Report of the Health Care Task Force of Richmond’s Future

The Future of Health Care in the Richmond Region
Summary of Recommendations

Health System Disruptive Innovation

Richmond Region Top 10 Healthiest Workforce

*Move the Richmond Region’s workforce from the current 20th place to one of the top ten healthiest in the country.*

1. Survey human resources directors
2. Seek multi-year funding from nine health care foundations
3. Assess needs and resources to achieve goal
4. Identify gaps compared to best practices in workforce wellness
5. Public policy and advocacy arm
6. Support ongoing efforts

Health Care Proof of Concept Alliance

*Local entities should form a Healthcare Proof of Concept Alliance to commercialize innovations.*

7. Innovation Laboratory
8. Growth Fund

Health Information Exchange

*Jurisdictions in the Richmond Region should jointly seek funding from the state to make Richmond Region the state demonstration site for health information exchange.*

Unified Community Needs Assessment

*The three health systems should jointly retain consulting and other assistance to carry out a unified community needs assessment that all three can implement together.*

Richmond: The Emergency Medical Services Capital of the World

*The Economic Development Offices in the Richmond Region should collaborate on an innovation ecosystem strategy to promote and provoke disruptive thought, apply inspired research, experimentation and accelerated implementation to attract companies serving the emergency medical services sector.*

1. Review and revision of messages to corporate prospects to highlight emergency medical services
2. Target businesses that supply and conduct research in emergency medical services
3. Develop communication plan and program
4. Funding to local health departments to enhance public health education on emergencies
5. *EMS Today* annual meeting in Richmond

Biotech 2.0

*Discover and realize what might be called Biotech 2.0*

1. Bring together the Science Museum of Virginia's new Virginia Director of STEM and the Executive Director of Bridging Richmond for workforce training and K-12 and higher education pipeline development.
2. Community Lab for summer training and internships for middle and high school students
3. Biotechnology Zone under Code of Virginia
4. Mid-stage biotechnology companies given reduction in gross receipts taxes
5. Richmond Region Biotechnology Business Council to improve region’s competitiveness in attracting bioscience companies and talent
Richmond's Future in Health Care?

Goals and Purpose

Many companies and entrepreneurs see health care as one of the most promising opportunities for regional economic development. Fully 76% of Fortune 50 companies are already in the health industry or contain a health division.\(^1\)

Moreover, the health care sector is projected to grow, as customers newly insured through recent health reform will increase the demand for health care. Health spending will reach almost 20% of GDP by 2021, up from the current 17.9%, and continue to grow.\(^2\)

The purpose of this report is to examine how innovation, in both health care delivery and research can drive economic development in the Richmond Region. The goal is to find the key drivers that can make the region grow and prosper economically in the globally competitive environment of the 21\(^{st}\) century.

How Might Richmond Make Health Care One Of Its Engines For Economic Growth?

To answer this question, the report begins with a discussion of the Disruptive Innovation Model applied to health care as one way of thinking about changing the current regional environment. A section follows on the Richmond Region’s enormous health care assets, which already make the region the center of health care in Virginia. The final section covers a list of ideas for leveraging health care innovation, including tasking the region’s three health systems to take the lead in disruptive innovation, making the region the emergency medical services capital of the world, and leveraging the existing strength in biotechnology with a refresh.

Framework

What is meant by economic development in health care delivery and research? One answer is to consider the role that innovation, especially disruptive innovation, can play in economic growth.\(^3\)

Consumer Types

Consider the types of consumers in the market. Usually, consumers fall along a spectrum of demand, with some considered high demanders and others low demanders. The spectrum is magnified in health care.

Less healthy and elderly consumers (or patients), those with a wider array of health concerns, and those with high expectations of the services and products they receive are typically high-demand consumers. Their extensive and complex requirements must be met and they present opportunities.
At the other end of the spectrum are low-demand consumers, who tend to be younger, healthier, or others without general health problems. Low demand consumers may also be without health insurance, although health care reform in 2014 should reduce the number of uninsured.

But low-demanding consumers spend money on maintaining good health, and evidence suggests that simpler, lower-end, and innovative products and services are an area of underinvestment. Therefore, low-demanding consumers and simpler innovations should not be overlooked. Moreover, low-demanding consumers might have fewer demands because they are underserved, leaving the perfect window of opportunity for companies looking to increase demand by innovating to meet their unique needs.

