

# *Exploring the Clinical Use of Ultrasound Imaging: A Survey of Physiotherapists in New Zealand*

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Ellis et al. (2018). *Musculoskeletal Science and Practice*, 34(4), 27-37.  
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# Background

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Surveys in Australia<sup>1,2</sup> and UK<sup>3</sup> suggested a growing use of ultrasound imaging (USI) by physiotherapists

Anecdotal evidence suggested a similar trend in **New Zealand**, but no formal evidence to support this

1. Jedrzejczak & Chipchase (2008). *Physio Res Int*, 13, 231 | 2. McKiernan et al. (2011). *Radiography*, 17, 121 | 3. Potter et al. (2012). *Man Ther*, 17, 39

# *Background*

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Previous surveys have quantified...

- Different clinical uses for USI in physiotherapy practice
- Type and context of USI training

Gaps in the evidence-base...

- Knowledge of the **Scopes of Practice** (SoP's) for physiotherapists to use USI
- Barriers preventing physiotherapists from using USI

# *Aims*

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Conduct a survey of registered New Zealand physiotherapists to ask.....

# Aims

Understanding of *Scopes of Practice* to  
use USI in New Zealand?

Are you using USI?

**YES: I am using USI**

Different clinical uses?

Level of training?

Formal versus Non-formal  
training?

**NO: I'm NOT using  
USI**

Barriers preventing you  
from using USI?

# Methods

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Cross sectional, observational design

Utilised Internet-based, anonymous survey of New Zealand registered physiotherapists

Face validity assessment and survey development

- Initial survey obtained from UK study<sup>1</sup>
- Expert Panel convened to provide feedback about the survey items, design and flow

# *Methods*

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Final survey examined 5 domains of interest

1. Professional and demographic details
2. Scopes of Practice
3. Barriers to using USI
4. Clinical uses of USI
5. Training

# Methods

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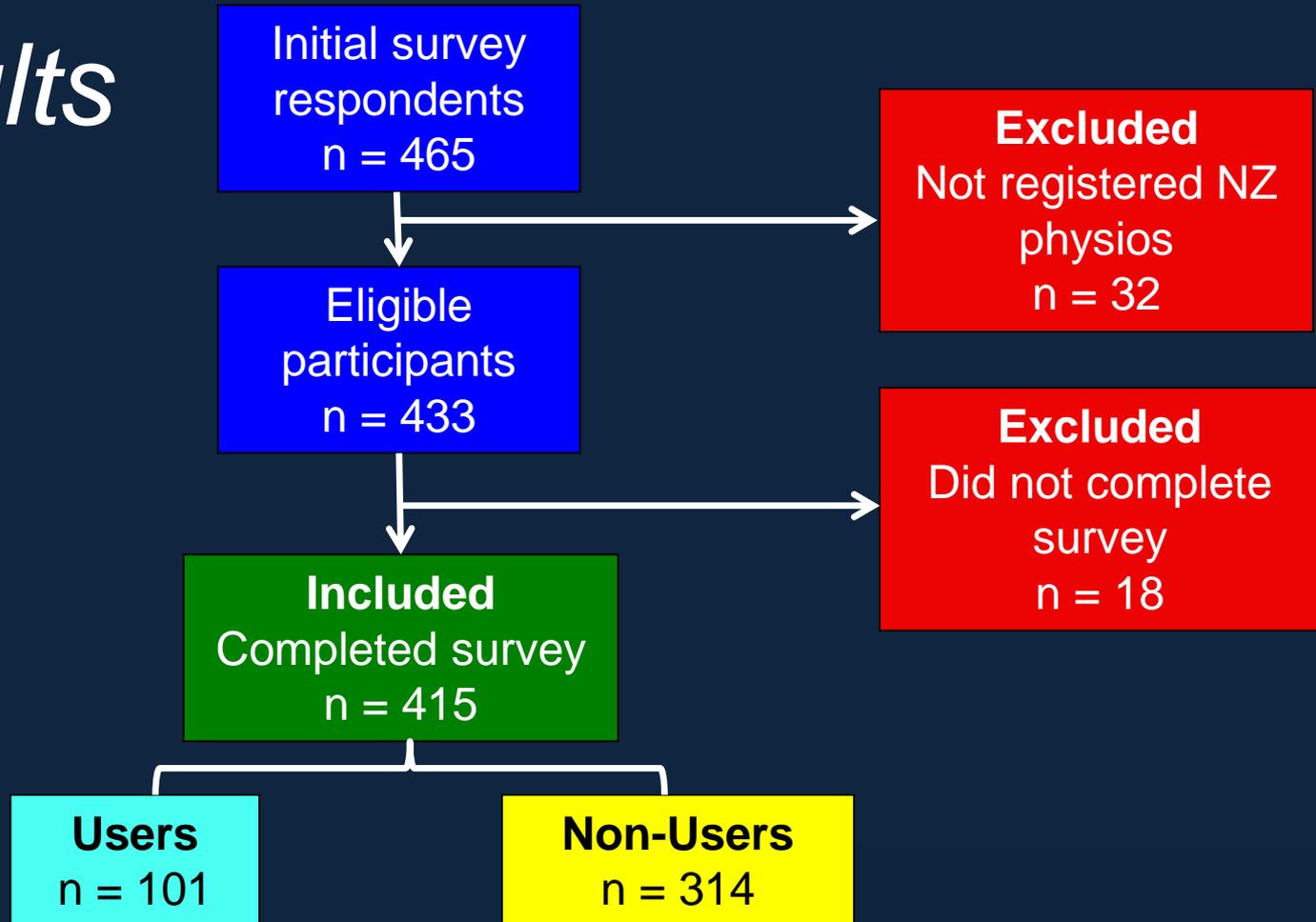
Descriptive analysis utilised

