

Waste Not, Want Not

U.S. hospitals account for a surprising 8.5% of all greenhouse gas emissions in the country (more than four times more than those caused by the airline industry).^{1,2} Hospitals generate 43 pounds of waste per patient per day.³

Urgent action is needed, and governments are taking notice. Over 50 countries have committed to reducing greenhouse gas emissions from the healthcare sector, including the United States.⁴

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When the delivery of healthcare generates climate changing emissions, human lives are shortened. A study from the United States found a 388,000 reduction in disability-adjusted life years directly caused by greenhouse gas emissions from the health sector.⁵



Climate change increases water and air pollution which can cause and aggravate chronic respiratory disease, such as asthma.⁶ Increased temperatures due to climate change lead to increased ground-level ozone, which cause airway inflammation and damages lung tissue.⁷

Given the impacts of the sector's environmental footprint on global health, healthcare facilities have a moral responsibility to pursue initiatives that not only identify sources of greenhouse gas emissions from the supply chain, but also find lower emission alternatives.

Health practitioners also uphold the Hippocratic oath to do no harm and have a moral obligation to bring the health sector as close to “net zero” emissions as soon as possible.

Use of regulated, reprocessed “single-use” medical devices (SUDs) is a relatively easy switch for hospitals and health systems in North America and Europe, where over 300 types of remanufactured medical devices have been found substantially equivalent to original devices. In 2020, over 10,100 hospitals used over 34 million commercially reprocessed SUDs.

¹ Eckelman, M., et. al, “Health Care Pollution and Public Health Damage In The United States: An Update,” Health Affairs 2020 39:12, 2071-2079

² Gabbatis, J., “Healthcare in world’s largest economies ‘accounts for 4%’ of global emissions,” CarbonBrief, June 19, 2019

³ Choi-Schagrín, W. “How Hospitals Fuel Climate Change,” The New York Times, November 25, 2021.

⁴ “Countries commit to develop climate-smart health care at COP26 UN climate conference,” News Release, World Health Organization, November 9, 2021

⁵ Eckelman, M., op. cit.

⁶ Amato G, Cecchi L, Amato M, et al. Climate change and respiratory diseases. European Respiratory Review. 2014; 23(132):161-69.

⁷ Amato G, Cagani Ca, Cecchi L, et al. Climate change, air pollution, and extreme events leading to increasing prevalence of allergic respiratory diseases. Multidisciplinary Respiratory Medicine. 2013;12.

Remind clinicians that the FDA has over 20 years' experience regulating the field and have found reprocessed devices to be as safe and effective as new devices.

But industry experts agree that's a small portion of the number that could be reprocessed. In the cardiology space, for example, hospital departments typically only realize about a third of reprocessing's savings potential.⁸

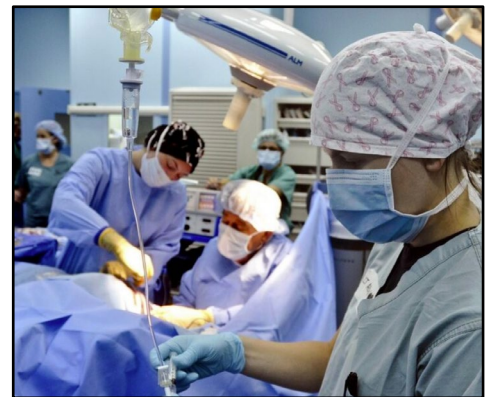
AMDR recently released its first cross-tabs analysis to understand the purchasing trends at hospitals that use reprocessed devices. The top 10% performing hospitals are setting the bar high. If all hospitals realized the same savings from reprocessed devices as these top 10%, over \$2.2B in additional savings would be realized by the U.S. health sector.

Action Plan

Following are actions taken by hospitals that save the most from reprocessed devices.

1. Commit to Sustainable Procurement Plan

Sustainable purchasing guides are emerging, such as Practice Greenhealth's [Sustainable Procurement Guide](#), that includes a calculator for reducing greenhouse gas emissions in the supply chain. Turn to these guides to learn about the full range of tools available to reduce your hospital's carbon footprint.



Include a review of purchasing of the over 300-types SUDs for which FDA, or other regulatory authorities allow reprocessing. Look for new app-based tools entering the marketplace that can help you calculate the reduction in greenhouse gas emissions your institution will save if as many of reprocessed devices as possible were used (estimated available in early 2023).

2. Educate

Educate leadership across the management matrix that reduction of greenhouse gas emissions starts with more sustainable supply chain decisions. Inform what the circular economy is and what your institution is doing to convert from linear to circular thinking.

Remember to inform that, contrary to the perception of greener decisions costing more, reprocessed devices *reduce* costs without compromising patient safety. Consider adding a regular column in internal newsletters, intranet news portal, blog or other internal comms materials to continuously bring employees up to speed on sustainability changes and the reasons for them.

Very important and often forgotten is the inclusion of clinicians in the discussion about reprocessing. Ultimately, the physician decides what devices to use – and whether she or he is OK with using a reprocessed device. Physicians may have had a bad experience with a reprocessed device in the past, when reprocessing was not as advanced as it is today.

⁸ [U.S. EP Labs Losing \\$500 Million Each Year Due to Underutilized Reprocessing Programs](#), EP Lab Digest, June 10, 2020

Transparency helps: physician need to “buy in” and understand the financial implications of reprocessing – and its impact on their ability to work in an ideal work environment. For example, in cardiology departments where clinical integration has been central to the reprocessing program, physicians can see that using reprocessed devices means that they get the best new technology.

3. Remain Vigilant

Single-use devices should be viewed as hospital *assets*, *not trash*. Educate clinical teams to treat them with care and put them in the proper receptacle intended for reprocessing.

Hospitals must work consciously to collect all devices from procedures their reprocessing partner offers. Some reprocessable devices in cardiology yield savings of more than \$1,000 per device, so failing to place even one of these in the reprocessing collection system is wasteful financially and environmentally. Your reprocessing team may need to go to great lengths to educate staff about what can be reprocessed and what can't, yet collection compliance can be an issue. Repetition of messaging makes the practice “stick.”

Make sure the reprocessor collects in a timely fashion. Encourage staff to use reprocessed devices first. Be aware of vendor interference in reprocessing programs. No devices are not to be tampered with by non-hospital employees. The breaking or bending of devices to prevent reprocessing, the destroying or hiding of collection bins of devices intended to be reprocessed, or the removing of used devices from collection points should not be tolerated.



4. Manage Vendor Contracts

Ask for transparency in contracts with the manufacturers. Adopt a purchasing and supply chain strategy that does not restrict your ability to maximize the savings of a robust reprocessing program. When presented with new contracts or offers, look for minimum purchase requirements and ensure you do not restrict your freedom to buy what you want, when you want and from whom you want. When looking at reprocessor contracts, ensure accountable and transparent reporting on the devices you have reprocessed. Ask yourself, are you maximizing your potential?

Finally, we all want the latest model of new devices, but does it really offers patient benefits? Some device “upgrades” provide nothing more than microchips that intentionally prevent hospitals from reprocessing their assets. Ask your vendor before you sign on the dotted line.

5. Advocate

Commit to regular internal audits of your sustainability program to determine what advances and new science have revealed to help further reduce greenhouse gas emissions. If you don't have a sustainability officer, create the position and make advocacy for the need for environmentally cleaner decision making within the health sector. Remember to produce graphics annually on the amount of reductions realized through Scope 3 (supply chain) procurement decisions.

For more tips on managing SUD vendors to integrate your reprocessing program, please visit <http://sudreprocessing.amdr.org/AMDR-Practical-Contracting-Considerations.pdf>