Belfast Health and Social Care Trust
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FOI/35382

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Radiopharmaceuticals

1. Cost per dose of commonly used nuclear medicines.

The cost per dose of commonly used radiopharmaceuticals varies from approximately £33 per dose to £580 per dose for diagnostic radiopharmaceuticals. Therapeutic radiopharmaceuticals used in RVH range in price from approximately £165 to £13,000 per patient dose.

2. Total annual expenditure on radiopharmaceuticals

Total expenditure for radiopharmaceuticals ordered for use in RVH was approximately £2,525,574 for the year April 2024 to March 2025.

3. Lead times typically involved in procuring these medicines.

Lead times for ordering radiopharmaceuticals varies from 24 hours to 1 or 2 weeks prior to required use.

4. Any logistical challenges or constraints associated with regular supply and storage.

Radiopharmaceuticals have a very short shelf life due to their radioactive properties and generally need to be used on the day of delivery.

5. A brief overview of the applications of nuclear medicine at RVH, including the financial split between imaging and therapy.

Locally supplied radiopharmaceuticals are impacted by issues with supply of raw ingredients for the manufacture of the radiopharmaceuticals. This manufacturing process is also reliant on sufficient staff capacity and suitable facilities to manufacture drugs to the required safety and quality standards.

Ready to use radiopharmaceuticals that are purchased directly from suppliers outside of Northern Ireland also suffer from production failures and from transport failures e.g. flight cancellations and delays.

In the year 2024/2025 the financial split between diagnostic and therapy radiopharmaceuticals was 59% diagnostic to 41% therapy. The overview of applications is listed in the table at point 6 below.

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6. A list or summary of the types of radiopharmaceuticals regularly used.

Radiopharmaceutical	Uses in RVH
$^{99}Tc^{m}$ HDP	Bone imaging
$^{99}Tc^{m}$ Nanocolloid	Gastric Emptying studies Lymphoscintigram Liver Scan
$^{99}Tc^{m}$ MAA	Perfusion lung imaging Lung shunt scan
$^{99}Tc^{m}$ Technegas	Ventilation lung imaging
$^{99}Tc^{m}$ DMSA	Renal imaging
$^{99}Tc^{m}$ MAG 3	Renal imaging/ Renogram
$^{99}Tc^{m}$ Exametazime	Ceretec Brain scan
$^{99}Tc^{m}$ Pertechnetate	Meckels scan Red Cell scan – Haemangioma GI Bleed scan Salivary Gland scan
$^{99}Tc^{m}$ DTPA	GFR Test
$^{99}Tc^{m}$ MIBI	Parathyroid scan
^{123} I Sodium Iodide	Thyroid Imaging and uptake Whole Body thyroid scan
^{123}I mIBG	Cardiac mIBG Scan mIBG tumour imaging
^{123}I Ioflupane	DaTSCAN brain imaging
^{111}In Pentetreotide	Octreotide scan for somatostatin receptor imaging
^{75}Se Tauroselcholic	SeHCAT study for bile salt absorption
^{18}F FDG	PET CT scan for tumour imaging PET CT scan for dementia brain imaging
$^{99}Tc^{m}$ Tetrofosmin	Myocardial imaging
^{177}Lu Dotatate	Treatment of neuroendocrine malignancy
^{90}Y microspheres	Treatment of hepatic malignancy
^{131}1 Sodium Iodide	Treatment of benign thyroid disease Treatment of carcinoma of thyroid

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7. Whether RVH works with multiple approved suppliers or prefers a single supplier for streamlined supply chain management.

RVH purchases products from a regional tendered contract for the supply of radiopharmaceuticals. There are multiple approved suppliers to cover the range of products included in this contract.

8. The regulatory approvals required for suppliers to be qualified to provide radiopharmaceuticals to your hospital.

Potential suppliers are verified by the regional procurement and logistics service during the tendering process for the contract for the supply of radiopharmaceuticals.