Comparative analysis (non-parametric chi-square tests)

- ‘*users*’ versus ‘*non-users*’
  - Professional details and demographic details
- ‘*users*’
  - Content of **Formal** versus **Non-formal** training

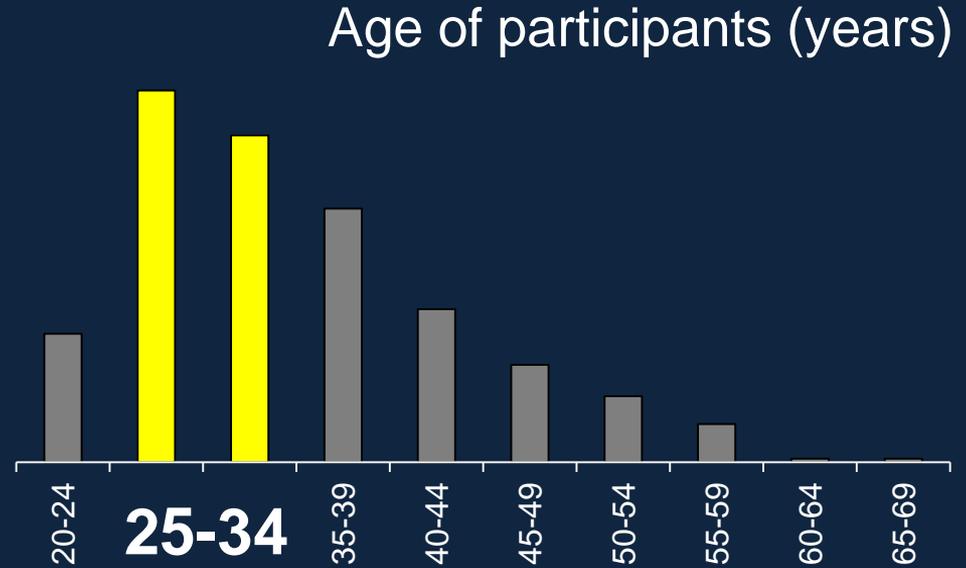
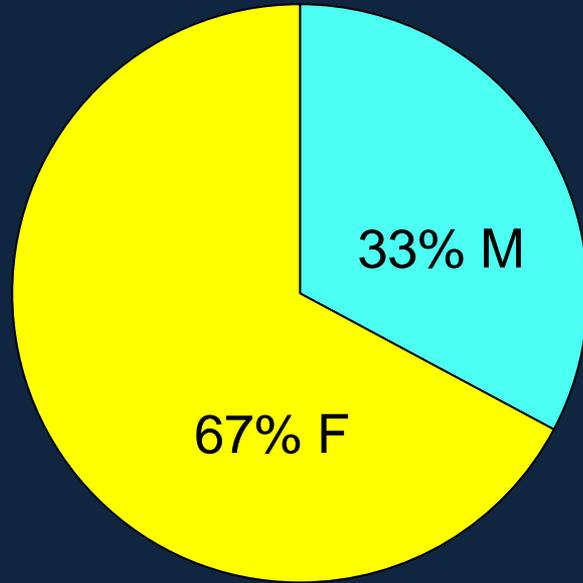
Ethical approval gain from AUTEK

# Results



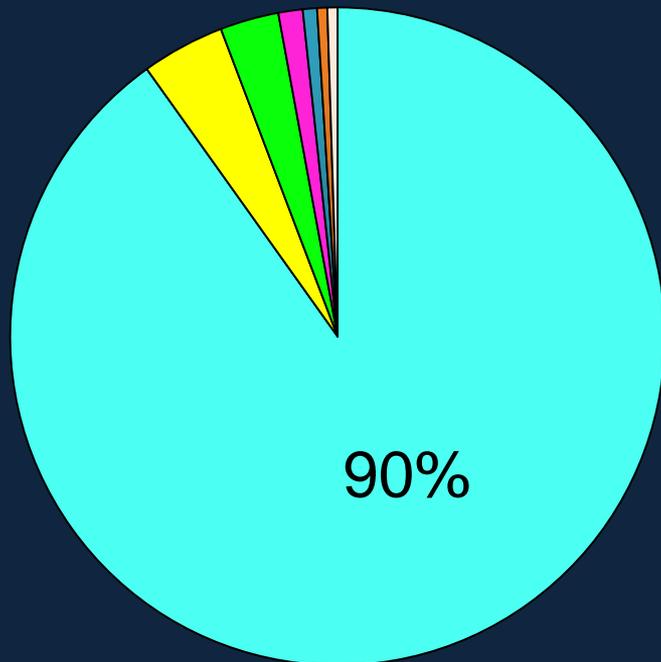
# Results

## Demographics and Professional



# Results

## Demographics and Professional



### Area of Practice

- Clinical
- Management
- Teaching/education
- Research
- Clinical and Management
- Clinical and Education
- Other

