UCLA Health x OUCLA Sustainability Action Research Sustainable Product Procurement Guide

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Abstract

Hospitals are incredibly energy-intensive and generate enormous amounts of waste. Thus, addressing inefficiencies in their product procurement is critical. Implementing sustainable products can help hospitals balance cost, sustainability, whilst still adhering to hospital regulations. The team's research specifically focuses on improving sustainable product procurement within the UCLA Health system. The research aims to address three central questions: What does the process look like to bring a new product into the hospital? How can UCLA's procurement strategy incorporate sustainable principles? How can a sustainable supply chain become proactive rather than reactive?

To investigate this, we conducted interviews with key hospital administrators, vendors, and sustainability specialists to identify barriers and opportunities for sustainable procurement. Market research provided insights into viable product alternatives that align with UCLA Health's sustainability goals. Our findings so far indicate that products like reprocessed stethoscopes, biodegradable gloves, and disinfectant wipes offer significant environmental benefits with minimal cost increase. Challenges emerged when trying to find sustainable products that met strict medical sterility standards and seamlessly integrated into daily hospital operations, from laundering staff and nurses to chief doctors performing open-heart surgeries. By prioritizing products that would likely not be handled by a physician but still reduce Ronald Reagan Medical Center's environmental footprint, we have identified feasible solutions for UCLA Health. With that in mind, we created a Sustainable Procurement Guide through research, interviews, and stakeholder approvals. The guide will provide UCLA Health with a framework for sustainable procurement, serving as a model for RRUMC and other institutions.

Introduction

As the world is becoming increasingly aware of waste, pollution, and their impacts, pressure to change the current system of consumption is growing. Some of this pressure is towards the healthcare system, which currently plays a significant role in this problem. Current studies on the overall impact of healthcare systems indicate that the global healthcare sector had a measured climate footprint of 2.0 GtCO2e in 2014, amounting to 4.4% of the global net emissions (Karliner et al., 2019). The United States and its healthcare systems' emissions stand out amongst the rest as the number one country in healthcare emissions and making up more than 7.6% of the total US climate footprint (Karliner et al., 2019). Among these, total emissions include those coming from the healthcare supply chain, including the production, transport, use, and disposal of goods and services that the sector consumes, amounting to 71% of total healthcare sector emissions (Karliner et al., 2019). As a prominent greenhouse gas contributor and waste producer, the healthcare industry needs to play a bigger role in developing sustainable strategies in response to the ever-growing climate impact of these healthcare supply chains.

This SAR project intends to work on this industry gap through UCLA Health and RRUMC with research and advocacy toward developing sustainable operations and purchasing. Central to this research is answering these two questions: What are the inefficiencies in UCLA Health's sustainable procurement practices, and which products best promote a sustainable supply chain? Innovations in sustainability help push viable pathways to reduce consumption in the healthcare system at large. The implementation of sustainable purchasing into RRUMC plays a significant role in setting a precedent for other leaders in healthcare. Showing the industry that sustainability and healthcare can coexist has the potential to massively reduce healthcare emissions and waste. With this purpose in mind, the team is setting out to 1) Create a framework for future purchasing decisions to be made more sustainably and 2) Create metrics for evaluating the sustainability of products.

Methods

In order to gain the most holistic insight into building a process for identifying, selecting, and implementing sustainable product alternatives in UCLA Health facilities, the SAR team determined and enacted a wide variety of methodologies. This allowed us to gain the most realistic outlook in order to approach our project's issue. Our primary methodologies included: Conducting interviews, performing market research, and developing criteria of what makes a product "sustainable" yet effective.

Conducting Interviews:

The SAR team conducted a total of five interviews with a variety of professionals across different fields. Our first vendor interview was with Standard Textile on February 12, 2025. Standard Textile functions as a manufacturer and provider of reusable textiles that are used in healthcare settings. Our second vendor interview was with ASP Global Product Development on February 25, 2025. ASP Global functions as a strategic sourcing partner for healthcare, where they outline sustainable product guidelines. Our next three interviews were with Noah Bidna, who is a supply chain analyst at UCLA Health, one RRUMC nurse, and a pending interview with the sustainability department at UCSD. These interviews provided strong insight into identifying barriers and opportunities, alongside giving us context-specific knowledge. It allowed us to better understand how implementing sustainability alternatives might impact the user experience, along with what current practices are already in place.

