Intro – Why do we measure implementation

- Intervention results might vary across different settings
  - → Is the intervention at fault or was the intervention not implemented as intended?

| Intervention | → | Implementation | ⇢ | Outcomes |

Intro – Why do we measure implementation

- Intervention results might vary across different settings

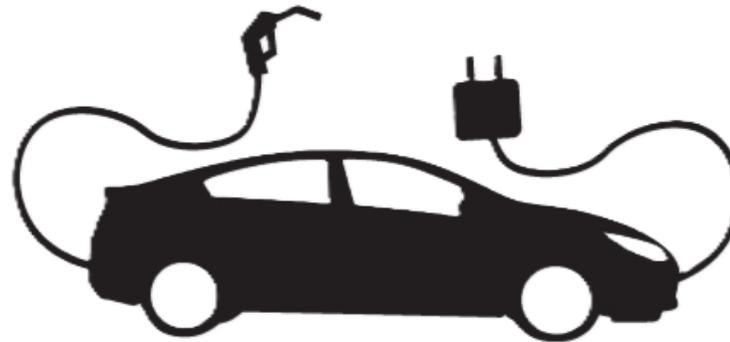 → Is the intervention at fault or was the intervention not implemented as intended?

VS.

Intro – Measured outcomes CIBOSurg

Effectiveness Outcomes

- Patient outcomes

Implementation Outcomes

- Acceptability
  - n
  - iateness
  - ty
  - :ion
- Sustainability

→ **hybrid type II effectiveness-implementation project**

Proctor et al. Outcomes for Implementation. *Adm. Policy Ment. Health.* 2011
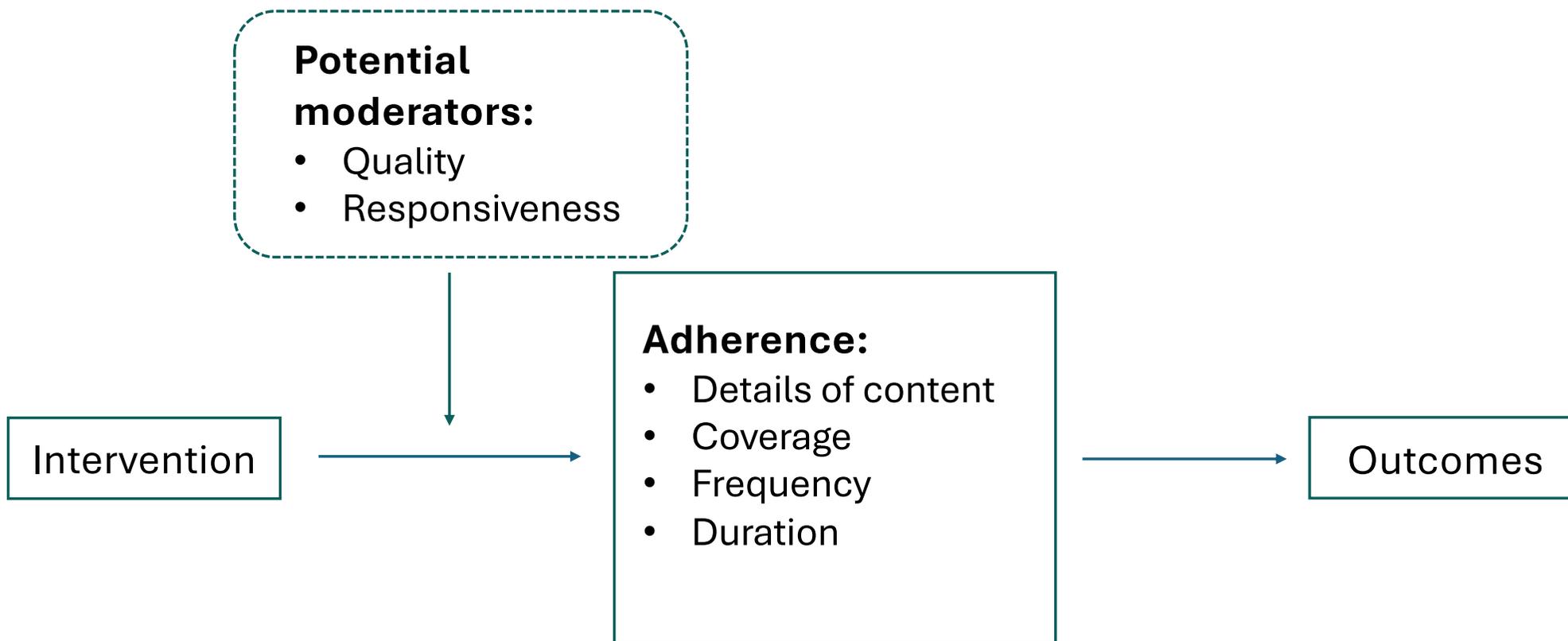
Implementation Fidelity

"Implementation fidelity refers to the degree to which
the ***implementation is performed*** as intended."

