

Economic Impact Award (v.10)
Harry T. Lester

Growing the Health & Economy of Hampton Roads

Vincent Rhodes 2/18/13 9:55 AM

Comment [1]: CUES FOR PREZI
Start on cityscape/rotunda

Thank you, Jim, for the kind introduction.

EVMS and I have enjoyed receiving a number of awards during the past 8 years. They generally come with some obligation to speak, and as many of you are aware, I am known for brevity.

Not so this time. The obligation is there, but the Economics Club requires something with heft, what I call an adult speech. Not my style. But here I am, so to those who expected my usual, please get comfortable. And like the then-rector Dr. Clancy Holland told me when I first joined the EVMS Board of Visitors: "You might learn something."

Today I'm going to tell you about the birth of EVMS. I'm going to explain how you and those you know benefit from having an academic health center in Hampton Roads.

I'm also going to tell you a little bit of what I see coming in the future.

And, I'm going to explain

- why all this matters to you
- how it helps our regional economy
- and how it keeps you healthy.

Eastern Virginia Medical School holds an honored position in American history as one of the only schools of medicine founded by a grassroots effort of the local community. As a result, EVMS has deep roots and a strong sense of community service.

You and I... and our families and friends... benefit today because forward-thinking civic leaders turned their attention in the early 1960s to improving the quality of health care in the region... because they planted a seed.

Here was the problem: In 1960, there was a shortage of doctors in the region. The ratio of physicians to population in eastern Virginia was 86 practitioners to 100,000 residents. In contrast, around Richmond the ratio was 183 doctors per 100,000 residents. In Charlottesville, the ratio was 281 per 100,000 people. That's 86 versus 183 versus 281.

Vincent Rhodes 2/18/13 9:56 AM

Comment [2]: *Full tree + city

Vincent Rhodes 2/18/13 9:57 AM

Comment [3]: *seed

Vincent Rhodes 2/18/13 9:57 AM

Comment [4]: *HR ratio

Vincent Rhodes 2/18/13 9:57 AM

Comment [5]: *Richmond ratio

Vincent Rhodes 2/18/13 9:57 AM

Comment [6]: *C'ville ratio

The solution seemed obvious. We needed a medical school.

So, our community leaders approached the Commonwealth for permission to build one. [PAUSE] It ended up being a good-news/bad-news situation... The enabling legislation created the Norfolk Area Medical Center Authority but provided **NO MONEY** for the project. Instead, state officials argued the medical school should be a private endeavor.

In 1964, the Norfolk City Council appointed seven non-salaried Commissioners to the Medical Authority... choosing regionally oriented people from other cities in addition to Norfolk. This was the beginning of a five-year mission to build needed health services that would attract top-flight physician educators.

The Medical Authority knew we needed additional treatment facilities in Hampton Roads. They created a physical and occupational therapy institute that included the region's first public resource for students with disabilities. Five months later, they opened a center that allowed open-heart surgeries to be performed in Eastern Virginia for the first

Vincent Rhodes 2/18/13 9:58 AM
Comment [7]: *1964/enabling legislation

Vincent Rhodes 2/18/13 9:58 AM
Comment [8]: *Commissioners

Vincent Rhodes 2/18/13 9:58 AM
Comment [9]: *crutches

Vincent Rhodes 2/18/13 9:58 AM
Comment [10]: *open heart

time. They also opened a research institute in the area's largest non-profit hospital — We're talking about Norfolk General.

Vincent Rhodes 2/18/13 9:59 AM

Comment [11]: *beaker

By 1969 the Medical Authority believed there were enough health-care facilities in the pipeline to provide an adequate clinical base. It was time to find the money for the medical school. Thirty-five public-service-minded citizens were named co-chairmen of the Capital Campaign and charged with raising \$15 million. The campaign began in January 1970 with an estimated completion date of six months. [PAUSE]

Vincent Rhodes 2/18/13 9:59 AM

Comment [12]: *all three icons/1969

Vincent Rhodes 2/18/13 9:59 AM

Comment [13]: *\$15M goal

Vincent Rhodes 2/18/13 10:00 AM

Comment [14]: *pull back to see timeline

It took three years.

