

SPECTRUM HEALTH



Sustainability Program

March 24th, 2015

Sarah Chartier

Sustainability Program Manager

Spectrum Health

Agenda

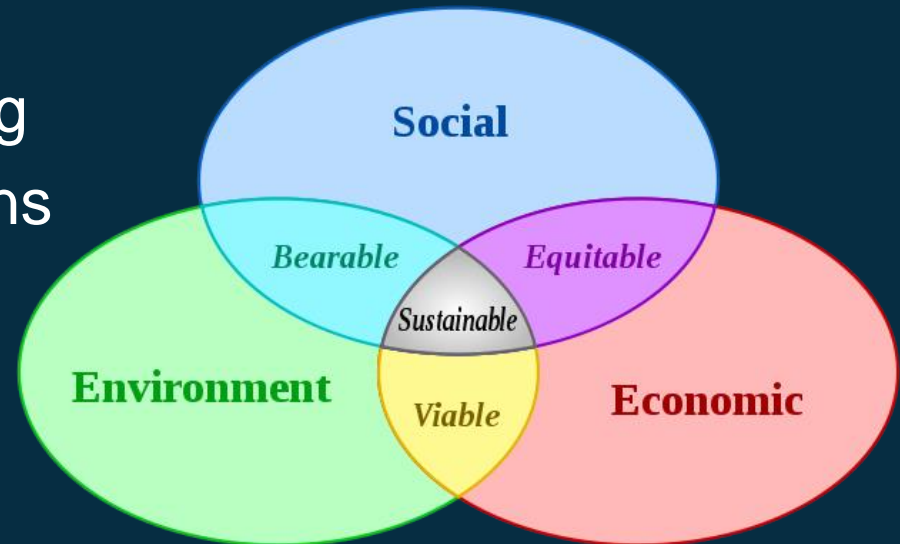
- Why Sustainability in Health Care
- Sustainability at Spectrum Health
- Human and Environmental Health

Why Should we care?



First Do No Harm

- Meeting the needs of the present without compromising the ability of future generations to meet their own needs*
- People, Planet and Profit



*World Commission on Environment and Development. Brundtland Commission 1987

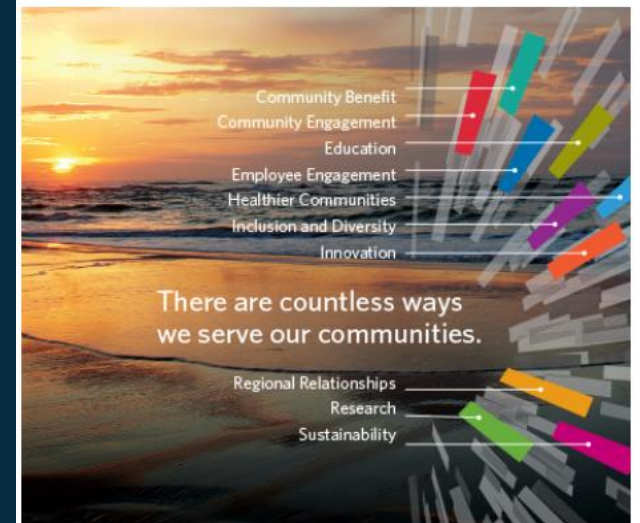


Corporate Social Responsibility

We have a responsibility to our community



Corporate Social Responsibility



At Spectrum Health, our commitment to the communities we serve is impacting lives in ways people don't always see. As a not-for-profit health system rooted in West Michigan, we invest in improving patient care, building and renovating facilities, providing health education and funding programs that proactively address disease and illness. All told, our efforts have brought hundreds of millions of dollars into our communities.

Creating Exceptional Experiences.....

...for our Patients

...for our Team

...for our Community



We believe...
physical environments can enhance healing,
health and wellbeing.

