

2014-2015 Inova Sustainability and Wellness Report



Connecting your environment and your health.





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## Message from Inova's CEO

It is with great pleasure that I share with you Inova's Sustainability and Wellness Report. As a nationally recognized health system and provider of world-class healthcare, we are committed to keeping our patients, employees and communities safe and healthy—inside and outside of our facilities' walls. The 2014-2015 Sustainability and Wellness Report highlights the important connection between our health and our environment. We are excited to share our successes in reducing our operational impacts, as well as engaging our employees, patients and communities we serve in sustainability and wellness initiatives. This report also highlights opportunities for furthering our commitment to environmental excellence.

Understanding the important connection our environment has on our health is at the heart of how we deliver world-class care. At Inova, we understand that keeping the communities we serve healthy compels us to ensure our environment is healthy as well. We are living our mission through our commitment to create a healthier environment in our community, now and for the future. Supporting a healthy and sustainability community also makes smart business sense, yielding significant cost savings year after year. This in turn gives Inova more capital to invest into the communities that we serve.

Our commitment to sustainability and wellness drives improvements across our supply chain, helps our patients heal quickly, and fosters a safe, healthy space for our employees, patients and visitors. This commitment also enables us to live by our mission to improve the health of the diverse communities we serve through excellence in patient care, education and research. We are proud to share a snapshot of our progress to date, and invite you to learn more about these efforts as we continue our journey of innovating and paving the future of health.

“We are living our mission through our commitment to sustainability and wellness, and we do it because it is the right thing to do, for now and for the future.”

Knox Singleton

J. Knox Singleton  
Chief Executive Officer  
Inova



## Message from Inova's President and COO

Inova embraces the direct link between patient, employee, and business partner's well-being and performance to the environment to which they are exposed on a daily basis. That is why, for us, sustainability and wellness are more than the right thing to do. Sustainability and wellness drive value.

Patients and revenue are crucial to the continued success of any healthcare organization. While we pride ourselves on treating our patients with the highest level of care so that they can return home more quickly, sustainability and wellness are key drivers in ensuring that Inova also actively contributes to making the communities in which our patients live safer and healthier, so that they stay well.

Sustainability and wellness are embedded in our delivery of care. We work to reduce our waste streams and purchase products that protect our patients, their families and our employees from harmful chemicals and pollution. We serve the highest quality, nutritious foods, because we know that food is the best medicine. We source our ingredients locally when possible so that we reduce transportation costs and associated emissions from food shipment. These programs enhance our quality of care so that our patients receive the experience of excellence they have come to expect at Inova.

Inova's mission is directly linked to the core elements of supporting a healthy and sustainable community. Inova honors our responsibility to manage and minimize the health impacts of the resources we use, the products we purchase, and the waste we create in the process of healing our patients. We also recognize the importance of embedding these values in our workplace culture. We invite you to read on to learn more about how Inova's sustainability and wellness programs optimize human health, protect our environment, and provide the highest quality of care to those we serve, in order to shape the future of health.

“Sustainability is embedded in our delivery of care.”

Mark Stauder

A handwritten signature in black ink that reads "Mark S. Stauder".

Mark S. Stauder  
President and Chief Operating Officer  
Inova

## Our Environment = Our Health

Our perspective is evolving to look not just at our impact on the environment, but towards the environmental impacts on health.

- **Sustainability + Wellness** = serving well-balanced, nutritious foods to help our patients heal and keep our cafeteria customers healthy.
- **Sustainability + Wellness** = understanding how the environment's health and human health are related, and how we can take responsibility for healthier communities.
- **Sustainability + Wellness** = promoting alternative transportation to minimize air pollution and support active lifestyles.
- **Sustainability and Wellness** = creating healing environments free of harmful chemicals.
- **Sustainability + Wellness** = ensuring our community is healthy and prepared today for tomorrow's challenges.
- **Sustainability + Wellness** = saving money by wasting less, so we can invest more in research and patient care.
- **Sustainability + Wellness** = preserving our resources now so we can extend our mission into the future.
- **Sustainability + Wellness** = supporting the health of our patients, employees, communities and environment.



“Creating the healthiest possible work environment is paramount to achieving optimal levels of employee productivity, happiness and performance.”

Mark Stauder  
President and Chief Operating Officer



## WellAware Mission Statement

To help employees, their families and our community realize life balance and purpose by providing motivation, support and guidance in optimal wellness.

## WellAware Program: Wellness at Inova

WellAware is a goal-based, healthy lifestyle, system-wide program designed to support ALL Inova employees and spouses at all health and fitness levels. In addition to supporting a culture of health and wellness for employees, Inova employees who participate in WellAware and carry our medical insurance can receive a discount on their medical premiums for the following year. The overarching theme is a sense of strong community and total wellness.

During 2015, the WellAware program added a health coaching team dedicated to supporting the health of Inova employees by leveraging the power of social engagement, behavioral economics, and evidence-based science. We worked to unite employees in a collective effort to improve health and develop a culture of wellness through an internal social media platform. Based on the year over year health screening comparisons, Inova employees have improved markers in the traditional lipids, artherogenic lipoproteins and inflammation categories. Participants had no change in thyroid blood markers and have had an increase in those showing poor glucose control.

## Success by the Numbers

- 3,346 participants completed the Ready Set Go Challenge: (84 percent female and 16 percent male) - 54 percent of participants reports “some weight loss”, while others reported a specific amount ranging from 5-30+ pounds.
- 2,391 participants completed the European Expedition Challenge: (86 percent female and 14 percent male) - 1,606 participants reported more energy at work as a result of this program, 1,753 participants reported participating to reduce stress and/or improve their mental well-being.
- 1,436 participants completed the Team Up for Weight Loss challenge: (88 percent female and 12 percent male) - 751 participants lost a total of 4,080.7 pounds.
- 5,052 individuals participated in health screenings which provided them with comprehensive lab results including total cholesterol, LDL and HDL, insulin and glucose levels and thyroid function
- 1,681 unique participation incidents in monthly fitness walks (program started in March 2015)
- 1,077 participated in coaching (in person or telephonic)
- 439 participants completed a race
- 1,712 participants engaged in a Healthy Mind Activity
- 56 participants completed a Weight Loss class or program
- 3,835 earned points for walking 45,000+ steps each week
- Over 2,100 employees achieved a Gold level status in the WellAware program in 2015
- Over 1,200 employees achieved a Silver level status in the WellAware program in 2015

The WellAware program is focused on supporting whole health through our five dimensions of health.

## What We Believe



### Be Aware

Knowing and understanding information on your health profile is the important first step in managing your unique wellness needs.



### Health Coaching

Health Coaching offers online support or support with a personal health coach who is as committed to your health goals as you are.



### Get Active

Physical fitness can produce long-term health benefits and help prevent chronic diseases.



### Eat Well

Good nutrition and healthy eating habits provide a foundation for being healthy and can help reduce the risk of chronic diseases.



### Healthy Mind

Living life to the fullest is centered on having a healthy mind.

