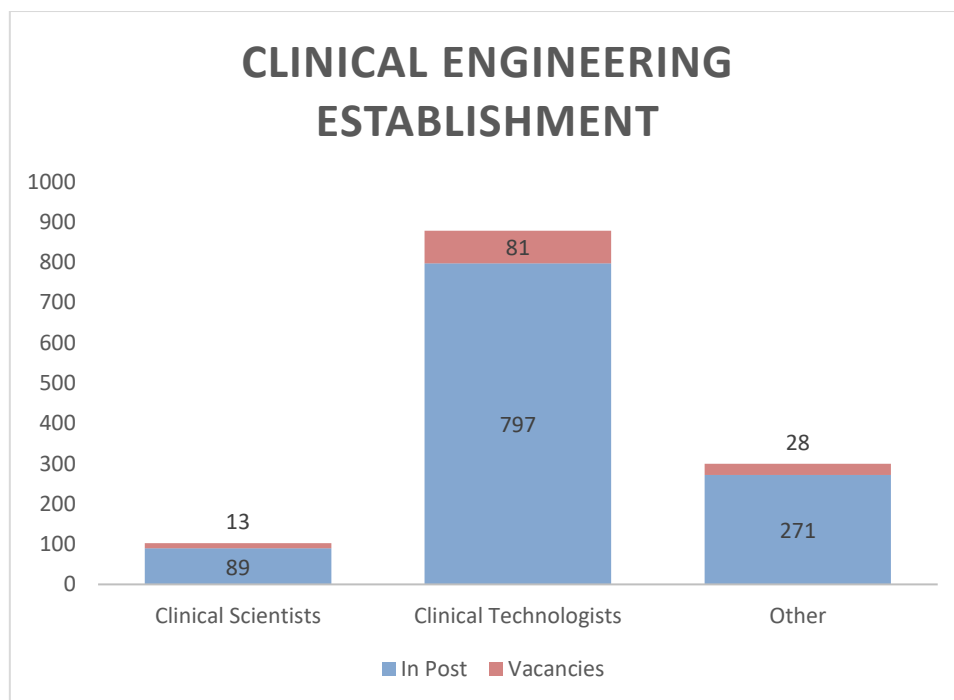# Clinical Engineering Short Form Workforce Report

This data is compiled from IPEM's Clinical Engineering Workforce Survey, carried out November 2020. An invitation to respond was sent to all heads of Clinical Engineering in the UK, at all centres delivering Clinical Engineering including NHS and Independent providers. At the time of compiling this report, the overall response rate is 30% covering 52 centres. Data was gathered on 2 professional groups: Clinical Scientists and Clinical Technologists. Information was also gathered on other staff essential to the clinical service provision.
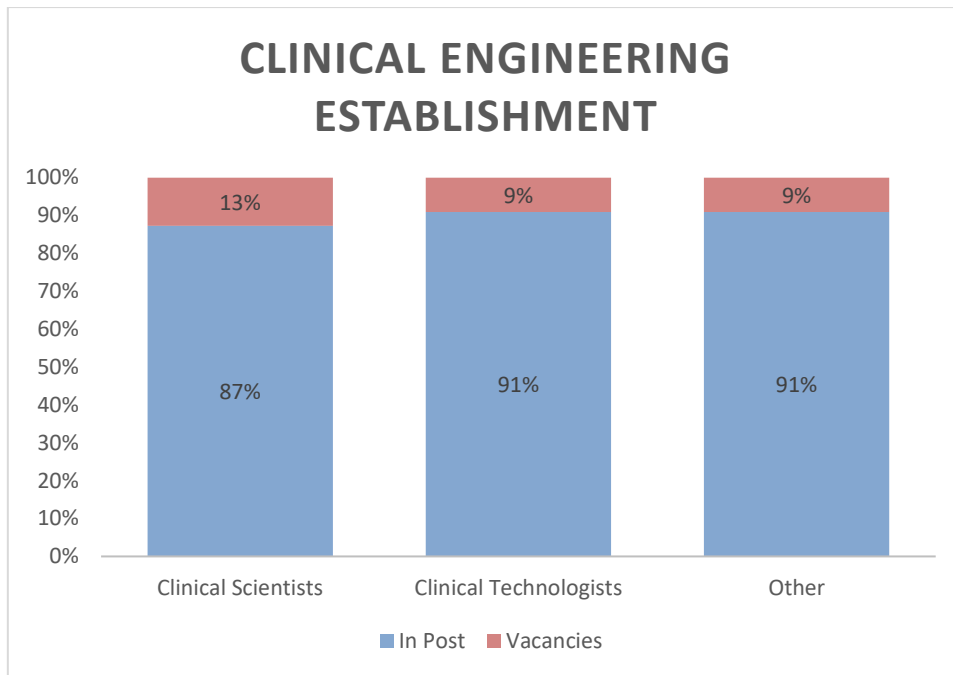
Establishment and Vacancy Rates

	WTE of responding centres	Vacancy Rate
Clinical Scientists	102	13%
Clinical Technologists	878	9%
Other Staff	309	9%

	Estimated WTE of all centres
Clinical Scientists	226
Clinical Technologists	1967

Estimated WTE derived from responding centres to the Clinical Engineering Survey 2017 and 2020. All centres have been categorised into a large or small department category, average establishment was then calculated over the large and small departments respectively for any missing centres.

