to allow them to go out in the community, particularly schools, try to find the need, do some initial things that they can do on site without necessarily the direct supervision of a dentist, and then try to get those patients in for the more extensive dental care that they need.

And those programs seemed to be quite successful, but right now, it's only limited to the Virginia Department of Health and we're not sure where that all is going to hit given the economy and the budgeting for health.

Sandra Reen: Could I add a note to that, it actually did pass in the last general assembly that it is a statewide...

David Sarrett: Right. Yes. Starting in Southwest as a pilot and now, statewide. I think a lot of advantage could be taken of that if indeed the Health Department can hire the folks to actually do the work, but that's the problem.

Another thing that's a growing controversy in dentistry and if you look at *USA Today*, January 3rd, there was an article in there that talks about the mid-level therapists issue and this is a growing area. It's really only active in Minnesota right now and Alaska in this country but there's other states that are pressing hard. It's being driven by a lot of political pressure from agencies outside of dentistry completely and is really driven about dealing with access to care issues and it's a program that's been in many other countries for many years.

It is very controversial. Well, this will actually improve the access to care and is the cause of training. These individuals can provide the substitute care for dentists, for their scope of practice. Some people compare to the MPM physician assistant and it's not exactly the same kind of comparison.

In the state, we do have something called dental assistant II which allow dental assistants who are trained to do under direct supervision, things like placing the filling material in the

teeth and contouring restorations under the supervision of dentist which can expand the ability of the dentist to supply to care.

As you look at these graphs that show the number of dentists and dental hygienists in various areas of the state, one of the huge driving factors there is really economics. The only thing that supports the presence of a dental office as pointed out, most of them are solo practices is where there's actually demand for care, which means there's a way of funding and paying for the care.

And I think this whole mid-level provider discussion is somewhat been – some agencies kind of shooting the thing to a dentist saying, how come you're not able to provide care even though there's no money to pay for it? I'm not saying that's happening to the other professions. They're being somewhat blamed for the problems so to speak.

In our school, we have roughly a combination of these two numbers, about 400 dental students and we graduate somewhere around 100 roughly per year. And while the other chart is in the full report, there's a chart which I thought was quite interesting that said the number of dentists who we expect to retire over the next five years. And if I recall, accumulative of that number was about 517, which means we have to replace into the state about 517 dentists over the next five years.

I think most people in dental education will tell you that we don't need to train a lot more dentists than we're doing right now. It's really more about distribution of the dentists and there seems to be driving need for folks that think that we need to train more dentists. And, in fact, the Weldon Cooper Study from UVA that was really focused on Southwest Virginia pretty much stated that in Virginia, it looked like our supply and demand was in pretty good shape actually.

As I say, we participate in dental hygiene in a small amount, but the majority of hygiene students are coming from community college programs. We are now around 50 percent female in our entire school. The last two classes of dental students actually were more female than male, so I would see that number trending to be more looking like pharmacy in the next few years. Dental hygiene is still the predominantly female profession. I think, like nursing, we probably need to work harder at getting males into dental hygiene.

Applicant's strength nationally is very good. There are some 12,000 or so applicants for dentistry every year for roughly about 4,500 slots. And I won't go through all the slides but there's a slide that talks about new dental schools coming on and a lot of places want to start new dental schools including Bluefield College.

They're saying that there are all these applicants who can't get into dentistry and there are all these patients who aren't getting treated in the rural areas. If we train more dentists and get them out there, we'll be able to solve this problem. It's not that straightforward. We roughly graduate about half of our students as Virginia residents. These are the applicant numbers here from out of state and they've risen dramatically in the past few years.

And I'll end here and that we find that based on one of my surveys that somewhere around 50 to 60 percent of our students, once they graduate from the dental program, say that they're staying in Virginia. It's pretty much where the number of residents we take but they're not the same students. We have out of state students who stay. We have residents who leave. The dental hygiene program, there's some data there also that they're really more predominantly in state and that most dentists stay within the state.

