



HEALTH NUTRITION SUSTAINABILITY

AT THE RONALD REAGAN MEDICAL CENTER



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Abstract

Food waste is one of the key sustainability issues in large-scale healthcare environments. Dining services must meet multiple demands for patient nutritional needs, dietary limitations, sanitation requirements, and operational effectiveness. Our project examines sustainability measures implemented by the Ronald Reagan UCLA Medical Center's (RRUMC) Food and Nutrition team and their effectiveness in mitigating food waste through these measures. The purpose of our study is to comprehend the scope of food waste produced in hospitals, specifically looking at how it can be measured and reduced without compromising the quality of services and operations—a critical sustainability issue in the operations of healthcare services and facilities. Throughout our project we established connections with staff, took facility tours, and obtained food waste and retail sales data. The Last-Call Initiative, a sustainability initiative created by the Food and Nutrition team, became our team's main focus of analysis. Through analysis of sales data and food waste logs, we were able to measure the effectiveness of the Last-Call Initiative, allowing us to highlight its success and help nutrition and cafeteria staff understand what they are doing right, as well as what could possibly be improved upon in terms of food waste sustainability. Our project sought to create transparency and inform the Sustainability team about the successful measures which have been put in place by the Food and Nutrition team. In order to promote understanding, our team created multiple charts and graphics which clearly demonstrate the impacts and importance of hospital initiatives on mitigation of food waste.

Introduction

Food waste represents one of the most pressing sustainability challenges in large-scale healthcare environments, where dining services must simultaneously meet patient nutritional needs, dietary restrictions, sanitation requirements, and operational demands. Hospitals in particular generate substantial waste; UCLA Health alone produced over 11 million pounds of waste in fiscal year 2022 across the RRUMC and UCLA Santa Monica Medical Center, prompting institutional goals to divert 50% of materials from landfill. Our project examines the sustainability initiatives implemented by the RRUMC Food and Nutrition team and evaluates their effectiveness in reducing food waste without compromising service quality. Our central research question asks to what extent do the food waste reduction initiatives at RRUMC, particularly the Last-Call Initiative, reduce food waste, and how do they align with UCLA Health's broader sustainability commitments. We hypothesize that programs like the Last-Call Initiative produce significant reductions in end-of-service food waste and that RRUMC's approach to sustainability exceeds minimum institutional benchmarks.

Prior Sustainability Action Research (SAR) research provides important methodological grounding for this study. The 2022 Food Recovery SAR team assessed food systems at UCLA Dining Halls through dietary surveys and food audit reports, offering an excellent framework for analyzing menu design and dining behavior in institutional settings such as at RRUMC. Similarly, the 2017 SAR Food Waste Behavior team used surveys and focus groups to identify waste patterns across dining halls and subsequently launched education and outreach programs, demonstrating that communication strategies can translate food waste data into meaningful change. Both projects inform our mixed-methods approach, which combines facility tours, staff

interviews, and quantitative sales data analysis to measure the effectiveness of the Last-Call Initiative, allowing us to highlight its effectiveness and help nutrition and cafeteria staff understand the extent of their success in terms of food waste sustainability.

The primary variables of this study include a comparison of cafeteria sales volume during standard and last-call meal periods and staff and operational practices such as demand forecasting and the room-service model. Together, these variables allow us to assess RRUMC's food waste reduction efforts both independently and in relation to the UC Sustainable Practice Policy's procurement targets. The purpose of this study is to provide the RRUMC Food and Nutrition team with clear, data-supported evidence of what their initiatives are achieving, identify areas for potential improvement, and produce accessible graphics that communicate these findings to hospital staff and stakeholders.

Methods

Our research consisted of three main methods of data collection: RRUMC facility tours, interviews, and data analysis. We chose these methods because they provided us with real opportunities to analyze operational efficiencies within the RRUMC food system and to develop quantitative results of their sustainable practices.