**Diffusion**

Next, consider how the diffusion of innovative products and services occurs. The success of diffusion is predicated on the ability to communicate the change and have it successfully adopted within a market and culture. The faster a community recognizes a relevant innovation and implements measures to adopt it, the more likely that new businesses will succeed in diffusing the innovation and create economic growth.

Below is a checklist of questions for successful innovation. They are not all required to create innovation, nor do they guarantee innovation if answered successfully.

<table>
<thead>
<tr>
<th>Checklist of Questions for Successful Innovation</th>
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<tr>
<td>1) Will the innovation give consumers a transparent advantage?</td>
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<td>2) Is the new product or service in line with the needs and culture of the people who are to adopt it?</td>
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<td>3) Will adopting the innovation require a significant change?</td>
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<td>4) Can the product or service be market tested prior to complete adoption and evaluated in terms of its value to consumers?</td>
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<tr>
<td>5) Will the use of the innovation provide a transparent and accurate estimate of costs and benefits to consumers?</td>
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Societal pressures influence the direction of innovation and adoption. If a particular product or service does not fit within the social context or match consumer needs, then diffusion is unlikely to occur. A prominent example is the tick-borne Lyme disease. A vaccine, approved in 1998, sold well at first, but people claimed the vaccine gave them arthritis. The clinical data did not show any problem with the Lyme disease vaccine. Yet, scientists were literally threatened personally and the manufacture pulled the vaccine. The vaccine is still approved today, but the culture has put a halt to the innovation. Currently in health care there is great emphasis on patient-centered care. Innovations should be patient centered as well.
National Trends

Half of the three-quarters of Fortune 50 companies in health care have entered the market in non-traditional ways. Non-traditional businesses are those with expertise not usually associated with health care products and services, such as technology, telecommunications, and even retail. The health care industry is not only enormous, but also offers tremendous opportunities for innovation across a broad spectrum of industry specialties.

While the use of the term “health care” obviously includes those National American Industry Classification System (NAICS) classifications under “Health Care and Social Assistance” (NAICS 62); for the purposes of this study, the term should be more broadly defined. The reason for this broader definition is that the Richmond region’s assets and opportunities, as explained below, reach far beyond the basic delivery of health care services and treatment into manufacturing, research and development, and other scientific areas that are transforming health care. Regions that understand how to create disruptive innovations in any or all of these areas will become the leaders of the mid-21st century.

Longevity Dividend

One key national trend is what John Martin has called the longevity dividend in terms of demand for health services. Life expectancy continues to increase in the U.S. and the number of Americans over the age of 65 is projected to rise from 40 million in 2010 to 70 million in 2030. These seniors will be high-demand consumers, unless rationing and others forms of cost control bridle them.

Experts say this unprecedented and long anticipated demographic shift will also be associated with the following:

- overwhelming demand for aging in place,
- new aging-in-place technology including internet-based and telephone-based monitoring applications,
- innovative long-term care insurance products,
- greater emphasis on thrift, frugality, conservation and recycling.

Survey results show that boomers also have an entrepreneurial yearning that they will increasingly act upon. In recent years, the highest rate of entrepreneurial activity was among persons aged 55 to 64.

Post-Physician Office Era
But do not count out the low-demand consumers. There is a movement among younger Americans towards new health markets. For instance, 42% of consumers aged 18 to 24 years, frustrated by the long wait in physicians’ offices and emergency departments and minimal time with their health professionals, seek primary care outside of traditional office settings, opting for retail clinics and independent companies.12

Consumers are also responsive to new formats for health education and monitoring such as health-related video games and mobile health applications. To meet their needs, consumers are straying from the dominant producers’ goods and services and opting for new entrants to the health care market. Targeting the underserved low-demanding consumers, a likely option for economic development, might entail adopting promising innovations from non-health care businesses.

Health Information and Technology

Health information takes a wide variety of forms, from information on care quality to recording personal health information. Organizations are still trying to figure out how to identify valuable information and best use it to gain a competitive advantage. Different parties are often interested in very different types of data, making catering to all parties difficult. Nevertheless, health information is an evolving and growing sector.

Federal incentives provide financial support for providers to use electronic medical records (EMR) – partial federal government reimbursement for EMR adoption is contingent on meeting deadlines for progress on EMR conversion. Demand is expected to increase 26% between 2010 and 2020 for medical records and health information technicians.13

*e-Health*

Almost three-quarters of health care organizations use or plan to use health data for purposes beyond treating a patient.14 Providers are not the only ones investing in health information and technology. Consumers are projected to spend $13.6 billion per year out of their own pockets on health-related products and services that utilize health information technology.15 These include health-related games, resources rating physicians and hospitals, and mobile health applications (if not stymied by Food and Drug Administration regulations).