Bob Gibson: Thank you, David. Sandra?

Sandra Reen: Dr. Sarrett did a very good job of introducing the scope of practice issues in dentistry. The dentistry model when you're looking at it, a solo practice means that there is a dentist employer who may often not have any other assistants other than an office manager and that dentist is doing every step of the treatment, the examination, the prophylaxis, the decisions about what treatments need to be rendered and oftentimes, practices to full scope of dentistry, will do surgery procedures. He'll do the periodontal treatment. He'll do the endodontic treatments.

Bob Gibson: She will be doing those more in the future or so.

Sandra Reen: She, she. I'm using the generic he. And that model really is reflected in the statutes and regulations that govern the practice of dentistry in Virginia. The current issues that we're looking in scope of practice, not only are that we do not regulate dental assistants at all, although in regards to orthodontic treatment, dental assistants are probably the primary care provider. The orthodontist overseeing the treatment of multiple dental assistants, but we do not regulate them.

Dr. Sarrett indicated that we have introduced a new profession, dental assistant II and that is intended to be somewhat of a mid-level provider where a dentist could be working with someone who could complete restorations in the mouth, amalgam fillings, composite fillings, that sort of activity, so the dentist doesn't have to spend as much time with each patient that need those kinds of basic services.

The problem we're experiencing with that new model is it was a model that somewhat mirrored what North Carolina has in place. The difficulty was there are no schools in

Virginia prepared to teach this level of dental assisting and the startup of the programs in Virginia has been very slow. There are two dental assistant II training programs in the Tidewater area. The community college in the Richmond area is looking at starting a program and beyond that, there has been very little interest I think in the education community on taking on this level of professional training. So the initial results of that are that we have actually only registered one dental assistant II in the State of Virginia and that's a big challenge for the board in trying to figure out where we go from here to facilitate more resources in the dental profession.

And I also want to piggyback on Dr. Sarrett's remarks about the remote supervision model and how that relates to dental hygienists. I think here again, the question of what the scope of work of a dental hygienist should be has not really been approached in a policy way in Virginia in a very long time. The Dental Hygienists Association in collaboration with the Virginia Dental Association are actually introducing a proposed change in the definition of dental hygiene in this general assembly, trying to open the door for expansion of their scope of work.

But essentially, dental hygienists have to practice under the direction of a dentist and so there is always a direct relationship between the dentist and the dental hygienist and what the dental hygienist might do. But we have created levels of supervision for dental hygienists to begin to give them a little more freedom in practicing the preventive treatments that they do, the teeth cleaning, the scaling, the root planning, that type of activity, can be done now under general supervision. That means the dentist does not have to be present with the dental hygienist but he has to have ordered the treatment so the dental hygienist cannot initiate treatment without direction from a dentist. But now with all of the regulatory requirements met, dental hygienists can practice without him being in the dental office.

That level of supervision is still probably not practice to the full extent that it's possible because, again, the traditional model of a solo practice dentist is the dentist, his dental assistant if he has one and possibly a dental hygienist if he has one, but that he is the chief contact main driver and overseer of the dental treatment in every situation.

Another issue in regards to scope of practice is now, actually coming from other end of the equation, there are more and more corporate practices of dentistry. I'm sure many of you have read articles about Small Smiles in newspapers, that's a national issue about the corporate practice trend and how corporate practices are influencing, if not, actually directing what treatment patients will get separate and apart from what the dentist may believe is the appropriate course of treatment.

So we are looking at issues that I think are big challenges nationally. The beginning for us is trying to make sure our statutes begin to allow for this expansion and a more team approach in dentistry than the traditional model most everyone who uses a dentist experiences.

Bob Gibson: Let's have a big round of applause for everybody who's been on the panel. Thank you very much.

Diane Reynolds-Cane: And in closing, I'd like to thank everyone for coming today, all of the distinguished guests, health care leaders, stakeholders in the audience and on the phone and thanks again to all of our panelist and all the experts and especially to you, Mr. Gibson.

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