



Measuring the Kaiser Permanente Chemical Footprint

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Kaiser Permanente – At a glance

together
WE BUILD A BRIGHTER FUTURE

The largest non-profit healthcare system in the US

**\$56bn operating revenue
\$14bn spend**



10.1M members



**17,791 physicians
177,441 employees**



**38 acute care hospitals
619 medical office buildings**

Safe Chemicals

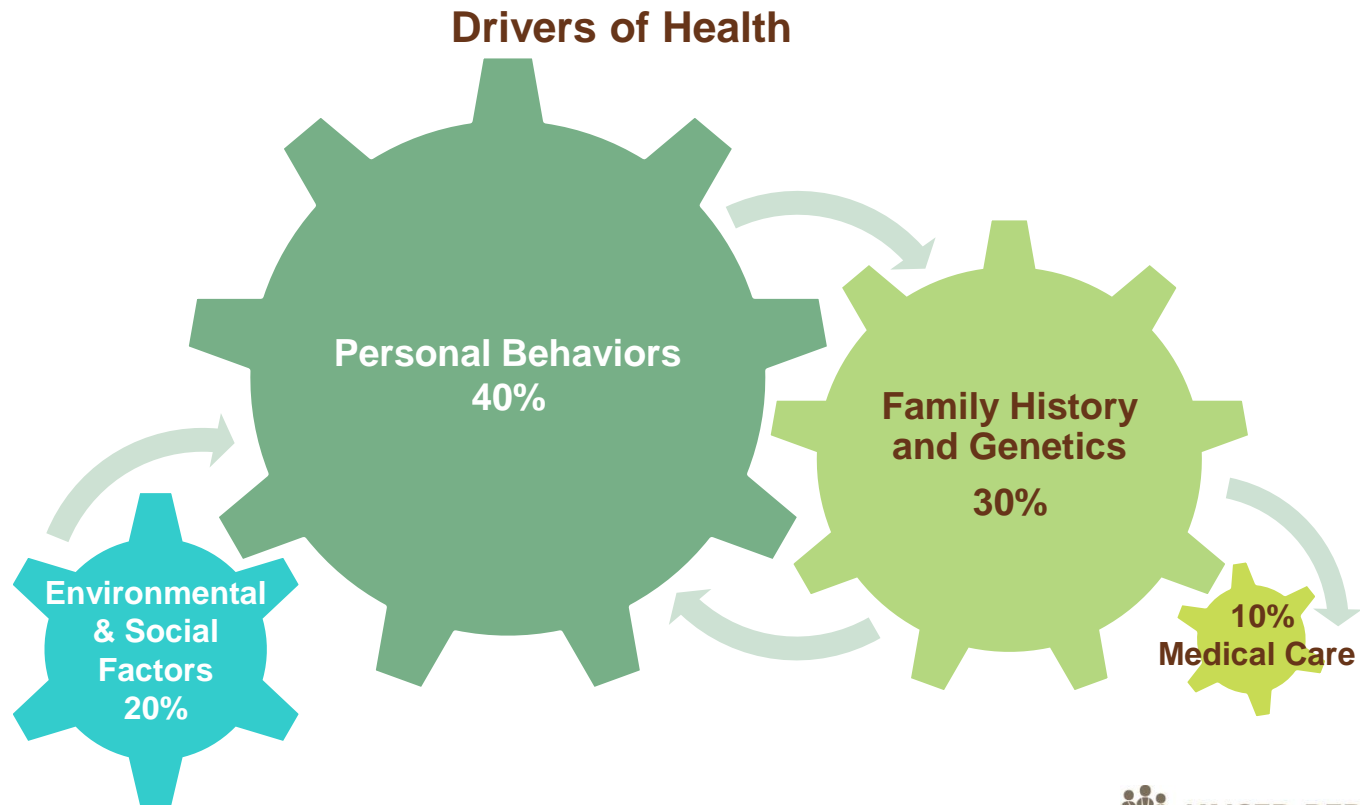
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Factors that Influence Health

- **The environment around us is a strong driver of overall health.**
- **We need healthy environments to support healthy behaviors and positive health outcomes.**



Safer Chemicals

- **We are working to reduce diseases and health conditions that are linked to environmental toxins include cancer, Parkinson's, asthma, and infertility.**
- **Four actions we are taking to promote safer chemicals in products:**

1 Sustainability scorecard

2 Targeted products

3 Public policy

4 Research (e.g., BPA exposure and health)

KP Sustainability Scorecard together WE BUILD A BRIGHTER FUTURE

Sustainability Scorecard for Medical Products



Corporate Level Questions

Corporate-level questions apply to your company's total performance. Including but not limited to headquarters, owned, operated, or leased manufacturing facilities, subsidiary manufacturing facilities, and partner manufacturing facilities.