## What We Do

### Be Aware

- Biometric Health Screening for ALL Inova employees
- Health Screening (including bloodwork) for ALL Inova employees
- Online health assessment to ALL Inova employees
- Variety of health check-ins with our Health Coaches

### Health Coaching

- Multiple online health coaching programs; Personal Back Coach, Personal Quit Coach, BabyNET, Personal Weight Coach, Food and Fit Coach, Aetna Journeys and Aetna Simple Steps
- In person one-on-one health coaching to help develop individual wellness goals, create a plan and help with each step along the way
- Dedicated health coaches to support developing a culture of wellness throughout Inova

### Get Active

- Ability to track participation in a variety of activities including walking, water activity, sports, skiing and everything in between
- On-site fitness walks
- On-site fitness classes
- On-going team-based challenges

### Eat Well

- Enhancing healthy choice offerings in the cafeterias
- Making healthier choices more accessible in the cafeterias through design (including product placement)
- Reducing offerings of sugar sweetened beverages
- Highlighting existing healthy foods practices served at Inova cafeterias such as elimination of trans-fat foods
- Registered Dietitian on staff to answer any nutrition related questions and guide employees to other helpful resources

### Healthy Mind

- Engaging in altruism through volunteer activities
- Developing a culture of wellness through the posting of helpful and healthy comments on the internal social media platform
- Offering classes and programming with a focus on stress reduction
- On-site fitness walks
- On-site fitness classes
- On-going team-based challenges

Inova's sustainability program is designed to manage and minimize the health impacts of the resources we use, the products we buy, and the waste we create.

## How We Lead: Inova's Sustainability Approach

### Sustainability Management at Inova

Inova's sustainability program is designed to manage and minimize the health impacts of the resources we use, the products we buy, and the waste we create. These efforts not only improve our patients' experiences and outcomes while at Inova, but also help keep patients out of our facilities in the first place by making our community a healthier place to live.

Inova's sustainability goals, programming and policies are established based on industry best management standards as indicated by organizations such as Practice Greenhealth, Healthier Hospitals, Health Care Without Harm, and other healthcare and sustainability experts. We are committed to being a leader within this area, and go out of our way to promote new, innovative programs and processes for improving our sustainability efforts.

Inova also understands that the programs and processes put in place must result in measurable progress towards achieving our established goals. Environmental metrics and related progress are reviewed periodically by key members of the Sustainability Advisory Board, and annually by Board members and leadership teams at each operating unit. The team members within Inova's Office of Sustainability, as well key leadership team members at each operating unit, are held accountable by top leadership for achieving annual goals related to the organization's environmental performance.

### Environmental Mission Statement

Inova is committed to establishing an environment that is safer and healthier for our patients, employees and community.

It should be mentioned that although most of these programs and strategies extend throughout all of Inova's hospitals and offsite facilities, the waste data and specific programming shared within this section apply only to Inova's five hospitals. These hospitals have historically been the focus of our efforts due to the sheer volume of waste they produce and the magnitude of their financial and environmental impacts. As we continue to gain knowledge and influence over our offsite facilities, we will begin to develop a system to baseline current performance, streamline waste disposal practices, and identify savings opportunities.

In the next section, *Inova's Sustainability Impacts and Progress*, we explore our goals and progress to date in the seven operational focus areas that comprise Inova's sustainability program: Waste, Energy, Water, Purchasing, Food, Transportation and Building. Each of these areas presents specific risks and opportunities for our organization, and has been identified as a priority by Inova's stakeholders and Sustainability Advisory Board based on its potential to impact organizational strategy, competitive position, financial performance, and patient, employee and community health.



## Inova's Sustainability Impacts and Progress

### 2014 Performance Against Goals

**Goal 1:** *Establish a data collection system with reporting accountability for Healthier Hospitals' Healthier Food Challenge.*

In 2014, Inova worked extensively with Morrison to develop a corporate social responsibility (CSR) report that included the metrics required by the Healthier Food Challenge. We also enhanced the reporting frequency of the data and made it available to all hospitals or operating units.

**Goal 2:** *Foster increased employee ownership of Inova's sustainability program by building employees into the sustainability planning process and creating new opportunities for engagement and education.*

Inova developed and launched Green Ambassador program that focuses on engaging front-line employees with Inova's sustainability efforts. The primary focus in 2014 included identifying and forming teams for each operating unit, providing education to those team members, and engagement with specific operational impact areas such as waste reduction.

**Goal 3:** *Further engage the Inova's Supply Chain Management Team and Group Purchasing Organizations Team in the planning and implementation of environmentally preferable purchasing (EPP) strategies.*

Inova continued to build sustainability further upstream in the purchasing process, and sustainability was included as a performance incentive for Vice President of Supply Chain. Sustainability and EPP metrics were also added as a measure of success to our outsourced services staff and reviewed on a quarterly basis.

**Goal 4:** *Expand Inova's Strategic Energy Management Plan (SEMP) to establish energy efficiency goals and provide details on employee education efforts.*

Inova continued to execute strategies contained in the SEMP, which included improvements in data gathering with smart metering. This data will inform program execution moving forward.

**Goal 5:** *Further build sustainability into strategic organizational priorities including patient experience, wellness and brand.*

In 2014, Inova's Sustainability program merged with the Wellness program to address a strategic need within the organization. Inova also created a new position of Assistant Vice President of Sustainability and Wellness that will create a higher level of urgency for both programs.



## 2015 Performance Against Goals

**Goal 1:** Increase the link for sustainability and wellness for employee engagement.

During 2015, foundational work was critical to configuring the wellness team as a bridge to integrate sustainability. Account representatives were assigned to manage two hospitals as well as our System Office. The wellness program was re-designed to focus on five key areas of health (Be Aware, Get Active, Eat Well, Healthy Mind and Health Coaching). A thematic calendar was also developed during the year to integrate sustainability into the monthly programming. Furthermore, the first educational series for wellness and sustainability was launched on Earth Day with over 400 participants. The core messaging that ties sustainability and health will continue to be revised and improved.

**Goal 2:** Develop and launch a new employee engagement strategy that is focused on key organizational influencers rather than a broader spectrum of employees.

Inova's Short Term Incentive program goals (basis for bonus structure) had key metrics of sustainability and wellness. In 2015, well over 100 leaders chose these metrics as their indicators and tracked towards them. This focus on engaging/empowering and holding accountable the leaders is one of the key strategies. Additionally, meetings were held with various key stakeholders throughout the year regarding sustainability growth opportunities. On

the employee engagement front, electronic educational materials were developed and distributed, as well as key engagement events such as Earth Day fairs (at all hospitals and our system office) and Climate Grand Rounds that was live and stream-cast.

**Goal 3:** Develop a strategic plan for Inova's supply chain department focused on sustainability and includes all stakeholders (purchasers, contract managers, GPO, Vendors). This will, in part, be launched at our supply chain innovation conference.

Inova's Office of Supply Chain experienced significant change and growth from a leadership perspective during 2015. Much of the year was focused on educating new team members and being part of the organization-wide Supply Chain strategic planning effort. The Supply Chain policy was also updated and protocols were established to have all onsite vendors (through required vendor certification) review and sign off on Inova's sustainability values.

**Goal 4:** Develop a climate action strategy and do a comprehensive greenhouse (GHG) inventory. This will also include making the link between climate and health.

A climate action team and strategy has been developed; however, the GHG inventory was not fully completed. Inova joined the Health Care Climate Council, and the sustainability office supported a series of climate-focused opportunities including the completion of a Climate Risk Assessment for all

Inova Alexandria Hospital



Inova Fair Oaks Hospital



Inova Fairfax Medical Campus



Inova Loudoun Hospital



Inova Mount Vernon Hospital



five hospitals. Inova also hosted and stream-cast a Climate and Health Grand Rounds to foster the distinct relationship between health and our environment. Inova also participated in forums at Climate Nexus and EcoAmerica and conducted an employee survey on the relationship between climate and health with a key focus on the clinical perspective.

**Goal 5:** *Launch Inova's 2020 energy campaign that is associated with our 2020 energy plan.*

This year was spent on finalizing the development of sub-metering throughout all of the hospitals and developing a dashboard to view the data remotely. Once the dashboard is finalized and data can be reviewed and analyzed, new goals and related initiatives will be launched.