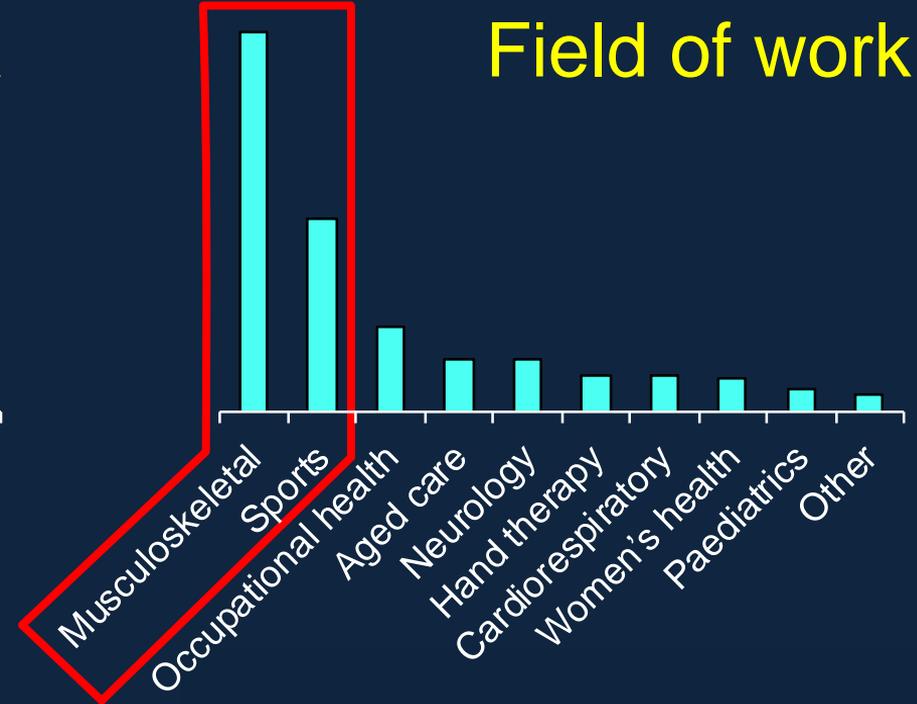
# Results

## Demographics and Professional

### Location of work

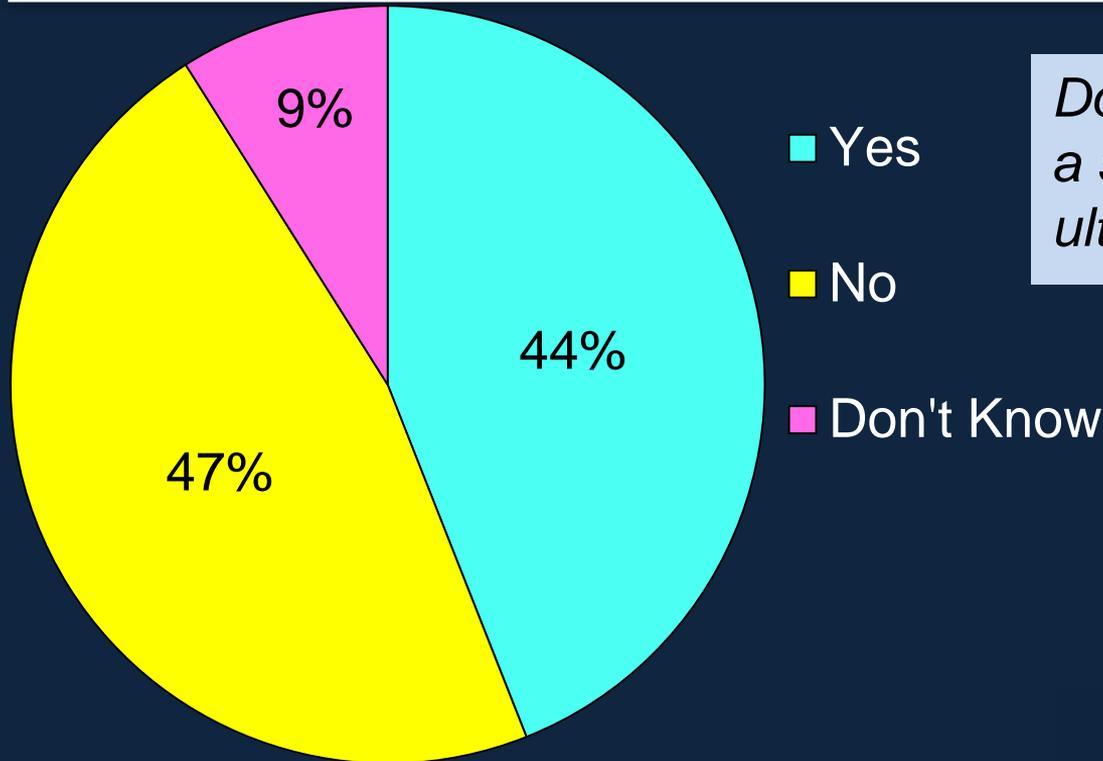


### Field of work



# Results

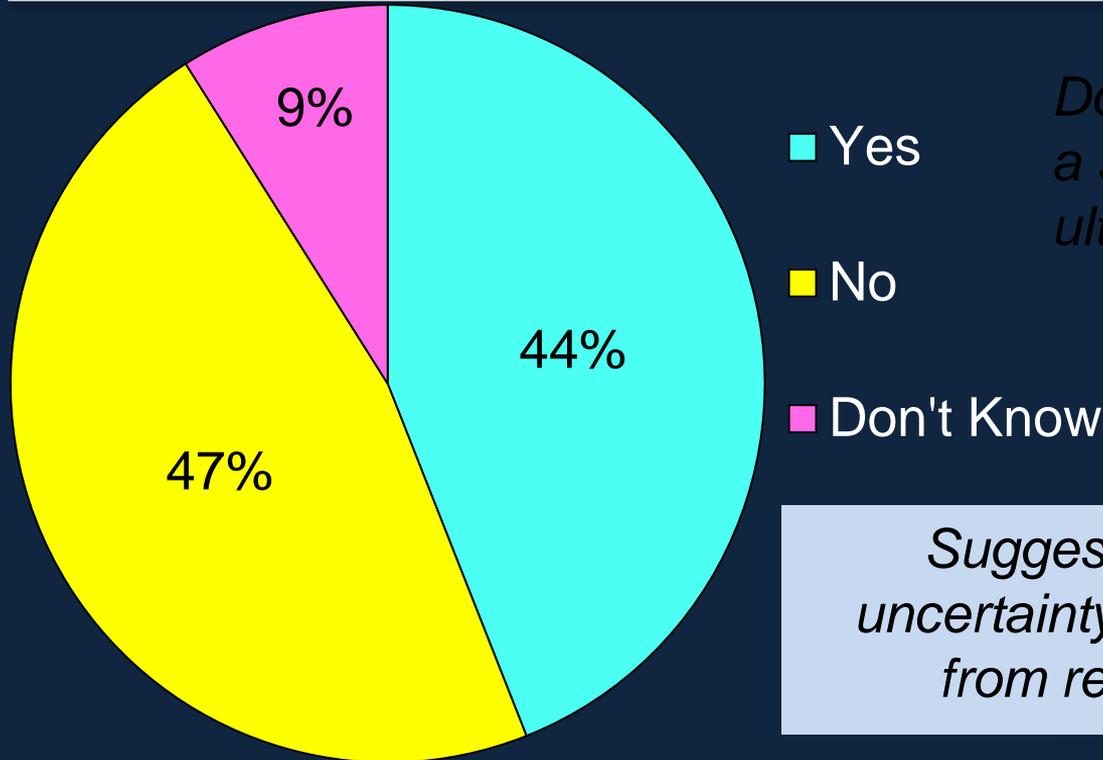
## Scopes of Practice



*Do NZ physiotherapists have a scope of practice to use ultrasound imaging?*