Market Research:

The SAR team's market research consisted of taking a deeper look into currently available sustainable healthcare products on the market. We began by conducting market research through the Green Health Initiative, which includes an in-depth overview of their sustainable procurement guide, taking note of all recommendations. Additionally, we looked at a variety of items, including reprocessed stethoscopes, reprocessed laryngoscopes, disinfectant wipes, reprocessed trocars, and biodegradable gloves. With the collected information, we then compared it against current hospital standards and available price points.

Criteria Development:

The development of criteria is essential for determining sustainability implementation in hospital settings. Some questions the team asked ourselves were: What is the current composition of certain products versus alternatives? Where can reusability be implemented in hospital settings without compromising health standards? Our two biggest criteria generated were in regards to product alternatives being cost-effective and not compromising CDC or other hospital health standards. By generating this criterion, the team was able to effectively apply these ideas to our other methodological processes.

Throughout the methodologies outlined above, our team made sure to manage any bias and incorporate equity, diversity, and inclusion (EDI), as it is a crucial part of promoting sustainability at UCLA Health. Sustainability not only includes meeting current needs while preserving the environment but also reducing the disproportionate effects on different populations while addressing social justice and inequities. We have done so by ensuring that our interviews are done with a diverse group of individuals who represent a variety of views and perspectives within the organization, and will continue with that methodology in future rounds of interviews. In the later stages of the project, background research will be done to confirm that any potential products found for procurement come from similar values of sustainability and EDI.

Challenges

Throughout the progress made in the interview, hospital walkthrough, and preliminary market research stages, the SAR team encountered multiple bureaucratic and hospital-specific challenges. Despite the multitude of information discovered surrounding sustainability in hospitals and sources of waste, the identification of what products to find sustainable alternatives for proved to be especially challenging. With over 200,000 available products in RRMC, it was difficult to narrow down to one or two products that could prove successful in implementation. The first attempt to overcome this scope challenge was with the interviews and hospital walkthrough, which did offer some insight into the scale of products that the hospital and its supply chain were in charge of managing. However, it did not solidify any new avenues to narrow our scope. Being unable to find resources on hospital product sustainable alternatives further intensified the inability to narrow the scope of our project. We originally had hoped to overcome the narrowing of the scope by seeing what current sustainable alternatives existed, but there are limited alternatives not already implemented in some form at RRMC.

Subsequent challenges arose with alternative product identification, pertaining to sanitation requirements and the need for sterile, clean environments to be maintained throughout the hospital. While necessary for patient safety, the concept of reusability concerning sanitation does not often coincide, taking away a potential facet of increasing the hospital's supply chain sustainability. Physicians throughout the hospital posed another challenge in deciding the target product, as many specialized physicians and technicians can be against changing their habits or healthcare techniques for the sake of sustainability. We were able to overcome both of these problems by focusing on products or areas in the supply chain that were less invasive on the

patient and also produced the most amount of waste. Additionally, the products focused on were not widely used patient care items like bedding or gauze, because by increasing the number of patients the product comes into contact with, it increases the possibility of the alternative product being noncompliant with sanitation and medical standards.

Despite these difficult challenges arising, which temporarily halted the research process, they provided avenues for more successful, sustainable product implementation in the hospital. Having an overwhelming amount of products to parse through when identifying sustainable sources in the hospital forced the team to decide on a product type and start market research on it, despite being unaware of the actual implementation feasibility. While this may have increased our initial time spent researching products with unsuccessful products and a lack of approval from stakeholders involved and hospital staff, it increased the background knowledge and the understanding of hospital operations for the project, and enlightened some possible product options as explained above. Sanitation and specificity challenges required us to take into account not only sustainable, but also sanitary, economic, medical, and technical considerations.

Results

The interviews conducted thus far have provided a foundational understanding of what sustainability looks like across the healthcare industry's supply chain. Five interviews were conducted with two vendors, one supply chain analyst, one third-party sustainability department, and one nurse. Every interview was tailored to the conversation about what each organization did.