Based on: Carroll et al. A conceptual framework. *Imp Science. 2007*

Implementation Fidelity

Potential moderators:
- Quality
- Responsiveness

Intervention

Adherence:
- Details of content
- Coverage
- Frequency
- Duration

Outcomes

Based on: Carroll et al. A conceptual framework. *Imp Science. 2007*

Methods & Analysis

- 6 early-adopting centers

- Guide: Documentation of implementation steps

- Interview
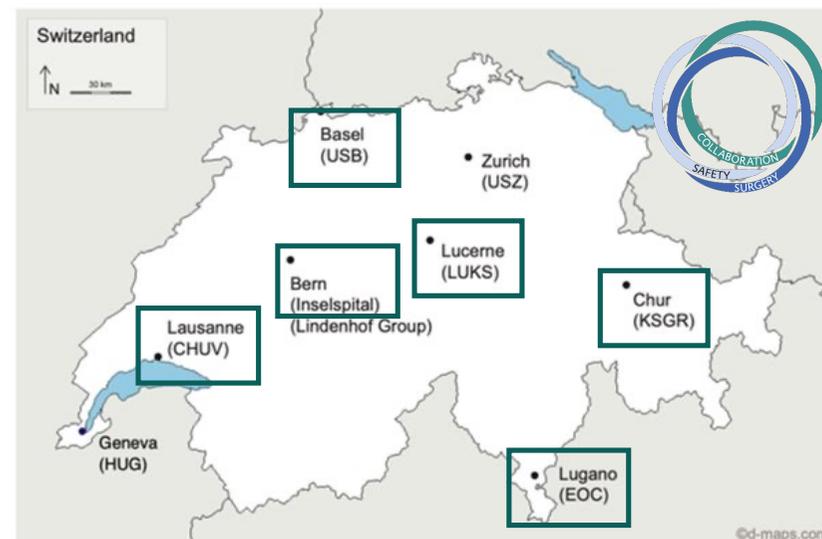
- Qualitative analysis (coding performed in MAXQDA, 1 center coded in collaboration, 5 centers coded independently)

- Synthesis of the analysis into a site-specific profile

- Discussing results with the respective hospital

→ **Final synthesis**

Documentation of implementation steps

Implementation team

Sign out

People

Administration

Training

Aufgabe	Datum Start*	Datum erledigt	Bemerkung (z.B., falls nicht oder nur teilweise erfüllt)	
Implementierungsteam gebildet				
Implementierungsteam ist interdisziplinär			Chir: ja / nein Anä: ja / nein TOA: ja / nein QM: ja / nein	
Sign Out Prozess definiert				
Checkliste bereitgestellt			iAE ergänzt: ja/nein	
			Zusätzl. Anpassungen: ja/nein	Welche:
Schlüsselpersonen identifiziert und eingebunden				
Ansprechpersonen aus allen involvierten Berufsgruppen				
Benutzerfreundliches **Dokumentationssystem** erstellt				
Feedback-Kanal für Anwender*innen erstellt und kommuniziert				
Allgemeine Information zu Projekt und Implementierung **kommuniziert**				
Schulungen geplant, Zielgruppen definiert				
Schulungen durchgeführt			Chir: ja / nein Anä: ja / nein TOA: ja / nein Lagerung: ja/nein	
E-learning für alle Berufsgruppen aufgeschaltet				

Site-specific profile

	Implementierungsschritte												
	Implemen-tierungsteam	Inter-disziplinäres Team	Sign Out Prozess	Checkliste	Schlüssel-personen	Ansprech-personen	Dokumen-tationssystem	Feedback-Kanal	Allgemeine Infor-mationen	Planung der Schulung	Durchführung der Schulung	E-Learning	Simulation
Kernelement													
Adhärenz													
Subelement													
Durchdringungsgrad	5 Pers										3 Events 120 Pers	42%	2 Events 60 Pers
Dauer			4 Monate	4 Monate						14 Tage			
Moderatoren													
Durchführungsqualität													
Engagement		ANA: hoch CHIR: mod											
Zusatzelement													
Anpassung													

Legende

	Ja/hoch
	Teilweise/moderat
	Nein/tief
	Anpassung erfolgt
	Keine Information vorhanden
	Nicht zutreffend

Intervention Fidelity

"Intervention fidelity refers to the degree to which
the **_intervention is delivered_** as intended."

