

NATIONAL IOM SURVEY



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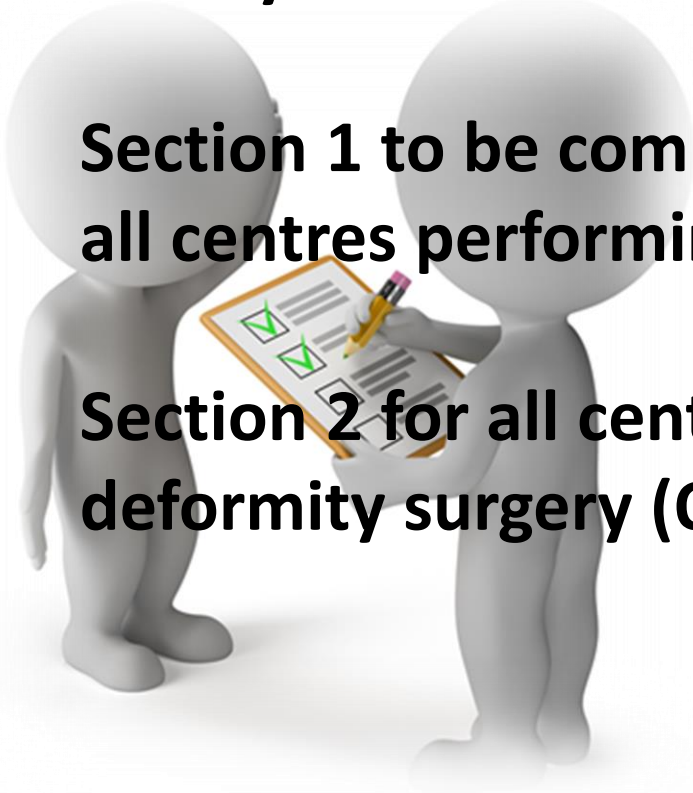


35 Respondents

Survey consisted of 2 sections

**Section 1 to be completed by
all centres performing IOM (Q1-Q10)**

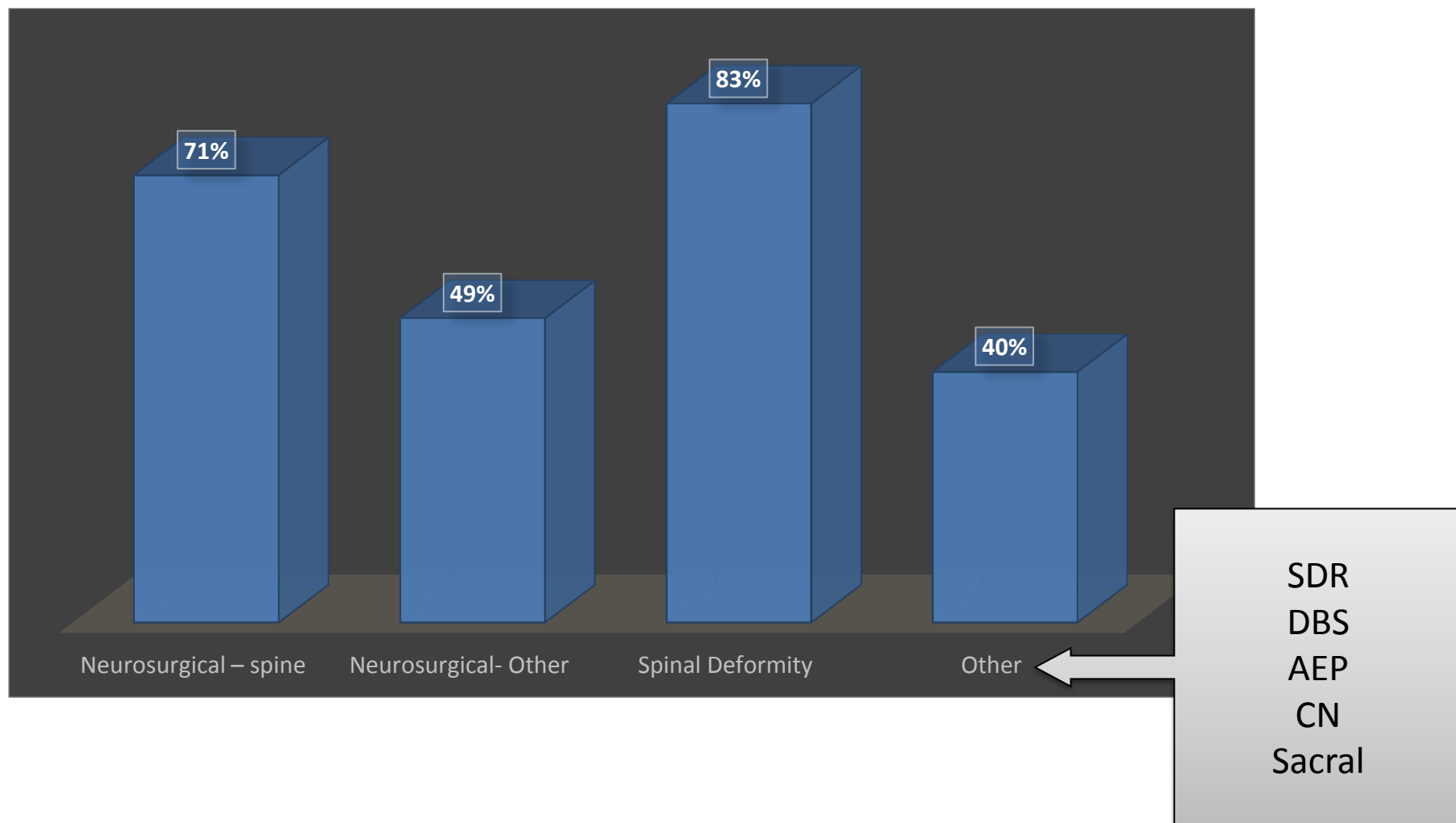
**Section 2 for all centres performing IOM for spinal
deformity surgery (Q11-Q36)**