*m-Health*

New information and communication technologies provide opportunities for a wide range of innovations in care.16 The mobile health industry facilitates the connection of physicians to patients and measures health remotely.17 The ability to communicate with providers and monitor key health measures, such as blood pressure, outside of the physician’s office using remote monitoring, email, or other modes is capable of eliminating a substantial number of office visits, decreasing costs, and more efficiently utilizing provider and patient time.18
On the other hand, many providers have been slow to adopt mobile and electronic health capabilities owning to barriers including issues of privacy and security, and difficulty changing workflow processes. In addition, current reimbursement models do not compensate or poorly compensate for many of these products and services. Moreover, medical liability questions loom in the absence of widespread adoption of mobile health.

*i-Health*

Some providers and companies with software capable of maintaining and integrating electronic features have embraced the technology and created new patient care models that feature online scheduling and remote follow-up appointments, emails, and texts. Many believe that younger practitioners are more likely to embrace new technologies that change the patient care model. Over time they, along with consumers’ increasing demands and policy makers, will drive the creative destruction of the traditional medical model.

**Negotiating on Value**

Pharmaceutical, biotech, and medical device makers are all pressured to deliver more cost-efficient products and services. Comparative effectiveness research (CER), value-based pricing, and value-based insurance have been gaining momentum. Because of health reform, the U.S. will spend $3.5 billion on comparative effectiveness research over the next decade through a new federal creation called the Patient-Centered Outcomes Research Institute. This is facilitated by health information data availability and provider responses to new forms of organization and payment. Steve Horan at Community Health Solutions lists some of the many variations: patient-centered medical homes, chronic care models, integrated care models, accountable care organizations, value-based purchasing, value-based insurance design, consumer-driven health plans, readmission penalties, never-event penalties, and focused payment reforms of all types.

**New Venture Models**

Because of new Medicare drug coverage (Medicare Part D), which swept millions of high prescription volume elderly patients into pharmaceutical benefit companies, and the unprecedented expiration of drug patents, the assumptions have changed for big pharmaceutical and biotechnology companies. Intramural research and development programs have been scaled back; venture capital has become impatient with long commercialization timelines; and mergers and acquisitions are more targeted on single specialty drugs than prior mergers that combined entire formulary offerings. Innovation in the pharmaceutical and biotechnology domain requires a new approach.

**Consumer-Directed Health Plans**

Consumers understand the pressure to increase health care efficiency while containing costs. Half of consumers indicate that they would be interested in value-based insurance plans or plans
that provided effective treatment at little out-of-pocket cost but required consumers to contribute more out-of-pocket for new treatments with unproven benefits. In 2013, 20% of employees with employer-provided coverage were in consumer-directed health plans, and 24% of employees in small businesses were in such plans. Consumer-directed health plans have lower premiums and higher deductibles, and studies show these plans make consumers more cost-conscious and foster personal responsibility. Other studies show reductions in emergency rooms visits, especially for conditions not classified as high severity.

Evolving Organizations and Health Care Workforce Projections

Providers and insurers are increasingly working together, especially to utilize data across the entire spectrum of care and take advantage of new payment models. Consumers desire this integration as well, with 72% preferring comprehensive or integrated health care organizations over specialized ones that force consumers to multiple entry points for care. Some successful collaborative and data-driven models are showing dramatic results, with Community Care of North Carolina boasting $1.5 billion in savings of health care costs from 2007 through 2009, as just one example.

Health Care Workforce Projections

Amid increasing health industry demand, large workforce shortages are predicted. There are large expected shortages of physicians, despite an influx of international medical graduates (IMGs). Physician assistants and nurse practitioners are expected to play an increased role in the provision of health care in response, but their numbers are not expected to be great enough to make up for shortages.

Along with the rest of the nation, Virginia will be facing these workforce challenges, with an estimated shortage of 1,500 physicians in the state in 2020. The retention of medical students, residents, and fellows has been identified as necessary to address the shortage of physicians in this state, which currently has less than average retention rates. The demand for registered nurses in the state is projected to increase by 43%, with shortages reaching 22,600 by 2020. This represents 33% of total demand for nurses in the state.