Adherence

Quality

Carroll et al. A conceptual framework. *Imp Science. 2007*

The Five Components of the WHO Sign Out

- Name of the procedure
- Completion of instrument, sponge and needle counts
- Specimen labelling
- Equipment problems
- Key concerns for recovery and management

WHO Surgical Safety Checklist
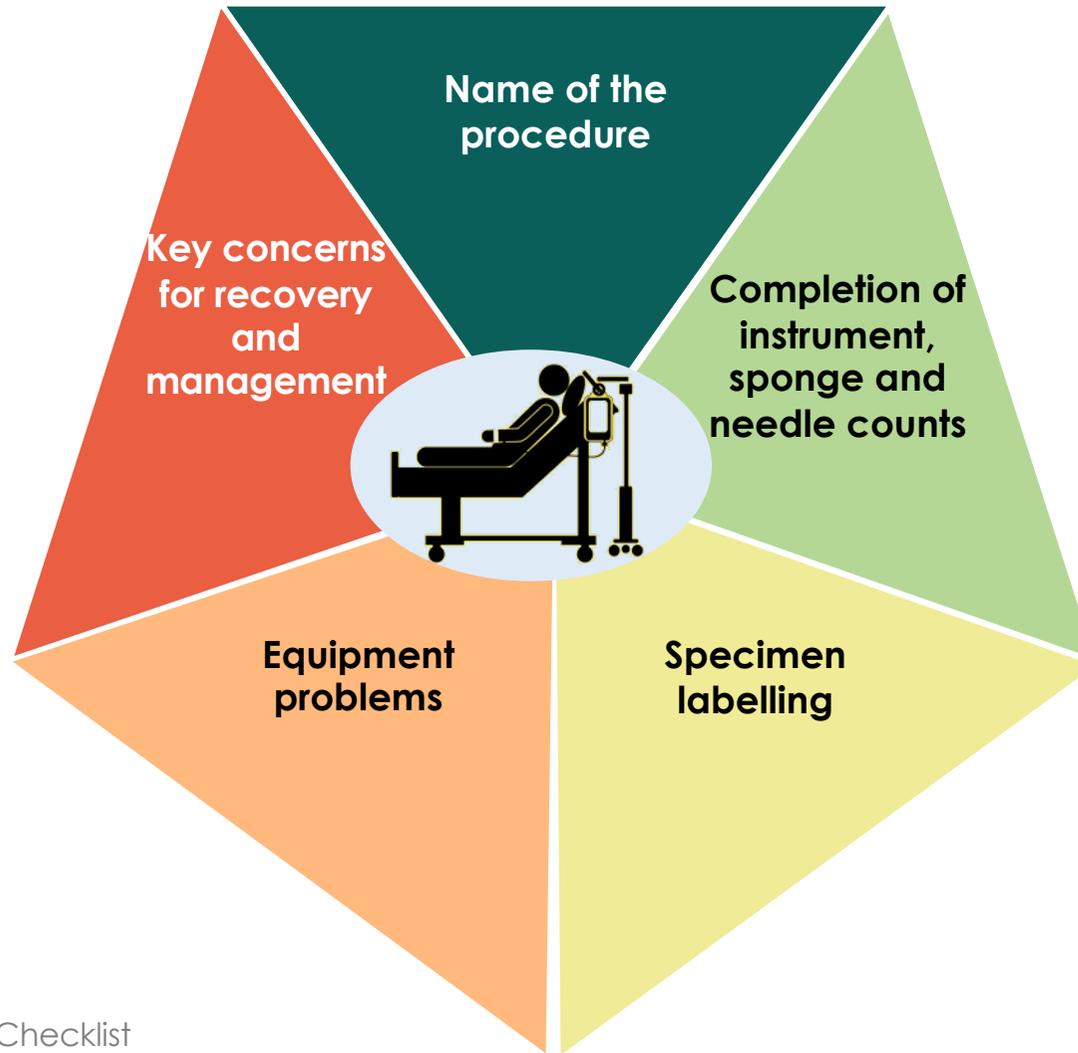
Sign Out Adherence following Implementation

Pre phase, sommer 2023, N=120

Sign Out — **2.5% complete** !

Post phase, summer 2025, N=120

Sign Out — **87% complete** ✓

6 month Follow Up, winter 2025, N=966

Sign Out — **44% complete** !