CLINICAL ENGINEERING ESTABLISHMENT

(Chart: Stacked bar chart showing In Post and Vacancies percentages)

- Clinical Scientists: 87% In Post, 13% Vacancies
- Clinical Technologists: 91% In Post, 9% Vacancies
- Other: 91% In Post, 9% Vacancies
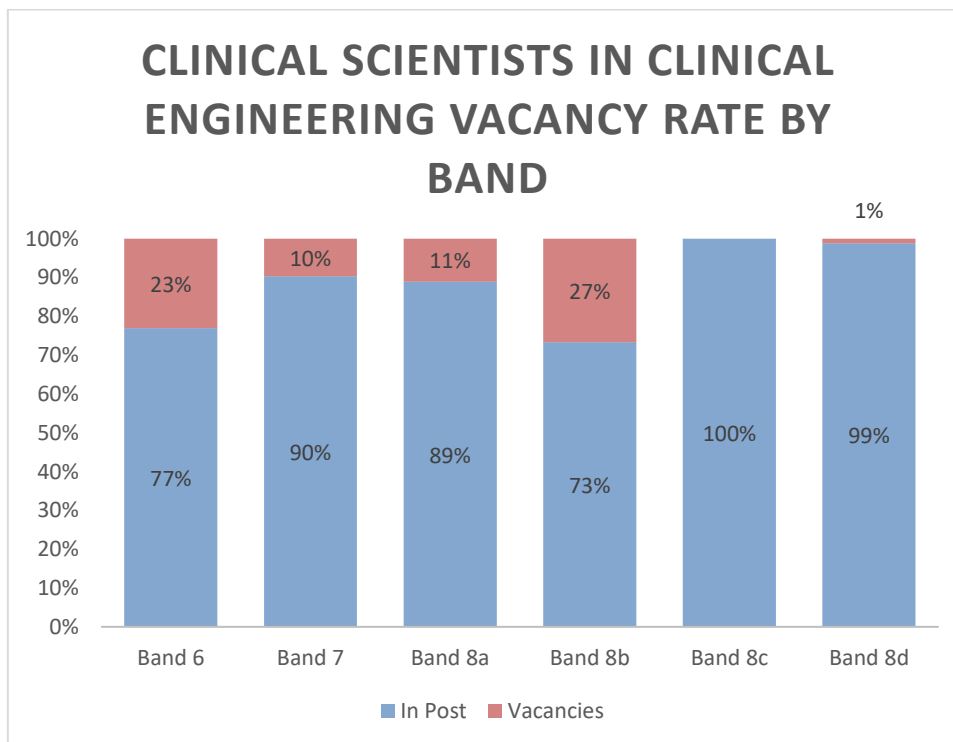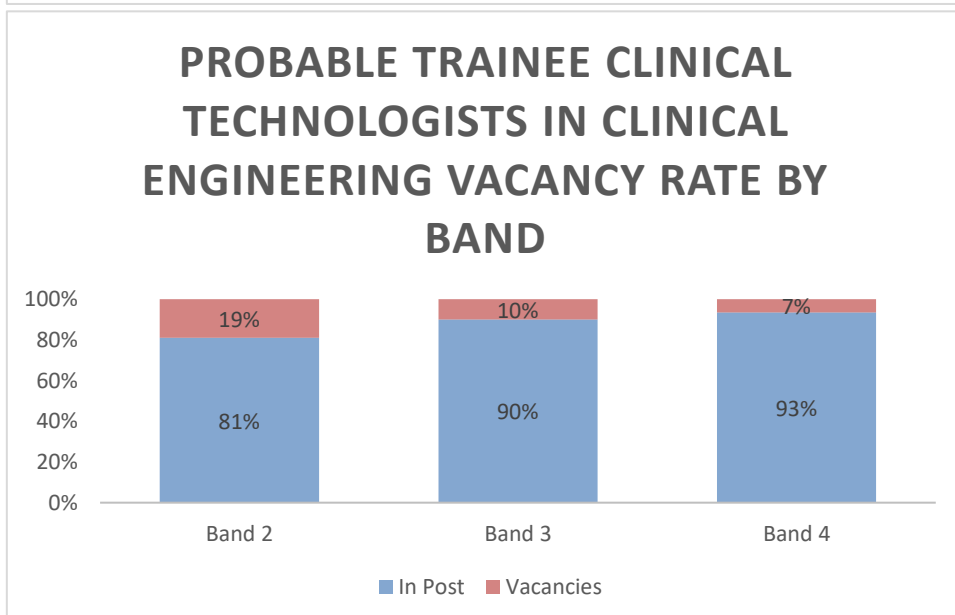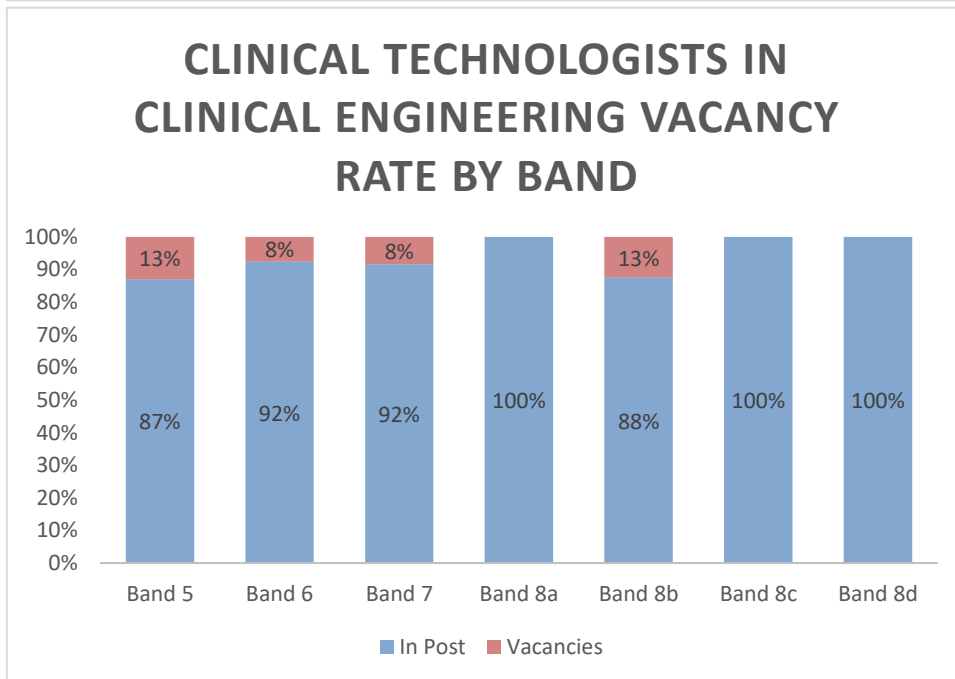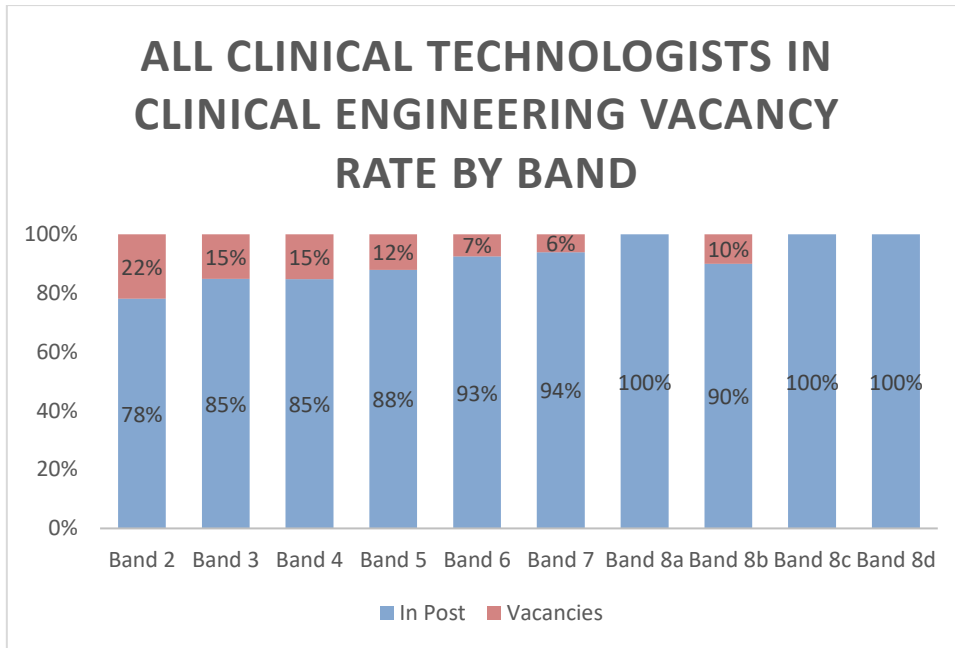
Legend: ■ In Post ■ Vacancies

Agenda for Change Banding

The establishment of the Clinical Engineering workforce split into their Agenda for Change bandings.