Technology Fix

Next generation electronic medical records and mobile health and electronic health initiatives, if actually implemented across the U.S. health system, could make existing clinicians more productive or even substitute for providers. There are notions that mobile health could put preventive health in every pocket and, thereby, alleviate the need for some routine primary care. Electronic medical records are supposed to enable smart ways of using the data they contain to reduce duplication and inefficiencies, although this has been elusive thus far. Advanced medical imaging technologies hold promise of better treatments, especially for specialties such as oncology and orthopedics. Education for clinicians could be transformed through new tools for medical skill development.
Economic Incentives for a Healthier Workforce

Lifestyle-related chronic illnesses will increase dramatically over the next two decades, affecting health care costs and quality of life. Employer costs are already affected by lost productivity and increasing health insurance premiums. Curtailing these negative outcomes will rely not only on medical care but also on other behavioral and environmental interventions to prevent disease and improve health. Improving public health is a strategy communities are increasingly turning to in order to attract workers and employers, increase productivity, and decrease the costs of doing business.  

Chronic Illness Fix

Chronic illnesses currently account for 78% of total health spending and costs of treatment are only the tip of the iceberg in terms of total economic costs. Modest improvements in prevention and chronic illness treatment are estimated to be capable of saving $1.1 trillion per year nationally by the year 2023, with $905 billion coming from productivity gains and $218 in savings from medical treatment. Without additional interventions, rates of chronic conditions are expected to skyrocket along with associated costs.
The Richmond Region’s Health Care Assets

Hospital and Health Systems

Virginia ranks 16th among states with the most hospitals and 13th in number of beds. Of the state’s 89 acute care, psychiatric, or rehabilitation hospitals, 19 of them are in the Richmond Region, including the fourth largest university-affiliated teaching hospital in the U.S.

Three hospital systems dominate the acute care market in the Richmond Region: VCU Health System (VCU Health System, Children’s Hospital at VCU), HCA Healthcare (Retreat Doctor’s Hospital, CJW Medical Center – Chippenham, Henrico Doctors’ Hospital, Parham Doctors’ Hospital, CJW Medical Center – Johnston Willis, John Randolph Medical Center) and Bon Secours Health System (Memorial Regional Medical Center, Richmond Community Hospital, St Francis Medical Center, St. Mary’s Hospital). In addition, the Richmond Region has Southside Regional Medical Center.

Nursing Facilities

Virginia has 287 nursing home facilities. A total of 35 nursing home facilities in the Richmond Region participate in Medicare and/or Medicaid. The state strictly regulates the number of nursing homes and nursing home beds.

Health Care Employment

Health care is already the largest sector within the Richmond Region, followed by retail trade and education, in terms of the number of establishments and employees.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Industry Sector</th>
<th>Establishments</th>
<th>Employees</th>
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<tr>
<td>1</td>
<td>Total, all industries</td>
<td>35,716</td>
<td>594,227</td>
</tr>
<tr>
<td>2</td>
<td>Health Care and Social Assistance</td>
<td>5,467</td>
<td>85,823</td>
</tr>
<tr>
<td>3</td>
<td>Retail Trade</td>
<td>4,077</td>
<td>66,158</td>
</tr>
<tr>
<td>4</td>
<td>Education Services</td>
<td>446</td>
<td>56,377</td>
</tr>
<tr>
<td>5</td>
<td>Accommodation and Food Services</td>
<td>2,385</td>
<td>46,924</td>
</tr>
<tr>
<td>6</td>
<td>Public Administration</td>
<td>619</td>
<td>40,482</td>
</tr>
<tr>
<td>7</td>
<td>Admin., Support, Waste Mgmt, Remediation</td>
<td>1,921</td>
<td>37,747</td>
</tr>
<tr>
<td>8</td>
<td>Professional Scientific &amp; Technical Svc</td>
<td>4,403</td>
<td>37,147</td>
</tr>
<tr>
<td>9</td>
<td>Finance and Insurance</td>
<td>2,160</td>
<td>36,883</td>
</tr>
<tr>
<td>10</td>
<td>Construction</td>
<td>3,673</td>
<td>34,012</td>
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Public administration is only the 6th largest employer in a region that houses the state capital. The Richmond Region is home to two major medical supply distributors. McKesson Medical-Surgical is a major employer that distributes more than 150,000 medical-surgical products to more than 300,000 primarily ambulatory care settings. Owens & Minor has called Richmond
home since the 1880s and has 5,100 employees in 55 distribution centers serving over 4,500 inpatient hospitals and health care systems.