Facility Tours

To begin, we started our data collection process with four tours of the RRUCM kitchen and cafeteria. The first tour was an informal site visit to the dining commons and it allowed us to better understand how the cafeteria operates and how customers interact with the dining system. On the second tour, we aimed to increase our connectedness to the Food and Nutrition Team and met with them face-to-face to share our contacts and establish a relationship that would allow for better communication later on throughout our project. The third tour was our most detailed and

comprehensive tour. It consisted of a formal walk through of the RRUMC kitchen, cafeteria, and waste disposal locations. This tour focused on providing more specific information regarding the daily operations and efficiencies of the RRUMC kitchen, helping us to better understand current food sustainability management techniques. Our fourth tour was held during the hospital's Earth Day fair and was conducted to understand what the hospital is doing to further their goals in sustainability.

Interviews

Later we set up interviews with three staff members associated with dining operations in the RRUMC: Willie Mercado (Assistant Director of RRUMC), Daisy Cardenas (Manager of the Dining Commons), and Gabriel Gomez (Executive Chef). Our interview with Mr. Mercado aimed to get a broader understanding of what sustainability initiatives had been implemented in the cafeteria. We asked about current approaches to sustainability within dining and learned about the room service model for patient food ordering and the 50% Last-Call initiative for the cafeteria operations. For our interview with Ms. Cardenas, we hoped to expand our knowledge of the 50% Last-Call initiative, and asked more direct questions to understand why it was implemented and how it was executed. Our third interview with Chef Gomez focused on understanding the general impact of the Last-Call initiative on staff, consumers, and overall food waste levels. Understanding the effects of this initiative allowed us to better acknowledge the success of the program and evaluate its role in reducing food waste within the RRUMC cafeteria.

Data Analysis

In terms of data analysis, we received four monthly retail sales logs for both general cafeteria sales and sales only collected from the 50% off Last-Call initiative. Our goal was to quantify and emphasize the sustainability savings from this initiative to provide measurable data

to reflect the efficiency of this program and the RRUMC food system. We used Google Sheets to input the data from the retail sale logs and to create graphs to display this data visually.

In order to address concerns of validity and bias when creating interview questions, our team consulted our SAR program directors and our stakeholders to help us prepare neutral interview questions. We focussed on incorporating questions that required more than a yes or no answer and that would specifically fill a current gap in our knowledge. This allowed us to obtain more accurate and in-depth responses from the staff members we interviewed. Additionally, considerations of equity, diversity, and inclusion (EDI) informed each stage of our research progress. On the facility tours, we were intentional to minimize disruptions that could affect workflow to staff, and when conducting interviews we questioned staff from different positions in order to acquire diverse insights and make sure all viewpoints were heard.

Challenges

Like any research team, our SAR team faced several challenges throughout the course of this project. At the start of the project we faced difficulties such as narrowing down the scope of our research and navigating a large organizational system like RRUMC. We also encountered challenges related to coordinating schedules, maintaining consistent communication, and adapting our project goals as new information became available. Despite these obstacles, each challenge provided valuable learning opportunities and ultimately strengthened both our project and our team's understanding of sustainability work within larger institutions.

At the start of the project, focusing the scope was one of our largest difficulties. Food systems within a hospital are large and complex. They involve many interconnected components, including procurement, preparation, service, patient nutrition, and waste management. At the beginning of the project, this broad scope made it difficult to determine which aspects of the

system we could realistically study within the timeframe of the project. The scope continued to evolve throughout the project as we worked to better understand the hospital's operations and identify areas where our research could provide the greatest value.

There are many departments and teams involved in hospital operations, and at the beginning of our project our team did not fully appreciate the number of moving parts required to implement even relatively small sustainability initiatives. For example, we initially suggested creating sustainability graphics for public outreach. Through discussions with our stakeholders, we learned that implementing such a project would require collaboration with additional departments, including communications and marketing teams, as well as multiple rounds of review and approval. While this initially appeared challenging, it provided our team with valuable insight into the importance of institutional coordination and the processes that help ensure information shared with patients and the public is accurate and effective. We overcame this challenge by remaining flexible, seeking guidance from our stakeholders, and continuously refining our project goals to align with the realities of the hospital environment.

