## Mission

**VISION**
We take risks to bring new ideas into a practical and concrete reality. We use innovation and creativity to improve the health of the communities we serve and to sustain and grow our health care ministry.

**JUSTICE**
We are a voice for the voiceless. We advocate for the most vulnerable and act on their behalf. We are stewards of our resources, aiming to make health care affordable in our communities.

**PRESENCE**
We believe our words and actions need to be in harmony with the mission and vision that our organization represents. We treat others with dignity and respect as each person feels important and worthwhile. We engage people in decisions that affect them.

**SERVICE**
We provide excellent service, care and value.

## Values

**QUALITY**
Top 10% Performance in Quality Outcomes and Patient Safety

**SERVICE**
Top 25% Performance in Patient Satisfaction

**CULTURE**
Top 25% Performance in Employee and Provider Engagement

**GROWTH**
Grow Primary Care
Primary Payer Size by 1%

**AFFORDABILITY**
Reduce Hospital Acuity Costs by 10% (reflecting volume)

## Goals

**EXPAND**
Expand our primary care market presence and perfect the Patient Centered Medical Home Model.

**OPTIMIZE**
Optimize the deployment of primary, secondary, and tertiary care services across our geography.

**ASSIST**
Assist in a culture of performance excellence to drive quality, service and financial performance.

**IMPROVE**
Improve access across our continuum of delivery areas.

## Strategies

- Expand our primary care market presence and perfect the Patient Centered Medical Home Model.
- Optimize the deployment of primary, secondary, and tertiary care services across our geography.
- Assist in a culture of performance excellence to drive quality, service and financial performance.
- Improve access across our continuum of delivery areas.

## Initiatives

**MUST DO, CAN’T FAILS**
Are the initiatives we undertake to achieve our strategies and meet our goals.

- Must Do, Can’t Fail #1: Patient Centered Medical Home Model
- Must Do, Can’t Fail #2: Quality Improvement Program

## Councils

**QUALITY COUNCIL**
Drew Mowery, MD
President, Affinity Health System

**SERVICE COUNCIL**
Arleen Hill
Regional Vice President, Northern Region

**CULTURE COUNCIL**
Sister Lisa Baals
Sister, Vice President, Mission and Culture Integration

**GROWTH COUNCIL**
Ben F. Hines
Senior Vice President and General Counsel

**INNOVATION & AFFORDABILITY COUNCIL**
Ben Hines
Senior Vice President, Population Health Systems

## Ministry Health Care

For more information about our strategic planning process or to submit a Must Do, Can’t Fail for consideration, visit:

ministryhealth.org/strategicplan
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Executive Summary

Rethink Stewardship

Affinity Health System has long history of stewardship since its inception when two groups of sisters came to Northeastern Wisconsin and established St. Elizabeth Hospital and Mercy Medical Center. The sisters believed just as the organization does today, “We believe the wise use of our resources today ensures our ability to continue our mission tomorrow.” The value of stewardship at Affinity Health System is powerful. It reiterates a heritage and commitment to sustainability – our dedication to people, planet and our prosperity. In a world where decreasing resources battle an increasing population, the challenge becomes about efficiency; doing more with less without sacrificing exceptional quality.

Placing stewardship into healthcare, an industry criticized for waste, is a recipe for sustainable development. It is no surprise this value at Affinity Health System is shaking off the negative industry perceptions by producing real outcomes by promoting a culture of continuous improvement where the promise of extraordinary person-center care is center stage, to obtaining the highest number of LEED certifications (Leadership in Energy and Environmental Design), and deploying one of the nation’s first environmental management system (ISO 14001). The result is the ongoing construction of LEED facilities (15 to date); Energy Star rated hospitals, and a pursuit of continuous improvement with the implementation of an Environmental Management System.