**Managed Care Health Plans**

Managed care enrollment will be growing in 2014 because of health reform and new coverage for the uninsured. A large number of major health plans have offices in the Richmond Region. These include Aetna, Inc., AMERIGROUP Virginia, Inc., Anthem Blue Cross & Blue Shield, CIGNA HealthCare, Coventry Health Care of Virginia, and Virginia Premier Health Plan.

**Biotech and Life Sciences Companies**

The Virginia Biotechnology Research Park is home to more than 60 national and international bioscience companies; research institutes affiliated with the VCU Medical Center; major state and national medical, forensic, and public health laboratories; and organizations involved with management of the nation’s organ transplantation process. The construction of the new 450,000 square-foot Altria Center for Research and Technology in 2007 marked the point at which the Park was at two-thirds of capacity.

The latest construction in the Park is the first phase of 112,000 square feet of expanded space for Health Diagnostic Laboratory, to be followed by another 100,000 square-foot building. The company expects to hire 400 new employees in the next two years, which will make it the largest employer in the Park with over 1,000 employees when completed.


**Health Information**

MedVirginia is headquartered in Richmond and seeks to electronically integrate health care providers in Central Virginia through a community-wide clinical health information exchange (HIE). It was awarded the 2012 Virginia Health Care Innovator Award in the field of health information technology.
Recommendations for Health Care in Richmond’s Future

With the notion of disruptive innovation as a framework, considering current and projected trends and current Richmond Region resources, we recommend three broad areas for growth and development.

Health System Disruptive Innovation

The Richmond Region’s three leading health systems – Bon Secours Health System, HCA Healthcare and VCU Health System – have competed vigorously on price and quality for many years. This should continue in order to give consumers in the Richmond Region choices in terms of costs and quality care. Nevertheless, to attract new employers to the region and increase economic growth, we need the health systems to lead us in the disruptive innovation of the future. The Bon Secours and HCA Healthcare hospitals are among the most successful, operationally and financially within their respective systems. The VCU Health System is one of the largest in the nation. The changes required could be achieved through targeted cooperative efforts that satisfy anti-trust regulations.

Richmond Region Top 10 Healthiest Workforce

The American Fitness Index from the American College of Sport Medicine ranks the Richmond Region 20th of 50 large cities on fitness, with a score of 55/100 (top ranked scored 78.2 and bottom ranked scored 31.2)40.

*The goal should be to move the Richmond Region’s workforce from the current 20th place to one of the top ten healthiest in the country.* A rank in the top ten is achievable, by expanding existing programs and filling gaps, with a focus on the built environment (parkland, biking/walking paths, public transportation), recreational facilities, chronic health problems, and health behaviors. A healthier region can attract new employers, especially if associated with lower (human capital) costs.

Ten modifiable health risk factors are known to affect health and costs, including high risk for depression, high blood glucose, high blood pressure, obesity, tobacco use, physical inactivity, and high stress.41 According to the American Fitness Index, the Richmond Metropolitan Statistical Area has a lower percent of city land area as parkland, fewer acres of parkland per capita, lower percent using public transportation to work, a lower percent bicycling or walking to work and fewer golf courses per capita relative to its peers.

A number of entities help cities improve health promotion including Well City USA42 and the Center for Disease Control Healthier Worksite Initiative.43 We recommend that this effort to create one of the healthiest workforce use these proven resources by starting a Leadership Group to guide these efforts. This group should consist of representatives from the three health systems,
the Greater Richmond SHRM (Society for Human Resources Management), the Richmond Sports Backers (who also are on record supporting an active and fun workplace), the Partnership for Smarter Growth, local departments of health, representatives from the Virginia Department of Human Resources and other engaged, committed organizations to focus the effort. The following steps should be taken:

1. Begin with a survey of human resources directors in the Richmond Region to inventory current workplace wellness activities and assess needs.
2. Seek multi-year funding for the survey and a small staff for the Leadership Group from the nine foundations in the Richmond Region that make health care grants.
3. Use the needs assessment survey and a process of asset mapping to identify community resources to help achieve the goal of healthiest workforce.
4. Identify gaps by comparing the current activities of employers to best practices (see Appendix).
5. Develop a public policy and advocacy arm that can promote the goals and educate community decision makers from both the private sector and public officials on improving the built environment and recreational facilities.
6. Support ongoing efforts, such as the (Richmond) BridgePark, and efforts of the (Richmond) Sports Backers, and (Richmond) Partnership for Smarter Growth to improve the built environment and recreational facilities.