Another challenge involved maintaining communication and coordinating meetings with stakeholders and team members who all had busy schedules. Our stakeholders manage numerous responsibilities related to sustainability and hospital operations, so scheduling meetings and obtaining information sometimes took longer than anticipated. Additionally, because food sustainability initiatives happened across multiple departments and individuals, our team spent time learning the roles and areas of expertise of various stakeholders to ensure that questions and requests were directed to the most appropriate contacts. Rather than viewing this as a setback, our team learned the importance of patience, professionalism, and proactive communication. We adjusted by utilizing detailed meeting agendas, emailing the details of meeting discussions, and

making the most of the opportunities we had to engage with our stakeholders. Their willingness to share their expertise and provide feedback helped us stay focused and continue making progress throughout the project.

One additional challenge our team encountered was balancing project responsibilities alongside academic schedules, extracurricular commitments, and other obligations throughout the quarter. As students with varying course loads and availability, it was sometimes difficult to find meeting times that worked for everyone and to ensure that tasks were completed on a consistent timeline. To address this challenge, our team prioritized clear communication and flexibility. We established regular check-ins and maintained shared documents so that all members could stay informed of project developments. This collaborative approach allowed us to remain organized even during particularly busy periods of the quarter and ensured that progress continued despite occasional scheduling conflicts. By working together and supporting one another, our team was able to successfully complete project milestones.

Ultimately, these experiences highlighted the collaborative nature of sustainability work in large institutions. Navigating complex organizational structures, coordinating with busy professionals, and adapting to evolving circumstances are all important skills that cannot be fully learned in a classroom setting alone. Through the support and guidance of our stakeholders and SAR directors, our team gained a greater appreciation for the challenges associated with implementing sustainability initiatives in healthcare settings and developed valuable professional skills that will benefit us in future projects and careers.

Results

Interviews

We conducted interviews with the Assistant Director of RRUMC, Dining Commons Manager, and the Executive Chef to gain diverse insights beyond what we could see during the facility tours and to supplement the data analysis that we executed. Since we were focused on the Food and Nutrition team's initiatives it was important to hear first-hand how and why they were implemented from the team themselves, as well as general background knowledge of the RRUMC cafeteria hospital inner workings. With our first interview with Mr. Mercado, he explained the RRUMC's history and how the hospital relocating (about 15 years ago) has been the one of the catalysts for the demand forecasting and room service model that is actively in practice to this day. Additionally, we learned about the Last-Call initiative (the main focus of our data analysis and research), leading us to interview the Manager of the Dining Commons about the implementation of the Last-Call initiative and information about the "Single Item Sales Detail" report. Ms. Cardenas, assisted by Eve Martinez (Food Service Senior Manager), informed us that this initiative was implemented on July 1, 2024, led by the Food and Nutrition team for the main purpose of decreasing food waste, therefore to be more cost effective. We were also provided with four monthly retail sales logs called the "Single Item Sales Detail" report, where the amount of food sold during the regular hours and the Last-Call initiative hours were recorded. While the RRUMC's managers oversaw the execution of this initiative, we also interviewed the Executive Chef to understand the procurement and preparation of food being served. The Last-Call initiative has been helpful for the staff and they do not have to cook more food in the last hour, as the purpose of the initiative is to sell out of all the food that is cooked for that meal period. Furthermore, Chef Gomez noted he has seen a decrease in food waste created.

