Hospital Climate Solutions

Sara Wohlford, MPH, RN
Hospitals and Health Systems in the United States…

- 42 pounds waste per patient day
- 11,725 tons per day
- 10 percent of the nation’s energy
- World’s seventh-largest producer of carbon dioxide
- Major contributor to air pollution

*Source: https://practicegreenhealth.org/topics/waste/waste-0
Engaged Leadership

Support an organization-wide sustainability initiative
Healthier Hospitals
Executive Commitment Statement

- Comprehensive environmental sustainability program
- Sustainable, measurable outcomes
- Integrating environmental sustainability into our core business strategies
- Tracking and sharing results
Less Waste

Reduce waste and increase recycling
Less Waste Goals

Achieve a 20 percent recycling rate compared to total waste

CRMH: Recycling Rate Compared to Total Waste

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent Recycled</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>13%</td>
</tr>
<tr>
<td>2017</td>
<td>15.2%</td>
</tr>
<tr>
<td>2018</td>
<td>15.5%</td>
</tr>
<tr>
<td>Goal</td>
<td>20%</td>
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</tbody>
</table>

CRMH Pounds Recycled

<table>
<thead>
<tr>
<th>Year</th>
<th>Pounds Recycled</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>710,297</td>
</tr>
<tr>
<td>2016</td>
<td>732,393</td>
</tr>
<tr>
<td>2017</td>
<td>870,980</td>
</tr>
<tr>
<td>2018</td>
<td>866,560</td>
</tr>
</tbody>
</table>
Mission Donation Program

- 97,000 pounds (Over 48 Tons!) medical supplies and equipment donated since 2016

“Reduction and reuse are the most effective ways you can save natural resources, protect the environment and save money.”

- United States Environmental Protection Agency
Evaluating

- Construction and Demolition Recycling and Diversion
- Soft plastics recycling

*Interventional Radiology: 2 Cases*
Healthier Food

Offer healthier food for staff, patients, and visitors
Healthier Foods

Goal

• Increase local: 7% over baseline year
  – Located within a 250-mile radius of the facility
  – 2014 (Baseline): $58,000
  – 2016: $135,000
  – 2017: $322,000
  – 2018: $305,462
Healthier Foods

Goal

• Reduce/eliminate use of Styrofoam
• Eco-friendly/Compostable Serviceware purchased by D&N
  – 2016: ~1%
  – 2017: 33.8%
  – 2018: 41%
American consumers, businesses, and farms spend **$218 billion a year**, or 1.3 percent of the gross domestic product (GDP), growing, processing, transporting, and disposing of food that is never eaten.*

It is estimated that 10 to 15 percent of an average hospital’s waste is comprised of food waste.**
Food Waste

• Salads disposed:
  – Yearly projection: 42,912
  – Pounds of salads: 8,153

• Milk cartons disposed:
  – Yearly projection: 35,040 cartons
  – Pounds of full cartons: 18,571
Leaner Energy

Reduce energy use and greenhouse gas emissions
Carilion Roanoke Memorial Hospital (2015): Net 45,916 tons of CO2 annual emissions
CNRV Solar Tracking Field

• 4,000 solar panels
• 5 Acres
• Generate 17% annual energy needs
• Offset 3.2 million pounds of CO2 annually
Leaner Energy

LED Upgrades

- CRMH
  ~3.84 million kWh
- CNRV
  ~230,000 kWh
- CGCH
- CASB
  ~500,000 kWh
- Garages
  - 6 Riverside
  - Crystal Spring
- Laundry
- Exterior:
  - Cancer Center
- Next Interiors:
  - 3 Riverside
  - 1 Riverside
  - CFM Martinsville
  - Crystal Spring
  - ION
  - HR 3rd Street
  - Warehouse
  - Brambleton CFM

Solar Feasibility

- New Rehab
- CRMH
- Franklin Road Warehouse
- Riverside 1
- CRCH
- Highland MOB
- Crystal Springs Medical Building

Occupancy Sensors

- CRMH (50 locations)
**Water**

**Carilion Laundry Services**

- New Tunnel Washer
- Decreases water utilization by **35,000 gallons per day**
- Increased press capacity decreases drying times, reducing electricity and natural gas consumption
Employee Engagement
Carilion Clinic and VTCSOM invite you to an educational event for physicians and nurses

Health in a Changing Climate
Understanding the Impacts on Virginians

WHEN:
8:30 a.m. - 2:15 p.m.
Saturday, Oct. 5, 2019

Keynote speaker is Farham Jaberi, M.D., M.P.H., chief deputy commissioner at the Virginia Department of Health

WHERE:
Carilion Roanoke Memorial Hospital
Sixth Floor Auditorium
1906 Bellevue Ave., SE
Roanoke, VA 24014

TOPICS INCLUDE:
- Causes and health effects of a changing climate
- Health practitioners’ response and solutions to reduce health risks
- Changes in disease vectors and allergens
- Impacts on vulnerable populations
- Climate science research updates from Virginia Tech and the U.S. Environmental Protection Agency
- Clinical case presentations by Carilion physicians

REGISTRATION INFORMATION:
To register, visit: CarilionClinic.org/conferences
Deadline to register is Friday, Sept. 27. No refunds issued after Sept. 27, 2019
Carilion Clinic attendees: Registration fee is covered by Carilion Clinic
External attendees: The fee is $15. Student attendees: The fee is $10.
Lunch will be provided
Employee Engagement

- Supply waste reduction
- Linen Efficiency
- Pharmaceutical waste sorting and proper disposal
- Regulated medical waste sorting and proper disposal
- Basic recycling
- Battery recycling
- SCD Sleeve Reprocessing
- Pulse oximeter reprocessing
- Mission donations
- Patient education: Climate and Health
- Energy Reduction/Behavior Change
- Print Reduction Campaign
Your Role

1. Sustainability Champion
   (sewohlford@carilionclinic.org)
2. Clinician and Nursing Engagement
3. Bridging the communication gap
4. Empower
Questions?

EACH ONE OF US CAN MAKE A DIFFERENCE.
TOGETHER WE MAKE CHANGE.