The campaign started well enough. The committee members made a persuasive argument for the economic impact a medical school would deliver...

- the attraction of highly paid professionals,
- increased jobs at the medical center,
- millions of dollars in construction revenues, and
- increased tax revenues.

By mid-1970 they had raised \$4 million locally... but efforts to bring in national sources of funding were meeting with disappointment. In October 1970, the Carnegie Commission on Higher Education issued a report identifying eastern Virginia as the largest population center in the United States without a medical school.

Vincent Rhodes 2/18/13 10:01 AM
Comment [15]: *July 1970

The report confirmed our need, but in January 1971, the first anniversary of the fund, the total raised hovered at just over \$7 million in cash and pledges. And, national funding sources were still saying “no.”

Vincent Rhodes 2/18/13 10:02 AM
Comment [17]: *Jan. 71/1st anniversary

April brought the fund to its local goal of \$7.5 million and the first “meaningful” national money came in.

Vincent Rhodes 2/18/13 10:03 AM
Comment [18]: *April 1971

Dr. Robert Manning was appointed dean of the medical school and a site visit from the accrediting committee was scheduled.

Vincent Rhodes 2/18/13 10:03 AM
Comment [19]: *Manning/1st Dean

However, trouble was brewing in the state capitol. As he planned his 1972-74 biennial budget, Governor Linwood Holton requested a detailed report on the financial planning for construction and operation of the medical school. A delegation of Medical Authority commissioners, the campaign chairman, state legislators and a United States

Vincent Rhodes 2/18/13 10:03 AM
Comment [20]: *Holton

Congressman from the area planned to hand-deliver the document to the Governor.

But the meeting was abruptly canceled and they were told to mail the report instead. [PAUSE] I've spent enough time in Richmond to know that's NEVER a good sign.

At the second anniversary of the fund drive in January 1972, the total cash and pledges approached \$9 million.

Vincent Rhodes 2/18/13 10:04 AM
Comment [21]: *Jan. 72/2nd anniversary

The accrediting body for medical schools recognized EVMS for clearing the first hurdle in a four-step process.

The Medical Authority requested \$4,000 per medical student per year — about \$96,000 total — in funding from the state annually. But, the

Vincent Rhodes 2/18/13 10:04 AM
Comment [22]: *\$4,000 subsidy

Governor refused to include the subsidy in his budget. He objected to the concept of state support for a private school. This set up a skirmish at the capitol.

Vincent Rhodes 2/18/13 10:04 AM
Comment [23]: *Gov. refused

A delegation of eastern Virginians appeared before the Appropriations Committee pointing out:

- that many states contributed much more to private schools of medicine.
- That the requested subsidy was far less than those being provided to the other medical schools in Virginia
- And, that the state would get a third medical school without a capital investment.

They were convincing... The committee inserted the modest subsidy...

Vincent Rhodes 2/18/13 10:14 AM
Comment [24]: *subsidy submitted

And, the governor kept it in. We were finally making progress.

Vincent Rhodes 2/18/13 10:15 AM
Comment [25]: *No veto

The Spring of 1972 saw a surge of fundraising success. But late summer brought setbacks.

By the time Fall arrived, the campaign committee had been working two and half years and:

Vincent Rhodes 2/18/13 10:29 AM
Comment [26]: *Sept. 72/\$11M

- They had raised more than \$11 million.
- They had acquired buildings.
- Faculty had been recruited.
- More than a thousand students had applied for admission.

However, the medical school champions were having some “sobering second thoughts.” January 1973 was just around the corner... The accrediting body was scheduled to return and the campaign was still more than \$3 million short.