Sustainability In Health Care

18% of USA GDP

\$6.5 billion on energy

5.9 million tons of waste



Economic Benefit

- Every dollar a nonprofit health care organization saves on energy is equivalent to generating new revenues of \$20 for hospitals or \$10 for medical offices
- Reducing waste, energy, process saves money
 - \$750,000 sustainability savings 2015 FY
 - \$750,000 energy savings 2015 FY

Sustainability At Spectrum Health

Spectrum Health's sustainability program focuses on improving human health, protecting the natural environment and practicing fiscal responsibility

Sustainability Overview [Video](#)





Program Overview

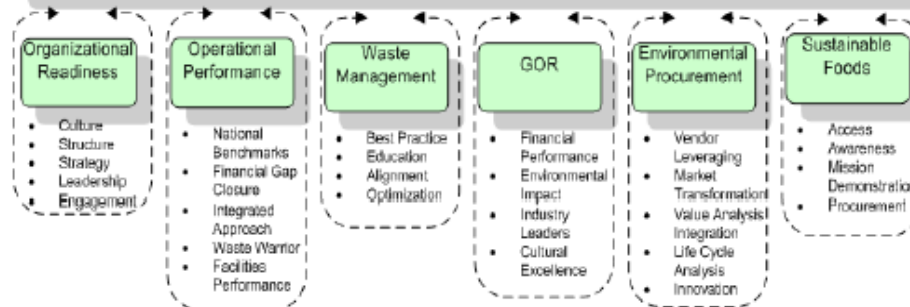
Sustainability Program

Spectrum Health



Sustainability Vision
 By 2020, Spectrum Health will be the national leader for sustainability in healthcare through improving human health, protecting the natural environment, and practicing fiscal responsibility.

Focus Areas
 How are we going to get there?



How Will We Measure Success?

- Triple Bottom Line Reports & Metrics
- Best Practice Benchmarking
- Patient Satisfaction
- Financial Gap Closure
- Key Performance Indicators
- Staff Engagement
- Media Coverage
- CSR Report
- Carbon Emissions Reduction

Operational Performance





Operational Performance



Ride The Rapid For Free



A pass issued by security services will be swiped when you board a bus and can be used for free transportation twice daily. Employees who need to change buses to get to and from work will need to request a free transfer pass from The Rapid driver when they board.

The pass is valid for 180 days; after that, employees can request a new pass from security services. If the pass is lost, report it as lost to security services so it can be cancelled and a new one can be issued. Contact security services team with questions at 616.391.4377.

Operational Performance



Energy Production



Versus



Pharmaceutical Waste



Food Waste

Sustainable Food Efforts

At Blodgett and Butterworth hospitals, 10 tons of food are composted each month. Also, more than 40 percent of our food service supplies for these hospitals come from local sources.

Blodgett and Butterworth hospitals food composting



Process Waste

- Supplies and orders
- Unnecessary procedures
 - C-Section
 - MRI
- Pharmaceutical Waste

Lean Six Sigma: 8 Wastes

 <p>Talent</p> <p>Underutilizing people's talents, skills, & knowledge.</p>	 <p>Inventory</p> <p>Excess products and materials not being processed.</p>	 <p>Motion</p> <p>Unnecessary movements by people (e.g., walking).</p>	 <p>Waiting</p> <p>Wasted time waiting for the next step in a process.</p>
 <p>Transportation</p> <p>Unnecessary movements of products & materials.</p>	 <p>Defects</p> <p>Efforts caused by rework, scrap, and incorrect information.</p>	 <p>Overproduction</p> <p>Production that is more than needed or before it is needed.</p>	 <p>Overprocessing</p> <p>More work or higher quality than is required by the customer.</p>


<http://GoLeanSixSigma.com>

Where does my waste go?



VS



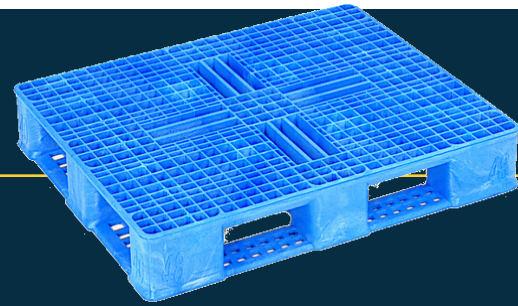
Recycled

Incinerated

1,478 tons recycled at Spectrum Health in 2014
5.9 million tons of waste produced annually in healthcare