## 2016 Goals

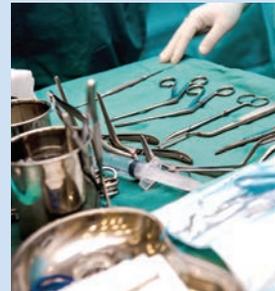
- Goal 1** Expand upon Inova's 2020 Energy campaign and establish long-term energy reduction goals.
- Goal 2** Enhance employee engagement strategy and incorporate a project management approach that empowers all employees to make a difference.
- Goal 3** Develop and implement focused strategic plans for key areas of Inova's supply chain department.
- Goal 4** Review and update Inova's climate reduction activities and conduct a greenhouse gas inventory.
- Goal 5** Re-evaluate and enhance Inova's sustainable operations and strategic plans to include quantifiable goals, timelines and relationship to the Inova Vision 2020.

## Sustainability Performance by Focus Area

1. Waste Management
2. Energy Management
3. Water Management
4. Environmentally-Preferable Purchasing
5. Sustainable Foods
6. Alternative Transportation
7. Green Buildings

“Sustainability is at the heart of how we deliver world-class care.”

Knox Singleton  
Chief Executive Officer





## 1. Waste Management

### THE ISSUE

Responsible management of an organization's solid waste is a cornerstone of any sustainability program. Healthcare systems must pay close attention to this waste stream due to the potential impact it can have on the environment and people that interact with the system on a daily basis. Beyond traditional waste streams such as municipal solid waste and recycling, hospitals manage regulated medical waste (RMW) and hazardous waste that both require special handling, storage and disposal. These requirements add cost equating to more than six times the cost of disposal of RMW when compared to normal trash or municipal solid waste (MSW). Recycling is the least expensive of all of Inova's waste streams, costing approximately 30 percent less per pound when compared to MSW. Thus, proper waste management is a key strategy to not only reduce Inova's impact on the environment, but also to save on operational costs.

### INOVA'S PROGRESS

Inova is very proud of its waste management efforts as we continue to expand and grow as an organization. Staff, patients and our business partners all play important roles throughout the entire waste management cycle. It starts with a focus on reducing or eliminating waste upfront, through thoughtful purchasing and reuse strategies. Eliminating waste up front is the most effective strategy due to the economic and environmental benefits associated with not having to buy, use and ultimately dispose of a particular item. If a product has to be purchased and used, durability and the ability to reuse are key principles as they save money over the life of that product. Administrative practices such as double-sided printing, the conversion to electronic medical records, and the practice of donating new and used medical products, are all core to Inova's waste reduction efforts. Once all waste reduction and reuse options are exhausted, Inova has a multi-material recycling program that captures the typical paper products and bottles/cans, electronics, construction materials and specific single-use medical devices. These devices are then remanufactured and repurchased by Inova, therefore, "closing the loop" which is an essential piece to the recycling lifecycle. And all items that cannot be recycled are appropriately managed and disposed according to applicable state and federal requirements.

Greater than 99% of Inova's Waste Stream		
Recycling	Solid Waste (General Trash)	Regulated Medical Waste
<p><b>Accepted Materials:</b> Paper, Plastic, Cardboard, Metals/Aluminum, Glass</p> <p><b>Container Type:</b> Green recycle bin (some offices use small blue recycle containers at individual desks)</p>	<p><b>All general trash items:</b> Including gloves, coffee cups, Styrofoam products, paper towels, tissues, plastic utensils, hairnets, food waste, food wrappers, disposable gowns</p>	<p><b>Biohazardous Waste:</b> (contaminated with blood or potentially infectious body fluids)</p> <p><b>Container Type:</b> Red RMW bin, often marked with a biohazard symbol</p>

Greater than 99 percent of Inova's waste falls into one of these areas; recycling, solid waste or regulated medical waste.

In 2014 and 2015, more than 5.1 million pounds of materials were recycled resulting in a savings of greater than \$200,000.

There are a number of key successes in the area of waste management with some highlights summarized below:

### Waste Reduction

Inova is implementing innovative programs to ensure that reusable items never make it into the trash and receive a second life outside the walls of our hospitals. These programs include the collection of reusable capital equipment that can be refurbished and used at facilities across the U.S. as well as every day hospital supplies that would normally be destined for the landfill. Items such as gauze, surgical gloves, tape and more are finding a second life in areas around the globe that are in desperate need of these supplies. In 2015 alone, more than 12,000 pounds of supplies were collected and ultimately transferred around the globe, making a significant contribution to healthcare services in some of the most disadvantaged parts of the world.

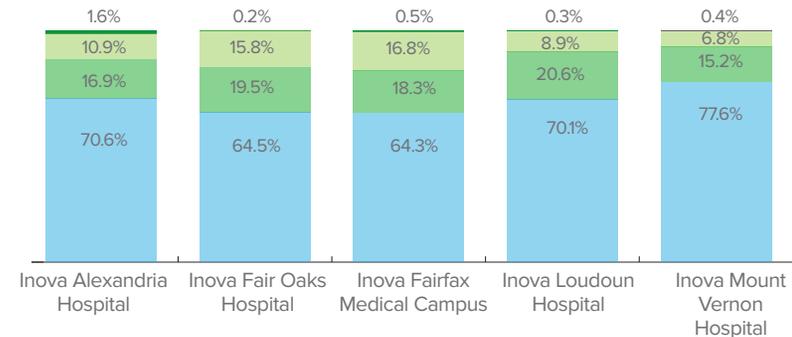
### Recycling

Inova's multi-material recycling program captures materials throughout our facilities including our operating rooms, cafeterias, lobbies/hallways and administrative offices. In 2014 and 2015, more than 5.1 million pounds of materials were recycled that resulted in savings of greater than \$200,000. Recycling is typically the most visible of all sustainable practices and as such, Inova is regularly reviewing these efforts to ensure the program is functioning properly.

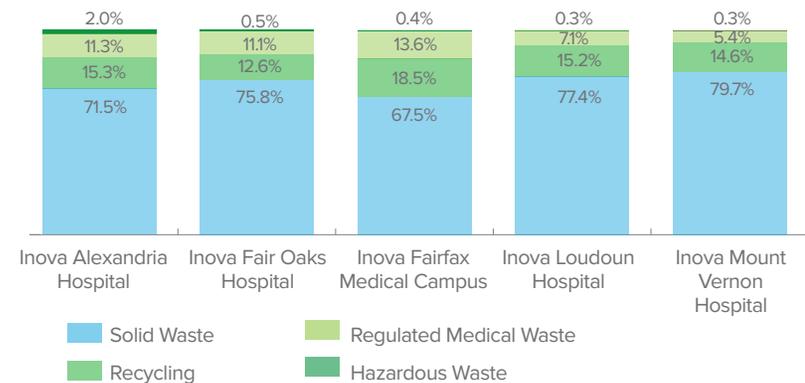
### RMW Reduction

Efforts to reduce RMW generation continues throughout Inova's operating units with a particular focus at our largest source of RMW, the Inova Fairfax Medical Campus. Going back to 2009, the Fairfax Campus generated approximately three times the total amount of RMW it does today, equating to significant savings over that time period. The success of the program can be attributed to the combination of effective education and signage, an efficient and appropriate collection system, as well as daily audits in order to provide real-time feedback to the units that are generating the material.