As a concerted push among existing employers who are already investing in workforce wellness, including the Commonwealth of Virginia, the health systems, and the managed care companies this new, organized effort will yield results.

**Health Care Proof of Concept Alliance**

Through informal means, the Health Care Task Force determined that the Richmond Region is behind notable communities (e.g., Boston, MA, Nashville, TN, and Menlo Park, CA) in the region’s general entrepreneurial environment and ability to help innovative companies get started and grow.

*Local entities should form a Healthcare Proof of Concept Alliance* that would pool funds in two areas:
1. **Innovation Laboratory** – Rigorous criteria should be established to provide financing to incubate internal innovations arising from the three health systems and applicable to the local region. The three health systems should collaborate on taking innovations through proof of concept to implementation in the region and then the commercial market.

2. **Growth Fund** – A fund should be created to invest in promising mid-stage regional health care related companies, with the goal of receiving investment returns. The health systems would also cooperate to the extent the mid-stage companies needed care settings to test their promising products or services.

This is not merely a fund, but an opportunity for the entrepreneurial sector to collaborate with the three health systems and others on the front line of medicine. Thus, the recommendation is for local entities to take the lead in these funds, including the three health systems, managed care plans, other local health care companies and venture capital individuals or firms. Participants could be eligible for the Virginia Qualified Equity and Subordinated Debt Investments Tax Credit.

A structure would need to be established to make financing, investment, and pooling decisions. As a starting point, the checklist for successful innovation at the beginning of this report could be a guide.

The assumption is that the Innovation Laboratory would give returns to the participating entities through ideas that prove to lower costs or raise quality and patient safety. If the ideas become commercialized, they would lead to new companies and greater regional employment, as well as an investment return to the participating entities.

**Health Information Exchange**

The Commonwealth has an all-payers claims database under development, which can be of enormous value to improve of health care. However, a health information exchange that is more real-time and providing greater clinical information in accordance with all security and privacy expectations can improve the process of care as well as population health. Thus, a health information exchange for the region would support the first goal of a top healthy workforce. **Jurisdictions in the Richmond Region should jointly seek funding from the state to make it the state demonstration site for health information exchange.** Gradually, this model would be pushed out across the Commonwealth.

Through the efforts of MedVirginia and ConnectVirginia (respectively, regional and statewide health information exchanges), the Richmond Region is well on the way to having virtually all hospital-based medical records available to authorized providers. Importantly, this access includes the medical records of our injured veterans via connectivity with the Veterans Health Administration and Department of Defense health records systems.
While such expanded access to clinical data will bring tangible and concrete value to patients, providers and the community, there is also an opportunity to leverage the common platform for accessing such information (i.e., provider portal) to create a virtual marketplace for innovative, health IT solutions. A significant barrier to market entry for health innovation technologies is the distribution channel and technical integration with physician practices. The ConnectVirginia provider portal should be utilized to redress this barrier, enabling local technology companies to provide integrated solutions that create value for health care practitioners. Indeed, this “one-stop shopping” approach itself would be a potentially disruptive innovation which could bring the companies that supply this technology to our region.

Unified Community Needs Assessment

The Affordable Care Act (ACA), enacted March 2010, added new requirements that 501 (c) (3) hospitals must satisfy in order to retain their tax-exempt status. VCU Health System is a state-authority and HCA Healthcare a public company and not subject to this provision of ACA. Bon Secours Health System has 501 (c) (3) hospitals.

Under the new rules, 501 (c) (3) hospitals must conduct a community needs assessment and adopt an implementation strategy at least once every three years. Notwithstanding the requirements and who must comply, the three health systems, including VCU Health System and HCA Healthcare, should jointly retain consulting and other assistance to carry out a unified community needs assessment that all three can implement together. The local departments of health should be a part of the effort.

A common, regional understanding of community needs and an implementation strategy for addressing those needs has the potential of making health care in the Richmond Region more cost effective and of higher quality. Businesses looking for locations seek reasonable employee health costs - one of the highest and fastest increasing costs items.

These ideas are not new, but the recommendations would disrupt the current way the region is doing things. The Virginia Hospital and Healthcare Association has statewide initiatives in development. The Virginia Health Innovation Network (which is housed at the Virginia Chamber of Commerce) and the Virginia Atlas of Community Health (www.atlasva.org) are additional resources for carrying out these recommendations.