75,000 lbs. in blue wrap recycled





Greening the Operating Room



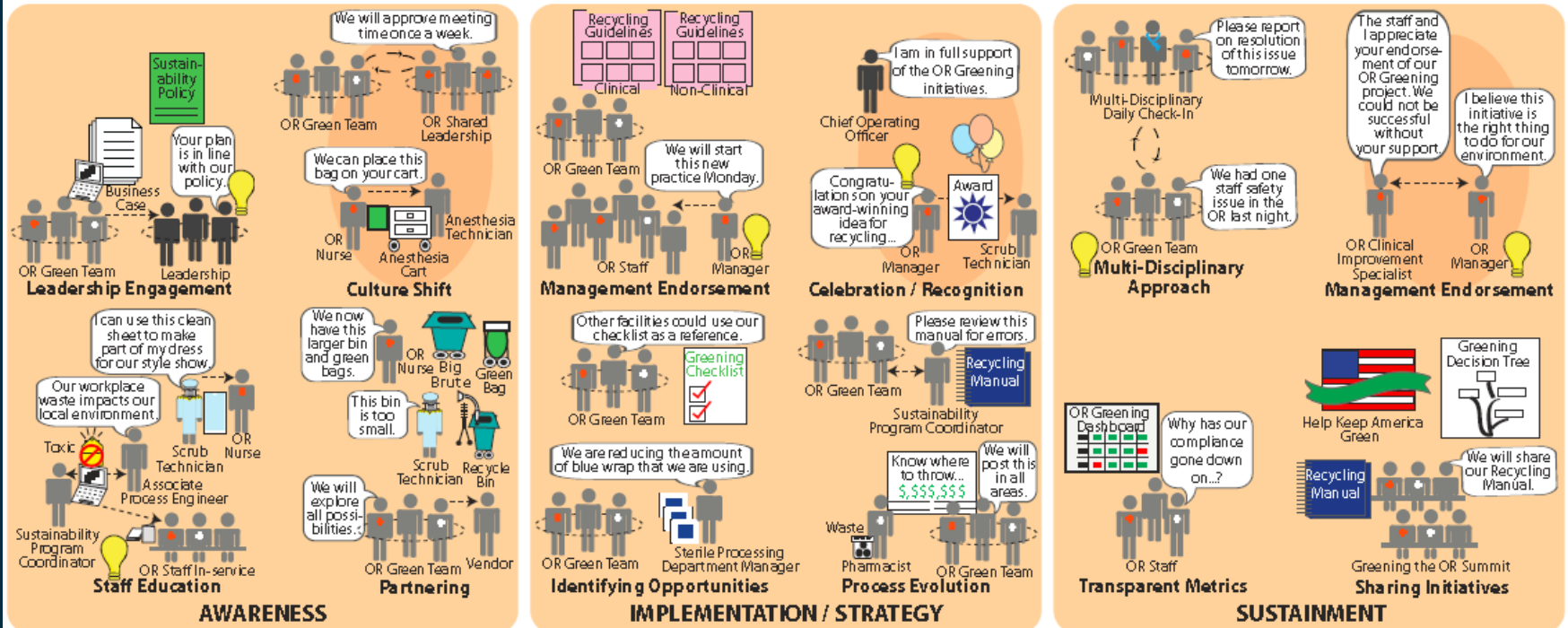
- Over 42% Revenue
- 56% Supply Costs
- 30% Hospital Waste



VHA Leading Practice Blueprint™

Spectrum Health - Butterworth Hospital - Greening the OR

Evolving From Recycling to Reuse and Reduce



Greening the OR



10 Hippos



FEBRUARY SUSTAINABILITY RESULTS

FEBRUARY WASTE AVOIDANCE (Pounds)	FEBRUARY COLLECTION GROWTH vs. Prior Month	POUNDS OF WASTE BY # of OR's	
Big Rapids	59 pounds -51%	20 pounds	
Blodgett	984 pounds -30%	70 pounds	
Butterworth	1,102 pounds -35%	39 pounds	
East Paris	92 pounds 52%	23 pounds	
Gerber Memorial	137 pounds 33%	34 pounds	
Helen DeVos Children's	124 pounds -8%	20 pounds	
Lake Drive	162 pounds 48%	76 pounds	
South Pavilion	226 pounds 22%	46 pounds	
United Memorial	133 pounds 50%	44 pounds	
Zeeland	308 pounds -12%	103 pounds	
Totals	3,245 pounds -18%	48 pounds	

FISCAL YEAR TOTALS July 1 st 2015 – February 28 th 2015	Waste Avoidance: 31,812 pounds
	Savings: \$ 408,441