2014 Hospital Waste Profiles



2015 Hospital Waste Profiles



2014/2015 System Waste Profile

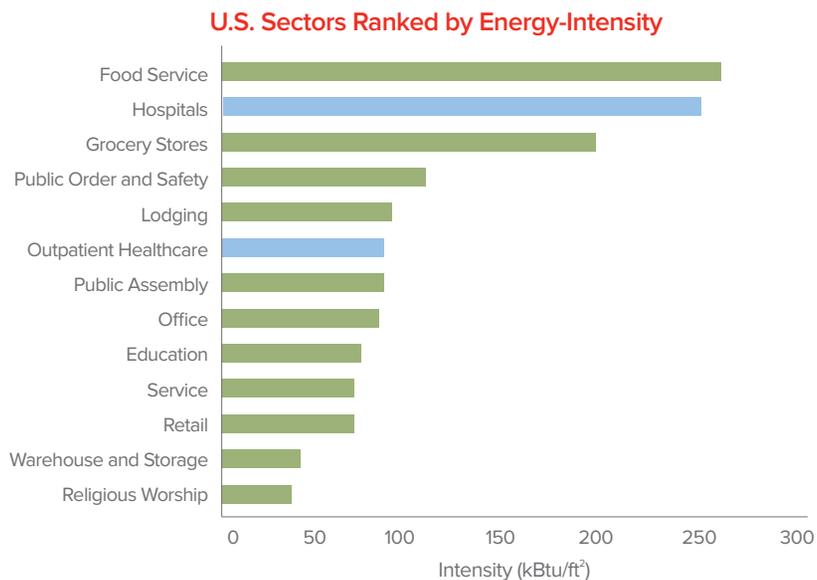
	2014 Total Tons	2014 %	2015 Total Tons	2015 %	Target %
Solid Waste	4,721	66.8%	5,422	71.1%	60-65%
Recycling	1,291	18.3%	1,2730	16.7%	25-30%
RMW	1,011	14.3%	885	11.6%	10%
Hazardous Waste	43	0.6%	48	0.6%	0.5%
<b>Total</b>	<b>7,066</b>		<b>7,627</b>	<b>100%</b>	



## 2. Energy Management

### THE ISSUE

Hospitals and healthcare facilities use significant amounts of energy, spending approximately \$8.8 billion annually to power life-saving medical equipment and the facilities that house that equipment<sup>1</sup>. The healthcare sector is the second most energy intensive, using on average 250kBtu per square foot, ranking just behind the food service sector (see graphic below). This is important due to the direct costs of operating these facilities as well as the down-stream pollution associated with using such large quantities of energy. The majority of energy generation across this country is still based on fossil fuel combustion, which releases a number of pollutants into our air, water and food supply. This can lead to respiratory diseases as well as cognitive impairments through exposure to toxins such as mercury, arsenic and lead. These ailments can lead to an increase in emergency room visits, resulting in even higher operational costs to the facility and the industry at large.



Source: DOE 2003

### INOVA'S PROGRESS

Inova's operating units use significant amounts of energy, spending approximately \$14.6 and \$16.4 million on energy (electricity and natural gas) in 2014 and 2015. Our energy use intensity (EUI) at the end of 2015 averaged just under 305kBtu per square foot, with a low of 229 at Inova Alexandria Hospital and the highest being at Inova Fair Oaks Hospital at 353. Inova is currently executing a Strategic Energy Management Plan (SEMP) to achieve a number of key results including:

- Reduced energy consumption per square foot by over 11 percent since 2012 baseline year.
- Avoided over \$3.3 million in utility expense since January 2013 by focusing on reliability improvements, energy efficiency focused efforts in operations.
- Recovered over \$160k in 2015 rebates through Dominion Power's energy rebates program.
- Developed a Real-Time Energy Dashboard with over 75 electric meters throughout Inova. This tool is guiding cost reduction efforts and validating projected project savings. \$250k reduced implementation cost.
- Received over \$323,000 in 2015 payments for participating in the Demand Response program and greater than \$760,000 in cash payments since January 2013.

### Systemwide Steam Trap Audit

Inova's Energy team, along with one of our vendors, conducted a steam trap audit of more than 400 steam traps. The audit uncovered steam traps that were failed open (waste), failed closed (not providing heat), installed incorrectly (waste), incorrect size (waste) and various steam leaks and failed condensate systems (waste). Over 27 deficiencies were uncovered during the audit and subsequently repaired by Inova's engineering team. The direct benefit of this collaborative effort was saving over \$95,000 in annual gas expense while providing a steam trap maintenance program.

<sup>1</sup> U.S. Department of Energy. (2012, Sept. 4). Energy Department's Hospital Energy Alliance Helps Partner Save Energy and Money. Retrieved September 20, 2016, from <http://energy.gov/articles/energy-department-s-hospital-energy-alliance-helps-partner-save-energy-and-money>.

## Claude Moore Atrium Lighting



The lighting in the atrium of the Claude Moore building was replaced with energy-efficient 25-watt light emitting diode (LED) fixtures. LEDs reduced electric demand 62 percent (more than 17,500 kWh) and provided the additional benefit of long life and light quality. The project is saving \$1,400 in annual energy costs and engineering staff can now focus on other critical facility needs.

## Parking Garage Lighting

In 2011, Inova replaced the existing lights in the garages with induction fixtures on the promise of energy and maintenance savings as well as improved lighting. The fixtures consistently failed, thus not meeting project goals. Repair cost exceeded \$100 per fixture. The diminished lighting on the lower levels of the garage was also a significant safety concern. To address the issue, LED fixture were selected to test in the basement levels. After a successful sample installation the two lower levels of the Employee Garage and lowest level of the Grey Garage were renovated with the new fixtures. Light levels were taken before and after the installation. Results showed LEDs increased light levels by 200 percent across the space and over 300 percent in some areas, and they did not contribute excessive glare. The project also yielded energy reductions of approximately 32 percent.



## A Note About Climate Change

2014 and 2015 were globally the warmest years since records began in 1880, according to NASA and NOAA. As Earth's climate continues to shift, healthcare organizations will be faced with the management of more extreme and widespread patient and public health issues. The most impactful climate health indicators in Inova's service area include:

- Reduced air quality
- Allergy and ozone exceedances
- Increase in emergency room visits for asthma
- Increase in hospitalizations due to cardiovascular and respiratory complications
- Increased incidence of vector-borne diseases, including Lyme disease
- Increased prevalence of extreme storm events and high heat days

Inova's sustainability program is increasingly focused on exploring the consequences of man-made climate shifts, and on implementing thoughtful strategies to minimize our own contribution to detrimental long-term impacts. One strategy that will be investigated is the opportunity to link climate activities to the Community Health Needs Assessment currently underway for each hospital.



### 3. Water Management

#### THE ISSUE

Hospitals are some of the largest users of water in their communities. While the high consumption of water is a necessity for the provision of medical treatment and the maintenance of healthcare facilities, it also has its own environmental and health impacts that make water management an important consideration for healthcare organizations pursuing sustainability goals.

Many aspects of hospital operations, such as sterilization, heating and cooling, and waste disposal, impact the safety and quality of local water supplies. Water quality and pollution directly affect human health, as humans are frequently exposed to the chemicals contained in the drinking water supply. Hospitals have an opportunity to reduce chemical exposure within the general population by implementing programs to protect the water supply by disposing of waste properly, minimizing air pollution from transportation and fossil fuel consumption, supporting foods produced in a sustainable manner and integrating thoughtful building practices that minimize chemical usage and runoff.

Hospitals also have an opportunity to reduce their energy footprints through committing to water conservation. Water consumption contributes to air pollution and its associated health issues through the massive amount of energy that is required to actually use it. Water must be treated, transported, and heated or cooled as necessary before it can be used by hospitals, and then transported again for treatment before it can be released back into the water supply. As water usage increases, so too does energy usage and its associated air pollution and health impacts. This 'hidden' energy footprint of water is half of what is known as the water-energy nexus, which highlights the interconnectedness of water and energy. The other half of the equation explores the water requirements for energy production and usage, which are also significant. As energy prices continue to increase in the coming years, water sewerage and treatment services may also become financially significant for healthcare organizations and other large consumers of water, even in areas of the country where water prices are currently negligible. Water management strategies offer a key way to hedge this risk in the long run.

