



# “How it all started...”

*Joyce Nacario, RN, BSN, CNOR*

... grassroots approach ...

## Greening Initiative in the OR

UCSF Medical Center  
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Gail Lee, Sustainability Manager





In 2007, I volunteered to do a surgical mission in Peru and Ecuador and I realized how much supplies we waste in the US.



Life changing experience . . .



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# Five R's

**1**  
REDUCE

**2**  
REUSE

**3**  
RECYCLE

**4**  
REPROCESS

**5**  
Re-THINK

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# OR Greening Initiative



OR Schedule: 40 pages x 40 packets/ day  
Preference Cards: 4-8 pages x 50 - 70 surgeries (1 site)



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Overwhelming phone calls regarding the OR Schedule



Automated the OR Schedule & Preference Cards

- Automated Display replaced the paper OR Schedule/Preference Cards; significantly decreased phone calls
- Automated Display now accessible in all intranet computers and tablets using VPN by the bedside.

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# REUSE-able 2



## Blue Wrap Recycling

- Started by an OR RN, Joyce Nacario
- Roll out from one unit to three surgical units
- Backhauled by Unisource and consolidated for recycler
- 2010 – 36,500 pounds



## Hardcase

- Replacement for disposable blue wrap for hard case
- Reduces breached wrapped kits and cost of reprocessing
- Reduces bulky kits to reduce ergonomic injuries
- Budget for replacement 2010-11

If you want to go **GREEN**  
Don't go **BLUE!**

Period	Weight	Cost
FY09-10	34,820	\$123,421
FY10-11	32,125	\$113,868

## Dental School reusable autoclave bags

- Working with EnviroPouch to evaluate reusable sterilization pouches instead of disposables
- Could save \$12,000/yr in disposable
- Each pouch can be autoclaved up to 200 times



Decrease use of BLUE WRAP by replacing them with reusable instrument trays.

Designated BLUE WRAP BIN and collaborated with Unisource company for weekly pick-up and re-purposing.



Hard Plastics



Paper Products



**The key to recycling in a busy OR, is to provide easy access to RECEPTACLES.**  
**Provided RECYCLING BINS right outside each OR.**  
**Educated staff what to RECYCLE by creating a poster for each OR.**



## 4 REPROCESSING

harmonic scalpel, tourniquets, trocars



### Cardiac Catheters Reprocessing

- Byron Lee, MD Champion brought his experience as a fellow at Stanford
- The electrophysiology (EP) labs (adult/ pedi) have been reprocessing cardiac catheters for over a year
- Recycle ablation catheter tips to recover metals
- Purchased over 1000 reprocessed catheters/yr for a cost savings of \$248,774/yr



### Unused Medical Supplies Diversion

- Teaching & Learning Center spends \$32,000 per year in supplies
- Remedy
- MedShare
  - Accepts donations of unused, unexpired medical surplus supplies and used biomedical equipment
  - 6000 pounds/12 months



- Collaborated with companies to reprocess surgical items:
- to reuse endoscopic supplies to save money and environment (Stryker)
  - to donate soft goods to third world countries (Med Share)



## Fluid Management - Neptune

- Eliminates expense of suction canisters saving \$17,242 in FY10-11
- Eliminates expense of suction canister disposal
- Reduces worker exposure risk
- Direct disposal to sewer system with benefits
- Significant system and maintenance costs



