

CASE STUDY



REUSABLE ISOLATION GOWNS

Demographic Information

Ronald Reagan UCLA Medical Center is located in West Los Angeles, California. The hospital employs 1,500 full-time physicians and over 2,500 support staff, and provides patient care to over 380,000 people per year in nearly every medical specialty. There are 540 inpatient beds at the facility, which includes Stewart and Lynda Resnick Neuropsychiatric Hospital at UCLA and Mattel Children's Hospital UCLA. The Santa Monica Hospital with 266 beds is also part of the campus. Ronald Reagan UCLA Medical Center ranks as the #1 medical center in the Western U.S., and tied at #3 in the country in *U.S. News & World Report's Best Hospitals* survey.

The Problem

Isolation gowns are used by practitioners, housekeepers, and visitors when entering the room of a patient on precaution. These gowns are single-use disposables. At Ronald Reagan UCLA Medical Center, on average approximately 6,000 gowns were being used per day (2.2 million gowns per year). In order to reduce the waste associated with isolation gowns, the academic and healthcare sides of UCLA came together in 2012 to pilot the use of reusable isolation gowns.

The Strategy Selected

Custom reusable isolation gowns were designed through an intensive and collaborative process involving nursing staff, unit directors, two competing gown vendors, infection control staff, and the vendors that process the product (folding, laundering, transporting, etc.). After a six-

Executive Summary

Ronald Reagan UCLA Medical Center began a reusable isolation gown pilot project in May 2012, starting with a liver transplant unit that was using 1,000 disposable isolation gowns per day. During a collaborative six-month trial period, the reusable isolation gown design was finalized and rolled out. The reusable gowns offer more comfort and better protection than their disposable counterparts, and can be laundered and reused 75-100 times. More than 3.3 million reusable gowns have been used at both hospitals since the implementation, representing a financial savings of over \$1.1 million, on purchase alone. Since 2012, a total of 297 tons of waste has been diverted from landfills as a direct result of the reusable gown program.

month trial, the final gown design included snaps instead of tie-downs, smaller cuffs, and was comprised of 99 percent polyester and one percent carbon fiber to reduce static. The gowns are reversible which saves time for laundering.

Implementation Process

The reusable isolation gown program was piloted in a liver transplant unit—the busiest isolation unit at Ronald Reagan UCLA Medical Center, which used 1,000 disposable gowns a day. “If it won’t work in our busiest unit, it won’t work hospital-wide,” said Victor Mitry, assistant director of Materials Management. The pilot liver transplant and liver ICU units experienced a 20 percent decrease in gown usage when they converted to reusables, from 1000 gowns per day down to 800 gowns per day, because the disposable gowns

came in packs of ten, which meant that often unused gowns were discarded when patients were discharged. Staff education included flyers and in-person meetings, emphasizing that the new gowns would provide equal or better protection when compared with the disposables, and additionally reduce waste and costs. As the program expands, updates are shared with all staff in the staff newsletter and sustainability website. All unit directors regularly receive updated information from the Linen Committee on program performance, which is then presented by the unit directors to staff in regular nursing unit meetings.

In order to ease the transition from disposables to reusables, the implementation team insisted on having the new gowns visually presented in the same way as disposables. The gowns are folded and wrapped, tied five gowns to a bundle



From left to right:

for ease of handling, and stored in isolation carts outside of patient rooms. For ICUs, bundles are placed in individual plastic bags, and staff is trained on how to tie and untie them properly in order to reuse the bags as trash liners.

As the reusable gown program at UCLA expands, the changeover to reusable gowns rolls out a few units at a time, rather than at the whole-hospital level, to avoid overwhelming staff. When a new unit is converted to reusables, sustainability staff performs basic waste audits to ensure that reusable gowns aren't ending up in the trash, particularly in situations where a unit isn't totally converted over from disposables.

Furthermore, change in the isolation precaution policy in July 2014 reduced the use of the gowns by nearly 50 percent, as MRSA and VRE patients no longer required routine use of isolation gowns.

Benefits

- Over 3.3 million reusable gowns have been used as of November 2015, resulting in total financial savings of over \$1.1 million.
- 297 tons of waste has been diverted from the landfill as a result of this program.
- Originally projected to have a lifespan of between 50 and 75 uses, the actual lifespan of the reusable gowns is typically between 75 and 100 uses.
- The reusable gowns were rolled out in two sizes – standard and XXXL – in contrast to the previous “one size fits

all” disposables. Having two gown sizes available has been welcomed by staff, as larger staff members occasionally experienced tearing with the disposable gowns. This problem has been remedied with the introduction of an XXXL gown.

Challenges and Lessons Learned

Approximately a dozen nurses and staff (out of 1,000) reported an allergic reaction to the gowns. UCLA immediately had the gowns tested by an independent vendor to determine what might be causing the reaction, but the results were inconclusive. Those staff who reported a reaction was given the go-ahead to switch back to disposable gowns. When these staff members start each shift, they place an order with materials management for 1-2 packs of disposable gowns for that shift, kept the gowns on their cart during the shift, and return the unused gowns at the end of the shift. So far, only one family member of a patient has had a reaction to the reusable gowns. In this case, disposable gowns were immediately made available for that family member, and they were given enough disposable gowns for their visits with the patient.

When the reusable gowns were initially introduced, there was some pushback from staff who didn't feel comfortable putting gowns in the same hamper as the patient's linen. The implementation team responded by educating staff that all of the linen and gowns are washed according to the same high standards.

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Another initial complaint about the reusable gowns was that they were too hot for wearing longer than 10-15 minutes at a time. As time passed and staff became more accustomed to the new gowns, however, these types of complaints dissipated, and staff appreciated the increased protection provided by the gowns.

As the reusable gown program has rolled out and expanded, one of the challenges that UCLA is faced with is dealing with the reusable gowns at the end of their useful lives. Currently, the team is hoping to work with vendors to recycle the gowns once they are no longer useable in the hospital setting. In order to accurately monitor the

number of usages of each gown, the team is considering using an RFID-type chip and scanner setup to scan the gowns each time they go through the laundry, and flag individual gowns for replacement when they reach 100 uses. For now, the gowns are visually inspected by staff each time they are sent to be laundered, but there isn't a universally-used method for tracking the exact number of uses for each individual gown.