After interviewing members of the Food and Nutrition team, our team identified four main practices contributing to the sustainability and lack of food waste at RRUMC: demand forecasting, the room-service model, local and sustainable sourcing, and the Last-Call initiative. As our deliverable, we designed a graphic highlighting each of these initiatives in a clear, accessible manner, with the goal of celebrating the Food and Nutrition team's success in developing a sustainable kitchen, cafeteria, and menu (see Appendix A). The efforts of the Food and Nutrition team go largely unnoticed, despite UCLA Health Food Services' role as a leader in sustainable dining ("UCLA Health," 2025). This graphic can be utilized by our stakeholders to brief hospital staff and associates on how sustainability is integrated into RRUMC's dining system. While each practice relates to a different area of dining services, they complement each other to establish a kitchen and cafeteria that is both cost-efficient and sustainable.

Demand-forecasting

Demand-forecasting is a technique used to minimize food waste through the analysis of prior sales. In RRUMC's kitchen, the popularity of menu items is meticulously tracked with daily charts outlining food sales and leftovers. The quantity made of each dish is based on how much was sold the previous week. Not only does this strategy reduce food waste by avoiding cooking excessive amounts of food, but it also decreases the money lost on unsold food. Additionally, workers cook different amounts of food depending on the time of day. For example, if the cafeteria is closing soon, the kitchen will simply let a dish run out rather than making a whole new batch that would likely go to waste. Similarly, shipments are timed to avoid an excess of food that could go bad before it is consumed. Frequent communication between the kitchen and cafeteria staff ensures that sources of food waste are being identified and adjusted

accordingly. In regard to patient meals, reports are run to ascertain the popularity of each meal and used to inform quantities of food bought.

Room-Service Model

Patient meals are organized through the room-service model. This gives patients the ease of customizing their meals and time of delivery. An extensive menu offers a wide array of meal options that can be catered to specific dietary needs and ordered at the patient's own discretion. Since control lies in the hands of the patient, this system greatly reduces food waste—patients receive the meal they want when they are ready to eat. Of course, leftovers are not completely eliminated. Patients often struggle with appetite consistency, and food can only be in a room for two hours before it is removed due to health concerns. However, all patient food waste is condensed with the Somat machine (see Appendix B), which reduces the volume of leftovers. Like demand-forecasting, this practice has the benefit of lowering costs as well as food waste levels. The room-service model began in 2008 when RRUMC moved to a new location, and it has improved customer satisfaction and overall food service.

Sustainable Sourcing

When it comes to the food itself, the Food and Nutrition team continues to emphasize sustainability. Following the UC Sustainable Practice Policy, UCLA Health had a goal of sustainable food products contributing to 25% of procurement by 2025 (*Nutrition & Wellness - Sustainability | UCLA Health*, 2022). However, this goal was exceeded in 2025 with 28% of food and beverage purchases meeting the sustainability criteria, in addition to 31% of food and beverage purchases being plant-based (“UCLA Health,” 2025). Examples of sustainable products include sustainably-sourced salmon, organic produce, and meats from a distributor focused on sustainable and regenerative ranching (“UCLA Health,” 2025). Additionally, patients can order

vegan meals and the cafeteria serves meat alternatives like Beyond Meat and Gardein chicken strips. UCLA Health is also a member of the “Cool Food Pledge,” which promotes reducing greenhouse gas emissions associated with their served food by 25% before 2030 (*Nutrition & Wellness - Sustainability | UCLA Health*, 2022). While cost is often a barrier to purchasing sustainable food, RRUMC navigates the balance between the price and environmental impact of their procurement with grace.

Last-Call Initiative

Finally, the Last-Call initiative is the most recently implemented sustainability strategy but has seen unprecedented levels of success. Thus, our team decided to delve deeper into the effectiveness of this practice through the analysis of sales reports. The Last-Call initiative decreases the price of food by 50% for the last hour of the meal period, which is 7:00 to 8:00 pm for the salad bar and hot line and 9:00 to 10:00 pm for the soup bar. The purpose of this discount is to encourage customers to purchase food that could otherwise end up as waste. The Food and Nutrition team advertised the Last-Call program with a poster (see Appendix C), and the response has been very positive. Oftentimes, a line forms outside the cafeteria prior to 7:00 in anticipation of the discount. Our analysis demonstrated high levels of sales during the Last-Call period. For example, in January, 24.2% of Fish Entree sales and 29.9% of Beef Entree sales came during the Last-Call period (see Appendix D).