## Anesthesia Circuits/CO<sub>2</sub> Absorbents Pilot

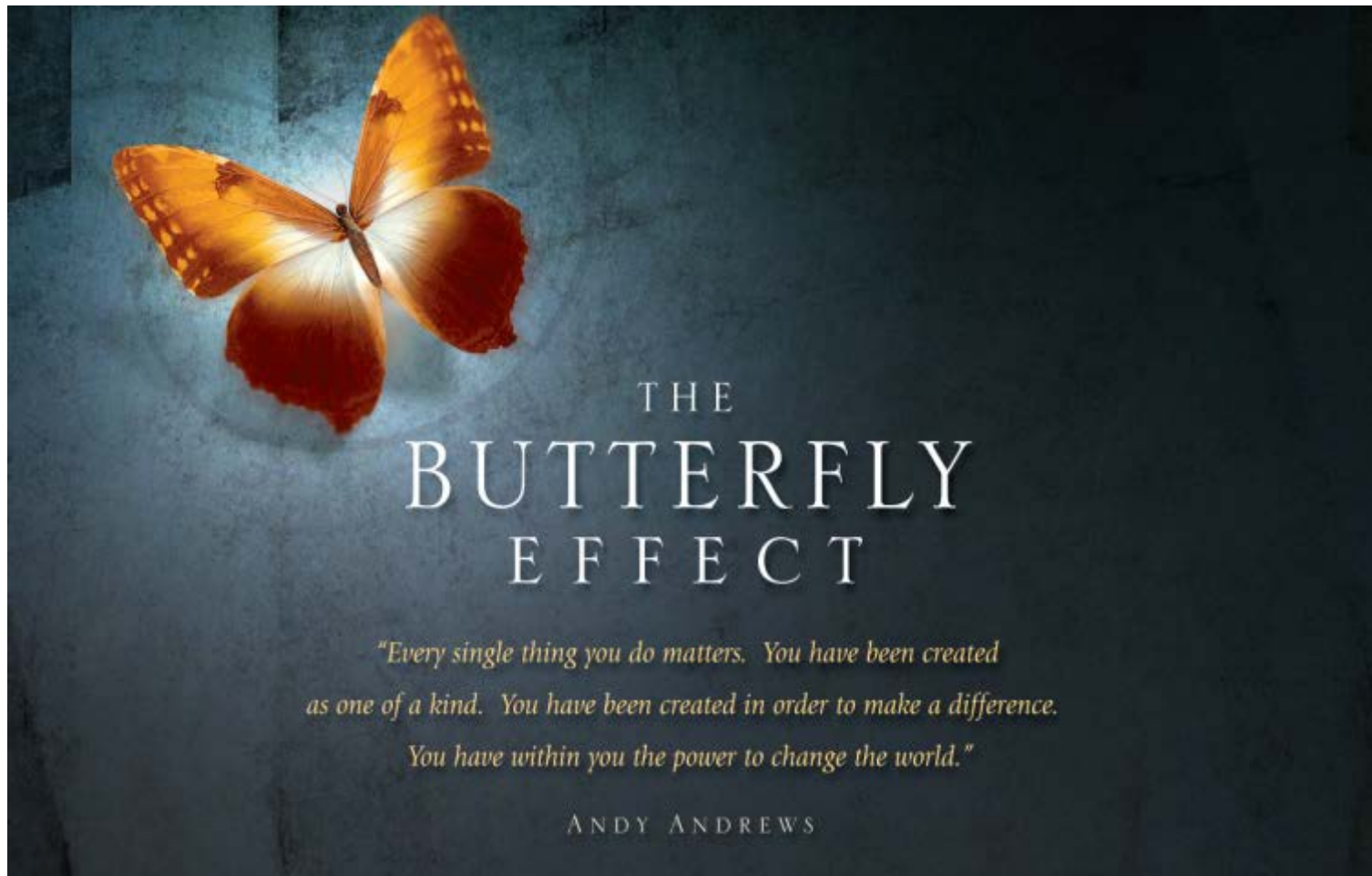
- John Taylor, MD, Champion
- Anesthesiologist in outpatient surgery center is piloting circuit filters and absorbent canister filters
- Cost savings realized by avoiding disposal of absorbent as haz waste
- Replacement 1xday instead of between patients



Streamline OR supplies; rethink purchasing.  
Encourage vendors to recycle packaging materials.