Richmond: The Emergency Medical Services Capital of the World

While emergency medical services are a relatively small part of overall health care spending (less than 2 percent), they nonetheless accounted for $48.3 billion of economic activity in 2010 and growing. And they are a vital part of the continuum of care, especially as critical partners with hospitals.
Major industrial conglomerates and employers such as 3M, General Electric Co, Siemens, AG, Koninklijke Philips NV, and Toshiba Corp serve the market. In addition to the obvious, ambulances; the health care equipment and products sub-industry serves the market. Names such as Stryker Corp, STERIS Corp, St Jude Medical Inc, Smith & Nephew, Rockwell Medical Inc are examples. Richmond’s Owens & Minor is a major distributor of products to emergency services. The annual meeting of emergency medical services professionals, EMS Today, held in Washington, DC, or Baltimore, MD, has scores of vendors offering a wide array of emergency medical service products and services.

The Economic Development Offices in the Richmond Region should collaborate on an innovation ecosystem strategy to promote and provoke disruptive thought, apply inspired research, experimentation and accelerated implementation to attract companies serving the emergency medical services sector. The Richmond Region would become known for its excellence in emergency medical services and as a place to be to research, innovate, and serve the emergency medical services sector. An explosion in public opinion about the excellence of the Richmond Region for emergency medical services can also be a point for general corporate recruitment.

This recommendation makes sense because Richmond is already one of the best-known places in the world for emergency medical services. The Richmond Region has 17 local emergency medical services or ambulance services and 11 emergency rooms. One of these emergency medical services, the Richmond Ambulance Authority, is known as a world-class provider and innovator. It has a fully computerized emergency operations center that uses state-of-the-art predictive modeling to stage its garage-less ambulances around the city. It has won various awards for service, patient safety, and health care innovation. It has been at the center of testing artificial blood, cardiac arrest survival, and chest pain procedures in the ambulance. Leaders in emergency medicine from around the world regularly visit it.

The United Network for Organ Sharing (UNOS) – the private, not-for-profit organization that manages the nation’s organ transplant system under contract with the federal government – is also in downtown Richmond. UNOS works very closely with emergency medical services to recover and distribute organs nationwide. Every solid organ transplanted in the U.S. must be done under UNOS organ gathering and distribution rules.
At Virginia Commonwealth University, emergency medical services are the focus of national attention in two major efforts. First, the Co-Chair for Cardiac Arrest of the national Resuscitation Outcomes Consortium (ROC) is Joseph Ornato, MD, Professor and Chair of Emergency Medicine at VCU. The National Heart, Lung, and Blood Institute of the National Institutes of Health, US Army Medical Research and Materiel Command, and the American Heart Association sponsor this major research effort in emergency services. Second, VCU’s David X. Cifu, Professor and Chair of Physical Medicine and Rehabilitation, was selected to lead a $62 million study of traumatic brain injuries from blasts and bullets in the military and from civilian injuries, such as those from car accidents, sports injuries, and falls.

The following steps should be taken:

1. The economic development offices in the Richmond Region should undertake a review and revision of their messages to corporate prospects to highlight the regional state of emergency medical services.
2. Major corporate conglomerates, equipment suppliers, and other businesses that supply and conduct research in emergency medical services should be included in economic development offices targets for recruitment.
3. A corporate sponsor already located in the Richmond Region should be approached to provide the financial resources necessary to develop a communication plan and program to make Richmond known as the emergency medicine capital of the world.
4. The Richmond Region jurisdictions should provide funding to local health departments to collaborate with local emergency medical services to enhance public health education on ways to avoid emergencies.
5. The economic development offices and tourist bureaus in the region should develop a plan to have the EMS Today annual meeting of professionals meet in Richmond on a regular basis in the future.

### Notable EMS Successes

In 2003, Jerry Nadeau was treated at VCU Health System after his car hit the wall at Richmond International Raceway. He had to be cut out of the car and suffered complete immobility of the left side, skull fracture, concussion, collapsed lung, and several broken ribs. He raced in the Old School Racing Champion’s Tour in 2008.

Shortly before 8 pm, October 19, Jeffrey Hopper was shot in the stomach by the Washington, DC sniper and critically wounded while leaving a Ponderosa steakhouse with his wife in Ashland, VA. VCU Health System surgeons removed part of the stomach, the left half of the pancreas, and the entire spleen. He jokes to this day that he does not go to buffets, because he does not have the stomach for them.
The Richmond Region already has major assets in the area of emergency medical services. A modest effort to highlight and improve those assets could attract companies in the sector and attract even more grant funding.