#### INOVA'S PROGRESS

In the mid-Atlantic region, clean water is available in plentiful supply and at very low costs. This makes the financial case for water management efforts much smaller than for drought-prone areas of the country where water conservation is of top priority.

In general, Inova's current water management efforts revolve around two general strategies:

- **Water conservation**, which entails adjusting practices and fine-tuning building systems to prevent additional water use.
- **Water efficiency**, which involves using water more effectively to achieve the same output using fewer water inputs.

Water management is an essential component of Inova's sustainability program, and we strive to make our water consumption as efficient and sustainable as possible. To this end, Inova's Facilities Management Division works to implement water conservation practices and efficient equipment wherever possible. Inova also continues to track our water consumption through the EPA's Energy Star Portfolio Manager.

**Inova Hospital Water Usage in Gallons**

	2012	2013	2014	2015
<b>Inova Alexandria</b>	36,495,000	32,600,000	33,500,000	27,362,000
<b>Inova Fair Oaks</b>	28,280,000	32,400,000	31,310,000	31,240,000
<b>Inova Fairfax</b>	118,636,000	125,000,000	133,100,000	140,034,000
<b>Inova Loudoun</b>	21,400,000	20,900,000	24,340,000	24,909,000
<b>Inova Mount Vernon</b>	14,630,000	19,600,000	20,200,000	
<b>Total</b>	<b>219,441,000</b>	<b>230,500,000</b>	<b>242,450,000</b>	<b>247,659,000</b>

Pinetop31

Additionally, Inova's water conservation strategies include implementing motion sensor faucets, utilizing water-efficient irrigation practices, and conducting periodic water audits to assess how to improve our conservation efforts. Another way we are working towards reduced water consumption is using native plants in our landscaping efforts. These plants, once established, do not need fertilizers, herbicides, pesticides or watering, and can help reduce a landscape's water use by 50-75 percent.



Inova strives to protect our local water supply, sourced from the Occoquan Reservoir and Potomac River, through efforts to reduce stormwater runoff and contamination.

Inova also strives to protect our local water supply, sourced from the Occoquan Reservoir and Potomac River, through efforts to reduce stormwater runoff and contamination. Green construction practices and the use of runoff-reduction measures such as bioswales and retention ponds help us preserve the safety of Northern Virginia's drinking water.





## 4. Environmentally-Preferable Purchasing

### THE ISSUE

Hospitals spend billions of dollars each year on the goods and services that help them fulfill their missions. These goods and services consume large amounts of energy and water, produce large quantities of waste, and contain a range of chemicals that are harmful to human and environmental health. Significant amounts of money are also wasted on inefficient purchasing practices that fail to capture efficiency savings or choose short-term cost reductions over long-term savings.

#### EPP Strategies

##### Chemical Minimization

Products should reduce the quantity and potential negative impacts of the chemicals they contain, including:

- PVC/Vinyl
- Flame retardants
- VOCs (volatile organic compounds)
- DEHP (and other phthalates)
- Latex
- Mercury
- Lead
- PBTs (persistent bioaccumulative toxics)
- Carcinogens, mutagens, reproductive toxins
- BPA (bisphenol A)

##### Waste Minimization

Products should assist in reducing the amount of waste Inova generates and/or reduce overall lifecycle impacts through:

- Recycled content
- Recyclability
- Reusability
- Reduced materials
- Biobased material content
- Biodegradable content
- Compostable content
- Increased durability/length of service

##### Energy and Water Conservation

Products should have characteristics that either reduce demand for or increase the efficiency of energy and/or water required for use.

##### Local Purchasing

Products should preferably contain content that is extracted, processed and manufactured regionally (within a 250-mile radius).

Hospital supply chain teams have an important opportunity to help shift the healthcare marketplace by using their organizations' purchasing power to demand safer, healthier, more environmentally preferable products from their supplier partners. The goal of these efforts is to push the healthcare supply chain to provide safer, healthier products that conserve resources, reduce waste, save money and minimize the use of harmful chemicals. This work has led to changes in the availability and pricing of healthier, more sustainable products. A continuing push from healthcare supply chain teams is essential in achieving these goals.

### INOVA'S PROGRESS

Inova's supply chain initiatives continued to expand in 2014 and 2015, including increased engagement of supply chain teams in the planning and implementation of sustainable purchasing strategies. To demonstrate commitment to sustainable, environmentally preferable practices, Inova signed Practice Greenhealth's Environmentally-Preferable Purchasing (EPP) Pledge. Specifically, the EPP Pledge signals Inova's dedication to support Group Purchasing Organizations (GPOs) in contracting for environmentally preferable products, and interest in purchasing products.

By signing the EPP Pledge, we recognize that a set of nationally recognized environmental criteria are important to healthcare with a goal to:

- **Reduce** the negative environmental and health impacts of products and services across their lifecycle.
- **Establish** a standard for successfully purchasing environmentally preferable products, thereby encouraging other healthcare purchasers to adopt.
- **Provide** a tool for educating staff and others on the environmental priorities in healthcare.
- **Create** safer and healthier environments for patients, healthcare workers, and local and global communities.

Inova also worked with our GPO to support environmentally preferable products. These conversations included presentations to representatives from the GPO, presentations at the Association for Healthcare Resource & Materials Management annual conference and regular meetings with our GPO on key initiatives. Inova's GPO also had a significant onsite presence for most of 2015, which allowed for general sustainability knowledge transfer.

In addition to cultivating a strong relationship with our GPO, Inova demonstrated a deep commitment to environmentally preferable purchasing by updating its purchasing policy. These updates were built into our master contract and into the supply chain management strategic plan.

### Greening the Supply Chain

Another major environmental purchasing issue facing hospitals is the use of products that contain toxic or potentially harmful chemicals. Supplies like cleaning chemicals, interior furnishings and pest management products can expose workers, patients and visitors to irritating or harmful fumes. Also, certain medical products contain chemicals that workers or patients can be exposed to during use.

2015 Percent Green Spend on Cleaning Products

	Total \$ Green Cleaning Chemicals	Total \$ Conventional Cleaning Chemicals	Total \$ All Cleaning Products	% Green \$ of Total
Inova Alexandria	\$23,291	\$14,309	\$37,600	61.9%
Inova Fair Oaks	\$13,331	\$8,189	\$21,520	61.9%
Inova Fairfax	\$52,409	\$9,899	\$62,308	84.1%
Inova Loudoun	\$11,514	\$2,174	\$13,688	84.1%
Inova Mount Vernon	\$15,178	\$2,817	\$17,995	84.3%
<b>Total</b>	<b>\$115,723</b>	<b>\$37,388</b>	<b>\$153,111</b>	<b>75.5%</b>

Promoting products and equipment that contain safer chemicals and produce less-toxic waste helps hospitals fulfill their mission to protect health, and may also help reduce long-term employee health insurance costs by creating healthier work environments. Inova has demonstrated its commitment to purchasing and using safer chemicals. The chart above details our progress, and we are pleased to report that we are continuing the trajectory to completely purchase green products. In line with this goal, we



have updated our supply chain policy and protocols were established to have all vendors onsite (through required vendor certification) learn and sign off on Inova's Sustainability values.

### Greening the OR

Since hospitals must pay to dispose of every single product – and associated packaging – brought through their doors, it is important to consider end-of-life impacts during the procurement process. Smaller medical products are often overlooked in this process, as they are generally disposable. Yet these items add up to a sizeable portion of a hospital's waste stream, and can cost upwards of millions of dollars that could otherwise be spent on improving and expanding access to patient care. Single-use medical supplies can also add costs to waste bills if they are improperly sorted into more expensive waste streams.