Vincent Rhodes 2/18/13 10:41 AM
Comment [27]: *second thoughts

The big break came in October 1972. Henry Clay Hofheimer was walking his dogs on the beach when he saw a couple who had donated substantial money to start a law school. So, he struck up a conversation and eventually convinced Frances and Sydney Lewis of Richmond to put up a challenge gift of \$1.5 million on the condition that it be matched by new dollars raised.

Vincent Rhodes 2/18/13 10:42 AM
Comment [28]: Oct. 72/ HCH walking dog

Vincent Rhodes 2/18/13 10:43 AM
Comment [29]: Frances & Sydney Lewis

The capital campaign had JUST 67 DAYS to make calls and attempt to secure more money from an area that had already committed so much. For perspective, in today's dollars we're talking about raising about \$8 million in just over two months.

Vincent Rhodes 2/18/13 10:43 AM
Comment [30]: *67 days/\$1.5M

Vincent Rhodes 2/18/13 10:43 AM
Comment [31]: *\$8M today

It was the eleventh hour... newspapers donated full-page ads... radio and TV stations responded with public service announcements. [PAUSE]

Vincent Rhodes 2/18/13 10:44 AM
Comment [32]: *Billboard

And, it worked. By December 28, \$15.7 million dollars had been rasied in cash and pledges. On December 31st, a \$1 million gift from a national foundation was announced and, by January 3, 1973 the campaign total reached \$17.6 million. It succeeded because people from all across the community pitched in.

Vincent Rhodes 2/18/13 10:44 AM
Comment [33]: *\$15.7M

Vincent Rhodes 2/18/13 10:45 AM
Comment [34]: *\$Jan. 73/\$17.6M

One of our faculty members recalls as a child hearing a presentation in church about the need for a medical school... about how important it would be to the region. So, he carried his piggy bank full of pennies to church to contribute to the cause. HE made the decision that EVMS was worth the investment... and decades later he oversees one of our educational programs. Please join me in thanking Clint Crews for his early investment in EVMS.

Vincent Rhodes 2/18/13 10:45 AM

Comment [35]: *Piggy bank

EVMS exists because a group of committed citizens would not be denied... A small group worked to nurture a seed that would grow into something remarkable. Community leaders such as Mason Andrews and Harry Mansbach who served as Chairmen of the Medical Authority... Congressman Porter Hardy, Jr. who served as Chairman of the EVMS Capital Campaign Committee... Henry Clay Hofheimer who served as President of the EVMS Foundation... Toy Savage who served as a Medical Authority Commissioner and drafted the enabling legislation.

Vincent Rhodes 2/19/13 11:36 AM

Comment [36]: Photo of R. Clinton Crews, Assistant Professor

[PAUSE] There are far too many people to mention everyone who had a hand in planting this seed. But, we are fortunate to have members of the founders' families with us today.

Vincent Rhodes 2/18/13 1:22 PM

Comment [37]: *Founder pics

Vincent Rhodes 2/18/13 1:23 PM

Comment [38]: *Thank you

I also would like to recognize Dr. Arthur Kirk who is 97 years old and hear with us this afternoon. I ask him to stand and the members of the founding families to stand and for you to join me in thanking them for this remarkable stewardship. [LEAD APPLAUSE]

[PAUSE] Now, let's fast forward to 2007...

Vincent Rhodes 2/18/13 1:23 PM
Comment [39]: *2007 Koch quote

In a study of the medical school's economic impact, Dr. Jim Koch observed that the founding of EVMS "is regarded by many as the most significant single event in our region's history in the second half of the 20th century."

From humble beginnings, EVMS has grown. Let's see how that initial community investment has paid off...

[VIDEO: [EVMS overview, 3 minutes 23 seconds](#)]

Vincent Rhodes 2/18/13 1:27 PM
Comment [40]: VIDEO

One year ago, in February 2012, Dr. Koch released another study. In that report he notes that EVMS is one of the region's most powerful economic engines with an estimated annual impact of about \$823 million.