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Types of monitoring carried out in each department



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How many practitioners are trained to do IOM and are there departmental policies on the qualifications and/or experience required?

Departments	No of staff
5	1
4	2
7	3
2	4
6	5
2	6
2	7
2	8

	%
Yes	66
No	34



Band 6

Band 7

BSc Clinical Physiology
Degree

Physiology Science degree
with EP experience



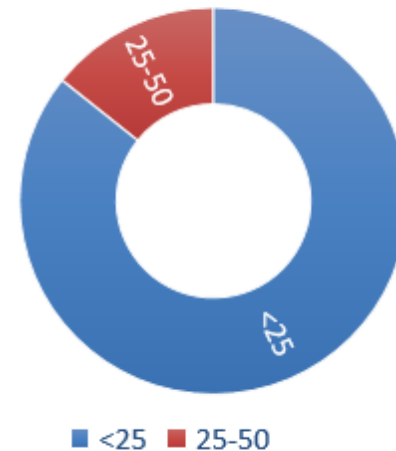
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Is there a minimum of number of cases a practitioner has to perform under supervision before being allowed to monitor independently?

Yes	31%
No	69%

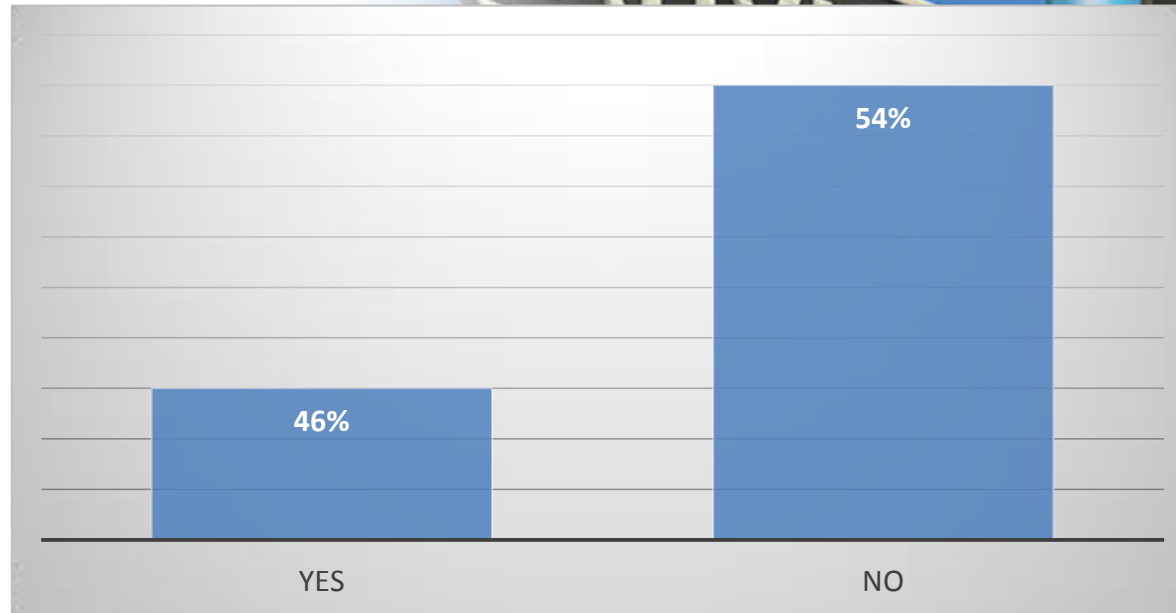
Number of cases required



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Are medical Clinical Neurophysiologists involved with monitoring cases and what is their availability?