**Biotech 2.0**

The Virginia Biotechnology Research Park has been a remarkable success and should serve as a strong base for continued economic development. The advent of negotiating on value in health care and other health reform initiatives will mean that the biotech business will be more about delivering clinical outcomes rather than just selling products and services. That is why the focus of biotech in the region must change.

If the buildings and economic development that came from the biotech park can be thought of version 1.0, *a concerted effort to discover and realize what might be called Biotech 2.0 needs to occur.* We believe this can involve community engagement around bioscience generally and biotechnology specifically – what it is, what it is doing, and what it can do. Most of the biotechnology establishments in Virginia are in medical device and equipment; research, testing and medical laboratories; or bioscience-related distribution. Their demand for highly trained employees need to be well understood and met by the region’s institutions of higher education.

The following steps should be taken:

1. Further enhance bioscience and biotechnology education in the region by bringing together the Science Museum of Virginia's new Virginia Director of STEM and the Executive Director of Bridging Richmond to build collaborations and partnerships relevant to workforce training and K-12 and higher education pipeline development.

2. As an example, a Community Lab located at the Biotech Park and programs oriented to summer training and internships created in cooperation with area higher educational institutions and corporate resources should be developed to acquaint and educate middle and high school students with the biosciences, to create young champions and leaders of the future in STEM-H careers.

3. Richmond Region should establish itself as a Biotechnology Zone under § 58.1—3850 “Creation of Local Technology Zones in the Code of Virginia” and provide regulatory flexibility to attract new biotechnology companies.

4. Mid-stage biotechnology companies should be given a reduction in gross receipts taxes in the Local Technology Zone.

5. Create a Richmond Region Biotechnology Business Council, bringing together stakeholders from industry, elected officials at the state and local levels, economic developers, academia, trade associations and representatives of the investment community to focus on improving the region's competitiveness in attracting bioscience companies and talent. Another goal would be to and improve access to capital for early-
stage companies and entrepreneurs seeking to start or locate their biotechnology companies in the region.

Since the Virginia Biotechnology Park began, cities across Virginia, the United States and the world are building, improving and incentivizing moves to biotechnology parks. Standing still means the Richmond Region loses. The early vision for the park was correct and has paid remarkable dividends through persistent leadership. To compete and stay ahead a community-based refresh is in order.
## Members

### Health Care Task Force of Richmond’s Future

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Appendix: 2013 Corporate Wellness Program Best Practices

**Goal:** A sustainable program with health benefits for employees while reducing healthcare costs, absenteeism and presenteeism for the workplace.

**New Rules:** The Patient Protection and Affordable Care Act (PPACA) reinforces current rules for employers to offer incentives of up to 20 percent of annual premiums to employees who participate in employee health programs. The PPACA increases this incentive to 30 percent in 2014, with an option to increase it to 50 percent at the discretion of the Secretary of Health and Human Services in future years.

**15 Best Practices:**

1. Prevention-based employee health programs offer opportunities for everyone to participate and to benefit by rewarding healthy behaviors.
2. Rally the senior management team around the wellness initiative.
3. Cultivate a network of champions throughout the organization.
4. Maintain program excitement through the benefits of ongoing competitions.
5. Employ strategies to keep the wellness initiative top-of-mind.
6. Link wellness program participation back to health care costs.
7. Start with a baseline health risk assessment that includes a health risk assessment including biometric testing for risk of chronic disease.
8. Not all employees are at the same fitness or motivation level, so programs should be flexible for everyone to participate.
9. Offer healthy lunch choices, healthy snack/vending machines, and evaluate local restaurants for healthy meal options and make recommendations.
10. Hold walking or standing meetings, replace office chairs with exercise balls, but encourage staff to get up and move.
11. Support onsite educational opportunities, health fairs or discounted gym memberships.
12. Employ consistent communication throughout the year with many messages and many marketing channels.
13. Tap technology to ensure programs are measurable and manageable.
14. Incentives spur participation but must be compelling, ongoing (not one-time) and assure everyone that earned incentives are a direct result of the healthy behaviors.
15. Studies show people take their health cues from their social communities, thus use social networking, online communities and opportunities for social engagement.

Source: Adapted from Health Diagnostic Laboratory.
Notes

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