In response, Inova's EPP focus is closely linked with our waste minimization efforts. We understand that beyond simply managing our waste, we can actively align our EPP efforts with preventing that waste from being created in the first place. This is especially important in our operating rooms (ORs)—one of every hospital's most resource- and waste-intensive areas.

Through OR pack reformulation, purchasing reusable sterilization containers, and engaging in single-use device reprocessing, Inova is dedicated to reducing our footprint systemwide—starting in our ORs. **In 2014 and 2015 alone, we saved \$1.3 million by preferentially purchasing reprocessed devices.**

The tables to the right indicate dollars spent on reprocessed devices, and total savings from purchasing reprocessed devices. Exact savings opportunities vary from year to year alongside changes in quantity of products used and the number of those products available for sale back to Inova.

Inova is dedicated to reducing our footprint systemwide – starting in our ORs.



#### Dollars Spent on Reprocessed Devices

	2014	2015
Inova Alexandria	\$43,552	\$46,479
Inova Fair Oaks	\$172,406	\$217,873
Inova Fairfax	\$101,782	\$383,609
Inova Loudoun	\$69,653	\$58,800
Inova Mount Vernon	\$21,315	\$27,052
<b>Total</b>	<b>\$408,708</b>	<b>\$733,813</b>

#### Single-Use Device Reprocessing Purchase Savings

	2014	2015
Inova Alexandria	\$49,492	\$52,818
Inova Fair Oaks	\$195,917	\$247,584
Inova Fairfax	\$115,661	\$435,920
Inova Loudoun	\$79,162	\$66,819
Inova Mount Vernon	\$24,223	\$30,742
<b>Total</b>	<b>\$464,455</b>	<b>\$833,883</b>



## 5. Sustainable Foods

### THE ISSUE

Inova recognizes that food, and the manner in which it is produced, can have a significant impact on the health and wellness of both the planet and the consumer. Diets filled with highly processed foods, sugar-sweetened beverages, and meat and poultry raised with routine growth hormones and antibiotics are the unhealthy, unsustainable norm in our society. The impact of this type of diet is profound. More than two-thirds of the U.S. adult population has been diagnosed as overweight or obese<sup>2</sup>. These unhealthy eating habits translate to higher healthcare costs, as well as losses in economic productivity due to missed work days and treatment for weight-related illnesses.

Furthermore, the current systems of food production are problematic from an environmental standpoint as well. It is estimated that the average American meal travels about 1500 miles<sup>3</sup> to get from farm to plate. Transporting food over long distances generates significant amounts of carbon dioxide emissions, making increased access to locally-sourced foods a healthier, more sustainable alternative. Additionally, fertilizer runoff from livestock feed, as well as leaching from large

manure ponds found at factory farms, enter local streams and pollute our air and water<sup>4</sup>. In fact, livestock farming alone contributes 18 percent to total annual GHG emissions.

### INOVA'S PROGRESS

Given the environmental and health impacts of large-scale, unsustainable systems of food production, Inova is deeply committed to honoring the notion that food is medicine—from procurement to serving of healthy, sustainable, balanced meals. In an effort to honor these commitments, all five Inova hospitals have enrolled in all three of the Healthier Hospitals' Healthier Foods Challenges, which require a commitment to pursuing goals and reporting data in the following categories: Local/Sustainable Foods, Balanced Menus, and Healthy Beverages. Additionally, we have increased our employee engagement efforts by hosting food education events to explore the connections among sustainability, wellness and food. In the next section, Inova's progress to date is discussed.

<sup>2</sup> Food Research and Action Center. Obesity in the U.S. Retrieved September 20, 2016 from <http://frac.org/initiatives/hunger-and-obesity/obesity-in-the-us/>

<sup>3</sup> CUESA. How Far Does Food Travel to Get to Your Plate? Retrieved September 20, 2016 from <http://www.cuesa.org/learn/how-far-does-your-food-travel-get-your-plate>

<sup>4</sup> Monger, B. (2015, April 22). Impact of Food Choices on the Environment. Campbell Center for Nutrition Studies.

<sup>5</sup> Monger, B. (2015, April 22). Impact of Food Choices on the Environment. Campbell Center for Nutrition Studies.

Local Produce Purchases									
	2013			2014*			2015**		
	Local \$	Total \$	% Local	Local \$	Total \$	% Local	Local \$	Total \$	% Local
<b>Inova Alexandria</b>	\$5,287	\$281,052	1.9%	\$9,208,95	\$312,284.84	2.9%	\$9,626.20	\$282,780.53	3.4%
<b>Inova Fair Oaks</b>	\$14,265	\$180,733	7.9%	-	-	-	\$2,124.02	\$146,282.39	1.5%
<b>Inova Fairfax</b>	\$62,505	\$697,077	9%	\$8,243.79	-	-	\$7,813.44	\$707,386.38	1.1%
<b>Inova Loudoun</b>	\$13,767	\$157,463	9%	\$11,463.56	\$164,137.45	6.9%	\$8,889.11	\$166,772.89	5.3%
<b>Inova Mount Vernon</b>	\$12,475	\$131,371	7.5%	\$5,034.73	\$136,019.61	3.7%	\$3,621.32	\$3,621.32	2.5%
<b>Total</b>	<b>\$108,400</b>	<b>\$1,442,695</b>	<b>7.5%</b>	-	-	-	<b>\$32,074.09</b>	<b>1,445,288.21</b>	<b>2.2%</b>

\*Due to unforeseen circumstances, local produce spend was estimated for two months (January and February 2014). This approximation is considered to have minimal impact on the accuracy of the overall reporting details provided. Unexpected gaps in data reporting are indicated by dashes (-).

\*\* Due to unforeseen circumstances, local produce spend was estimated for two months (August and September 2015). This approximation is considered to have minimal impact on the accuracy of the overall reporting details provided.

Inova is committed to offering a wide variety of locally-sourced, sustainable foods.

### Local/sustainable foods

Inova is committed to offering a wide variety of locally-sourced, sustainable foods in cafeterias, retail spaces and catering services. We began tracking our local purchasing data in 2010, and have since expanded these efforts by working with our food service partners and suppliers to also track data on our sustainable food purchases. Inova uses the following definition of local:



- Farms, ranches and production/processing facilities located within a 400-mile radius of the facility
- For processed foods with multiple ingredients, the product must have the majority of ingredients (greater than 50 percent by weight) produced within 400 miles.

### Less meat, better meat

Reducing the amount of meat and poultry served in hospitals provides health, social and environmental benefits that are consistent with prevention-based medicine. Hospitals can deliver an important preventive health message to patients, staff and communities by reducing the amount of meat and poultry they serve and by purchasing sustainably-produced meats and poultry.

In 2013, Inova established its initial baseline for meat purchases, and initiated planning discussions between the appropriate internal and external teams to develop a long-term strategy around meat reduction and sustainable meat procurement efforts. In 2014 and 2015, we improved on our baseline by decreasing the amount of meat served per meal. While variances in meals served among individual hospitals are largely due to hospital expansions, the systemwide trend points to yearly reductions in meat served per meal. In line with Healthier Hospitals’ Less Meat, Better Meat Challenge—and demonstrated in the chart below—our ultimate goal of an average 1.5 ounces of meat (.09375 lbs. /meal) per meal served was achieved in 2015.