The highest vacancy rates are in Band 6 and 8b for Clinical Scientists, showing a 23% and 27% vacancy rate respectively. For Clinical Technologists, the lower bands 2 to 4 have the highest vacancy rate, showing a 22% vacancy rate and Band 2 and 15% for Bands 3 and 4.

CLINICAL SCIENTISTS IN CLINICAL ENGINEERING VACANCY RATE BY BAND

(Chart: Stacked bar chart showing In Post and Vacancies percentages by band)

- Band 6: 77% In Post, 23% Vacancies
- Band 7: 90% In Post, 10% Vacancies
- Band 8a: 89% In Post, 11% Vacancies
- Band 8b: 73% In Post, 27% Vacancies
- Band 8c: 100% In Post
- Band 8d: 99% In Post, 1% Vacancies

Legend: ■ In Post ■ Vacancies

ALL CLINICAL TECHNOLOGISTS IN CLINICAL ENGINEERING VACANCY RATE BY BAND

Band	In Post	Vacancies
Band 2	78%	22%
Band 3	85%	15%
Band 4	85%	15%
Band 5	88%	12%
Band 6	93%	7%
Band 7	94%	6%
Band 8a	100%	
Band 8b	90%	10%
Band 8c	100%	
Band 8d	100%	

■ In Post ■ Vacancies

CLINICAL TECHNOLOGISTS IN CLINICAL ENGINEERING VACANCY RATE BY BAND

Band	In Post	Vacancies
Band 5	87%	13%
Band 6	92%	8%
Band 7	92%	8%
Band 8a	100%	
Band 8b	88%	13%
Band 8c	100%	
Band 8d	100%	

■ In Post ■ Vacancies

PROBABLE TRAINEE CLINICAL TECHNOLOGISTS IN CLINICAL ENGINEERING VACANCY RATE BY BAND

| Band	In Post	Vacancies
Band 2	81%	19%
Band 3	90%	10%
Band 4	93%	7%

■ In Post ■ Vacancies

Age Profile

The age profile of the Clinical Scientist as compared to the Clinical Technologist workforce in Clinical Engineering. More than half of the Clinical Scientists (57%) and the Clinical Technologists (62%) are aged over 40 with approximately 30% of the workforce approaching retirement age. For Clinical Technologist this reflects the same demographics of the IPEM membership but is significantly higher for Clinical Scientists.
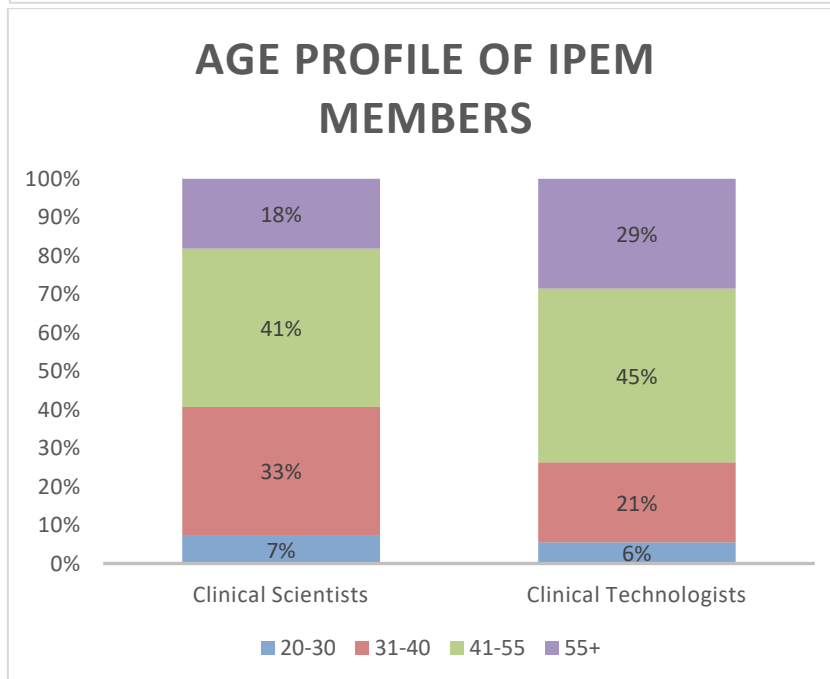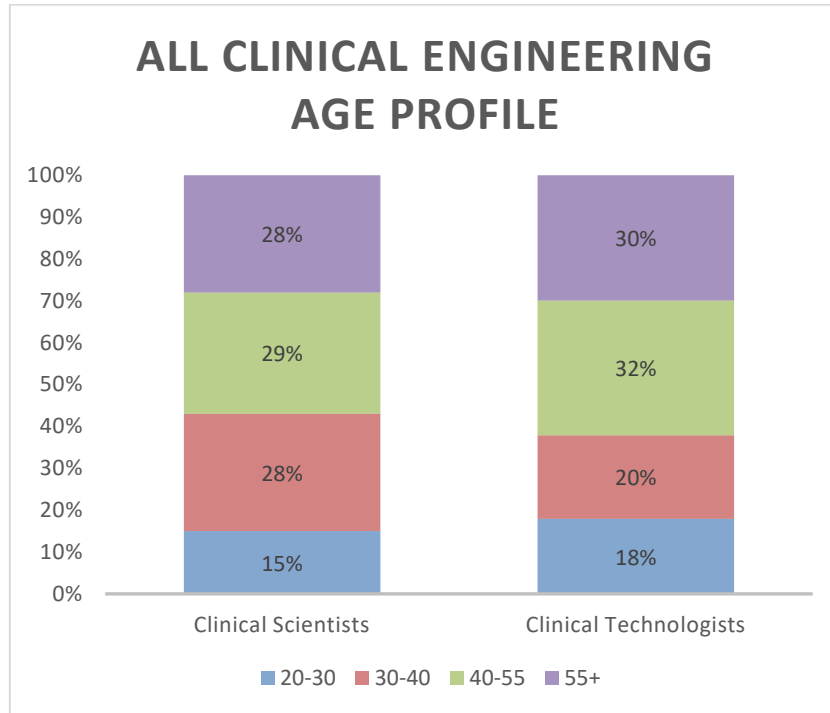
Staffing Provision