The natural direction of Affinity Health System parallels the Green Tier program. Placing an organization’s people and impact to planet is priority, creates a positive correlation to prosperity. During 2014 and 2015, Affinity Health System continued its Green Tier commitments that included:

- Implementation of ISO 14001 EMS
- Continuation of sustainable building projects
- Use of recycled paper products wherever possible
- Reduction solid waste and hazardous waste
- Reduction of energy consumption
- Education to workforce of sustainable practices and activities
Background

Since 1899, the Sisters of the Sorrowful Mother (SSM) from Germany came to Wisconsin to take care of patients. In Appleton Wisconsin, this journey began with a farm house where stewardship and sustainability was a daily practice and mindset through the reuse of resources like kerosene or the growing garden adjacent to house. Fast forward to today; St. Elizabeth Hospital now stands six stories tall at nearly a million square feet serving thousands of patients each year on a 17 acre campus that is land locked in the heart of a residential area nearby the Fox River. Throughout the decades, as the community grew, so did the hospital and its patient services. In April 2013, St. Elizabeth Hospital along with the greater organization of Ministry Health Care joined under the national umbrella of Ascension Health growing to become the largest nonprofit healthcare system in the country with over 140 hospitals and 150,000 employees in over 24 states.

Despite the growth, the organization and facility still focus on its internal and external stakeholders and community. “By empowering our culture, aligning systems and making continuous improvement part of daily activity, the person we care for is at the center of everything we do supported by behaviors and performance,” says Gary Kusnierz, VP Performance Excellence at Ministry Health Care. Kusnierz has been on championing the design and construction of St. Elizabeth Hospital since 2006 and was recognized nationally by Healthcare Design Magazine’s HCD 10 award in 2013. The LEED design and process work has led to an emergency department that jumped in satisfaction scores from 62% to 93% becoming the top 5% of all emergency departments in the country.
St. Elizabeth Hospital from the air clearly has a heat island effect issue. With surface parking fitting in every adjacency possible, an impressive 17,000 square feet of living roofs offer a counter to concrete coverage. Along the south side lays the Heart Lung and Vascular Center which obtained LEED Gold designation in 2010. In the southwest corner is the Women and Families department where the post-partum and labor and delivery suites became the site for the country’s first implementation of an active chilled beam system in any acute care facility. The new northwest corner has been renovated to become a no-wait emergency department while the northern most part of the campus along Fremont Street is LEED Gold with a patient bed tower. Finally, on the eastern side of the campus sits the renovated Cancer Center which also has living roofs with direct patient views.
The campus during its four phases of construction has held onto a strong Energy Star score, which as of May 2015, is an 86/100 equating to the top 14% of energy efficiency among hospitals nation-wide. This is in part due to an aggressive reduction goal of 30% electricity and natural gas usage set in 2009 to combat the campus growth. The EPA label became official later that year.

Objectives and Accomplishments

St. Elizabeth Hospital Campus Fast Facts

- 1017 Full-Time Equivalents (associates).
- Gross square footage is 857,054 with 98,461 square feet of parking.
- One four story parking garage.
- Over 140 staffed beds available.
- Number of MRI scan suites = 2
- One mobile MRI machine available on campus during certain days.
- Four electric meters and two natural gas meters.
- Energy Utilization Index (EUI) is 156.4 where the national average is 250.
• 90% recycling rate on new construction projects (e.g. 635 tons of metal, ceiling, carpet tiles, wood, etc. avoided the landfill from the emergency department and surgical procedure area.
• 100 year life cycle on Brownfield development.
• 10-20% pre consumer and post-consumer materials in new construction areas. That impacts virgin materials and includes concrete, asphalt, steel, and various tiles.
• 11,000 square feet of living roof access for patients and 6,000 square feet of living roof access for associates.
• 63% roof made of high albedo (white coefficient) metals and vegetation.
• Patient bed tower decibel rating <40 DBSTC
• Emergency department decibel rating <50 DBSTC
• Employee engagement results up 15% over the past 5 years (clinical associates).
• Over 20 environmental champions (employees with ISO 14001 auditor training).
• Over 30 environmental events executed and four annual environmental goals since 2012.