# Results

## Scopes of Practice



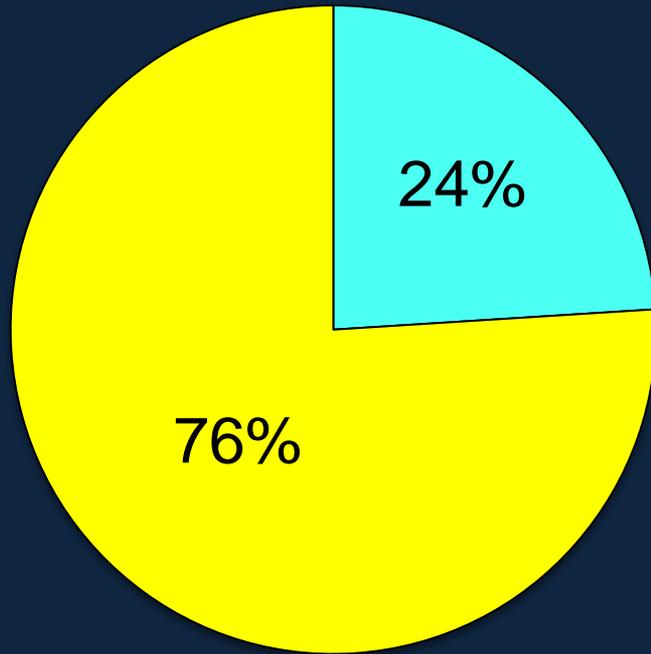
*Do NZ physiotherapists have a scope of practice to use ultrasound imaging?*

- Yes
- No
- Don't Know

*Suggests significant uncertainty regarding SoP from respondents?*

# Results

## Users versus Non-users



■ Users

■ Non-users

No significant differences in professional or demographic variables.....