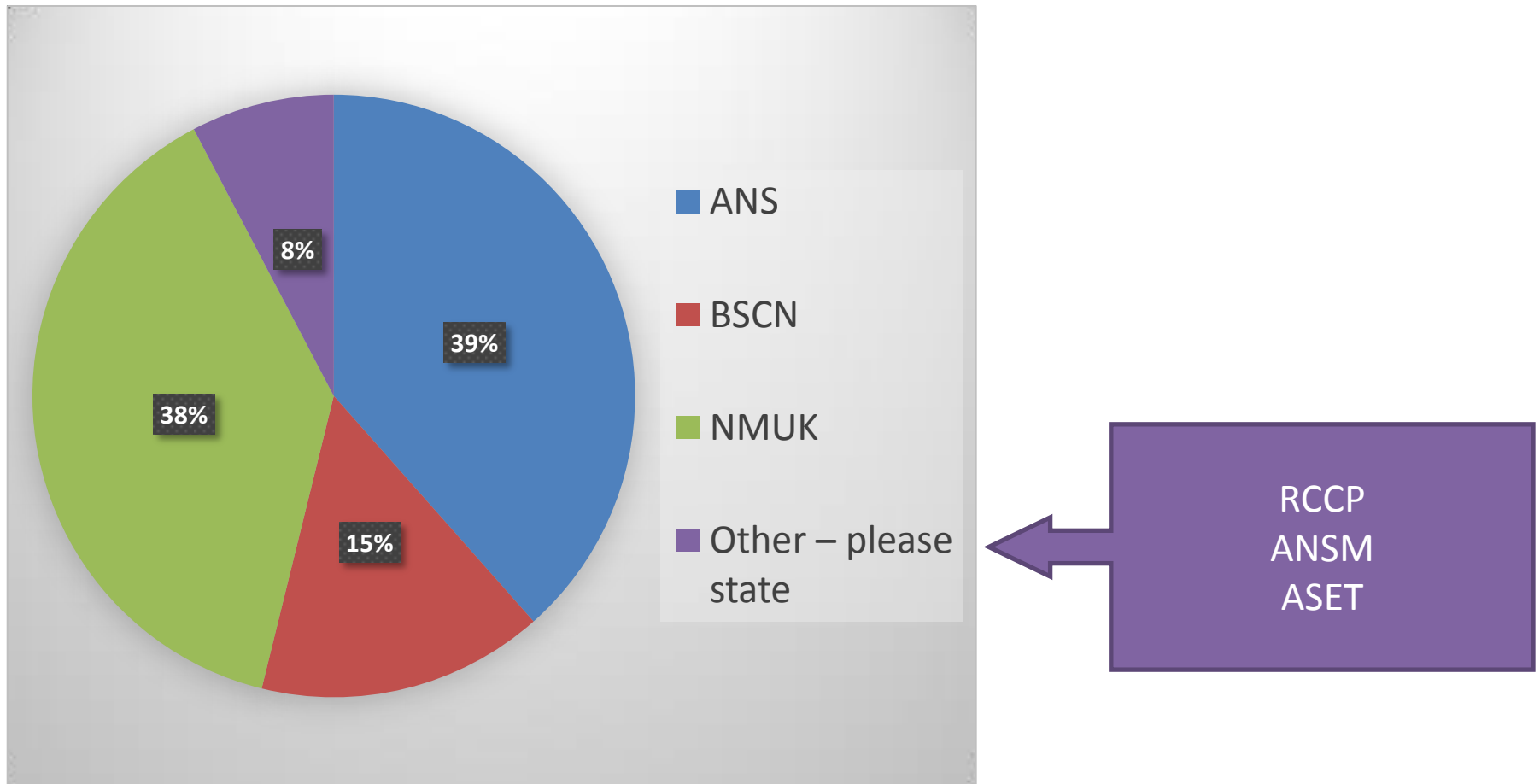
Available on the phone	29%
Present in theatre	29%
Available pre- and post- case	7%
Available in person if needed	35%



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Are the staff involved in monitoring part of a professional body/specialist monitoring group?



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Do you use published guidelines for IOM in Spinal Deformity Surgery?

Yes	97%
No	3%

Vast majority of respondents stated the use of BSCN/ANS guidelines (83%)

Minority listed other guidelines such as:

ACNS – American Clinical Neurophysiology Society

ASNM – American Society of Neurophysiological Monitoring

IFCN – International Federation of Clinical Neurophysiology

Literature



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- **80% of departments use a local departmental protocol**
- **Only 30% of departments have performed local audits on their IOM service and practice**
- **33% of departments provide patients with written information about spinal monitoring**
- **72% of departments performing IOM DO NOT obtain consent from patients**

