

**2018 Mo-99 TOPICAL MEETING ON
MOLYBDENUM-99 PRODUCTION TECHNOLOGY DEVELOPMENT**

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**Cardinal Health Nuclear & Precision Health Solutions
Perspectives on the Reliable Supply of Molybdenum-99**

David W. Pellicciarini, CHP
Vice President, Pharmacy Safety, Practice and Technical Operations
Cardinal Health Nuclear & Precision Health Solutions, 7000 Cardinal Place, Dublin, OH 43017
– USA

ABSTRACT

Molybdenum-99 is the parent of the most commonly used radioisotope in nuclear medicine: technetium-99m. Technetium-99m is used in millions of nuclear medicine imaging procedures each year. Tc-99m has a six-hour half life and must be distributed daily to medical facilities on a just-in-time basis. Disruptions to molybdenum-99 production can lead to a cascading effect throughout the supply chain, ending at a patient awaiting an important imaging procedure.

Some molybdenum-99 production occurs in reactors that use highly enriched uranium (HEU). Navigating the transition from HEU to non-HEU sources of molybdenum-99 without impacting patient care is a careful balance to maintain.

The US's reliance on overseas Mo-99 suppliers has highlighted the vulnerability of the global supply chain, as one overseas supplier has been shut down and a second overseas supplier has experienced unexpected outages.

Some overseas Mo-99 suppliers also produce iodine-131, another important medical radioisotope. Although Mo-99 supply impacts a greater number of medical procedures, there is also concern about potential disruptions to the supply of iodine-131 and the potential impact to medical care in the US.