Environmental Procurement



Chemicals

- Children's cancer rates have risen substantially over the past quarter century. From 1975 to 2000, cancer incidence increased 31.7% nationwide in children under the age of 15, or 29.6% in children under the age of 20.4*
- The World Health Organization,, states that up to 85% of cancers are caused from environmental toxicity
 - Cleaning products
 - Flame retardants
 - PVC
 - Pesticides

(See Figure 1.) * SEER Cancer Statistics Review 1975-2000, Section XXVII: Childhood Cancer by Site: Incidence, Survival, and Mortality. Available at http://www.seer.cancer.gov/csr/1975_2000/results_merged/sect_27_childhood_cancer.pdf
<http://www.who.int/mediacentre/factsheets/fs297/en/>

Health Impact of Chemicals

- EPA recognize that indoor air pollution is among the top five environmental risks to public health
- Chemical-related diseases, including cancer, asthma, birth defects, developmental disabilities, autism, endometriosis, and infertility. Mounting scientific evidence links the incidence of these diseases, in part, to environmental toxicants.
- U.S.: Roughly 1 in 2 American men and 1 in 3 American women are expected to get cancer in their lifetimes.

[\(http://www.who.int/mediacentre/factsheets/fs297/en/\)](http://www.who.int/mediacentre/factsheets/fs297/en/)

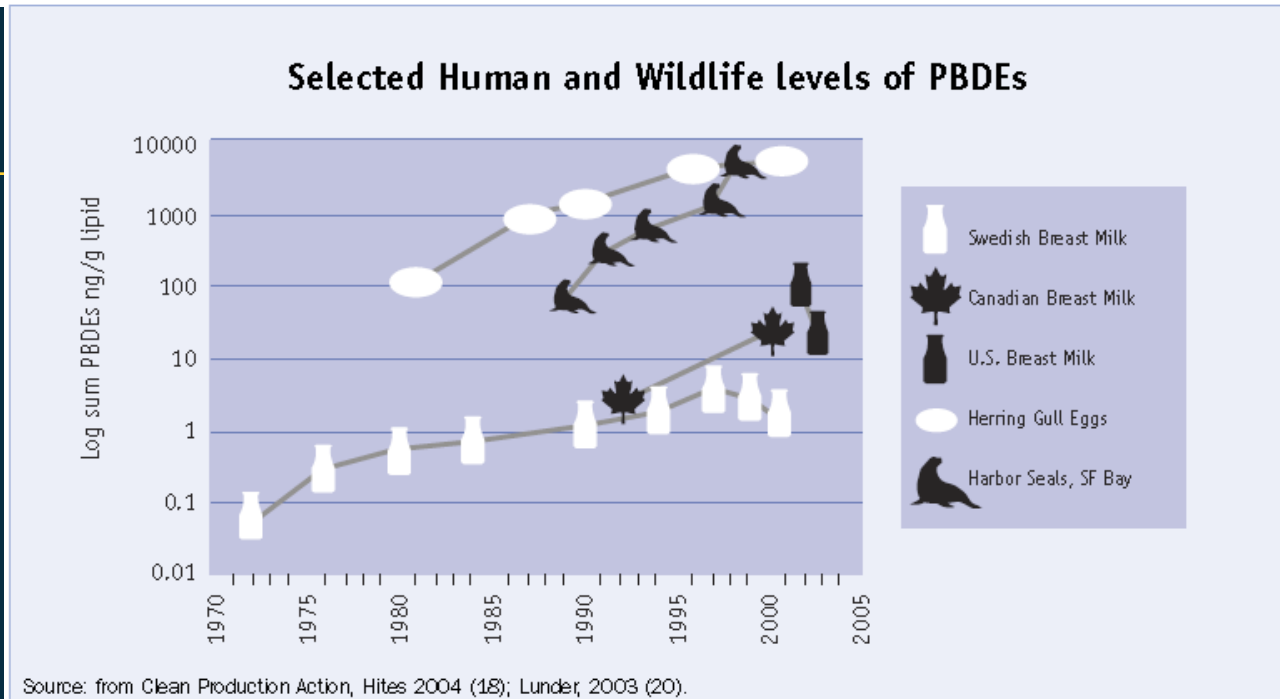
Chemicals in Health Care

- PVC
 - Most common plastic in medical devices
 - Creates dioxin when incinerated
- DEHP
 - Used to soften PVC plastic
 - Linked to reproductive birth defects
 - NICU babies at highest risk of exposure