**Meat Reduction Progress Against Baseline**

	Pounds of Meat Served			Total Meals Served			Pounds of Meat Per Meal		
	2013	2014	2015	2013	2014	2015	2013	2014	2015
<b>Inova Alexandria</b>	106,880	77,973	70,897	939,286	854,905	835,449	.113	.091	.084
<b>Inova Fair Oaks</b>	86,300	47,983	51,317	893,138	807,143	807,797	.096	.059	.063
<b>Inova Fairfax</b>	281,200	173,715	179,927	2,480,568	2,968,598	3,230,611	.113	.058	0.55
<b>Inova Loudoun</b>	82,380	49,216	50,740	569,768	629,814	701,778	.144	.078	.072
<b>Inova Mount Vernon</b>	58,960	39,187	42,847	614,408	489,489	577,882	.095	.078	.074
<b>Total</b>	<b>615,720</b>	<b>405,485</b>	<b>412,398</b>	<b>5,497,168</b>	<b>5,749,949</b>	<b>6,153,517</b>	<b>.112</b>	<b>.070</b>	<b>.067</b>

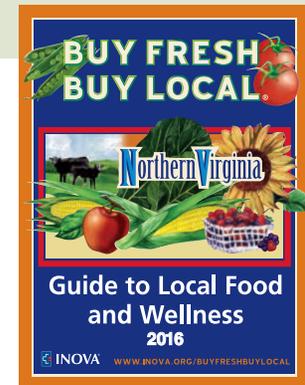
In addition to reducing the amount of meat served per meal, Inova strives to increase the quality of meat served.

In addition to reducing the amount of meat served per meal, Inova strives to increase the quality of meat served. This duality aligns with Heathier Hospitals' challenge to serve both Less Meat and Better Meat. In 2014 and 2015, Inova strove to maximize purchases of reduced-antibiotic chicken and turkey. As indicated in the graph of sustainable purchases below, the vast majority of our meat purchases in 2014 and 2015 met the reduced-antibiotic standard. In order to establish a baseline for our Better Meat purchases, we focused on purchasing reduced-antibiotic meat for this reporting period. Moving forward, Inova will work with healthcare systems across the country to phase out the use of routine antibiotics in meat altogether.

## Other Successes

- Continued Inova's Buy Fresh Buy Local Program.
- Hosted farmers market tables between May and September at each facility's main cafeteria.
- Hosted food waste movie viewing for staff and the community.
- Hosted a series of seasonal cooking classes.
- Preferentially purchased certified, commercially compostable food serveware where single-use/disposable items are necessary.
- Purchased and used recyclable to-go containers, and offered the option to recycle these to-go containers onsite.

Product Category	2014 Sustainable Purchases			2015 Sustainable Purchases		
	Total Program Spend	Total Non-Program Spend	Total Sustainable Spend %	Total Sustainable Qty	Total Non-Sustainable Qty	Total Sustainable Qty %
Cage Free Shell Eggs (HFAC)	\$4,808.99	\$52,147	7.8%	104,040	66,780	60.9%
Coffee	\$48,042	\$64,064	25.7%	3,980	4,919	44.7%
rBGH Milk	\$280,425	\$0	100%	16,981	0	100%
rBGH Yogurt	\$112,268	\$27,577	79.9%	95,628	\$0	100%
Reduced Antibiotic Chicken	\$449,109	\$225,189	71.8%	82,631	49,620	62.5%
Reduced Antibiotic Turkey	\$266,474	\$49,093	85.9%	55,448	5,394	91.1%
Sustainable Seafood	\$128,905	\$452	44.9%	31,109	232	99.3%
<b>Totals</b>	<b>\$1,290,031</b>	<b>\$418,522</b>	<b>32.4%</b>	<b>389,817</b>	<b>126,945</b>	<b>32.6%</b>



Moving forward, Inova will work with healthcare systems across the country to phase out the use of routine antibiotics in meat altogether.

### Healthy beverages

Even the healthiest, most sustainable meal can be off-course when paired with an unhealthy beverage. As part of Inova's commitment to serving the healthiest foods to our patients, employees and visitors, in 2013, we completed our first baseline of healthy beverage purchases within our hospitals. We have continued to build on this progress since our baseline year: In 2014, we increased our percentage of healthy beverage purchases to 67 percent of total beverage

purchases. This is a 22.5 percent increase from 2013, where our healthy beverage purchases made up 44.5 percent of our total dollars spent. In 2015, we increased our annual percentage of healthy beverages by 7 percent to 74 percent of total beverage spending.

Percentage Healthy Beverages Spending Compared to Total

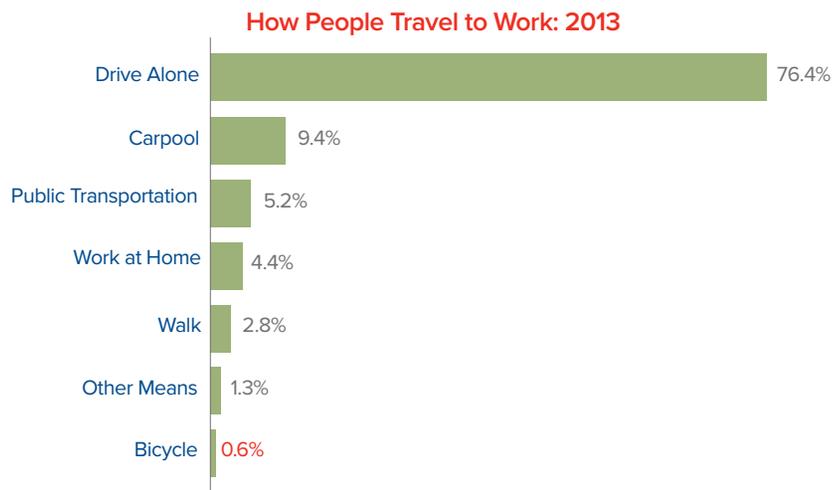
	2013			2014			2015		
	Healthy Bev \$	Total Bev \$	Percent Healthy	Healthy Bev \$	Total Bev \$	Percent Healthy	Healthy Bev \$	Total Bev \$	Percent Healthy
Inova Alexandria	\$115,150	\$283,992	40.5%	\$232,063	\$359,050	64.6%	\$233,573	\$302,164	77.3%
Inova Fair Oaks	\$91,697	\$192,656	47.6%	\$159,738	\$274,175	58.3%	\$374,286	\$515,476	72.6%
Inova Fairfax	\$317,877	\$696,547	45.6%	\$658,420	\$990,183	66.5%	\$1,515,044	\$2,051,104	73.9%
Inova Loudoun	\$80,047	\$198,124	40.4%	\$146,263	\$230,096	63.6%	\$341,907	\$451,564	75.7%
Inova Mount Vernon	\$28,285	\$50,276	56.3%	\$80,360	\$136,699	58.8%	\$258,762	\$339,190	76.3%
<b>Total</b>	<b>\$633,056</b>	<b>1,421,595</b>	<b>44.5%</b>	<b>\$1,276,844</b>	<b>\$1,990,203</b>	<b>67%</b>	<b>\$1,478,275</b>	<b>\$2,076,561</b>	<b>74%</b>



## 6. Alternative Transportation

### THE ISSUE

Transportation is the second leading contributor of greenhouse gas emissions (GHGs) in the United States<sup>6</sup>. Compounding this impact, as a sector, healthcare and all the industries that support it comprise 8 percent of total GHGs in the United States<sup>7</sup>, with hospitals alone comprising 3 percent of total US GHG emissions<sup>8</sup>. In fact, transportation is right behind coal burning power plants and manufacturing in terms of its impact on US GHG emissions<sup>9</sup>. Of the total impact of the transportation sector, passenger cars and trucks comprise 83 percent of its environmental footprint, which is why it is so important that we understand how employees commute to work, how we ship and receive with supply chain partners, and the internal transportation infrastructure<sup>10</sup>. Sustainability efforts related to transportation in the healthcare sector thus present ripe opportunities to further reduce GHGs, provide a positive return on investment, and improve community health and wellness.



Percentage of Workers. Universe; 16 years and older. Data based on sample. For information on confidentiality protection, sampling error, nonsampling error, and definitions see [www.census.gov/acs/www/](http://www.census.gov/acs/www/)

Source: U.S. Census Bureau, 2013 American Community Survey, Table 50801.