The first interview with Standard Textile, one of RRUMC's vendors, provided a synopsis of how sustainable products can be pushed to hospitals. This interview laid the foundational framework of how to approach sustainability in the healthcare industry. It highlighted the importance of meeting a hospital's needs by asking questions and choosing specific products that meet the delicate balance between client needs, clinical elements, and sustainable impacts.

The second interview with ASP Global, another one of RRUMC's vendors, outlined the organization's process of producing and choosing sustainable products for hospitals. The company has a new product development process that gives them the opportunity to push for more sustainable products through compliance, sourcing, and marketing. This process included a sustainable product list that was developed, ranging from reusable stethoscopes, biodegradable gloves, and primo preventative pads. From then on, the company created a clinical education resource that is given to their clients to learn and implement across the hospital. Most importantly, RRUMC has worked with ASP Global in implementing their sustainable products through the use of their guides.

The third interview with Vizient, the supply chain analyst, provided information on how the company meets client needs based on its highly developed sustainability criteria. Our interview with Vizient highlighted the various requirements a client may request for a sustainable product, which included chemical assessments, ingredient disclosures, reusability, etc. This provided insight into how a product can be researched and chosen for a client since hospitals have different requirements and regulations that must be met.

The fourth interview was with an RRUMC nurse, who our stakeholder is currently working with to implement a trial period for sustainable products. This trial period is still within the early stages of being implemented due to the bureaucratic policies of the hospital administration. However, our interview with her gave us an opportunity to understand how nurses view sustainability. She highlighted how sustainability is an important aspect, especially with the significance of UCLA Health making strides toward sustainability targets. However, it is difficult to implement due to the bureaucracy of the hospital, and the hospital administration gives the final say in determining which products can be replaced with more sustainable ones.

The final interview is currently pending with UCSD's sustainability department, which will provide an understanding of another UC school's system in pushing forward sustainability goals. Due to the similarities between UCLA and UCSD, which are major public universities, this interview would provide an interesting perspective on how UCSD's sustainability department operates and its own visions/goals that are in alignment with the rest of the UC system. With that being said, this interview would highlight the scope of what UCLA has been capable of in its sustainability targets.

From the interviews and market research completed over the Winter Quarter, the SAR 2025 Health Sustainable Procurement Team was able to produce a culminating Sustainable Procurement Guide that is specific to the Ronald Reagan University Medical Center. Throughout the research process, there were various other sustainable procurement guides identified meant for the healthcare sector in general. However, none of these were feasibly implementable or usable in the RRUMC Hospital setting. That created challenges both for our team and hospital staff in general in even starting a successful, sustainable product procurement strategy. This Sustainable Procurement Guide focuses on creating a repeatable step-by-step process that is accessible to all hospital staff and healthcare professionals, allowing for widespread sustainable product dissemination.

By taking the information and challenges our team learned from winter quarter, we were able to identify common practices and guides to completing a successful, sustainable product procurement process, and turned this into a product procurement guide. This product procurement guide focuses on laying out a comprehensive step-by-step plan to allow any individual in the process to repeat this product procurement process. An additional aim of this product procurement guide was to increase inter-hospital communications surrounding sustainability and possible product procurement targets. This would allow healthcare workers and other hospital staffers to communicate with the sustainability and supply chain departments, allowing these departments to have increased visibility into the sustainability issues surrounding different hospital products or processes.

In order to accomplish this goal of creating a proactive, living guide, our team separated the product procurement process into six general categories: background, sustainability criteria, hospital-specific criteria, alternative product identification, implementation, and evaluation. Due to all of the challenges faced by our team previously, this more dissected process allowed us, and the user to successfully implement an alternative product without potentially facing multiple blockades in the process. Part one of the background, while important, primarily focuses on the understanding of unsustainable practices already in RRUMC, and for the purposes of this report, will not be elaborated upon further.