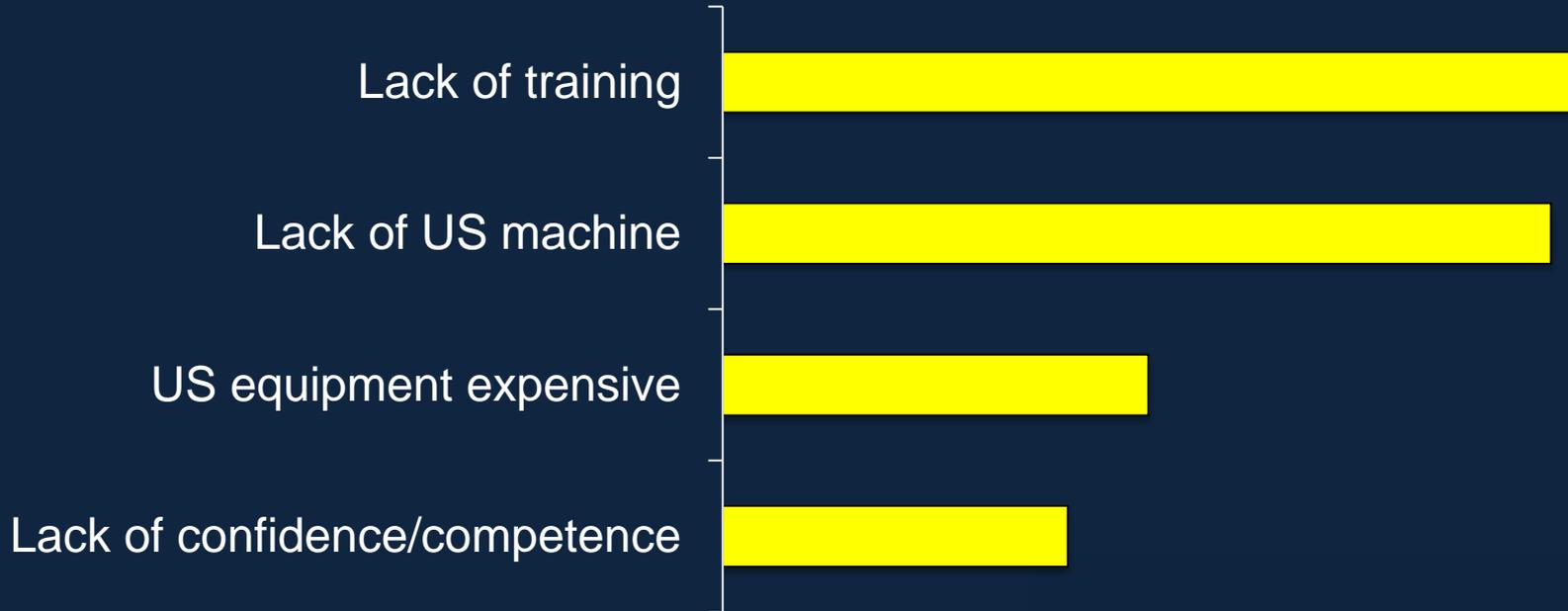
...aside from **postgraduate qualification** for *users* ( $p < 0.03$ )