Vincent Rhodes 2/18/13 1:27 PM
Comment [41]: *2012 Koch quote

EVMS ranks 21st on the list of largest non-governmental employers in Hampton Roads. Dr. Koch notes that we pay our employees an average of nearly \$79,000 annually... more than 90 percent higher than the regional average. But our impact on the Hampton Roads job market doesn't stop there. On average, our economic ripple impact results in an additional 3,700 jobs inside the region.

Vincent Rhodes 2/18/13 1:28 PM
Comment [42]: *Employee #chart

If EVMS did not exist, it would cost Hampton Roads a minimum of \$220 million annually... Without EVMS, 98,000 patients would be forced to travel to other metropolitan areas for appropriate medical care.

Vincent Rhodes 2/18/13 1:28 PM
Comment [43]: *Cost chart

EVMS was cultivated to improve the quality of health care in Hampton Roads... to attract top-notch doctors to our region. More than 40 years later, we are still fulfilling that important function. As I told you earlier, in the 1960s, Hampton Roads had only 86 physicians per 100,000 residents. Today, we have 331 doctors for every 100,000 residents.

Vincent Rhodes 2/18/13 1:29 PM
Comment [44]: *1960 v. 2013 doc ratio

In addition to their duties as educators and scientists, our physicians care for more than 1,500 people every day at 41 clinical sites around the region. Providers of primary care and highly specialized medicine, they routinely are recognized as leaders in their fields. In fact, Hampton

Vincent Rhodes 2/18/13 1:30 PM
Comment [45]: *visits & unique patients

Roads Magazine surveyed local physicians and celebrated the “Top Docs” for 2012... **MORE THAN HALF** were EVMS full-time faculty, community faculty, or alumni.

Vincent Rhodes 2/18/13 1:31 PM
Comment [46]: *HR Mag

More than 2,400 EVMS alumni practice right here in Hampton Roads.

Vincent Rhodes 2/18/13 1:31 PM
Comment [47]: *regional alumni

More than 3,400 EVMS alumni practice across the Commonwealth.

Vincent Rhodes 2/18/13 1:31 PM
Comment [48]: *state alumni

Our alumni and our EVMS physicians make a profound difference for those living in Hampton Roads. Listen as one of our community members tells you just how much EVMS and his doctor have impacted his life...

[VIDEO: [Simpson My Story; 1:31](#)]

Vincent Rhodes 2/18/13 2:27 PM
Comment [49]: VIDEO

Many of you know the first in vitro baby in the United States was conceived at the EVMS Jones Institute. But, did you also know that we offer the only high-risk pregnancy medical practice within an 80-mile radius? We have a remarkable team of OBGYN physicians led by Dr. Alfred Abuhamad.

Vincent Rhodes 2/18/13 1:31 PM
Comment [50]: Life cover (IVF)

Vincent Rhodes 2/18/13 1:32 PM
Comment [51]: *Abuhamad

[PAUSE]

Did you know the Level One Trauma center at Sentara Norfolk General Hospital — one of only five such centers in the state and the only one in our region — is staffed 24 hours a day, 365 days a year by EVMS surgeons? Dr. L.D. Britt serves as Chair of the Department of Surgery. Under his leadership and that of Trauma Division Chief Dr. Leonard J. Weireter, our surgeons handle cases from Williamsburg to the Outer Banks, provide trauma care for the Navy and take all pediatric trauma cases.

[PAUSE]

Virginia lies in the “diabetes belt” — a region of the United States where the prevalence of the disease is higher than elsewhere in the country. About 8 percent of Virginians have diabetes. That rate rockets to 20 percent in Southeastern Virginia. And, this is expected to increase. In fact our region has the highest mortality rate for diabetes in Virginia — nearly twice the state average.

