## **Service Costs**

Pei San Chan Radiopharmacist Nuclear Medicine Dept.





#### **Non-build Cost Considerations**

- For full business case
- For total on-going operating costs
- To identify future cost savings
- For items / services <u>not</u> included in building project:
  - Initial Validation of facility / equipment / systems/ cleaning / production processes
  - Additional equipment / items
  - Licence costs
- Separate equipment budget?





#### **Cost Variables**

- Department budgets
- Trust inter-dept. charging Pharmacy
  - Med. Engineering
  - Estates
- Pharmacy QA dept. services
- Undertaken in-house
- Outsource services





## Validation of Facility & Isolator / LFU

- Domestic clean £?
- GMP clean
   £? Staff time / out-source
- Cleaning materials
- Environmental monitoring
  - Physical £0 £400+/day
  - Micro. £100 media + £500+/day
- Process validations £? Staff time





# Initial Validation of Equipment / Systems

- IQ, OQ, PQ, PV Documentation prepared by? All / part?
- Execution by? All / part?

#### Cost depends on:

- in-house / outsourced
- staff time to undertake
- familiarisation, complexity, availability, problem solving, support





# **Additional Equipment / Items**









**NHS Foundation Trust** 









# **New Equipment / Systems**

Fridges £1-2K



Management software





Weighing Balance



Temperature Monitoring System

£4K + IQOQ £1K+







## **Future Equipment**



Radio-HPLC











# **Licensing Costs**

MHRA GMP inspection fees ~£2.7K

EA licences - increase limits ~ £4K+





## **On-going Operating Costs**

- Facility
- Equipment
- QA / QC services
- Staff
- Consumables / Materials
- Radiopharmaceuticals
- Miscellaneous





## **Further Operating Cost Variables**

- Workload volume
  - type
- Size of radiopharmacy
  - rooms / isolators / LFU
  - staff
- Radiopharmaceutical budget
- Technology / Equipment used
- Shared costs with departments





#### **Facilities**

AHU maintenance

- £0-30K
- 'Hotel' services + energy / heating
- EMS service / calibration
- £0-1K

- Cleaning
- Environmental monitoring
- Physical monitoring

• £2K





## **Equipment Maintenance / Calibration**

- Isolators
- Fume cupboard
- TMS calibration
- TLC scanner + software
- Endotoxin tester

- ~£600 / isolator
- ~£50
- ~£100 / sensor
- ~£3K

• ~£400





## **QA & QC services**

- Physical monitoring
- Environmental monitoring
- + Micro service
- + Lab service
- + Sterility testing
- GMP advice & training
- Support inspections / audit

• £2-3K

• £10-35K





## **Staff**

									non-		Inner
Band	8d	8c	8b	8a	7	6	5	London		London*	
wte	1			1	1	4		£	269,936	£	312,580
	1			1	1		3	£	219,609	£	252,187
		1		1	1	3		£	228,217	£	264,909
		1		1	1		3	£	207,649	£	240,227
		1		1	1	1	3	£	237,408	£	275,938
		1		1	1	1	2	£	214,505	£	248,455
		1		2	1		2	£	184,746	£	212,744
		1		1		3		£	192,681	£	223,094
		1			1	2		£	155,452	£	179,913
			1	1	1	2		£	188,914	£	219,655
			0.5		1		2	£	106,769	£	125,349
				0.3	0.3	0.5	0.5	£	49,894	£	58,927

- Training
- Attending conferences
- Travel expenses
- Classified workers medicals

Reproduced from the Royal college of Nursing: 2013/14 \* includes high cost area supplement





## **Consumables / Materials**

- Syringes, needles etc
- Cleaning materials
- TSA/ SDA plates etc
- Gloves / gauntlets
- TLC paper / solvents

- £10K+
- £10-15K
- £2-3K
- £2-10K
- £2 -5K





#### **Pharmaceuticals**

- Radioactive materials
- Cold kits
- Adjunct medicines

• £300K - 1million+





## **Miscellaneous**

- Laundry
- Stationary / Printing / Photocopying / post / phone
- Repairs / replacement / new / depreciation costs
- Computer systems / IT support / Security
- Transport / container testing
- Overheads

- £3K
- £2-5K

• 30-60%