(Answer Type)

General	1	Please attach your company's environmental or sustainability statement or policy.	Attachment
	2	Does your company have an established environmentally preferable purchasing and supply chain program? If so, please describe.	Y/N, description
	3	Does your company have a goal to steadily increase employee access to local, sustainable food in your cafeterias and vending areas?	Y/N
	4	Has your company published a sustainability report? If yes, for how many years?	Y/N, # of years
	5	Do you participate in any public reporting, such as through the Global Reporting Initiative (GRI, www.globalreporting.org), Ceres, or similar programs? If yes, please list.	Y/N, list
	6	What percent of total facilities that manufacture products sold by your company and its subsidiaries are certified under ISO 14001?	%
	7	In the previous fiscal year (FY), what was the monetary value (in US dollars) of significant fines (including those currently under appeal), and total number of non-monetary sanctions, for non-compliance with local, national, or international environmental laws and regulations?	\$. #
Resource Use	8	In the previous FY, what percent of total waste generated by your company and its subsidiaries was recycled or reused? ¹⁰	%
	9	What percent of total weight or volume of manufacturing input material is recycled material? ⁵ (Use GRI estimation methods to obtain answer)	%
	10	Do you offer any end-of-life product take-back programs, including electronics? If so, please list all items you take back for responsible recycling, donation, or reuse, and outline the process for	Y/N, list

SKU-Level Questions

Input "1" for yes and "0" for no

SKU	Product Name	Designed or sized for neonatal or pediatric applications	1	2	3	4	5	6	7 (A)	8 (B)	9	10
		Free of intentionally added latex in any material touched by patients or practitioners	All homogenous electronic parts compliant with all EU RoHS Directive's restricted limits (excluding exemptions) ⁹	Free of intentionally added Bisphenol A or Bisphenol A derived chemicals (including thermal paper) ²	All homogenous materials contain less than 1000 ppm of bromine and chlorine-based compounds ³	Free of Polyvinyl Chloride	Free of any intentionally added phthalate, including DEHP ⁶	Free of any intentionally added California Prop 65 Chemical greater than threshold or warning level ⁷	If no to (A), List Chemical Abstracts Service (CAS) #'s (separated by ",")	Does not create OR become hazardous waste on its own or when aggregated ⁴	Free of intentionally added antimicrobial/antibacterial agent ¹	

Prioritizing Products

- **Potential Patient/Employee Exposure**
- **Potential environmental impact**
- **Known Chemicals of Concern**
- **Procurement Cycle**



Targeted Product Example



Chemically Safer IV Tubing and Solution Bags

Environmental and Human Health Impact: Converted to **100 percent** (76 tons per year) PVC and DEHP-free IV solution bags and **100 percent** DEHP-free IV tubing (22 tons per year).

Business Impact: **21 percent price reduction** or **\$4.98 million** annualized price reduction.

Challenge

In 2009, Kaiser Permanente adopted a multi-year environmental stewardship strategy to support our overarching commitment to programs addressing safety, human health, and environmental excellence. Organizational guidelines were developed for sustainable food, climate, and safer chemicals. The safer chemicals strategy included performing a chemical hazard assessment that ultimately generated a "Targeted Ten" list of products that were pervasive in our facilities and could potentially expose employees and patients to chemicals of concern (COC) as defined in our Environmental Preferable Purchasing policy.

KP committed to substitute those products with safer alternatives, where alternatives meet all KP requirements. One of the Targeted Ten products is **intravenous (IV) tubing and solution bags**. KP sought to select IV products that have the smallest health risk associated with the material components. **KP purchases 4.9 million IV tubing sets and 9.2 million solution bags per year.**

Aim/Goal

- Identify any COC in all IV products and eliminate them within KP facilities and products if alternatives exist in the marketplace.