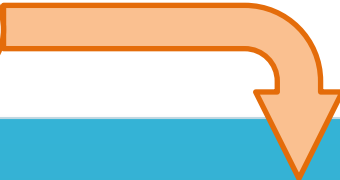


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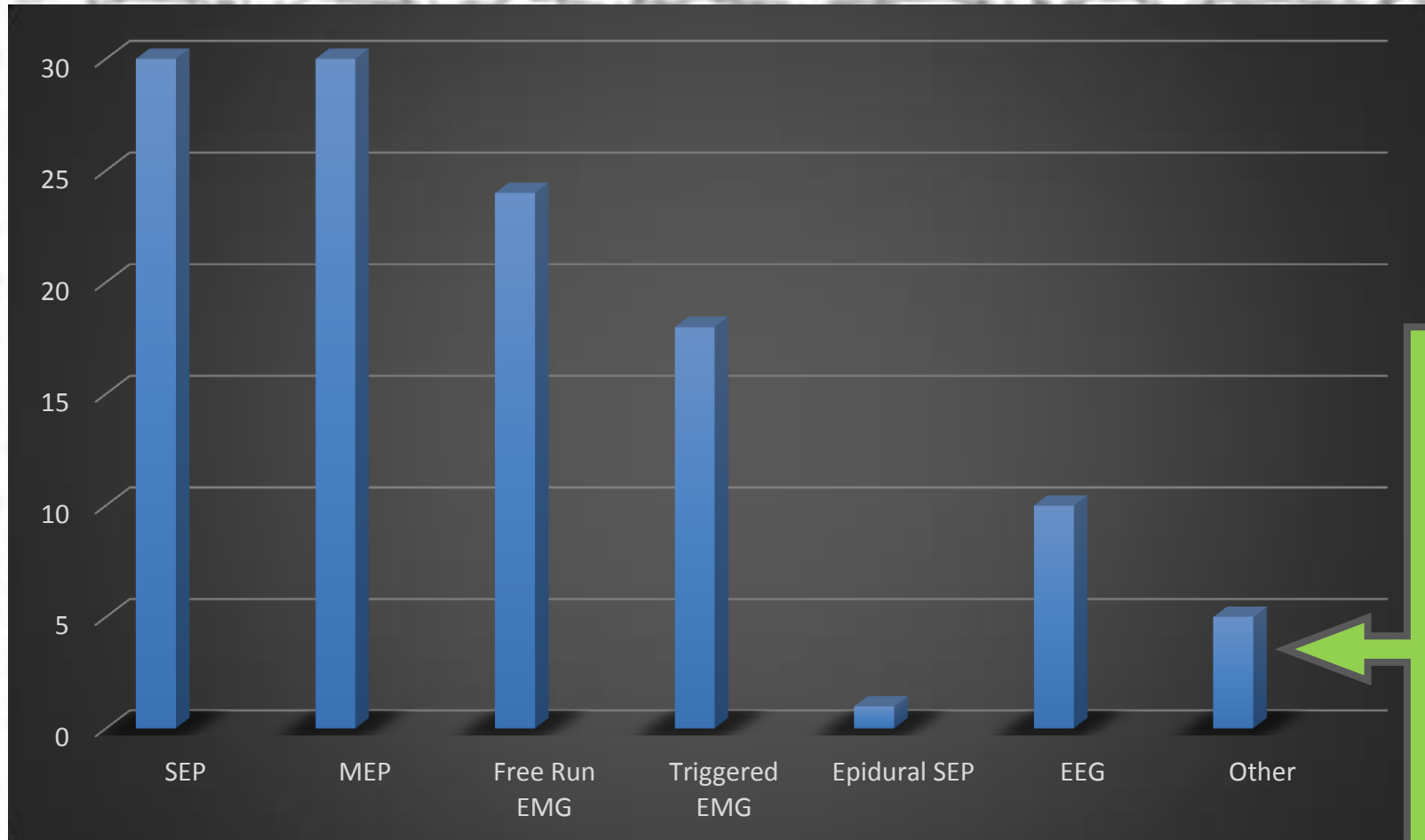
Do you carry out pre-operative studies?

- 43% said **YES**



SEP	100%
NCS	46%
Magnetic MEP	15%
Other - EEG	8%

Monitoring techniques provided

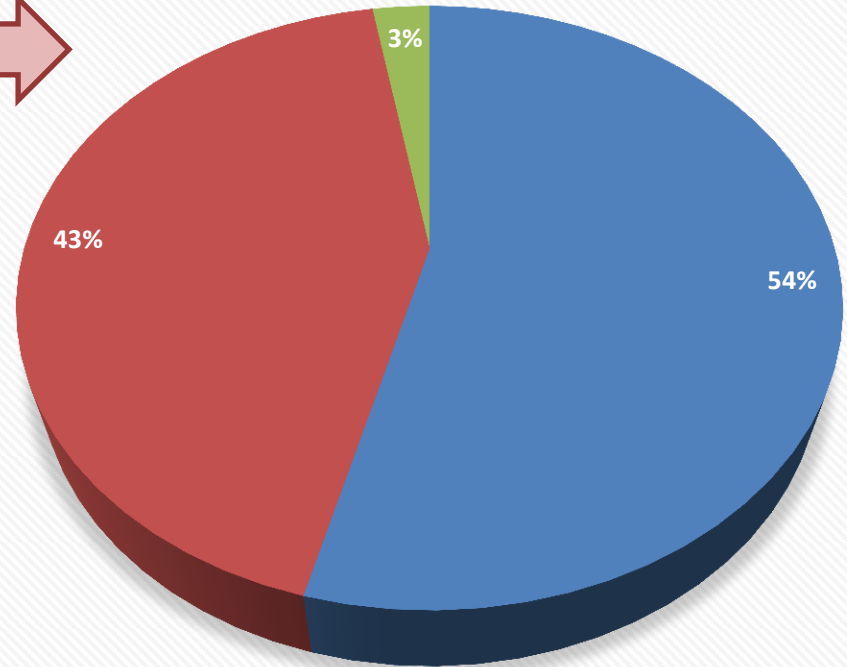


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Do you provide monitoring during Lengthening Procedures? If so, what monitoring?