40% of centres state their current overall staffing provision is sufficient with 60% of centres feeling their staffing provision is insufficient. Broken down into the two main staffing groups, 40% of centres stated their provision for Clinical Scientists as being sufficient while only 26% of centres stated their provision for Clinical Technologists as being sufficient.
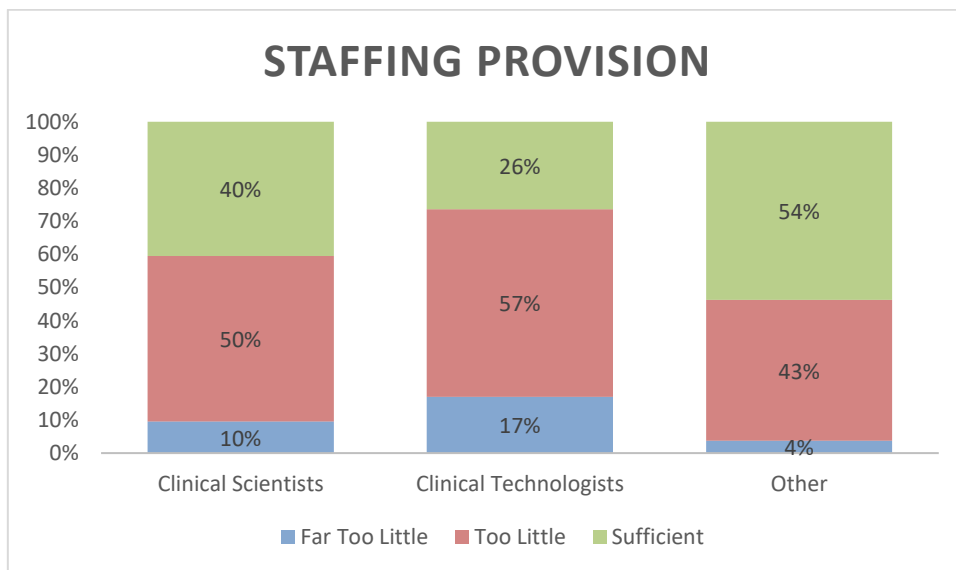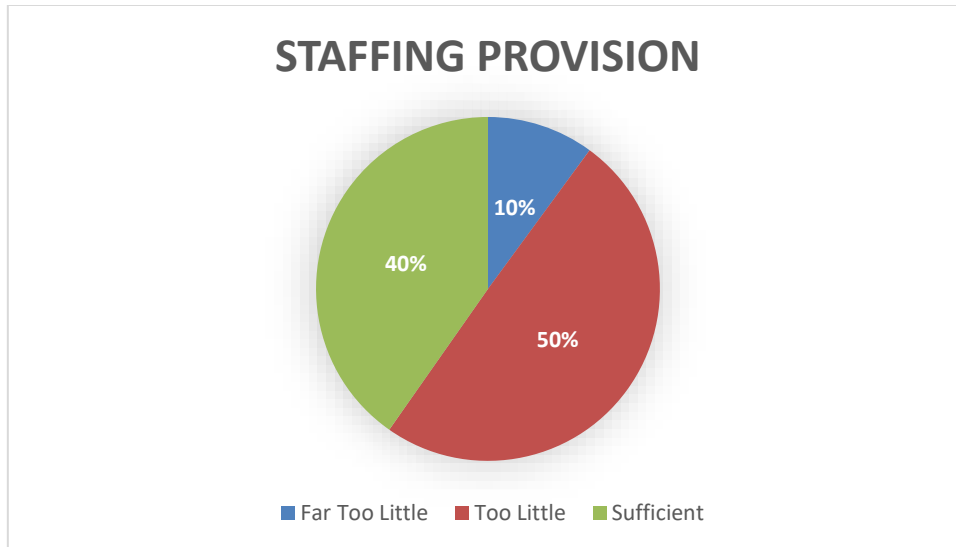
Staffing Provision Comments