# Results

## Barriers

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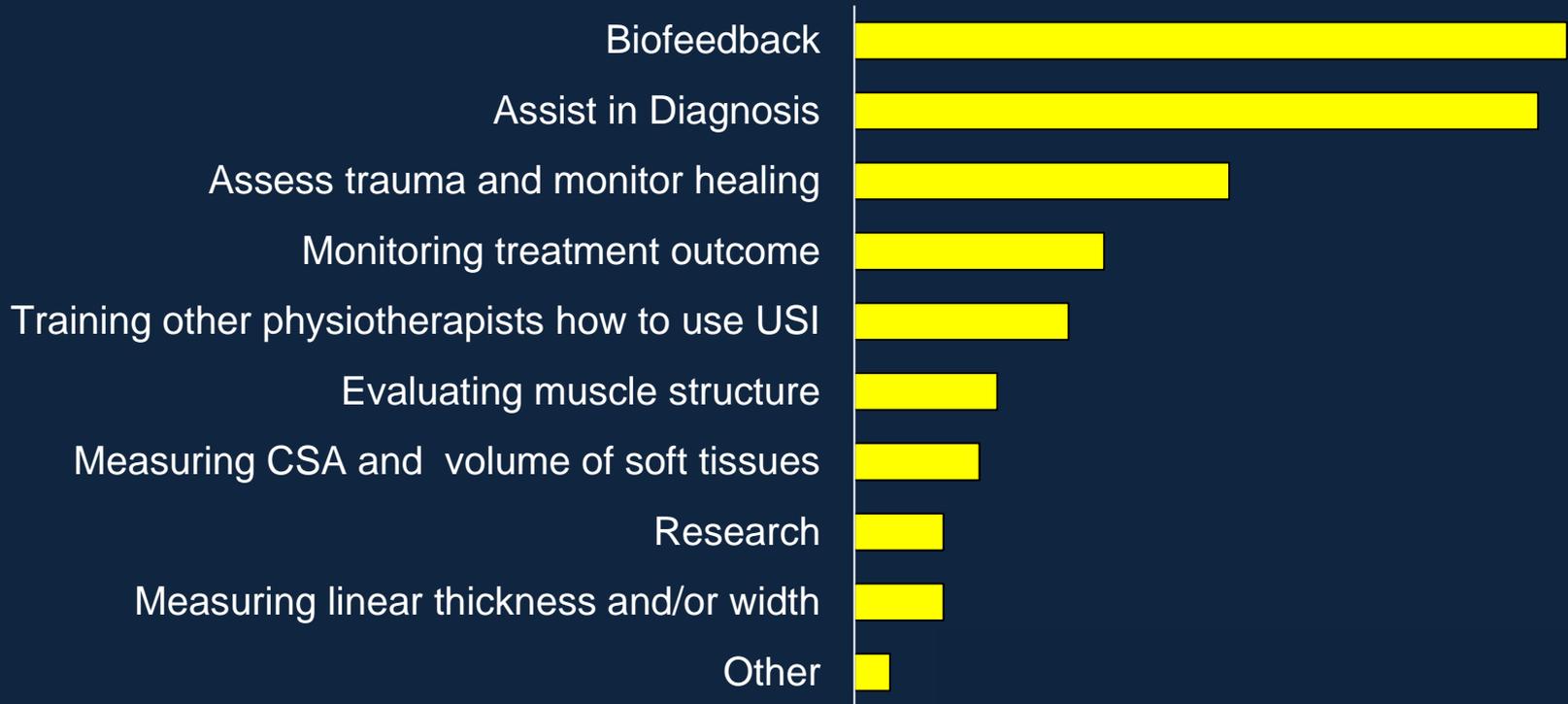
### Top 4 barriers:



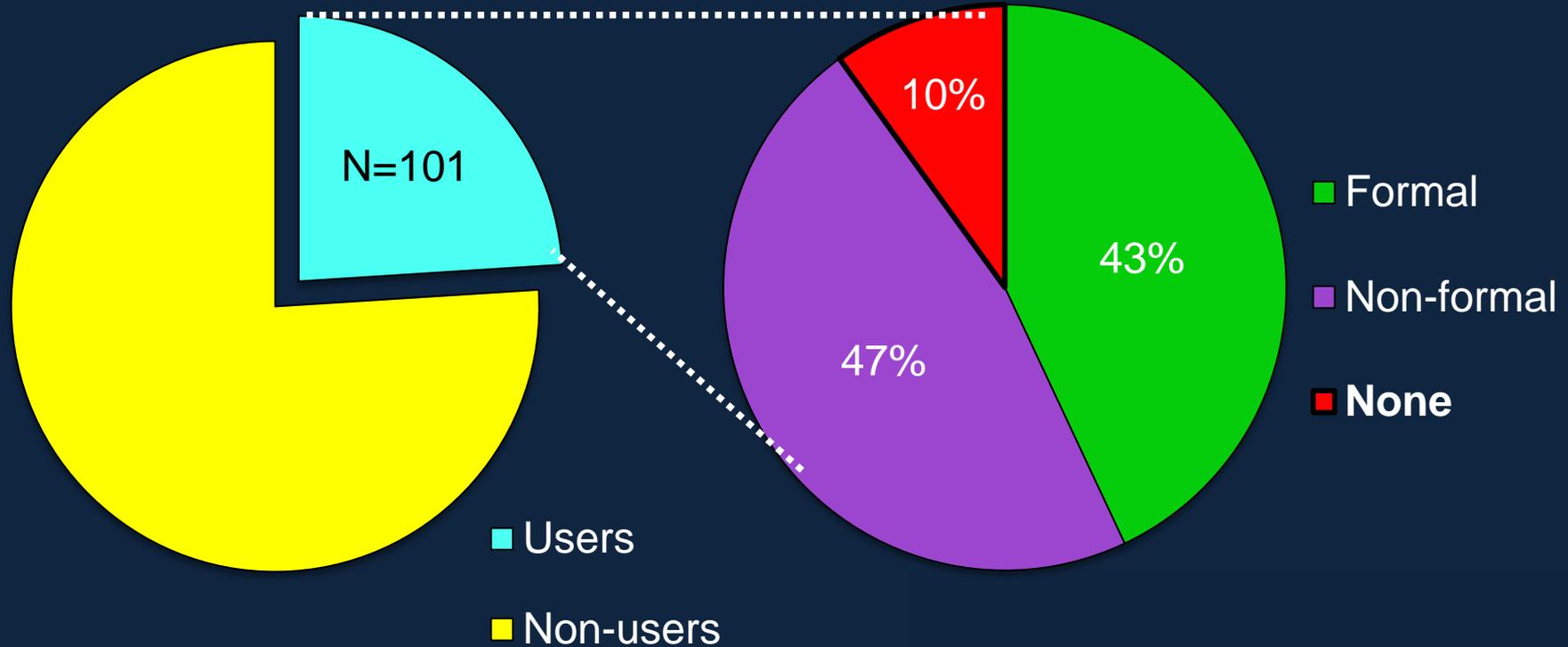
# Results

## Clinical Uses of USI

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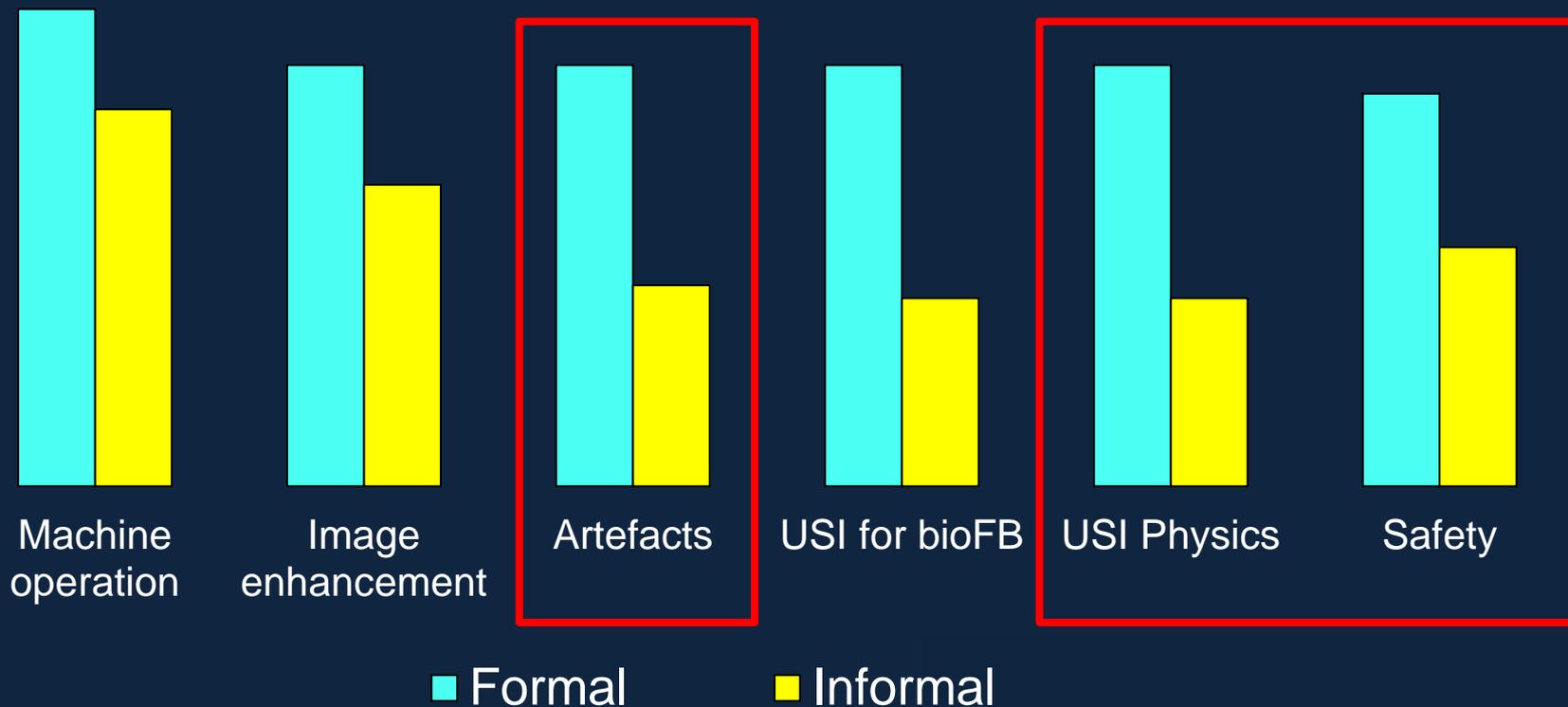


# Results Training



# Results

## Content of Training



# *Discussion*

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433 eligible participants represents 9% of NZ registered physiotherapists

- Survey sample was representative of the physio community in NZ

Physiotherapy Board of New Zealand. (2016). *The Physiotherapy Board of New Zealand: Annual Report*. <http://www.physioboard.org.nz/>

# Discussion

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Confusion exists re: SoP to use USI