Dr. Jerry Nadler leads a team of world-renowned clinicians and researchers at the EVMS Strelitz Diabetes Center in fighting the disease here in Hampton Roads. They handle about 16,000 patient visits a year.

Vincent Rhodes 2/18/13 1:32 PM
Comment [52]: ER symbol

Vincent Rhodes 2/18/13 1:32 PM
Comment [53]: *Britt

Vincent Rhodes 2/18/13 1:33 PM
Comment [54]: *Aloi quote

Vincent Rhodes 2/18/13 1:33 PM
Comment [55]: *Nadler

Vincent Rhodes 2/18/13 1:33 PM
Comment [56]: *SDC image

EVMS faculty use an Obici Healthcare Foundation grant to perform blood-sugar screenings in Western Tidewater and an Anthem Blue Cross Blue Shield Foundation grant to perform screenings and provide diabetes education throughout the region. This helps identify people with pre-diabetes giving them a chance to seek treatment early and minimize complications.

These clinicians also are researchers looking for treatments to better manage — or perhaps even eradicate — the disease.

Some of you may be familiar with Type 1 diabetes. It can occur at any age but often starts in childhood. EVMS physicians and scientists have joined an international effort to test the theory that a VIRUS triggers the disease.

Dr. Nadler has teamed with Dr. Julius Na-WALD-ee in our cancer-research program to engage unique proteomics expertise in this venture.

If the researchers find that a virus is responsible, this research could lead to the development of a vaccine. That could save 30,000 people in

Vincent Rhodes 2/18/13 1:34 PM

Comment [57]: *blood-sugar screening pic

Vincent Rhodes 2/18/13 1:34 PM

Comment [58]: *Type I Diabetes text

Vincent Rhodes 2/18/13 1:34 PM

Comment [59]: *Dr. Julius lab pic

Vincent Rhodes 2/18/13 1:35 PM

Comment [60]: *Vaccine

the U.S. from getting this devastating disease every year. If you have Type I diabetes or know someone who does, this is exciting stuff.

Our focus at EVMS is translational research... research that moves scientific advances from the laboratory bench to the patient bedside as quickly and safely as possible. And we focus our efforts around Hampton Roads' most pressing health needs. We recently dedicated a floor of our new building to cancer research. The Leroy T. Canoles, Jr. Cancer Research Center was made possible through a generous \$1 million gift from the Beazley Foundation. Please join me in thanking Judge Bray and the Beazley Foundation. [LEAD APPLAUSE]

Our research and our cutting-edge clinical treatments change lives daily. Just listen to this story.

[VIDEO: Crump My Story, 1:21]

We're proud of alumni like her... a capable Physician Assistant graduate.

Let me tell you a bit about our academic programs. We offer a range of doctoral and graduate degrees. In fact, EVMS received around 7,000 applications for 391 seats in our medical and health professions

Vincent Rhodes 2/18/13 1:35 PM
Comment [61]: *translational research

Vincent Rhodes 2/18/13 1:35 PM
Comment [62]: *Cancer center pic

Vincent Rhodes 2/18/13 1:36 PM
Comment [63]: *Bray

Vincent Rhodes 2/18/13 1:36 PM
Comment [64]: VIDEO

Vincent Rhodes 2/18/13 1:36 PM
Comment [65]: *MCAT/USMLE

programs this year. These are highly competitive and highly motivated students.

They come from prestigious undergraduate institutions such as Harvard, Yale, Stanford, Georgetown, UVa, William & Mary, and the University of Southern California. When they graduate from EVMS, they go on to residencies at places like the Mayo Clinic, Johns Hopkins, Duke, UVa, and the naval medical centers in Portsmouth and San Diego.

And, these students are not just smart... they are civic minded. Nearly three-quarters of our students participate in community outreach programs annually. Whether that means starting the State's only student-led free clinic, conducting health screenings, hosting Community Care Day or mentoring local public school students, they believe in giving back to Hampton Roads.