After going over the background on why a sustainable product procurement process was necessary, part two of the sustainability criteria is important in order to outline how to identify unsustainable products in general. This allows the user to be able to identify where in the hospital a product or process may be producing excessive amounts of waste. Additionally, this section outlines how to identify what makes a product more or less sustainable by showing how alternative items can be compostable, biodegradable, recyclable, reusable, and more. By taking these concepts, a user of the guide can identify where and what in the hospital is not sustainable, and potentially let the administration know in the process. Part three then elaborates on the criteria in determining where in the hospital to find an alternative product or process, by specifying criteria for the hospital standards, rules, and regulations. Hospital-specific criteria increase the safety measures and imperative sanitation considerations that may not be applicable in a non-healthcare, sustainability setting. There are additional important things to consider, like infection prevention, usability, and economic factors for the hospital. While sustainability is still important in a hospital setting, the most important thing to consider is the safety of the patient. If switching out a currently used product increases the likelihood of a patient not making a full recovery in any aspect, then that is not a suitable target for an alternative sustainable product.

After determining where in the hospital one should find an alternative product, the guide would walk the user through part 4, which shows them the various resources available to them to find the alternative product. We were able to use our interviews from various UCLA-approved vendors and non-profit organizations to understand what resources are best for this product identification process and how a healthcare worker could aid in determining the alternative product. After the determination, parts five and six conclude the guide by discussing how to properly implement the product and then assess how the product implementation process went as a whole. Overall, despite the challenges faced, the team was able to learn from them and create a cohesive, comprehensive guide to be used by all healthcare workers and staff to increase sustainability in RRUMC.

Discussion

The procurement guide serves to accelerate UCLA's progress toward the University of California's sustainable goals. Once hindered by RRUMC, the goals set forth by the UC Office of the President are now within reach. Comprehensive and accessible measures allow hospital staff to initiate a procurement process, regardless of their previous experience with sustainability. Demystifying sustainable procurement processes draws attention to the critical issues from all levels of leadership, from stakeholders of RRUMC to the nurses, stimulating action and soon, change. Breaking down a process previously thought difficult in hospitals, especially one as large and encompassing as RRUMC, entices employees from all levels of the hospital to participate in the advancement of campus-wide sustainability.

As RRUMC's sustainable procurement process is refined and becomes more efficient, UCLA will remain a trailblazer in sustainability among its peer institutions. Once UCLA Health collects a database of its procurement successes, other institutions will be able to recognize the potential of implementing their own tailored procurement process. UCLA has the opportunity to showcase its current initiatives in sustainability, ranging from comprehensive waste sorting to product procurement. The potential implications of one document create outcomes that not only positively affect UCLA's sustainability goals but amplify the need for sustainability in hospitals.

Compiling a procurement guide for one of the most stagnant sectors of sustainability offers insights into successful replication across UCLA's campus. The guide and process are not limited to the hospital; adjacent guides could help different departments improve their sustainability. From UCLA Housing to ASUCLA Catering, a focus on sustainability could be refined and implemented. The UCLA Health Sustainable Procurement Guide could potentially serve as a blueprint for other departments and exemplify what it means to procure sustainably.

Conclusion

The development of the Sustainable Procurement Guide promotes a framework for future sustainable procurement initiatives and a comprehensive list of products that are vetted and approved by stakeholders, hospital administrators, and staff within Ronald Reagan Medical Center. These guidelines 1) primarily preserve the health and safety of patients, ensuring their care experience remains unaffected, 2) align with UCLA's Sustainability goals, and 3) lastly, are financially feasible and possibly less expensive compared to the incumbent product.

The aim of the guide is to provide a resource for all hospital employees to be able to identify hotspots for sustainability, thus streamlining the process and preset timelines that allow future teams to conduct research necessary to support their pitch for sustainable products. Frameworks in sustainability, especially in healthcare, are necessary to advance and align with UCLA Health's sustainability goals. The UCLA Health Team plans to disseminate the completed framework to other institutions interested in implementing sustainable procurement into their own health systems. By engaging with key stakeholders across the hospital, it encourages and inspires these institutions to initiate sustainability efforts.



One-pager of the Sustainable Procurement Guide, which includes a synopsis of the guide along with contact information, for UCLA Health to utilize

Basement Supply Room



*Note:

Photos from ICU closet highlight the emphasis on close consideration of price before using a product, and the current integration of reprocessable items into the supply chain

Work Cited

Karliner, J., Slotterback, S., Boyd, R., Ashby, B., Steele, K., & Wang, J. (2020). Health care's climate footprint: The health sector contribution and opportunities for action. European Journal of Public Health, 30(Supplement_5), ckaa165.843. https://doi.org/10.1093/eurpub/ckaa165.843