Yes	72%
No	28%



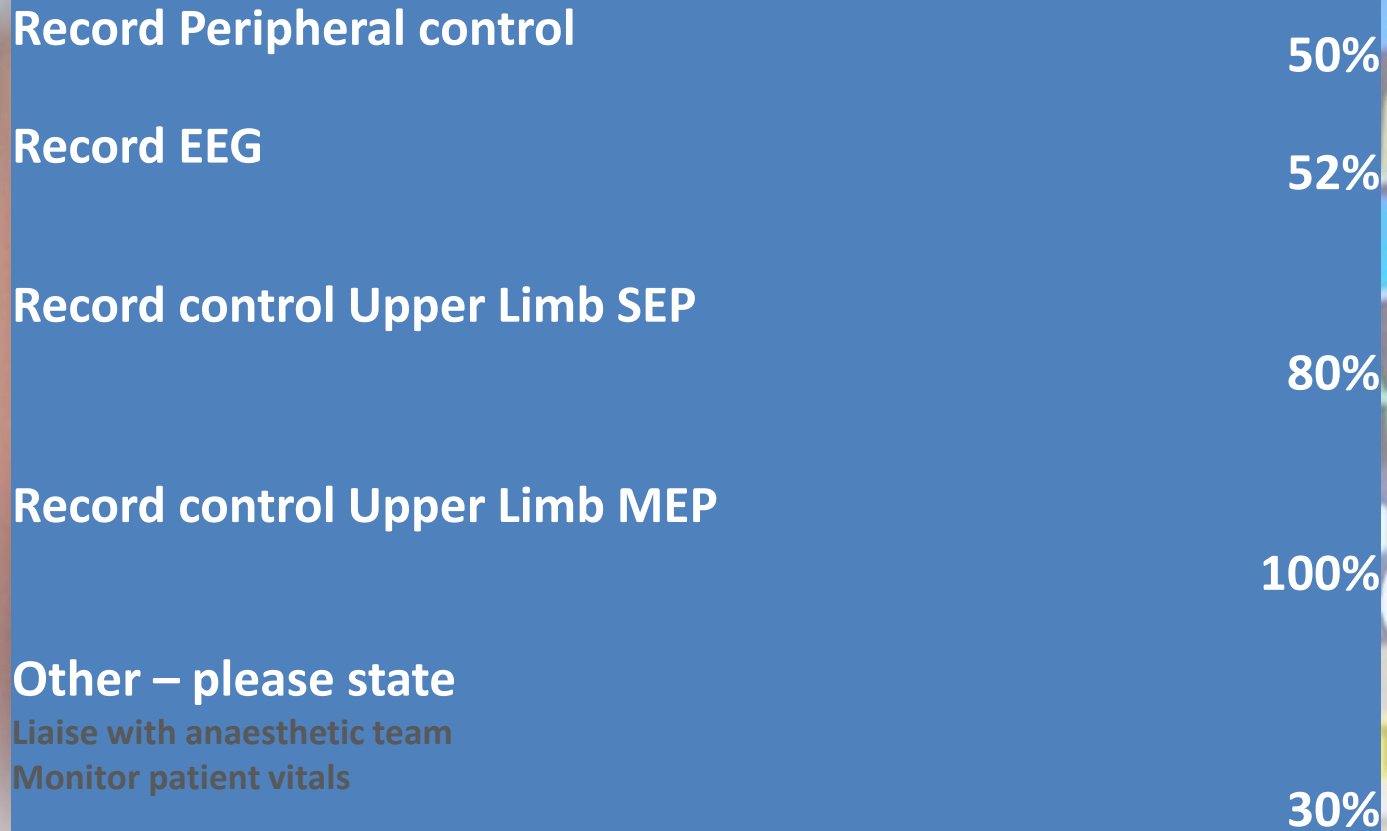
■ SEP ■ MEP ■ Other - please state



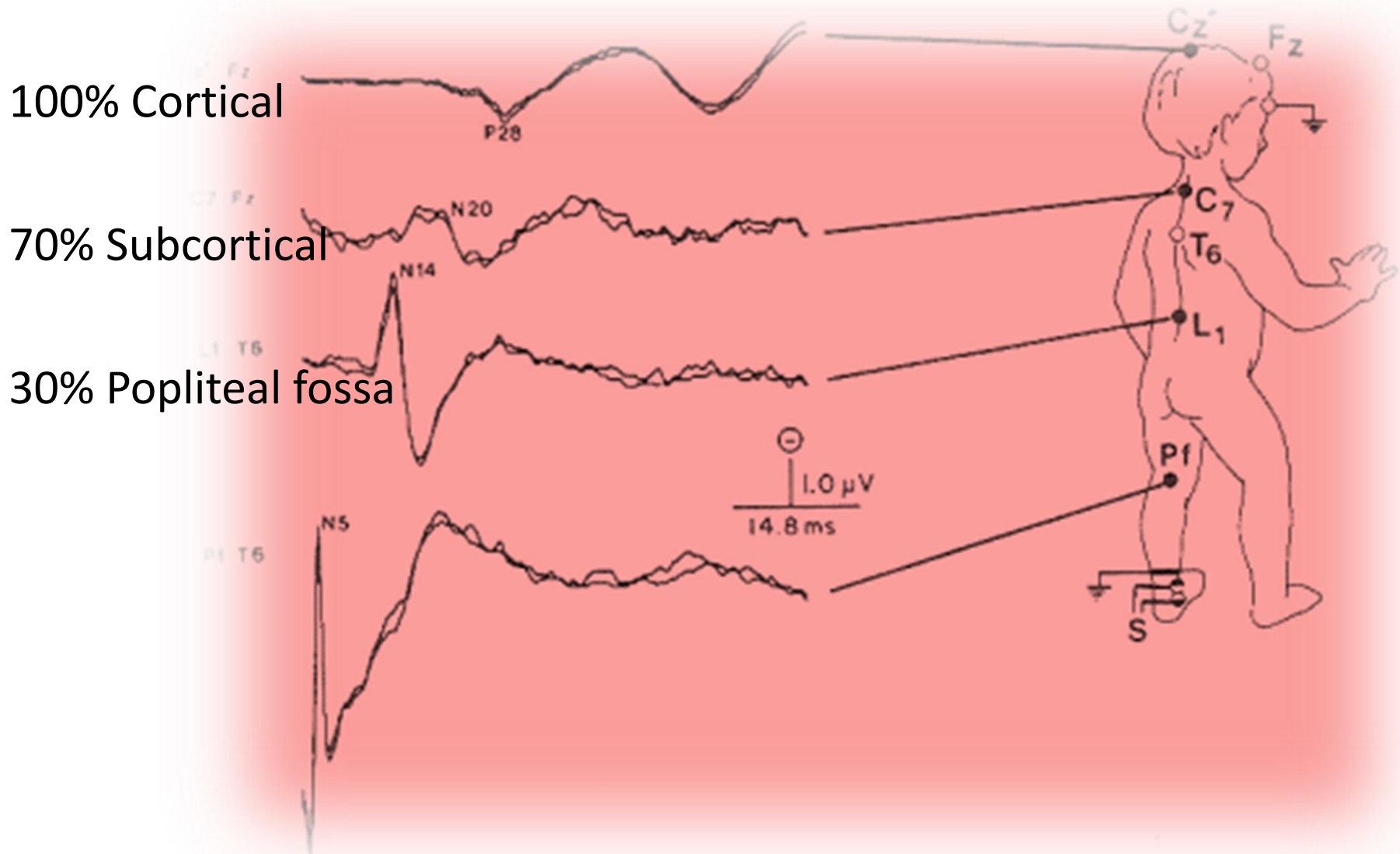
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How do you ensure monitoring changes are not caused by technical/anaesthetic changes?



Recording sites for lower limb SSEP's used



How frequently are averaged SEPs routinely recorded intraoperatively and what is your alert criteria?

Almost continuously	60%
At least once every minute	0%
At least once every 3 minutes	17%
At least once every 5 minutes	23%