This spirit of service inspired Joan and Macon Brock to make a \$3 million gift to establish the M. Foscue Brock Institute for Community and Global Health. This transformational gift serves as the focal point for integrating our clinical, educational and research programs. It enables us to take a major step forward in realizing our vision of

Vincent Rhodes 2/18/13 1:37 PM
Comment [66]: *community service pics

Vincent Rhodes 2/18/13 1:37 PM
Comment [67]: *Brocks

becoming the most community-oriented medical school in the nation.
Please join me in thanking Joan and Macon Brock for their investment in
EVMS and the health of our community. [LEAD APPLAUSE]

Thanks to a community that nurtured the seed planted so many years
ago, EVMS has grown into a strong tree with roots firmly spread
throughout the region... a tree with important branches that benefit all
of us: high-quality patient care, rigorous health and medical education,
and cutting-edge research. And these branches shelter us... providing
economic benefit to Hampton Roads while helping us weather coming
storms.

Regardless of your politics, you would likely agree that our health-care
system is facing significant problems. You might even call it a looming
crisis. [PAUSE] Let's review a few numbers...

The United States health-care system is the largest in the world. It
consumes over 17 percent of our GDP. That's almost \$3 trillion...

Vincent Rhodes 2/18/13 1:38 PM

Comment [68]: *full tree

Vincent Rhodes 2/18/13 1:56 PM

Comment [69]: *GDP circle (grey/blue)

To put that in perspective, that \$3 trillion accounts for nearly HALF the money spent WORLDWIDE for healthcare... but, that spending covers ONLY ABOUT 5 PERCENT of the world's population. And, if projections hold true, that spending may increase to somewhere between 25 and 30 percent of GDP by 2030.

Vincent Rhodes 2/18/13 1:56 PM

Comment [70]: *Reveal comparison to world (yellow circle)

That's \$3 trillion... or half the money spent on healthcare in the world... to cover just five percent of the world's population.

Vincent Rhodes 2/18/13 1:56 PM

Comment [71]: *5% US pop vs. world

Folks, that's simply not sustainable.

But, at least if we spend that kind of money, we're getting a great return on our investment... Right? [PAUSE]

Not quite. In spite of the highest spending in the world, our health-care system doesn't rank number one on ANY health-care outcome measured. Not one.

Vincent Rhodes 2/21/13 8:41 AM

Comment [72]: *focus on grey/blue GDP circle

In fact, the United States ranks 36th for life expectancy, 39th for infant mortality, 42nd for male mortality and 43rd for female mortality.

Vincent Rhodes 2/18/13 1:59 PM

Comment [73]: *rankings (in blue circle)

Add to these concerns, two others:

- inexplicable variations in the delivery of care, and
- persistent issues in patient safety.

Put simply, people don't practice medicine the same way from location to location. Granted, there is always some "Art" to balance the "Science," but a more standardized starting point would benefit patients.

The most recent study available on this topic indicates there were approximately 100,000 deaths a year in the United States attributable to patient safety errors. More recent studies confirm that, despite our best efforts, these types of problems persist.

So, if we're going to tackle these challenges facing our health-care system, we have to:

- find ways to bend the cost curve
- change patient outcomes, and
- and reduce the variation in care.

To that end, EVMS is making changes to our curriculum, and we will do an even better job training our future health professionals. We can't

Vincent Rhodes 2/18/13 2:01 PM
Comment [74]: *100,000 deaths

Vincent Rhodes 2/18/13 2:02 PM
Comment [75]: *blank screen

Vincent Rhodes 2/18/13 2:03 PM
Comment [76]: *animation1

Vincent Rhodes 2/18/13 2:03 PM
Comment [77]: *animation 2

Vincent Rhodes 2/18/13 2:02 PM
Comment [78]: *animation 3

solve every healthcare problem, but we think we can be part of the solution... particularly in the area of modeling and simulation.