VOLATILE ORGANIC COMPOUNDS

LOW VOC
POLLUTION PREVENTION PLANS - MATERIALS SCRUTINIZED FOR LOW VOC FOR WELLNESS (PAINTS, COATING, ADHESIVES, SEALANTS, FLOORING, COMPOSITES, WOOD & AGRIFIBER)

<50 PPM FOR FLAT PAINTS, AEROSOLS <250PPM, GLUES SEALANTS AT 250-500 PPM

• Energy Star ® has long been held at this site despite the expansion as shown below:
ISO 14001 (Environmental Management System)

“We’ve been able to achieve high levels of sustainability solutions across the system because we empower associates that are responsible for their work from a process improvement standpoint. For example, in our ISO 14001 journey, we launched events around gaps in environmental performance. Our hazmat protocols and procedures showed our response time in an undesirable range. A formal process improvement event gathered all the associates involved in that process from emergency department staff, safety and security, emergency preparedness, environmental services, facilities and through a 5s (sort, straighten, sweep, standardize and sustain) we were able to inventory all the personal protective equipment and establish standard work for donning and doffing so that our teams could be ready to handle hazardous event within two and half minutes. After the concerns of Ebola emerged, we revisited these standards with quality experts to ensure our associates were ready in case of an outbreak event. This is an example of engagement that takes sustainability to the next level,” says Kusnierz.

As emphasized earlier, St. Elizabeth Hospital has an impressive LEED history given its rapid growth and renovation in recent years. Its LEED boundary originally started from project to project but after much collaboration with the United States Green Building Council (USGBC), its latest submission is an all in one that includes the 90 patient bed tower (Fremont Tower), cancer center, central utility planet (CUP), emergency department (ED), women and families and surgical procedure area (SPA). Even the central utility plant, which houses high efficiency boilers, chillers, generators and other essential power, submitted with 47 points under LEED for Healthcare rating checklist in the spring of 2014. The innovation credits around this aspect of the building highlights the level of care and planning that went into energy and water performance through the use of “free cooling.”

Free cooling uses outside air combined with cooling tower operations to maintain certain temperatures for chilled water and AC operations (shown below). This is one example of how the integrated delivery team at St. Elizabeth Hospital used regional resources to make the campus have less of an impact to the community and lessen the burden on natural resources as coal is railed for steam generation. Another innovation credit is the green cleaning policy which uses the rigors of Green Seal, John & Johnson’s Diversy standards and annual surveys to measure occupancy data on overall cleanliness and purging of non-green cleaners and aerosols. The facility in 2011-2014 elimatined the majority of its cleaning aerosols and switched to high efficacy floor scrubbers that use electricity to charge debris particles instead of using water.
Free cooling loads are tweaked with until the building software automates levels. Below: The cooling tower holds as a background for Fred Betz of Affiliated Engineers highlights the advantage of regional technologies. The cooling tower cells sit high above ground and monitored routinely to ensure they are free of debris.

“Free cooling is climate specific and it is advantageous for regions like Wisconsin where a third of the year the operational performance is based on cooling loads and having enough run-time. It is not a one size fits all application. Taking into consideration the ASHRAE Climate Zone Map, regions 5-8 is appropriate with region 4 needing more assessment.”

Fred Betz @ Affiliated Engineers Inc. (AEI)
An impressive accolade to hitting the energy and atmosphere credits within LEED for Healthcare was the implementation of an active chilled beam system directly into patient rooms. Instead of relying on traditional HVAC systems which condition air prior to entering the room and using constant volume boxes to push that air, the active chilled beam system uses variable air volume boxes and conditions the air in the existing space by circulating the temperature through coils in which chilled or heated water treats the ambient air. The diagram below from the labor and delivery area highlights how this works. In each patient room the technology was installed, a 30% energy reduction occurred equating to massive savings and incremental points in the LEED checklist.

Arguably, the best feature of the active chilled beam system is the increased satisfaction among patients and associates. According to the HCAHPS (hospital survey) scores, the pre and post data show correlations to occupancy satisfaction in two distinct categories within the built environment. Firstly, the thermal comfort went from its previous state of 68% satisfied to 84%. Considering that temperature is one of the biggest complaints in any building, this 16% jump was a major accomplishment as patients are extra sensitive to the built environment. Next, the acoustic and quietness scores rose from 71% satisfied to 81%. This technology was so successful that every patient room carries this standard to further reduce energy usage while considerably affecting occupancy satisfaction. The hospital survey scores for the Women & Families department can be seen below.
Behind the scenes, an upgraded Siemens Building Automation System gives to a more efficient operation of the energy management system which constantly communicates back to dashboards to let various levels of users assess conditions. A sample image is below of an HVAC system displaying current temps, airflow conditions, etc. This system is responsible for monitoring and adjusting controls through the entire five stories of the patient bed tower. Each individual component (HVAC, lighting, and shading) is tethered through a holistic approach. Thresholds are determined for each system for safety measures while algorithms do predictive modeling and real-time evaluation.