Deliverable

This guided our research to create a meaningful deliverable that can be distributed internally for the RRUMC’s Sustainability Team to understand the accomplishments of the Food and Nutrition team’s initiatives from a sustainability perspective. For our final deliverable, our team created a sustainability infographic that summarizes our findings in a clear and accessible

format. The infographic is organized around three main components: current sustainability initiatives, data visualization, and connections to broader UCLA Health sustainability goals (see Appendix A).

The infographic highlights several sustainability initiatives currently being implemented in Ronald Reagan Medical Center's kitchen and cafeteria, including the Last-Call Initiative, demand forecasting, the room-service model, and local and sustainable procurement. This section demonstrates that UCLA Health is already taking practical steps to reduce food waste and improve the sustainability of its food operations. By presenting these initiatives together, the infographic helps our stakeholders see how different aspects of the kitchen and cafeteria system contribute to a larger sustainability effort.

Moreover, the infographic includes a data visualization comparing regular cafeteria sales with Last-Call sales. This chart helps translate our data into a more accessible story by showing that certain food items that might otherwise have become waste were instead purchased and consumed through the Last-Call initiative. In this way, the visualization supports the value of the initiative by making its impact easier to understand. Rather than presenting numbers alone, the infographic uses visual evidence to show how daily cafeteria practices can contribute to waste reduction.

Finally, the infographic connects RRUMC's food sustainability efforts to broader UCLA Health sustainability pledges, including the Practice Greenhealth Partnership, the Cool Food Pledge, and the Health Care Without Harm Climate Challenge. Incorporating these pledges helps situate the Food and Nutrition team's work within UCLA Health's larger institutional sustainability commitments. This connection emphasizes that kitchen and cafeteria operations

are not isolated efforts, but part of a broader movement toward more sustainable health care practices.

The intended impact of this deliverable can be summarized through the *CARE* framework. The infographic helps *Communicate* sustainability efforts by presenting current initiatives in a visually engaging and easy-to-understand format. It also *Amplifies* awareness across campus by making the Food and Nutrition team's sustainability work more visible to stakeholders who may not be familiar with these ongoing efforts. In addition, it *Recommends* data-informed actions by using sales data to demonstrate how programs such as the Last Call Initiative can reduce potential food waste. Finally, it *Enhances* the sustainable dining experience by encouraging continued attention to waste reduction, responsible procurement, and patient-centered food service practices.

Overall, we hope this infographic can serve as a practical guide for RRUMC stakeholders as they continue supporting more sustainable kitchen and cafeteria operations. By combining initiative summaries, data visualization, and institutional sustainability goals, the deliverable functions not only as a reflection of our research, but also as a communication tool that can help RRUMC recognize current progress and identify opportunities for continued improvement.

Discussion

The results demonstrate that sustainability within healthcare food systems extend beyond simply sourcing environmentally friendly products. At the RRUMC, sustainability has been implemented throughout the entire chain of events from procurement to meal delivery. Facility tours, personal interviews, and sales analysis enabled the research to identify a number of interrelated initiatives aimed at reducing food waste and maintaining quality food services at the

same time. Demand forecasting, room-service meals, sustainable procurement processes, and Last-Call initiatives are among the key components of such practices.

Among the major discoveries of this assessment is that food waste prevention starts even before the food is served to customers. Forecasting the demand allows the Food and Nutrition team to utilize previous sales records to calculate how much food should be prepared every day. Instead of predicting the amount of food necessary, the staff accounts of leftover amounts and sales trends. As a result, overproduction and excessive purchases are minimized, as well as the costs connected with getting rid of excess products. In other words, sustainability becomes an important component of day-to-day decision making.