The comments reinforce the precarious nature of staffing this specialism, with many services struggling to recruit, especially Clinical Technologists with a lack of training posts or qualified applicants. Departments are reporting having to develop training plans for current staff or staff moving between neighbouring centres instead of bringing in new employees to the profession.

Concerns were expressed surrounding a lack of service resilience, with a difficulty in covering maternity leave or long-term illness. There were also concerns expressed over future workforce supply, with an aging workforce approaching retirement coupled with the issues in recruitment. Some centres also expressed budgetary constraints and high workloads contributing to their insufficient staffing provisions.

This just-about-managing description of the workforce is not future-proof, and while safe, does not have sufficient capacity to research, develop, and implement new technologies.
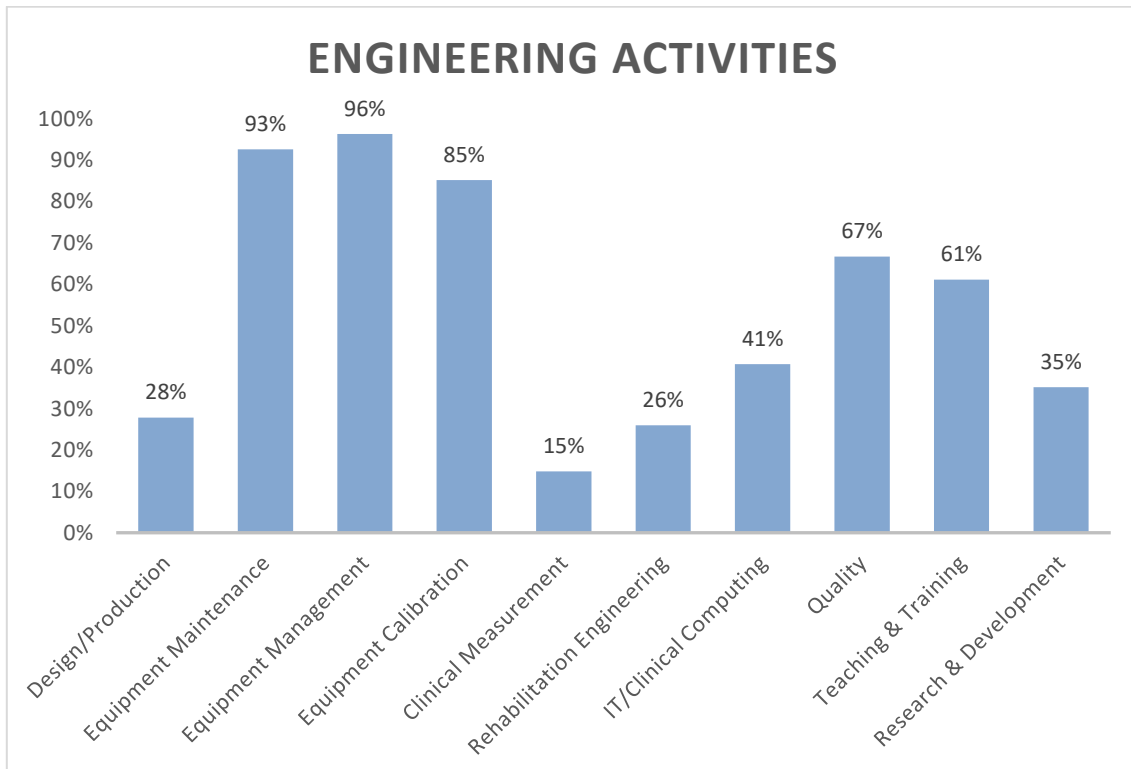
Engineering Provision to Department

Split between internally NHS provided engineering and externally provided engineering to departments.