To further hit the more stringent performance measures within LEED for Healthcare revision 4, the new 90 patient bed tower has ground-floor and rooftop gardens, which benefit both patients and the environment. Instead of being covered with asphalt shingles or metal panels, roofs along major corridors are covered with plants. These living roofs functionally help with acoustics and insulation while providing a more appealing view for patients. Research shows that patients who view natural scenes heal more quickly and need less pain medication with correlations to lowered anxiety (as much as 68%) and increased creativity (as high as 36%) within a 15-20 minute time span. While a traditional roof can heat up to 90 degrees above air temperature, living roofs usually don’t rise above air temperature in the summer. If one looked at two buildings standing a block apart on a warm sunny day, the traditional roof could reach 160 degrees while the green roof wouldn’t get above 70 degrees. A living roof helps the...
whole neighborhood stay cooler and is a perfect solution for St. Elizabeth Hospital as shown in the aerial overview.

Patients have access to the courtyard adjacent to the Marketplace (cafeteria) which is revamped to cater more robust locally sourced foods while associates have access to a rooftop patio. The living rooftop patio can only be accessed by associates that have key access. This level of security is vetted out during orientation; therefore, employees from other sites visiting St. Elizabeth Hospital would not be able to open the door on their own.

The courtyard has a peanut shaped walkway that dips up and down in elevation and has a fountain which re-circulates water in a catch basin with a bio-filter. Patients, visitors and employees are seen enjoying these features in virtually all shifts and times of the day. In regard to overall access, the LEED credit of community connectivity is satisfied by this campus. That is that within a half mile radius of St. Elizabeth Hospital, over 15 services are available (laundry services, daycare, restaurants, apartments, dental care, and more).

At every major entrance bike racks, showers and changing rooms are available. There are two sides of the campus that bus stops and routes that frequently pass daily and the sustainable transportation site credits are further diversified by the installation of an electric vehicle charging stations that is offered free of cost to patients, visitors and associates. In the two years the EV stations has been in operation, over 615 charge ups have occurred. Over 17% of the carbon emissions from hospitals are from employees driving to and from the site. Since this feature was introduced, six employees at St. Elizabeth Hospital have EV vehicles from physicians to front line associates (vehicles include: Prius plug in, Nissan Leaf, Ford CMax, Chevy Volt and more). Below the direct usage of this EV station shows the offset in fossil fuel consumption while the photos show the location and plug of the actual unit next to the Welcome Center.
As part of the ISO 14001 program, other aspects of environment and building performance have been enhanced by the ongoing nature of finding opportunities for improvement. In all of the stairwells at St. Elizabeth Hospital, LED fixtures are equipped with daylight harvesting and motion sensors. This means that when occupants step within eight feet of the LED fixture, it goes from low watt usage capable of showering 15 foot candle illumination to 25 when triggered. This helps with energy efficiency by 52,400 kilowatts a year or approximately five thousand dollars a year and improves safety by having wall to wall coverage.

Waste receptacles have also been standardized across the campus. Recycle stations (made up of 795 recycled milk gallons with antibacterial coating) are in every major public space. Therefore, occupants in waiting rooms, vestibules, main corridors
and other convenient locations don’t have to second guess where to place their consumables. This effort increased the annual recycling by 5,000 pounds because of easy visual standards for occupants who in the previous state had to second guess where to discard due to different colored bins and inconsistent labeling. Nearly 40 of these units can be found throughout the campus proving that low technologies can be just as effective as the high end. Moreover, each of the campus surface lots have regular sweeping from May to October in order to prevent dirt and debris (including garbage) from enter the storm sewer system, vortex and bio ponds.