Chemicals in Health Care

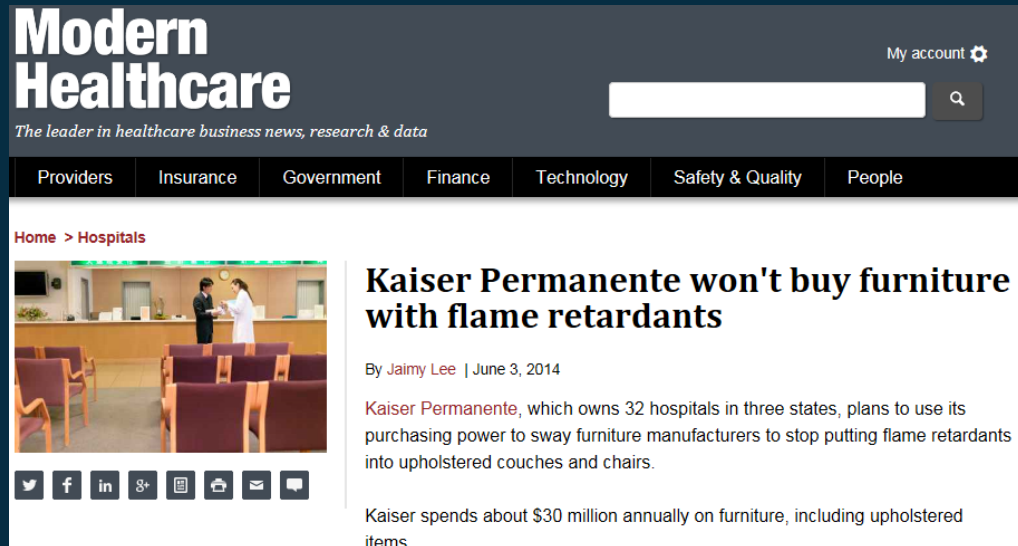
- Flame Retardants
 - Used in building materials, electronics, furnishings, motor vehicles, airplanes, plastics, polyurethane foams, and textiles.
 - brominated flame retardants" (BFRs) bio accumulate
 - The breast milk of American women contains the highest levels of BFRs in human breast milk found anywhere in the world.
- Controlled studies in laboratory animals show that some BFRs disrupt thyroid function, causing hyperactivity and problems with learning and memory.




- **PBDEs**, are organobromine compounds that are used as flame retardant
- Animal studies link PBDEs to immune suppression, cancer, endocrine disruption, and neurobehavioral and developmental effects

Health Cares Role in Chemical Reduction

- Eliminate DEHP from NICU
- Reduce flame retardants in furniture
- Educate the community



Modern Healthcare
The leader in healthcare business news, research & data

My account 

Providers Insurance Government Finance Technology Safety & Quality People

Home > Hospitals

Kaiser Permanente won't buy furniture with flame retardants

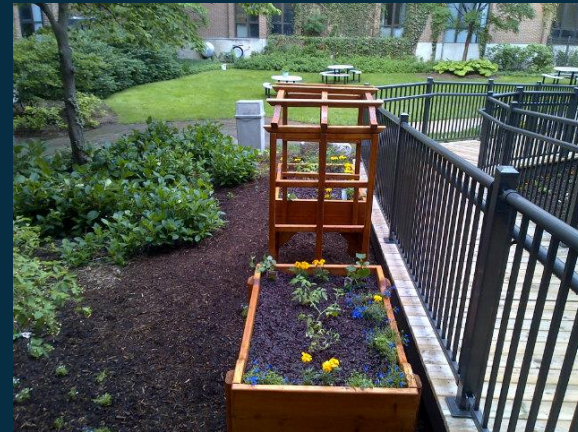
By Jaimy Lee | June 3, 2014

Kaiser Permanente, which owns 32 hospitals in three states, plans to use its purchasing power to sway furniture manufacturers to stop putting flame retardants into upholstered couches and chairs.

Kaiser spends about \$30 million annually on furniture, including upholstered items.