ENGINEERING SUPPLIER

Legend:
- NHS (91%)
- Wholly owned subsidiary (5%)
- Partial owned subsidiary (4%)
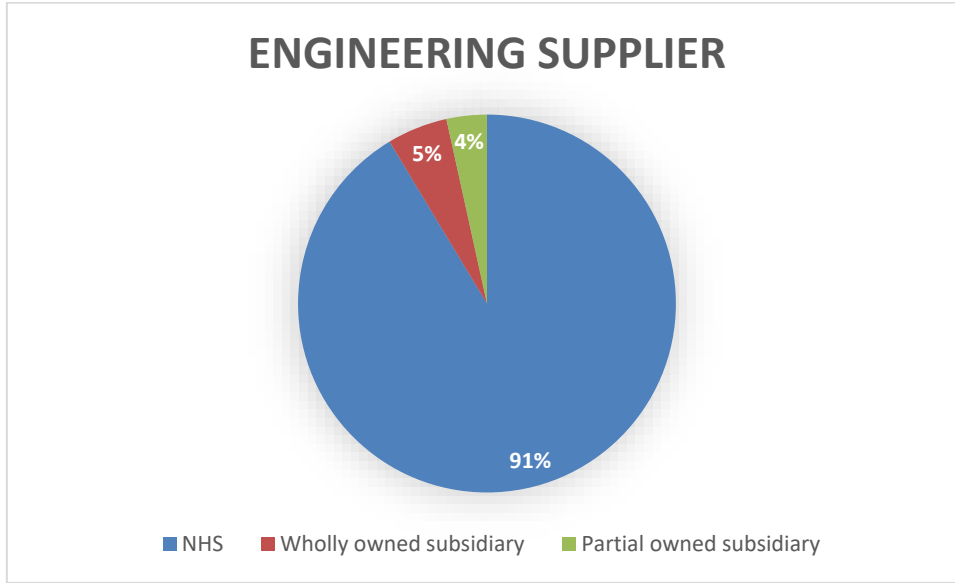
Engineering Activities

Spread of Engineering Activities carried out by Clinical Engineering Departments.

ENGINEERING ACTIVITIES

| Activity	Percentage
Design/Production	28%
Equipment Maintenance	93%
Equipment Management	96%
Equipment Calibration	85%
Clinical Measurement	15%
Rehabilitation Engineering	26%
IT/Clinical Computing	41%
Quality	67%
Teaching & Training	61%
Research & Development	35%

Equipment Management

Number of items managed by Clinical Engineering departments plotted against the value (£) in millions of the equipment.
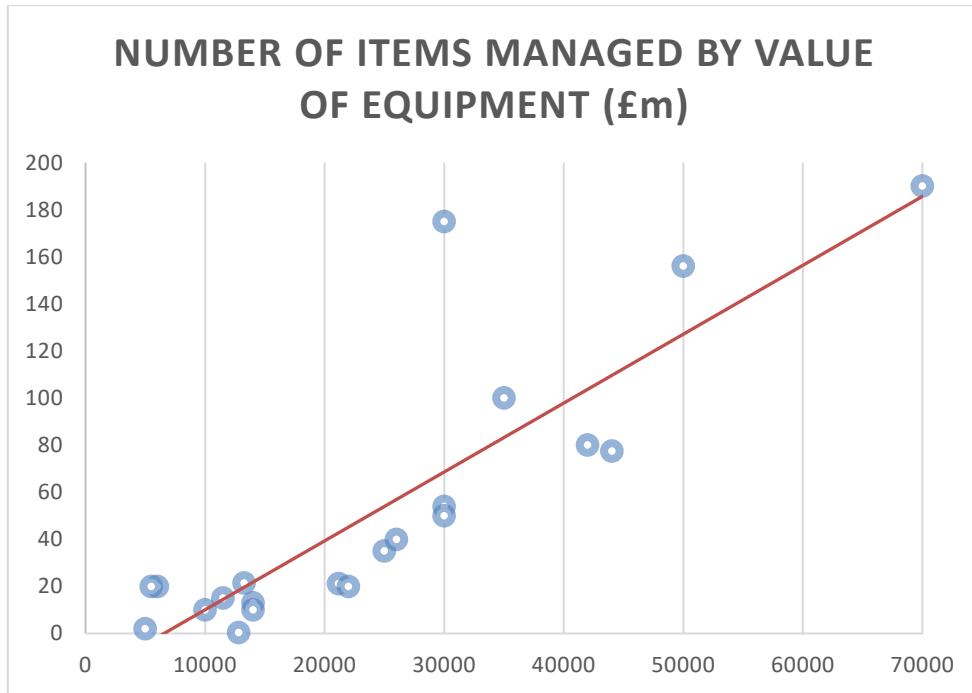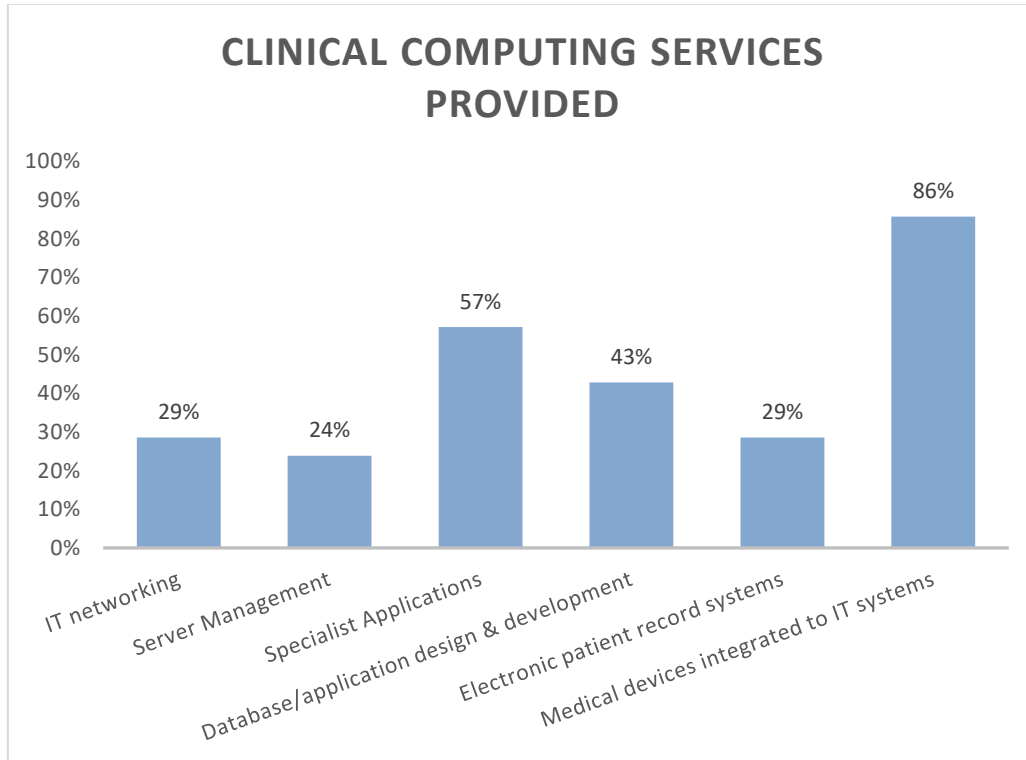