Moving on to the Marketplace, the LEED rating checklist had heavy influence for the entire food and nutrition team in their redesign. This new space opened in early 2015 and minimizes water by high efficiency equipment that in addition has earned the EPA Energy Star label. Water conservation is one of four annual environmental goals for the facility. It is the reason why the new patient bed tower uses 38.1% less water than traditional ASHRAE codes or 300,000 gallons less from domestic sources (toilets, faucets, and showers). Three major sky lights provide plentiful daylight while LEDs lamps are overhead for low heat rendering consistent natural white light. Building materials in this space are locally sourced wood with locally sourced foods from Riverview Gardens. The Marketplace is open to the entire community and has direct courtyard access which is utilized daily. Food waste in the previous cafeteria followed a completely different process, vendors and flow, amounting to nearly 20,000 pounds annually. Now pre-consumer food waste is reused for small dishes called “outtakes” and post-consumer food waste is minimized to several thousand (according to preliminary and partial 2015 data). This aspect of the building brings high praise from the community and the occupants. Below, a shot is taken from upon entering the Marketplace showing the seating and lighting in night-time setting.
Audit Summary

The following is the result of Environmental Champions and other ISO 14001 trained auditors who have completed environmental audits and reviews. The auditors follow a rigorous process of interviewing as well as conducting inspections. Conformity statements signify that a failure of intent, implementation, and effectiveness has NOT occurred. Consequently, an action request (AR) are items that need addressing while an OFI is simply an opportunity for improvement and is dependent on the department manager’s time and resource to implement.

Central Utility Plant

Scope

The priority of the audit was to assess the environmental impact of plant operations and determine efficiency and disposal practices:

- Assess the levels of PPE needed and emergency preparedness for spills or leaks
- Review existing systems that can affect environmental performance to confirm level of conformance to ISO 14001.
- General tour central utility plant that include boilers, generators and chillers.

Findings

- 13 conformity statements
- 1 action requests (AR)
  - Already corrected – the purchasing of extra apron and extra gloves for boiler chemical loading
- 5 opportunity for improvements (OFI)
  - 5s (sort, straighten, sweep, standardize, sustain) the spare parts area for better usage and recycling of obsolete equipment
  - Get items not utilized off the floor
  - Replace broken glass graduated cylinder
  - Dispose expired gum block
  - Assess spill response with the newly obtained large spill kit

Audit Conclusion

The central utility plant at St. Elizabeth Hospital has numerous great best practices that include having up to date and easily accessible material safety data sheets, annual inspections on boilers, visual monitoring and measurement markings on boiler chemicals (55 gallon drums), PPE like face shields, daily visual walkthroughs, eye wash stations, labeled shelves and guidelines posted like refrigerant changeover. The minor
opportunities for improvement can turn into formal process improvement events to maintain the space and utilize equipment better.

Emergency Department/Surgical Procedure Area

Scope

The priority of the audit was to assess the environmental utilization of the new space and storage practices:

- Review existing systems that can affect environmental performance to confirm level of conformance to ISO 14001.
- General tour of flex spaces, patient areas, office operations and storage areas.

Findings

- 7 conformity statements
- 2 action requests (AR)
  - Remove items below sinks in the staff room
  - One eye wash station had low pressure that is now corrected
- 6 opportunity for improvements (OFI)
  - Asset tag for slushy machine
  - Opened food items in the staff room
  - Disposal of expired sanitizers
  - One open supply item in Trauma 2
  - Assess public needle drop off (laundry detergents containers are compliant)

Audit Conclusion

The emergency department and surgical procedure area at St. Elizabeth Hospital has numerous great best practices that include displaying procedures visually at point of use. Items in the fridge for patient consumption were dated. Shelves had been labeled and Kanban-ed for just in time ordering. Contamination supply kit readily accessible and container requirements in all spaces had good standards and practices. The department has had a 20% increase in volume of patients in the first year so storage is increasingly demanding in order to address patient care needs.
Cancer Center/Radiology

Scope

The priority of the audit was to assess the environmental utilization of the new space and storage practices:

- Review existing systems that can affect environmental performance to confirm level of conformance to ISO 14001.
- General tour of control rooms, patient areas, office operations and storage areas.