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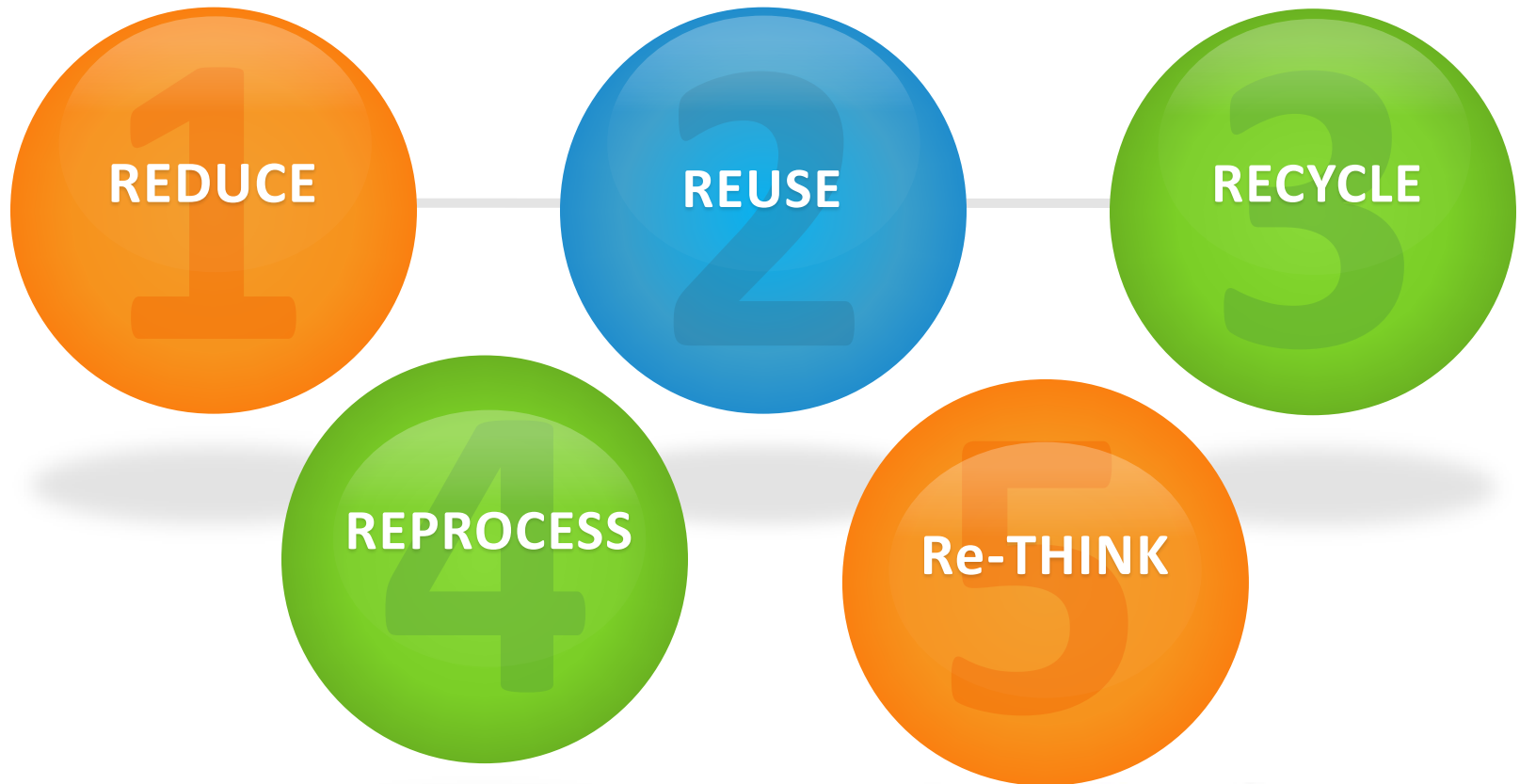


# Reprocessing SUDs

Company	11-12 lbs	12-13 lbs	13-14 lbs	14-15 lbs	11-12 \$Saved	12-13 \$Saved	13-14 \$Saved	FY14-15 \$Saved
<b>Hygia</b> (non-invasives) - SCDs, BP cuffs, infuser bags, somatic sensors, tourniquets	2462	3592	11,234	16,693	78,755	106,266	72,628	42,233
<b>Masimo</b> (Non-invasives) – Adult and pediatric pulse oximeters	0	5552	11,163	Est 11,163	0	21,355	36,764	Est 36,764
<b>Stryker</b> (invasives) - Harmonic scalpels, arthroscopic shavers, burrs, US and EP catheters, suture passers, pressure infusion bags	11,863	14,664	10,349	16,966	594,737	813,904	822,074	962,197
<b>TOTAL</b>	<b>14,325</b>	<b>15,041</b>	<b>32,746</b>	<b>44,822</b>	<b>673,792</b>	<b>903,336</b>	<b>931,466</b>	<b>1,041,194</b>

# Five R's

*"Every person is the right person to act. Every moment is the right moment to begin".*  
**THE Time to Act is Now!**



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