

Every mL saved is more to go around.

Preserving iodine, protecting imaging

Iodine is a finite resource that underpins modern diagnostic imaging. With global demand for iodinated contrast agents rising more than 5% per year and availability fluctuating,¹ the healthcare industry must make stewardship a priority to preserve supply while maintaining image quality and patient safety. It is a shared responsibility among healthcare leaders, clinicians, and industry partners and a strategic imperative for health systems with implications for patient care, throughput, and resilience.

Why iodine stewardship matters

Reason 01

Promotes health system stability

Disruptions to manufacturing or logistics can quickly affect availability and cost. Many health systems that optimized contrast dosing during a prior shortage reported that reduced volumes were sufficient for certain exams. The most prepared kept that discipline in place afterward.²

Reason 02

Safeguards patients in the short- and long-term

Using tailored contrast dosage for each patient protects kidney function by reducing unnecessary exposure to contrast.³ Stewardship also preserves reliable long-term access to iodinated contrast agents, which supports timely diagnoses and helps prevent delays or compromises in care.

Reason 03

Streamlines imaging operations and image reading throughput

Using contrast only when clinically appropriate can support faster, more predictable workflows. Even further, reducing unnecessary imaging could help speed time to diagnosis for high-acuity cases by allowing them to be prioritized.⁴

Reason 04

Increases care team capacity

Standardized contrast protocols can reduce unnecessary imaging and variability, easing the cognitive and operational burden on clinical staff and supporting consistent care quality.⁴

Reason 05

Reduces environmental and financial burden

Conserving iodinated contrast reduces procurement orders, cutting spend and easing supply chain pressure. It can also reduce packaging waste, cut carbon emissions,⁵ and minimize its presence in groundwater⁶ – potentially contributing to health system sustainability targets.

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3. Gulizia M, et al. [Adjustments of iodinated contrast media using lean body weight for abdominopelvic computed tomography: A systematic review and meta-analysis](#). *European Journal of Radiology*. July 19, 2024.

4. Chung R, et al. [Implementation of an Institution-Wide Rules-Based Automated CT Protocols System](#). *American Journal of Roentgenology*. January 17, 2024.

5. Nghiem D et al. [The Iodine Opportunity for Sustainable Radiology: Quantifying Supply-Chain Strategies to Cut Contrast's Carbon and Costs](#). *Journal of the American College of Radiology*. April 7, 2026.

6. Dekker HM, et al. [Tackling the increasing contamination of the water supply by iodinated contrast media](#). *Insights into Imaging*. February 24, 2022.

7. Grist TM, et al. [Short-, Mid-, and Long-term Strategies to Manage the Shortage of Iohexol](#). *Radiology*. May 19, 2022.

8. Blackmore CC, et al. [Effectiveness of Clinical Decision Support in Controlling Inappropriate Imaging](#). *Journal of the American College of Radiology*. January 4, 2011.

*This infographic is a companion piece to Advisory Board's expert insight, [Rethinking iodine contrast use: A stewardship maturity model](#).

How we move forward with iodine

Stewardship strategies

Every careful choice stretches iodine reserves further while protecting diagnostic quality

Your organization doesn't have to sacrifice diagnostic quality to keep iodinated contrast use sustainable. Protect access to contrast-enhanced imaging now while preserving this critical resource for the future by choosing the iodine stewardship strategies that work best for your health system.

Strategy 01

Reduce waste at the point of care

Map doses against patient weight distributions to identify over-dosing, then implement personalized dosing and lower-contrast imaging/contrast-delivery techniques (e.g., lower kVp).⁷ Pair these strategies with multi-dose bulk vials and injector workflows that minimize discard.

Assess overnight and end-of-day waste to determine whether mixed vial sizes or smarter bulk use are warranted.²

Strategy 02

Ensure imaging appropriateness

Regularly update the criteria for when contrast-enhanced imaging is clinically indicated, and standardize protocols across shifts and sites.

Embed clinical decision support into ordering workflows, including guidance for referring clinicians, to ensure that the right imaging modality is ordered for the right clinical scenarios.⁸

Strategy 03

Build a future-ready stewardship program

Identify stewardship champions, including imaging and supply chain leaders, and incorporate iodine stewardship metrics into existing operations and quality reviews.

Continue to research AI-enabled virtual or synthetic contrast, both emergent technologies that create or enhance diagnostic images through different mechanisms than conventional contrast media, as part of a long-term innovation roadmap.

Strategy 04

Connect with industry partners

Manufacturers are invested in meeting health system demand by maintaining production capacity, reducing waste in the production process, and partnering with health systems to improve efficiency. Engage with manufacturers' clinical applications support, educational resources, and expert optimization services.

This infographic was developed through interviews with clinical and operations experts.



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