Findings

- 5 conformity statements
- 1 action requests (AR)
  - 5s satellite room to recycle obsolete items
- 6 opportunity for improvements (OFI)
  - Miscellaneous construction and medical equipment in the MRI equipment room
  - New MRI equipment room adjacent to control room has an odor from rag
  - Phone lines on the floor could be wall mounted
  - Items in front of valve should be clear
  - Miscellaneous storage of paper storage, blueprints need to be discarded and recycled
  - Better controls for storage

Audit Conclusion

Cancer and Radiology has great operations to take care of patients. The storage areas need to be reassessed from finished construction as numerous items have been leftover. Facilities has already engaged and working with the department to address these items (e.g. collapsible ladder).
Conclusion

The Sisters of the Sorrowful Mother (SSM) are honored that the values of sustainability and stewardship are still executed at St. Elizabeth Hospital while putting patients at the center. The campus has numerous accolades and design features that make it a low carbon impact for the community. Even the artwork is all hand-made by local artists. These are the touches that help bring a facility to life and connect to occupants.

(Above: A courtyard entrance shows the inviting space and privacy shaded glass of patient rooms while artwork hanging on the corridors is displayed to inspire creativity.)

With the partnership of Ascension Health, the four annual goals for St. Elizabeth Hospital will focus on:

Energy Efficiency - St. Elizabeth Hospital is responding to climate change by a facility wide energy reduction effort where RCx began in December in addition to implementing energy conservation measures (ECMs). The intent is to improve the energy gap n Energy Star performance while simultaneously achieving the BBC’s 0% reduction goal by 2020. Over 30 capital ECMs have been identified to further reduce energy loads while looking at specific advantages in the factors of safety, patient care experience, building capability/controls, associate impact and energy savings.

Education and Communication – St. Elizabeth Hospital has a goal to maximize the Practice Greenhealth Membership by engaging associates and hosting learning sessions. At least 100 associates regularly using the PG membership is desired. The organization has consistently had publications in the community on the impact of green practices and infrastructure (e.g. LEED projects) while hosting public events. St. Elizabeth Hospitals also hosts the Department of Natural Resources (DNR) as part of their green teams. The organization participates in the DNR Green Tier program with regular audits, all of which will continue into FY16 and FY17.

-Advance the DNR Green Tier program to other hospitals - audits and annual reports are made public
-Publicize PG benefits and host webinar sessions at the departmental level while tying applicable CEUs
- During process improvement events, utilize sharing calls with PG's Director of Facility Engagement, Janet Howard (already in progress for Sustainability & Wellness Initiative)
- Continues sharing case studies through national (PG, Healthcare Design Magazine) and local platforms (@Affinity Magazine)
- Collaborate with other health ministries and ESP to share best practices and metrics

**Water Conservation** – St. Elizabeth Hospital has the goal to first establish baseline usage for water across the portfolio of hospitals (Schneider Electric integration has been delayed to FY16, and then set a reasonable reduction target (e.g. 5%) which can be met with behavioral activities and other supporting technologies/infrastructure. Begin to research reclaimed municipal water systems in addition to grey water systems for cooling towers.

- Finish meter data and access to Resource Advisor
- Establish baseline usage by each hospital site
- Set target across the portfolio
- Identify opportunities to reduce usage at each site (i.e. use of aerators, leak testing, education and awareness, etc.)
- Conduct walkthroughs with energy advisors (FOCUS on Energy) to further incentivize water projects
- Educate internal and external associates/community on water conservation practices
- Assess municipal reclaimed water and grey water systems for applicability

**Leadership and Infrastructure** – St. Elizabeth Hospital shall engage its leadership in the support of ESP and local sustainability initiatives. Executive champions at each site are desired to foster education and create opportunities to reduce impact in the nine categories of healthcare waste. Goal is to informally achieve HHI's Engaged Leadership Level 1 (e.g. developing a clinical champion).

- Network with peer groups and competitors on best practices (University of Wisconsin Oshkosh, Theda Care & Gundersen Health)
- Conduct site tours with leadership to learn firsthand the benefits of sustainability and renewable technologies
- Create system wide sustainability plan