ALERT

50% Amplitude 10% Latency	67%
Other – 30% reduction	6%
50% drop in amplitude	27%

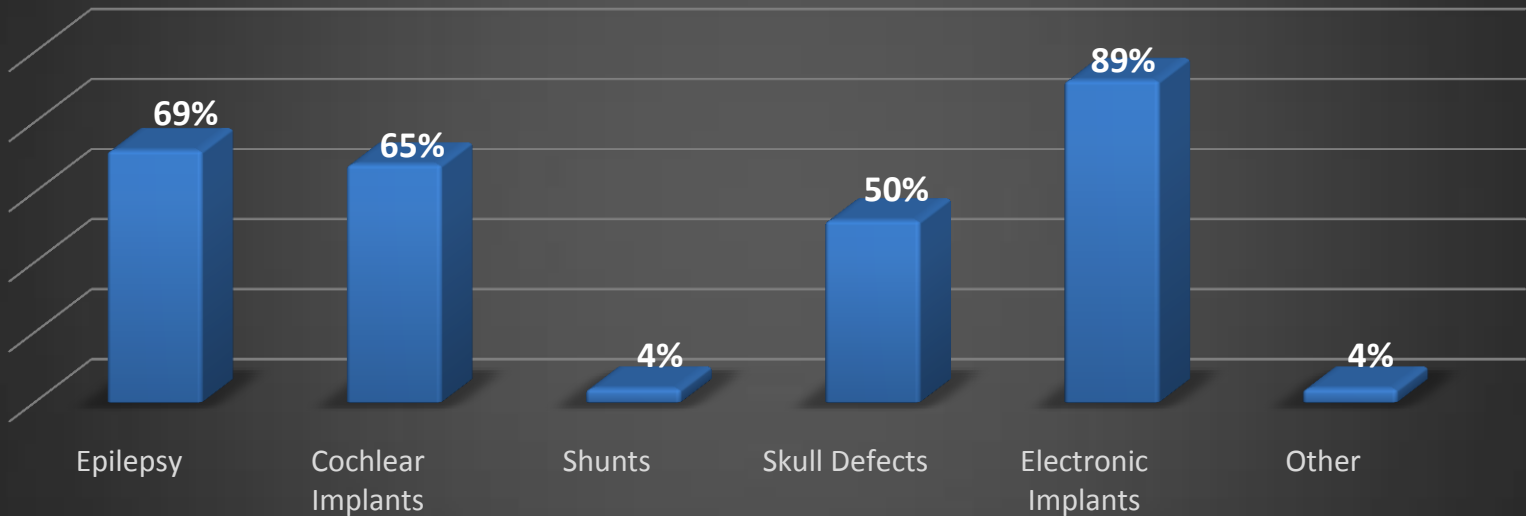


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87% said yes to monitoring MEP's unless contraindicated

Factors considered contraindications to MEP



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Commonly used recording sites used during MEP

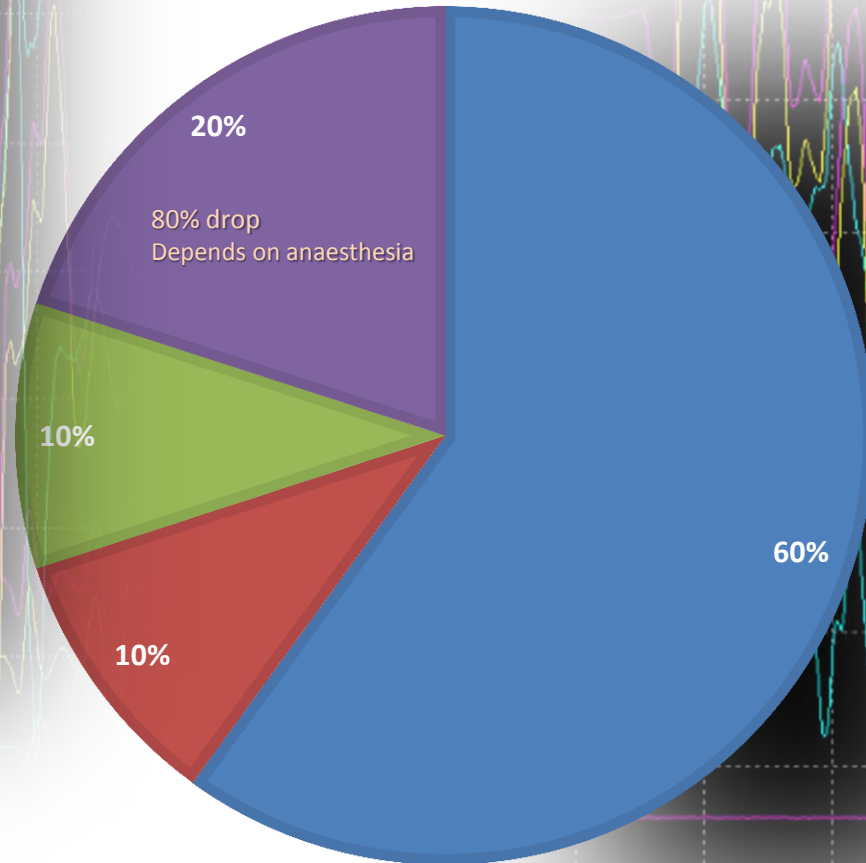
Quadriceps	47%
Tibialis anterior	100%
Gastrocnemius	27%
Abductor hallucis	93%
First Dorsal Interosseous	27%
Abductor Digiti Minimi	53%
Other – Brachioradialis	3%
APB	43%