Vincent Rhodes 2/18/13 2:03 PM
Comment [79]: *ModSim/Kaine pic

ModSim is not a silver bullet... It's a toolkit... a combination of activities. And at EVMS we think modeling and simulation should be one of the keys to lessening the looming health-care crisis.

We have a strong history in this area and we are one of the leaders in the field. In 2001, Congress formally established the National Center for Collaboration in Medical Modeling and Simulation — a joint effort of EVMS and Old Dominion University.

Vincent Rhodes 2/18/13 2:03 PM
Comment [80]: *EVMS/ODU

A \$5 million gift given in 2012 is helping us accelerate our ModSim efforts in the Sentara Center for Simulation and Immersive Learning at EVMS. Please join me in thanking David Bernd and Sentara for their generosity. [LEAD APPLAUSE]

Vincent Rhodes 2/18/13 2:05 PM
Comment [81]: Bernd/Lester pic

So let me share some examples of why it makes good sense to embrace ModSim. In medicine, we've relied on a 100-year-old apprenticeship model that trains medical students and residents by having them practice on live patients.

Vincent Rhodes 2/21/13 8:41 AM
Comment [82]: *White coat stick figure

Imagine if the aviation industry applied the same approach. You would never fly again, would you?

Vincent Rhodes 2/18/13 2:07 PM
Comment [83]: *airplane icon

Instead, pilots train hour after hour in a simulator ensuring they follow procedures, master different types of airplanes and are prepared for the unexpected. And, they do all this training without placing any actual passengers at risk.

Think about the possible applications of ModSim in medicine: There are currently about one million physicians, three million nurses and five million allied health-care workers in the United States.

Vincent Rhodes 2/18/13 2:07 PM
Comment [84]: *ModSim CAVE pic

Each year, the FDA approves a host of medical devices and medications. How do those health professionals learn to implement the newest devices and treatments? [PAUSE] How would you want them to learn?

Vincent Rhodes 2/18/13 2:07 PM
Comment [85]: *FDA stats

You've heard the axiom: "Practice makes perfect." [PAUSE] Our experts will tell you that statement isn't true. They say: "PERFECT practice makes perfect." Let's think about this in terms that might be more familiar... Consider my golf game. Practicing bad technique over and

Vincent Rhodes 2/18/13 2:08 PM
Comment [86]: *Practice makes perfect

Vincent Rhodes 2/18/13 2:08 PM
Comment [87]: PERFECT Practice...

over only ensures that my muscles will remember how to execute an unfortunate golf swing.

The same holds true in medicine. The Sentara Center for Simulation and Immersive Learning and the Portsmouth-based company SimIS received a grant to develop AIMS — an automated intelligent mentoring system.

Remember those pilots with hundreds of hours of simulator training time? Wouldn't you like your doctor to have the benefit of that kind of practice?

Take a look at the technology...

[[VIDEO: ModSim Technology](#)]

EVMS also is partnering with Northrop Grumman to help refine the company's immersive environment technology. Typically this kind of system is installed in a room that allows for images to be projected on the walls. Computer-based avatars with artificial intelligence are embedded in the environment to interact with those being trained.

Vincent Rhodes 2/19/13 8:56 AM
Comment [88]: EVMS/SimIS Governor's Award

Nancy Chapman 2/19/13 8:56 AM
Comment [89]: AIMS

Vincent Rhodes 2/18/13 2:09 PM
Comment [90]: VIDEO

Vincent Rhodes 2/18/13 2:09 PM
Comment [91]: Northrop Grumman

The system is generally fixed in one place and is very expensive... costing at least a million dollars. We're working with Northrop Grumman to refine their Virtual Immersive Portable Environment... or VIPE. The VIPE system would cost only about \$100,000 and could be packed up and moved in about half a day. This makes it possible to move a high-quality immersive-learning environment from hospital to hospital or business to business with a significantly smaller investment.