Team

Dr. John Howse, Chair, IV Sourcing and Standards Team (SST)
 Dianne Mackey, BSN, RN, Co-Chair, IV SST
 IV SST Team & Large Volume Pump Task Force
 Northern and Southern California Product Support Teams
 Mike Smith, Sourcing Manager, Procurement & Supply
 Brian Kelly, VP, MedAssets

Actions Taken

- In the bidding process, the IV SST required suppliers to complete KP's sustainability scorecard as well as an unprecedented disclosure of all chemical ingredients above 100ppm.
- Supplier disclosures were confidentially evaluated against KP's list of COC, and products were scored according to their chemical

components. **The most concerning chemicals were PVC and its plasticizer additive, DEHP.**

- B. Braun Medical had the broadest mix of products that were deemed clinically acceptable for our patients and that did not contain one or both of the chemicals.
- KP awarded contract to B. Braun Medical.

Results

	Chemical Make-Up	Old Contract	New Contract		
		Percent of Total Units	Percent of Total Units	Number Units/ Year	Number Tons/ Year
Solution Bags (including proprietary solution bags)	100% PVC & DEHP – free	18%	100%	9,248,313	72
	DEHP- free within fluid path only	1%	0%	0	0
	Contains both DEHP & PVC	81%	0%	0	0
Tubing (including proprietary tubing)	100% DEHP – free	72.8%	100%	4,910,995	22
	DEHP- free within fluid path only	0.002%	0%	0	0
	Contains both DEHP & PVC	27.2%	0%	0	0

Lessons Learned

- Complete market research to determine leaders in innovation, including introduction of safer chemicals in products.
- Suppliers often know the chemical components of their products and can supply information if given enough time, direction, and assurance that their information will be kept confidential.

Next Steps

- Complete conversion to all new products and identify any outlying subsets of solution bags, such as specific pharmacy bags that can be converted to chemically safer options in the future.

For More Information Contact: Environmental-Supply-Chain@kp.org

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External Engagement

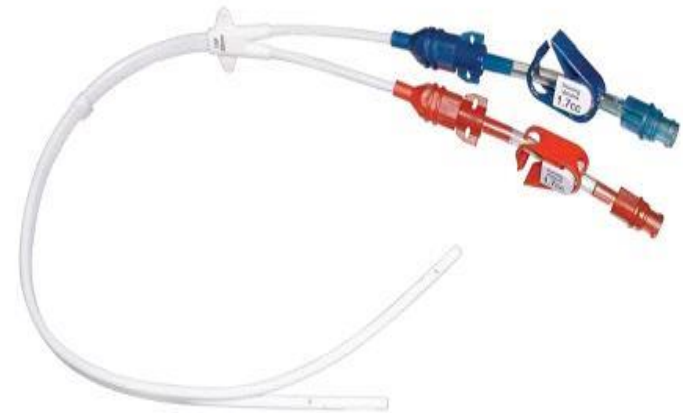


- **Testify before Congress**
- **Meet with legislators, government agencies**
- **Business-NGO Working Group**

“As we strive to advance an economy where the production and use of chemicals are not harmful for humans or the environment, Kaiser Permanente invests significant time and resources. ... Mechanisms are needed to support downstream users in procuring the safest products and materials for our needs.”

Congressional testimony of Kathy Gerwig, VP, Environmental Stewardship Officer

Chemical Footprint Approach



Chemical Footprint Value

- **Provide comprehensive identification of chemicals of concern**
- **Enable assessment and prioritization of chemical health risks**
- **Support the development of a plan to eliminate or reduce those chemical health risks.**
- **Enable tracking of progress to reduce and eliminate chemicals of concern**
- **Tell a story to drive change!**

Measuring Our Footprint

- **Hospital?**
- **Outpatient Medical Office Building?**
- **Floor/Wing?**
- **Department?**
- **Room?**
- **Process or Procedure?**

Measuring Our Footprint

Categories to Consider:

- Medical Supplies?
- Medical Equipment?
- Furnishings ?
- IT equipment?
- Cleaning Chemicals?
- Administrative Supplies?
- Pharmaceuticals?
- Built Environment?
- Laboratory Chemicals?

Measuring Our Footprint

Chemicals:

- ROHS restrictions
- BPA
- Bromine, Chlorine-based compounds
- PVC
- Phthalates including DEHP
- California Proposition 65
- Antimicrobials
- Others???

Measuring Our Footprint



Measuring Our Footprint

What is Meaningful?

- The number of products/equipment containing any chemicals of concern
- The number of products/equipment per manufacturer containing any chemicals of concern
- The number of chemicals of concern per product category (e.g., medical supplies, furnishings)
- The products containing Prop 65 chemicals
- The number of chemicals of concern by health hazard (e.g., 5 carcinogens, 4 developmental toxins, etc.)