The Last-Call initiative is an example of how behavioral incentives have the potential to make progress towards sustainability goals. Through the 50% discount on all food offered during the last hour of operations at RRUMC, customers are incentivized to buy the food which would have otherwise gone to waste. Evidence suggests that a significant number of sales were made during this time period, indicating the success of the program in recycling food from being wasted to being consumed. This depicts the reaping benefits through relatively simple changes made within the organization.

In addition to avoiding food waste, the sustainability measures seen at RRUMC have furthered the goals set by UCLA for sustainability. According to UCLA Health, its goal for sustainable procurement has been achieved because 28% of food and beverage products purchased met sustainability requirements, with 31% being plant-based. This reduces greenhouse emissions that occur during the production process, and the agriculture is environmentally responsible. It should be noted that UCLA Health has the ability to act as a standard-bearer for

sustainable food practices among hospitals in Southern California because it is the largest system here.

The subsequent demonstration of this project has revealed how critical communication and transparency have been in achieving sustainable development. Many hospital visitors, staff members, and patients are unaware of the immense efforts of the Food and Nutrition team. Increasing knowledge about current sustainability projects will help garner more support for future endeavors, encourage involvement in waste reduction efforts, and foster an environmentally responsible culture among the staff.

Future Direction

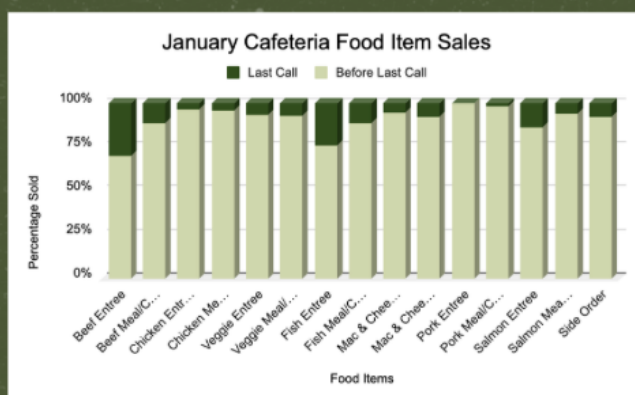
There are various possibilities that exist for future exploration and improvement. One possible area would be to conduct longitudinal reviews of food waste to determine the precise amount of food that has been saved from waste streams through initiatives like the Last-Call initiative, as well as analyzing how well these demand forecast predictions have performed. It would also be interesting to see research conducted on the environmental impact of sustainable purchasing policies and greenhouse gas emission reductions related to local plant foods.

With healthcare organizations having increasing challenges when it comes to operating sustainably, RRUMC serves as an important example of how organizations can manage their financial and social goals at the same time. As seen from the strategies discovered during the course of this project, significant reduction in food waste is achievable with proper planning, data-driven approaches, and determination on the part of the organization.

Appendix

Sustainability in Ronald Reagan Medical Center's Kitchen & Cafeteria

How the UCLA Health Food and Nutrition team are working to keep customers healthy and happy, while achieving a sustainable kitchen, cafeteria, and menu.



Above is a visualization of regular sales compared to last-call sales for menu items. The dark green represents food that could have gone to waste, but was instead purchased and eaten thanks to the last-call initiative.

