

Isotope shortage means fewer tests and higher costs: Report

June 16, 2010

Joanna Smith

Ottawa Bureau

OTTAWA—The shortage of medical isotopes caused by the shutdown of a Canadian reactor sent hospitals scrambling to reschedule diagnostic tests and they still ended up performing thousands fewer procedures than usual, says a new report.

The Canadian Institute for Health Information surveyed nuclear medicine facilities across the country earlier this year to put numbers behind the anecdotal complaints that the shortage sparked by the shutdown of the National Research Universal reactor at Chalk River, Ont., negatively affected their ability to conduct diagnostic tests on patients with cancer and other ailments.

"The goal of the survey was really to establish foundational information about what happened," said Francine Anne Roy, director of health resources at the institute.

Atomic Energy of Canada Ltd. reported Wednesday it has finished fixing the reactor and, pending the result of a public hearing at the Canadian Nuclear Safety Commission June 28, expects to be making isotopes by the end of July — more than a year since a leak shut it down in May 2009.

The results published Wednesday underscore the fact that a shortage of technetium-99 — a decay product of the molybdenum-99 isotope produced at Chalk River — is linked to a drop in the number of tests that use it, but the survey also gives an idea of what hospitals and clinics have been doing to cope.

Researchers looked at how many times hospitals and clinics performed three main types of procedures — lung exams, bone scans and cardiac tests — that together account for 80 per cent of the use of technetium-99 and found the numbers dropped significantly compared to before the Chalk River reactor went out of service.



Aaron Lynett/Toronto Star

A nuclear reactor, owned and operated by Atomic Energy of Canada Ltd. at its Chalk River laboratory, along the Ottawa River in Chalk Lake, Ontario, about 180 km North-West of Ottawa.

There were 42,594 tests performed in October 2009 at the roughly 170 nuclear medicine sites that completed the survey, compared to 54,470 procedures performed in those same hospitals and clinics in October 2008 — an almost 22 per cent decrease.

The survey also provides an idea of why there is little life-or-death rhetoric coming from the nuclear medicine community.

The results show the most popular strategies for coping with the shortage include booking tests for when radiopharmaceutical companies expect to be able to deliver a greater supply of technetium-99 and then making sure they use it all while it lasts, along with rescheduling exams and coming up with new ways to prioritize patients.

They have also turned to using alternative isotopes such as thallium 201, which can be used for some heart-related therapies. The head of the Ontario Association of Nuclear Medicine said this has been the biggest lifesaver but has also masked the severity of the shortage.

"If they were to all go back to using technetium for hearts, (we'd) be in crisis mode," said Dr. Christopher O'Brien, who is also medical director of nuclear medicine at the Brantford General.

O'Brien said patients are still being well taken care of, but the soaring costs associated with limited supply and high demand and the constant rejuggling of schedules has taken a toll on budgets and staff morale.

"It's still very difficult and we're definitely not out of the woods," O'Brien said. "Thallium has been a godsend, but it's not where we want to be in the 21st century."

The survey made the same points, with 41 per cent of respondents reporting a medium- to high-degree drop in staff morale and nearly 68 per cent reporting they were managing but exceeding their budgets due to surcharges from isotope vendors. Only 2 per cent reported no impact.

Tim Vail, a spokesman for federal Health Minister Leona Aglukkaq, said the federal government is "open to discussing challenges they are facing during the isotope shortage."