Equipment Maintenance

Split between areas that Clinical Engineering departments provide Equipment Maintenance support to.
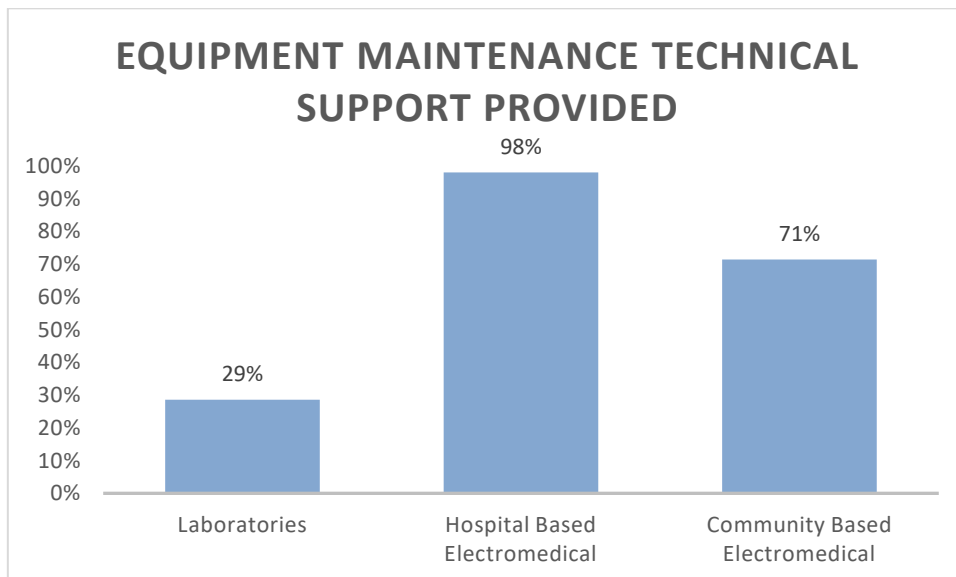
Clinical Computing

Spread of Clinical Computing services, where provided, by Clinical Engineering departments.

CLINICAL COMPUTING SERVICES PROVIDED

Service	Percentage
IT networking	29%
Server Management	24%
Specialist Applications	57%
Database/application design & development	43%
Electronic patient record systems	29%
Medical devices integrated to IT systems	86%

Quality Management Systems Standards

Quality Management System standards being used in Clinical Engineering departments.

QMS STANDARDS

Standard	Percentage
ISO 9001:2015	70%
ISO 13485	12%
ISO 55001	3%
Working towards ISO 9001:2015	6%
Working towards ISO 13485	9%