



NYSP2I Performs Energy and Environmental Impact Comparison of Three Welch Allyn Single Use Blood Pressure Cuffs

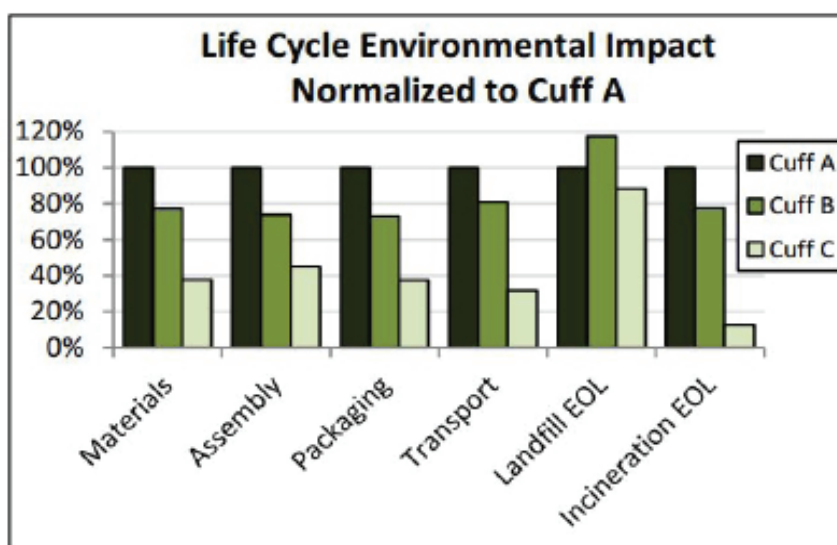
Welch Allyn is a manufacturer of medical devices, products and solutions used by caregivers in doctors' offices, hospitals, and emergency response settings with headquarters in Skaneateles, New York.

Challenge

Welch Allyn's EcoCuff, a single patient use blood pressure cuff, was designed to be environmentally preferable to previous models by using less material and consisting of one, homogeneous material. Welch Allyn needed a method to quantify the environmental impacts of three versions of their disposable blood pressure cuffs in order to determine environmental preference when used in a single patient use manner, identify areas for future improvement, and establish the optimal end of life strategy.

Solution

New York State Pollution Prevention Institute performed life cycle assessments (LCA) of three Welch Allyn blood pressure cuffs in compliance with ISO 14040 and 14044 LCA standards. Each cuff was modeled with two end of life scenarios - landfill and incineration - to determine the optimal end of life management strategy for each cuff.



CHALLENGE

- Welch Allyn needed a method to quantify the environmental impacts of three versions of their disposable blood pressure cuffs

SOLUTION

- NYSP2I performed LCAs of three Welch Allyn blood pressure cuffs in compliance with ISO 14040 and 14044 LCA standards

RESULTS

- Welch Allyn's EcoCuff uses approximately 50-60% less energy and results in 50-60% less environmental impact than the other two disposable cuff models
- LCA results identified operations throughout the life cycle that contribute significant impact which allows the design team to focus on these processes to further reduce the impact of future designs
- Welch Allyn is able to educate and assist customers in making more informed purchasing and end of life management decisions
- Through inventory collection, Welch Allyn identified suppliers that are and are not dedicated to working with them to collect data



Results

LCA results show that EcoCuff uses approximately 50-60% less energy and results in 50-60% less environmental impact than the other two disposable cuff models. LCA results were used internally and externally and Welch Allyn experienced benefits, as outlined below.

- Results were used internally to understand and improve the environmental impact of the cuffs
- The assessment validated the dematerialization and material choices made by product designers
- Welch Allyn was able to understand the influence of their manufacturing operations and finished cuff packaging on the life cycle impacts
- Operations that contribute significant impact were identified, allowing the design team to focus on these processes to further reduce the impact of future designs

Results were used externally to communicate environmental impact of the cuffs

- Validate and support EcoCuff environmental claims made by Welch Allyn
- Educate and assist customers in making more informed purchasing and end of life management decisions

Additional benefits experienced by Welch Allyn

- Educate internal employees and engage other departments and processes that were not involved in the LCA
- Through inventory collection, Welch Allyn identified suppliers that are and are not dedicated to working with them to collect data

TESTIMONIAL

“The life cycle assessment (LCA) performed by NYSP2I’s experts was useful in a number of ways. Results allowed our product designers to better understand how the choices they make affect the environmental impact of our EcoCuffs throughout their life. Operations that contribute significantly to environmental impact were identified and targeted to further reduce the impact of future designs. The LCA results validate and support our EcoCuff’s environmental claims which help our customers make more informed purchasing and end of life management decisions. Working with NYSP2I helped us to better understand how to make more environmentally friendly products in the future.”

– Sean Karla, Senior Global Category Manager;
Welch Allyn

NYSP2I PARTNERS

R·I·T

 Rensselaer



University at Buffalo
The State University of New York



New York Manufacturing Extension Partnership

Funding provided by the Environmental Protection Fund as administered by the New York State Department of Environmental Conservation. © 2017 Rochester Institute of Technology. Any opinions, results, findings, and/or interpretations of data contained herein are the responsibility of Rochester Institute of Technology and its NYS Pollution Prevention Institute and do not represent the opinions, interpretation or policy of the State.

For more information please contact us:

111 Lomb Memorial Drive, Bldg. 78
Rochester, NY 14623

Tel: 585-475-2512
Web: nysp2i.rit.edu
E-mail: nysp2i@rit.edu

 R·I·T
Golisano Institute
for Sustainability
ROCHESTER INSTITUTE OF TECHNOLOGY