- Physiotherapy Board of NZ defines SoP
- Use of USI covered within the **general SoP**
- No **specified** SoP for using USI
- Position statement re: ***“Defined field of practice”***
  - Prioritises ongoing professional development and education along with self-evaluation and mentoring

# *Discussion*

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Several barriers identified

- Lack of training and access to US equipment most prominent

Clinical uses of USI reflect traditional uses, but are expanding into new areas

# Discussion

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## Training

- Clearly a discrepancy between **formal** and **non-formal** training
- If *'defined fields of practice'* necessitate targeted training and CPD, then this needs to be a focus for clinicians using USI
- Physiotherapy community using USI need to be pro-active

# Acknowledgements

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## Expert panel members

*Scott Allen, Catherine Gambaro, Andrew Graham, Prof. Wayne Hing, Dr. Brett Lyons, Helen McKendrey, Jill Muirhead, Scott Pierce, Sarah Talyancich*

# Research Team

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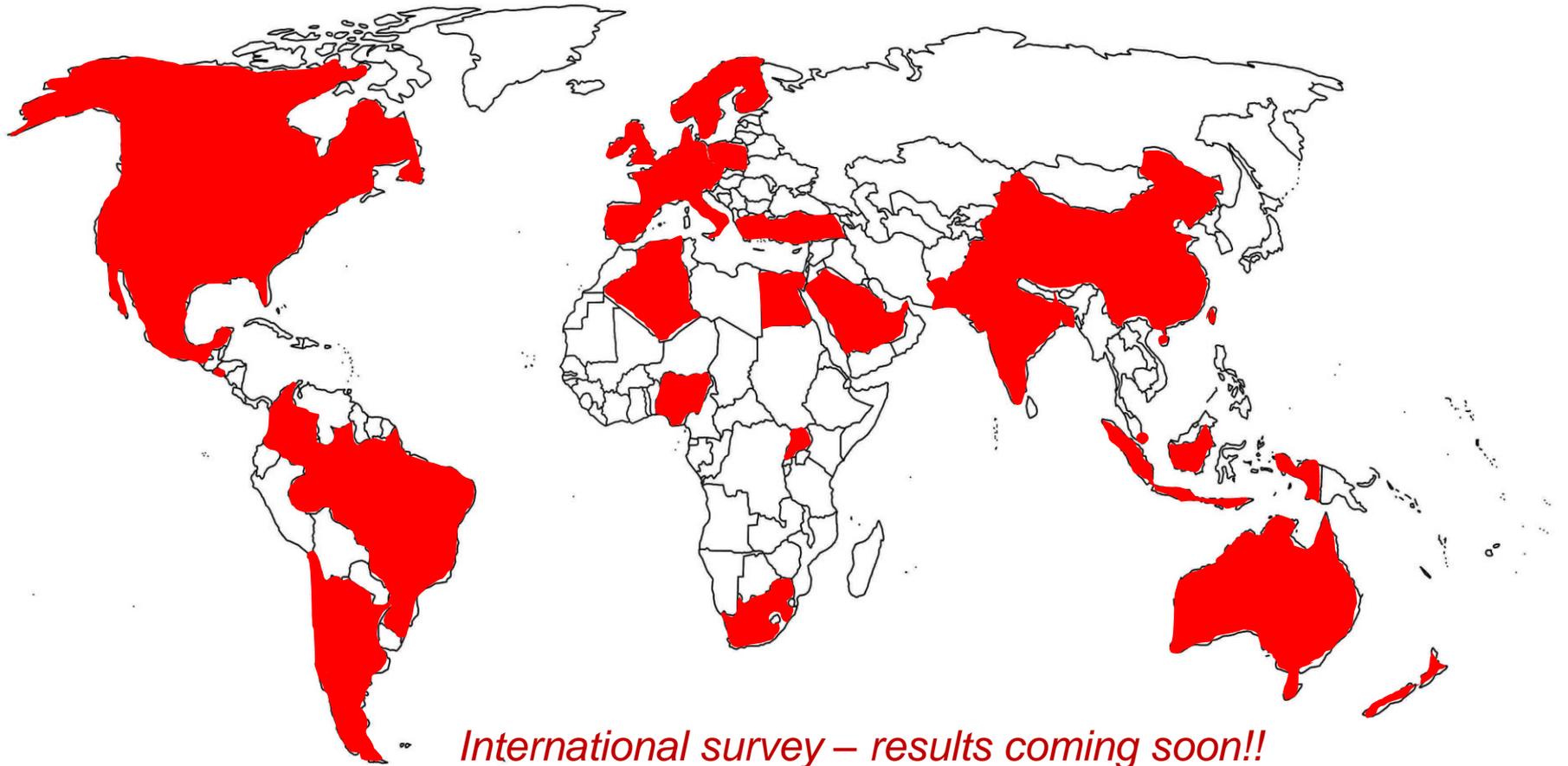
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*International survey – results coming soon!!*

Thanks for your attention.  
Enjoy WCPT!!