As one of the community's largest employers, hospitals and health systems can positively influence employee commuting practices. As a sector, healthcare comprises almost 18 percent of GDP, and is in a position to help shape transportation best practices with our supply carriers and freight haulers, as well as by improving our internal infrastructure. This includes offerings such as electric charging stations, bike racks and showers, as well as policies and resources which support various programs such as time and labor for a transportation coordinator, data collection resources, and policies (employee incentives, business travel, telework, no idling policies).

### INOVA'S PROGRESS

Inova is committed to exploring alternative transportation opportunities, because we know it improves environmental health, reduces our energy use, conserves natural resources, and improves air quality for our community, patients and employees. Inova's alternative transportation program is a joint effort between our Safety & Security Department, Office of Sustainability, Facilities Management Department and the Fairfax County Department of Transportation. Our strategy aims to minimize the impacts of our employees' commutes by providing and incentivizing viable alternative commute options. Our efforts have been recognized by Fairfax County's Department of Transportation, as Inova Alexandria Hospital and Inova Fairfax Medical Campus have been designated among the county's "Best Workplaces for Commuters." Progress made in alternative transportation incentives and opportunities at Inova include:

<sup>6</sup> Environmental Protection Agency. Sources of Greenhouse Gas Emissions. Accessed September 20, 2016 from <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#transportation>

<sup>7</sup> Environmental Protection Agency. Industry Sector Emissions. Accessed September 20, 2016 from <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#transportation>

<sup>8</sup> Chung, JW and Meltzer, DO. (2009). Estimate of the carbon footprint of the US health care sector. JAMA 302(18), 1970-2.

<sup>9</sup> Environmental Protection Agency. Sources of Greenhouse Gas Emissions. Accessed September 20, 2016 from <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#transportation>

<sup>10</sup> Environmental Protection Agency. Sources of Greenhouse Gas Emissions. Accessed September 20, 2016 from <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#transportation>

Inova has committed to increasing access to alternative transportation options in several key ways.

### Bike Racks and Pedestrian Accommodations

All of Inova's facilities offer bike racks and shower facilities to accommodate employees who bike to work. Additionally, based on bicyclist feedback via the annual employee survey, bike lockers were installed in the Green Garage at the Inova Fairfax Medical Campus in the first or second quarter of 2016. To facilitate and encourage pedestrian circulation, a sidewalk system was designed and paved across the medical campus. This sidewalk system will continue to be offered, and will continue to function as a tool for promoting employee wellness and activity, in addition to serving as an environmentally friendly transportation option.

### Educational Opportunities and Events

Information about the local bike routes and regulations is available on the Office of Sustainability's intranet webpage. Transit-related information is provided to all new employees as part of the benefits package, and includes all of the available buses, Metro, and shuttles serving Inova Fairfax Medical Campus, as well as carpool/vanpool, biking, and walking information. Transportation-related information is also displayed in numerous common areas throughout the hospital, including the new Inova Women's and Inova Children's Hospitals and in the Employee Garage. Employees are also engaged in education regarding alternative transportation during our Alternative Transportation Fairs, which are hosted annually around Bike to Work Day. In an effort to connect sustainability and wellness in alternative transportation messaging, Inova's Wellness program also delivered a recorded webinar that educated employees on the environmental and health benefits associated with biking or walking to work.

### Alternative Transportation, Preferred Parking and Incentives

Inova has committed to increasing access to alternative transportation options in several key ways. Inova Fairfax Medical Campus now has a regional transportation hub designed to increase ease of access to alternative transportation options for visitors and employees. Additionally, all of Inova's hospitals have established preferred parking spaces for registered carpools,

vanpools and hybrid vehicles. These spaces are located in close proximity to elevators and hospital entrances, and were offered and promoted in 2016. In addition to preferential parking to encourage alternative transportation, Inova also offers two incentive programs: WageWorks and MetroCheck. The WageWorks Commuter Benefits Program allows employees to pay for eligible commuting costs through automatic, pre-tax payroll deductions. It works for train, bus, vanpool, or parking facility expenses, and is available as an employee benefit through Inova's Human Resources Department. MetroCheck is a monthly transportation stipend that is available to employees at Inova Alexandria Hospital who use public transportation to get to work.



### Fleet Management Activities

In 2013, Inova outsourced the management of our internal delivery services and fleet to an external partner, with a goal of streamlining and unifying transportation, improving process quality, and implementing technology to boost security. This work continued in 2014 and 2015 and included building the required infrastructure to connect our network, drive integration and standardization, and remove waste and inefficiencies. For instance, a process at the Inova Lab was closely analyzed, comparing site pick-up times with specimen counts collected at those sites. A recommendation was made to delete the stops with low specimen yields, eliminating **1,400+ extra miles driven per week**. These reductions not only save time and money, but they also reduce pollution that contributes to climate change and a variety of local illnesses.



## 7. Green Building

### THE ISSUE

The manner in which a building is constructed, operated and maintained can have a significant impact on both the environment and people that interact within that space. Hospitals and healthcare facilities in particular must ensure their facilities are clean and sterile, requiring the use of cleaning chemicals and air exchange rates that are higher when compared to traditional buildings. These products and processes can have a tremendous impact on both human and environmental health. Products such as flooring, paint, cleaners and a variety of construction materials, all contain chemicals and gases that contribute to indoor air pollution. The negative environmental externalities are further compounded by the extraction of raw materials, and associated emissions and waste that occurs when renovating or constructing a new building.

### INOVA'S PROGRESS

Inova has a history of implementing successful strategies related to minimizing the health and environmental impacts of our facilities. We start by following green practices in relation to the design and construction of new and existing buildings, adhering to Green Guide for Health Care guidelines as well as pursuing LEED (Leadership in Energy & Environmental Design) certification for appropriate projects. During the design and construction phase, both costs and

environmental impacts are reduced by salvaging and donating reusable items and ultimately recycling much of the construction and demolition waste. Once the building project is completed and ready for occupancy, our sustainable facilities management efforts are implemented and include: energy efficiency initiatives (see Energy Management section); water conservation (see Water Management); utilization of Green Seal Certified cleaning products; and integrated pest management efforts, to name a few. These efforts are regularly monitored and evaluated to ensure that Inova is operating our facilities in the most efficient manner.

### LEED Building Projects at Inova

#### Inova Fairfax Medical Campus, North Tower & Critical Care Wing Renovation

Renovation of the North Patient Tower and Critical Care Wing at the Inova Fairfax Medical Campus began in 2013 and was completed at the end of 2015. This project was multi-phased, encompassing approximately 275,000 square feet. Project goals included reductions in domestic water and landscape irrigation, thermal comfort and lighting level controllability, as well as energy savings through increasing insulation and energy-efficient heating, ventilating and air conditioning systems. LEED certification for the North Patient Tower portion of the project was pending as of the end of 2015.

Inova has a history of implementing successful strategies related to minimizing the health and environmental impacts of our facilities.

### Inova Fairfax Medical Campus, Inova Women's Hospital and Inova Children's Hospital New Construction

The Inova Women's Hospital and Inova Children's Hospital project consisted of an addition to the Inova Fairfax Medical Campus, adding 660,000 square feet to the complex. The project included a 108 bassinet NICU, 8 ORs, 6 C-Section rooms, 33 labor and delivery rooms, 192 private patient rooms for Women's Services, and 118 patient beds for Pediatric Services. There are also miscellaneous ancillary functions which include a new central and detached energy plant, food service kitchen, skywalk to the new parking garage and sterile processing depot. The building opened the beginning of 2016 and LEED silver certification is pending.



# 2014-2015

## Inova Sustainability and Wellness Report

