

Going Green Saves You Green!

Evans Army Community Hospital, Fort Carson, CO.

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Introduction

As a part of Army Medical Command's (MEDCOM) ongoing effort to increase mission readiness through sustainability and move towards the goal of net zero medical treatment facilities (MTF), Evans Army Community Hospital (ACH) at Fort Carson, Colorado, has developed and implemented a sustainability action plan in alignment with the MEDCOM Sustainability Strategy, Executive Order (EO) 13514, the DoD Strategic Sustainability Performance Plan, and the Army Sustainability Campaign Plan.

The sustainability effort at Evans ACH began with formation of the Evans Sustainability Team in April 2011 during a workshop supported by MEDCOM. The workshop provided the Evans ACH Sustainability Team with the knowledge and guidance needed to jumpstart a sustainability program tailored to the specific needs of Evans ACH while also following the overarching Sustainability Program developed by MEDCOM. During the workshop, the newly-formed sustainability team developed their draft Sustainability Action Plan for their MTF, including metric-driven goals, targets, and initiatives. Based on information taken from the MEDCOM baselining sustainability data, Evans ACH was able to see where they stood in sustainability against other MTFs and then set goals that were appropriate to their mission while also supporting the goals of the MEDCOM Sustainability Strategy.

So far, the initiatives started at Evans ACH have, among other benefits, eliminated the use of plastic wrap in laundry operations, which has kept 354,000 linear feet of plastic wrap from being disposed in landfills over the last seven months. This initiative will save Evans ACH \$12,000 per year. Evans ACH was also able to reduce the number of cleaning chemicals used from 25 to 19 with 10 of the remaining cleaning chemicals being Green Seal Certified for an annual cost savings of \$32,000. The cleaning staff has improved from a 25% use of microfibers for mopping to 75% use. The increased use of microfiber mopping resulted in a 39% reduction in the amount of chemicals needed for cleaning, and a labor hour savings estimate at \$340,000 on an annual basis. The total annual cost savings attributed to these ventures for our facility is nearly \$400,000.

Methods

The Evans ACH Sustainability team was established in April 2011 to develop and implement a sustainability Strategy in support of the HQ MEDCOM Sustainability Strategy and EO 13514. The purpose of the Evans ACH Sustainability Team is to support Evans ACH by helping the facility to maintain mission readiness, improve quality of life for patients and healthcare staff, strengthen relationships with the community, and reduce the total cost of operation ownership. During the sustainability workshop, the Evans ACH Sustainability team developed sustainability goals, targets, and initiatives tailored to their

MTF that support the mission of the hospital and the MEDCOM Sustainability Strategy. The Evans ACH Sustainability Team includes members from all departments, and no previous knowledge or training was required to be a part of the team.

During the workshop, Ms. Mary Barber, Fort Carson Sustainability Resource Officer, educated the Sustainability Team on Fort Carson's efforts to become an Army Net Zero installation and the critical role Evans ACH plays in achieving this goal. Based on the information presented to them during the workshop, the team developed the Evans ACH Sustainability Action Plan, including short and long term sustainability goals for the hospital. The goals established by the Evans Sustainability Team include:

- Reduction of solid waste by 50% by 2015 and by 100% by 2020
- Reduce generation of regulated medical waste of (RMW) to less than 10% of the total hospital waste stream
- Reduce usage of potable and nonpotable water
- Reduce energy consumption by 30% by 2015

After the workshop concluded, the team immediately set about implementing their sustainability action plan. Improvements to Evans ACH began almost immediately, with the installation of high efficiency water fixtures and lights in the hospital's bathrooms and the replacement of traditional tank water heaters with more energy efficient instantaneous water heaters.

The Team developed a comprehensive recycling program and began weighing waste that was transported to the Fort Carson landfill to allow tracking of the amount of waste being diverted to recycling. The Team developed a new contract to form a "Green Partnership" with Goodwill Industries of Colorado Springs Fresh Start Commercial Laundry. This partnership led to a dramatic reduction in the amount of plastic wrap used to cover clean laundry at Evans ACH. Through this partnership, Goodwill Industries is researching more water efficient laundry machines, including implementation of wash systems which could reduce water consumption for the laundry by 67%. The Team is also working with the Evans ACH Environmental Services Department to increase the number of green cleaners used in the hospital.

The sustainability effort at Evans ACH has been ongoing since April 2011 and data is constantly being gathered by the Sustainability Team. Data is collected through site audits conducted by the Team and sent to MEDCOM for evaluation and further guidance.

Results

The Green Partnership with Goodwill Industries resulted in the elimination of over 354,000 linear feet of plastic wrap from being disposed of in landfills just in the seven months since implementation of the Evans Sustainability Program. This is the equivalent of saving 1,500 gallons of petroleum that would otherwise have been needed to create the unused plastic wrap. This also resulted in a cost savings of \$12,000 annually. Plans are underway to begin using a tunnel washer for laundry services which could lead to an 8,000,000 gallon annual reduction in water usage for laundry.

The Evans ACH Sustainability Team's effort with the housekeeping staff at the hospital led to a 24% reduction in the number of cleaning chemicals used (dropping from 25 to 19 chemicals) and saved the organization \$32,000 annually. Today, 10 of the cleaning chemicals used in Evans ACH are Green Seal Certified. The Sustainability Team has also worked to increase the amount of microfiber mopping in the hospital. The cleaning staff has improved from a 25% use of microfibers for mopping to 75% use. The increased use of microfiber mopping resulted in a 39% reduction in the amount of chemicals needed for cleaning, which also yields cost savings and a healthier environment for Evans ACH patients and staff. It also led to more efficient housekeeping practices which reduced overall labor hours by at least 10% (or \$340,000) annually. Many patients and staff have reported a reduction in asthma symptoms after the switch to the greener cleaning products and the recent annual contract negotiation for housekeeping services resulted in a cost reduction slightly over \$500,000 (10% of the contract price) as a direct result of these actions.

Evans ACH is currently investigating switching to eco friendly trash liners and installing more recycling containers than trashcans in their facility, with a goal of reducing waste production by 20% in the next fiscal year. A scale to weigh solid waste to monitor the success of this effort has been installed to track solid waste and recycling in support of the MTF sustainability goals, MEDCOM sustainability goals, and Fort Carson's Net Zero Waste goals.

The Evans ACH Sustainability Team conducted an audit of hospital facilities to find mercury containing equipment. They did not find any and will nominate their hospital for a national Making Medicine Mercury Free award in January 2012.

To improve employee health, the Sustainability Team organized a bike competition to see who could bike the most miles on the most days to and from work at the hospital. There were six winners, resulting in a total of 1,895 miles biked to work over the course of the contest.

Data gathering and evaluation of the Evans ACH Sustainability Program is ongoing and continuing to develop. The Sustainability Team conducts regular audits of all activities and sends all data to MEDCOM for evaluation and inclusion in the annual MEDCOM sustainability report.

Conclusion

The Evans ACH Sustainability program will continue to save MTF resources into the future. The establishment of a holistic sustainability team at Evans ACH supports not only the hospital but also Fort Carson, MEDCOM, and America's sustainability goals. The process of sustainability team formation paired with metric-driven goal development is already being replicated at MTFs throughout MEDCOM and has proven highly successful. Evans ACH serves as a prime example of how a sustainable MEDCOM facility can not only improve the MTFs bottom line and support MEDCOM/Army objectives but also how it can improve the health of staff, patients, and the surrounding community.