[PAUSE]

If you've seen a doctor any time recently, you probably have an electronic health record... A digital file that holds your test results and notes from patient visits. We're pretty good at crunching numbers from the those electronic records, but not so good when it comes to the narrative components... those notes the doctor records about your visit, your symptoms, and planned treatment.

Homeland Security uses "natural language" capabilities to monitor electronic communications looking for potential threats. But what if we could apply that same technology to electronic health records? What patterns might emerge? How might we improve your doctors' ability to

Vincent Rhodes 2/18/13 2:09 PM

Comment [92]: Electronic Health Record

Vincent Rhodes 2/18/13 2:10 PM

Comment [93]: Lockheed logo

diagnose problems? EVMS is working with Lockheed Martin to see whether their natural language capabilities can be applied to these types of analytical tasks.

So, clearly, there are significant health benefits to using ModSim. But this is an economic impact award, so I want to give you a dollars-and-cents example: Most hospitals spend at least \$80,000 on-boarding each new nurse... training him or her on the specific operating procedures of the facility.

We are developing simulation programs to speed that process. If we could shorten that 3-month on-boarding period by about 2 weeks we could save about \$15,000 in costs for every nurse.

That adds up.

We are uniquely positioned in Hampton Roads to capitalize on medical modeling and simulation. ODU has the only integrated ModSim training program that moves students from Bachelors to Masters to PhD, and graduates from those programs earn high salaries.

Nancy Chapman 2/19/13 11:46 AM

Comment [94]: Nurse graphic

Nancy Chapman 2/21/13 8:42 AM

Comment [95]: Cost savings

Vincent Rhodes 2/18/13 2:11 PM

Comment [96]: ODU logo

In the past, Hampton Roads has relied heavily on defense spending. But those opportunities are vanishing. If we want to keep those companies healthy and thriving... if we want to safeguard our regional economy... we must help local companies transition to new specialties. [PAUSE]

Vincent Rhodes 2/18/13 2:11 PM
Comment [97]: Battleship photo illustration

EVMS can do that.

Vincent Rhodes 2/18/13 2:11 PM
Comment [98]: *gears

EVMS can be a linchpin in helping them find new business models and leverage existing technologies for medical markets. After all, as big as the defense industry is... it's still only a third of the share of GDP allocated for health care. That's shocking. Make sure you get that... defense spending is five percent of GDP. We spend 17 percent of our GDP on healthcare.

Vincent Rhodes 2/18/13 2:12 PM
Comment [99]: *healthcare v. defense GDP chart

Our leadership... our partnerships with companies such as Lockheed, Northrop Grumman, SimIS, ALION, CAE and Mimic... grow the health and the economy of Hampton Roads.

Vincent Rhodes 2/18/13 2:12 PM
Comment [100]: *gears

Let me say it simply: You're healthier – both physically and economically – because we're here. If EVMS did not exist, we would not

Vincent Rhodes 2/18/13 2:14 PM
Comment [101]: *EVMS logo

have the high-quality health care we enjoy throughout the region. Just listen. . .

[\[VIDEO: Economic Impact; 4:30\]](#)

Vincent Rhodes 2/18/13 2:15 PM

Comment [102]: VIDEO

[\[We didn't do this alone\]](#) All this fruit grows because a group of community leaders planted an important seed that sprouted more than 40 years ago. We exist... We're healthier... because of you. Your investment... whether through local and state support or personal philanthropic gifts... supports the growth of EVMS... which in turn grows the health and economy of Hampton Roads.

Vincent Rhodes 2/18/13 2:16 PM

Comment [103]: Big cycle

It is a critical cycle... and one I hope you will continue to support.

Thank you to the Economics Club of Hampton Roads for this prestigious award.

Thank you to the founders who planted the seed more than 40 years ago so EVMS could grow.

Thank you to our Board of Visitors and Board of Trustees.

Thank you to our faculty, staff and students who make EVMS a thriving part of our community.

And, thanks to each of you for supporting EVMS.

Good afternoon.