Frequency of MEP stimulation and alarm criteria

■ All or nothing ■ 50% drop ■ Gradual decrease ■ other

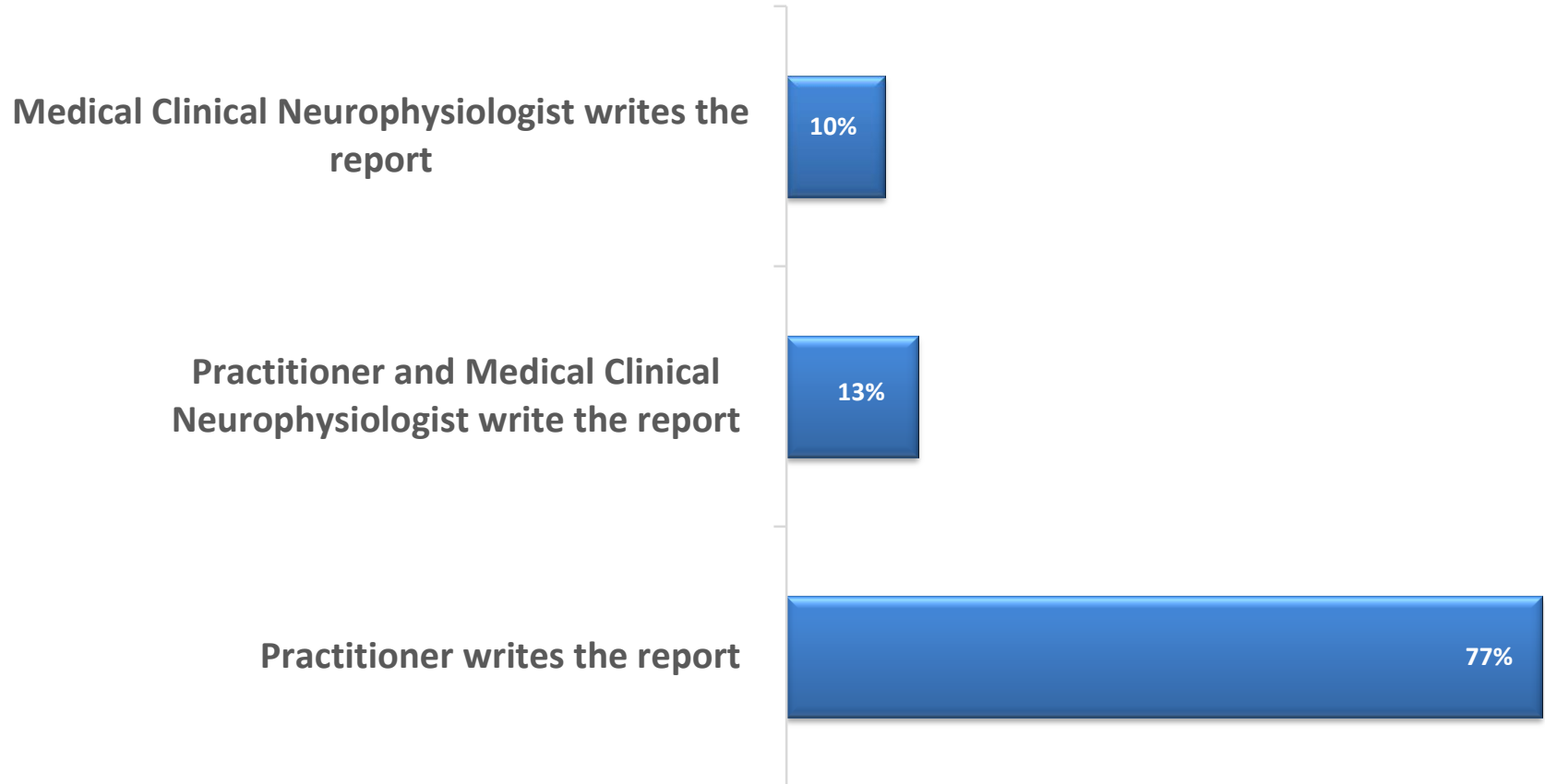
At least once every minute	4%
At least once every 5 minutes	31%
At least once every 10 minutes	32%
At least once every 15 minutes	7%
Other – please state After every screw insertion At surgeons request	28%



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100% say Yes to writing an IOM report



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Have you experienced any adverse events caused by monitoring itself?

Tongue bite	37%
Lip Laceration	17%
Hair Loss	3%
Seizures	3%
Compartment Syndrome	3%
Other	10%



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Conclusion

Good Compliance overall with multimodal monitoring
100% SEP and MEP

Good compliance with following standards
and guidelines - 97%

Shortfalls within consenting procedures and supplying patient information

Variations and lack of standards in training of IOM staff
and minimum competency requirements

Large variability in alarm criteria, use of peripheral
responses and amount of staff present in theatre



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Recommendations

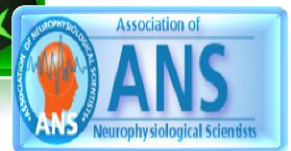
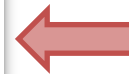
**Development of
national accreditation
and certification from
professional bodies**



**Promotes confidence
Reinforces knowledge
Establishes minimum competency
Enhances awareness
Fosters professionalism
Encourages continuing education
Improves patient care and safety**



**Developing clinical practice
guidelines by BSCN/ANS/NM_UK to
accompany technical standards
covering training, consent and
patient information**



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