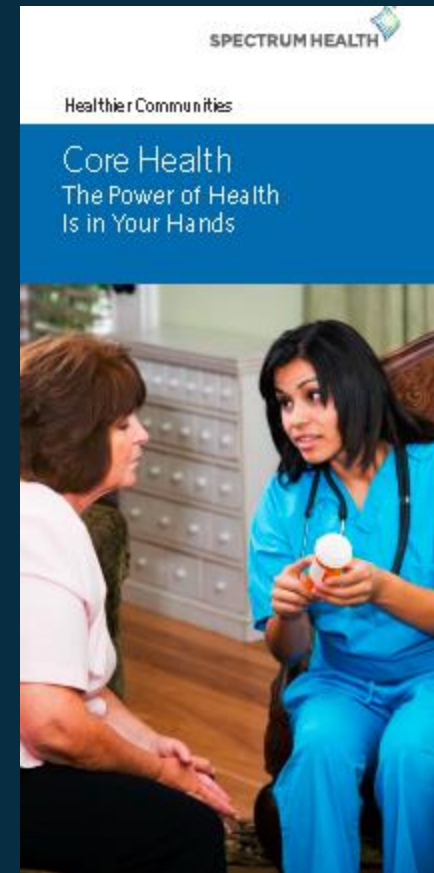


Sustainable Food at Spectrum Health



Food Rx Program

Family Medicine Clinic
Internal Medicine Clinic





Food Rx Program



Fruit Salsa

2 cups fresh, seasonal fruit
(like peaches or nectarines, berries, or apples)
2 tablespoons orange juice concentrate
2 tablespoons apple jelly
2 1/2 tablespoons brown sugar

Wash all fruit, then finely chop and place in a large bowl. In a small bowl, combine orange juice concentrate, jelly and brown sugar. Stir into fruit. Chill for several hours before serving.




Antibiotic Free Meat


- According to US FDA estimates, up to 80% of all the antibiotics consumed each year are routinely given to poultry, beef cattle, and swine in their feed
- The FDA reported a 16 percent increase in the amount of antibiotics sold for agriculture use between 2009 and 2012 in the U.S. alone.
- PBS Special- The Trouble with Antibiotics
 - Cephalosporin resistance found in cattle

ANTIBIOTIC RESISTANCE


from the farm to the table

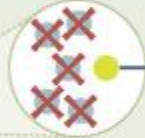
RESISTANCE

All animals carry **bacteria** in their intestines




Antibiotics are given to animals






Antibiotics kill most bacteria




But resistant bacteria survive and multiply

SPREAD


Resistant bacteria can spread to...




animal products



produce through contaminated water or soil




prepared food through contaminated surfaces




the environment when animals poop


EXPOSURE


People can get sick with resistant infections from...



contaminated food









contaminated environment

IMPACT


Some resistant infections cause...



mild illness



severe illness and may lead to death



Learn more about antibiotic resistance and food safety at www.cdc.gov/foodsafety/antibiotic-resistance.html

Health Cares Role in Antibiotic Use

- Get educated
- Express concern for hospital meat purchases
- Be an advocate for antibiotic protection

Expanding Antibiotic Stewardship

The Role of Health Care in
Eliminating Antibiotic Overuse
in Animal Agriculture



Next Steps



Questions



Sources

- [CHE Toxicant and Disease database](#)
- American Cancer Society, [Cancer Facts & Figures 2012](#) (pdf)
- Woodruff T, et al. Trends in environmentally related childhood illnesses. *Pediatrics*, 2004;113(4):1133-1140.
- Boyle C, et al. Trends in the prevalence of developmental disabilities in U.S. children, 1997-2008. *Pediatrics* 2011;127(6):1034-1042.
- **Use of Di(2-Ethylhexyl) Phthalate Containing Medical Products and Urinary Levels of Mono(2-Ethylhexyl) Phthalate in Neonatal Intensive Care Unit Infants**, by Ronald Green, Russ Hauser, Antonia M. Calafat, Jennifer Weuve, Ted Schettler, Steven Ringer, Kenneth Huttner, and Howard Hu
- PBS Frontline Special <http://www.pbs.org/wgbh/pages/frontline/health-science-technology/trouble-with-antibiotics/study-antibiotic-use-in-animals-projected-to-soar/>
- [CDC- National Antimicrobial Resistance Monitoring System](#)
- <https://noharm-uscanada.org/sites/default/files/documents-files/2735/Expanding%20Antibiotic%20Stewardship.pdf>

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