FURTHERING SUSTAINABILITY GOALS

UCLA Health's Sustainability Pledges

1. Practice Greenhealth Partnership
2. Cool Food Pledge
3. Health Care Without Harm Climate Challenge



LAST CALL INITIATIVE

End-of-day discounts offered to reduce leftover food



DEMAND FORECASTING

Demand is tracked to plan quantity of food needed to be made



ROOM-SERVICE MODEL

Patients order meal from expansive menu at their own convenience



LOCAL & SUSTAINABLE

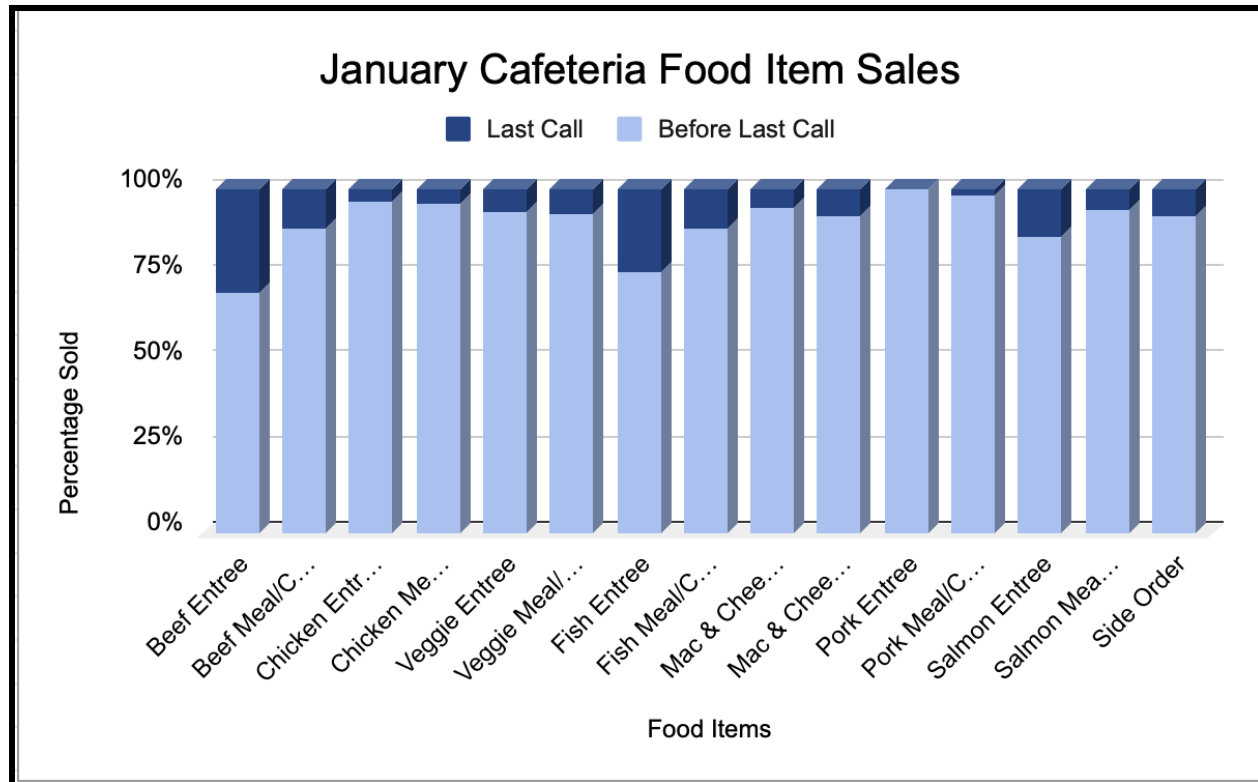
Emphasis on procurement of local and sustainable foods



Appendix B - Somat Machine



Appendix C - Last-Call Poster



Appendix D - Last-Call Analysis

Acknowledgements

This project reflects the collective support and commitment to sustainability shared by the UCLA Health community and beyond. It would not have been possible without the insights, encouragement, and generosity of many individuals.

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Works Cited

Nutrition & Wellness—Sustainability | UCLA Health. (2022). Retrieved May 30, 2026, from

<https://www.uclahealth.org/sustainability/our-progress/nutrition-wellness>

UCLA Health. (2025). *Sustainability Annual Report 2025*. Retrieved May 28, 2026, from

<https://sec-1127-sustainabilityreport-multi.pantheonsite.io/2025/locations/ucla-health/>