

treatment dose for a patient, I can call up and get it in an hour. I can also get gallium, thallium, ytterbium and other radiopharmaceuticals much more quickly than before. Also, the radiopharmacy performs many quality control tests that we either couldn't have or didn't perform. For our patient load, the commercial pharmacy definitely saves us money, not to mention saving technologists' time and reducing the radiation to technologists.

One final point: I ask you to consider how many times you may have made up an MAA kit on Saturday for one lung scan? The pharmacy does not waste material, as it makes up kits for their maximum use. And in a society with limited resources, we should be striving for maximum use of all radiopharmaceuticals.

This is not to say that the questions that Concerned Technologist raises should not be asked. Remember that no matter where you get your radiopharmaceuticals the responsibility still lies with you and your institution. Remember too when you ask questions not to ask only what benefits you as a professional, but also ask what benefits your patients.

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This letter is in response to a letter to the editor printed in the June 1979 *JNMT* titled "The Nuclear Medicine Technologist and the Commercial Radiopharmacy."

Our institution has been utilizing the services of a commercial central radiopharmacy for the past two years. I personally have worked in every type of nuclear medicine facility available, from a small clinic to large university medical centers. With this background and 8 years experience I will attempt to answer publicly the questions asked in that article.

Who is liable for what I inject?

The list of the liable in any malpractice suit is as long as my arm, and extends from the manufacturer of the kit and generator to the hospital or clinic administrator. But as a professional I must take that liability, no matter whose kit or unit dose system I use.

What is in that syringe?

The unit dose syringes that we receive from our nuclear pharmacy are better labelled as to their content than most departments in the country. A simple cross check of prescription number, label, and dose callibrator assure me of content.

What quality control measures have been taken?

I personally visited our radiopharmacy and found only the most modern equipment and highly trained individuals performing full range Q.C. testing on every batch that was produced.

Can I rely on deliveries?

Our institution is located 1 hour driving time from the radiopharmacy. Our first delivery is at 6:30 am, with a routine second delivery at 10:30 am. In two years I can count on one hand the number of times the driver was more than one-half hour late. During a winter blizzard our pharmaceuticals made it in at 7:00 am, when no one from the department was able to dig themselves out of their driveway. Yes, I can rely on deliveries.

How will I handle emergencies?

Back up and emergency doses of technetium products are supplied with our daily shipment; we also stock a number of commercial kits so that we are prepared for most emergencies. All this preparation is done at no charge to us, unless the preparations are used. All other non-technetium items are available to me within an hour.

Will I save any time?

I have documented 2.5 man hours per day time savings in the hot lab alone, and unaccounted personal hours of record keeping.

Whose radiopharmaceutical am I using?

I specify the manufacturer's kit, and the radiopharmacy complies with that request.

Will there be compliance with package inserts, overloading of vials, and fewer working hours?

Two NRC inspections say we are in compliance with all packaging laws, our usage is strictly unit dose, and time savings was documented above.

Will there be records available with delivery of materials?

We receive detailed descriptions of the pharmaceuticals that are delivered daily, along with a monthly itemized list of all items we receive and return for disposal.

What about cost?

I have documented a 12.5% cost savings while using a central radiopharmacy.

Not mentioned in the letter was radiation exposure to technologists, consultant services and educational opportunities. I will leave these questions for the unknown writer of that letter to answer.

I believe that honest criticism of the central radiopharmacy is needed, so that all regulations and quality control measures are met and patient safety can be insured.

My relationship with Pharmatopes Inc., a commercial radiopharmacy in the metropolitan Detroit area, has left me with this judgement: I am a professional, and I do not view the commercial radiopharmacy as a threat to my professional status. I see it as a new, time saving, money saving, exposure saving, truly professional asset to the field. And it's a good thing that doctors didn't think the opposite way about nurses 100 years ago.

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