

<b>Title</b>	Optimizing health system use of medical isotopes and other imaging modalities
<b>Agency</b>	Canadian Agency for Drugs and Technologies in Health (CADTH) Suite 600, 865 Carling Ave, Ottawa, ON Canada K1S 5S8 Phone: 1-613-226-2553 / Fax: 1-613-226-5392 E-mail: <a href="mailto:requests@cadth.ca">requests@cadth.ca</a> / Web site: <a href="http://www.cadth.ca">http://www.cadth.ca</a>
<b>Reference</b>	CADTH Optimal Use Report, volume 2, issue 1A, 2012. Available from: <a href="http://www.cadth.ca/media/pdf/H0504_Medical_Isotopes_final-Report_wAppen_e.pdf">http://www.cadth.ca/media/pdf/H0504_Medical_Isotopes_final-Report_wAppen_e.pdf</a>

**Aim**

To provide national guidance on the optimal use of the medical isotope technetium-99m ( $^{99m}\text{Tc}$ ) during a situation of reduced supply.

**Conclusions and results**

In the event of a disruption in supply, the allocation of the medical isotope technetium-99m ( $^{99m}\text{Tc}$ ) used in medical diagnostic imaging should follow an evidence-informed framework while considering both the available alternatives and local context. Alternatives to diagnostic imaging and other contextual elements are unique to each setting where  $^{99m}\text{Tc}$  use must be prioritized during a supply disruption. It is best to customize the information to each circumstance when deciding how best to allocate  $^{99m}\text{Tc}$ .

**Methods**

Multi-criteria decision analysis (MCDA) was used to create a prioritized list of possible courses of action in the event of a reduced supply of  $^{99m}\text{Tc}$ . A nationally representative group of experts, through a series of discussions and taking a national perspective, defined, prioritized and consented to a list of possible actions to guide decision-makers. Recognizing that there are jurisdictional differences in supply and circumstances, for which a national perspective might not be suitable, the group also created a web-based tool to aid in the creation of customized priority lists suitable for use by different jurisdictions. The MCDA process has four basic steps: Development of relevant criteria; identification of the possible courses of action (in this instance, the most common clinical uses of  $^{99m}\text{Tc}$ ); formal evaluation of each possible course of action; and, formulation of priorities and recommendations.

**Written by**

Jeannine Fraser