WHOBARS: Quality Assessment

WHO BARS Domain	Criteria
Setting the stage	Appropriate initiation by responsible person
Team Engagement	All are engaged, attentive and supportive
Team Activation	All are addressed, involved and encouraged
Problem Anticipation	Critical discussion of patient information and measures
Process Completion	Counts and labelling of specimen(s)
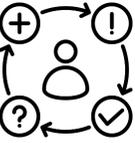
WHOBARS: Results Pre – Post

WHOBARS Total Score (Median, IQR)
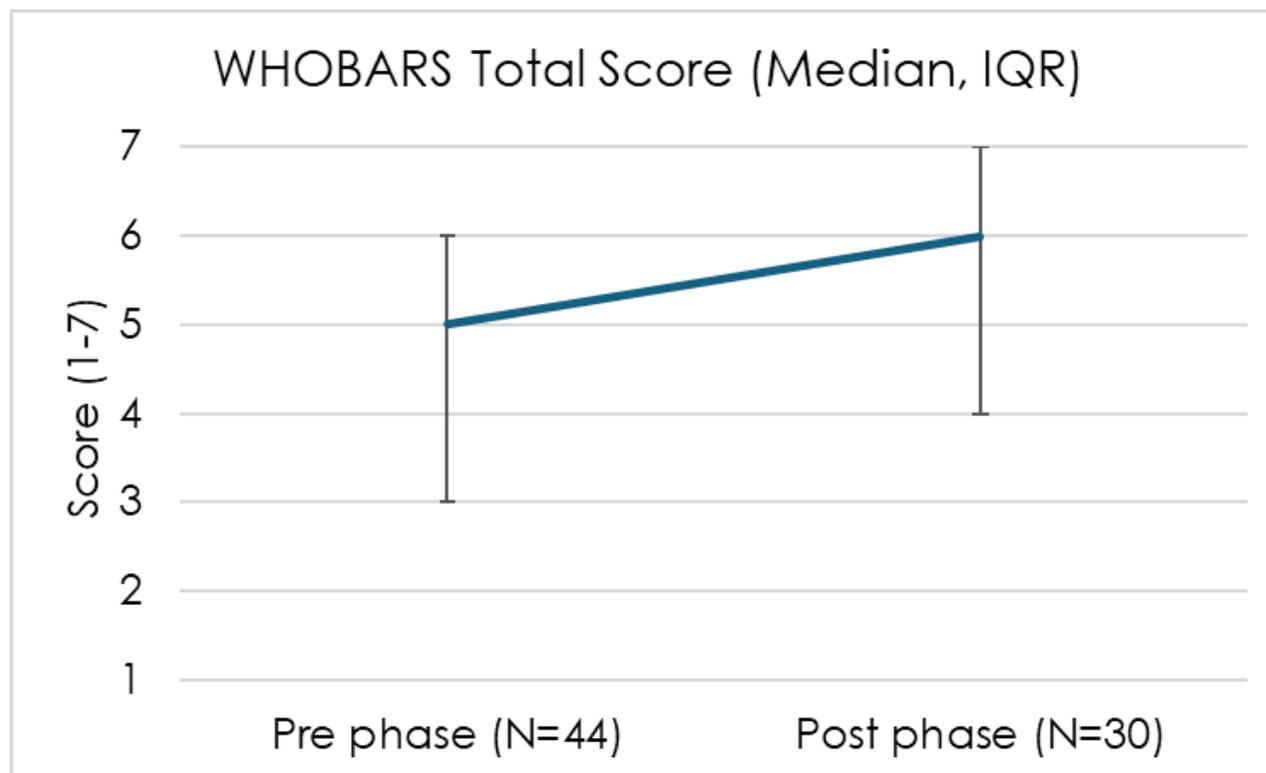
WHOBARS: Results Post – Follow Up

	Post (N=30)		Follow Up (N=30)	
Setting the Stage	**5.5**	(IQR 4 – 6)	**5**	(IQR 4 – 6)
Team Engagement	**5**	(IQR 4 – 6)	**5**	(IQR 3 – 6)
Team Activation	**6**	(IQR 4 – 6)	**5**	(IQR 4 – 6)
Problem Anticipation	**6**	(IQR 6 – 7)	**6**	(IQR 4 – 7)
Process Completion	**6**	(IQR 6 – 7)	**6**	(IQR 5 – 7)
Total	**5.6**	(IQR 5 – 6)	**5**	(IQR 4 – 6)

1   2   3   4   5   6   7

Poor   Excellent

Intervention Perception

Acceptability: perceived **agreeableness** or **satisfaction**
(<u>personal</u>: *do I want this?*)
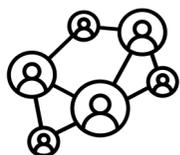
Appropriateness: perceived **fit**, **relevance**, or **compatibility**
(<u>technical, social</u>: *does this fit my setting?*)

Feasibility: **successful use** within a given setting
(<u>practical</u>: *can I do it in practice?*)

Weiner et al. Psychometric assessment. *Imp Science. 2017*
Proctor et al. Outcomes for Implememtation. *Adm. Policy Ment. Health. 2011*

The Surveys

Acceptability (AIM)	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely Agree
The sign-out including iAE recording (ClassIntra®) **meets my approval.**	1	2	3	4	5
The sign-out including iAE recording (ClassIntra®) **is appealing to me.**	1	2	3	4	5
I like the sign-out including iAE recording (ClassIntra®).	1	2	3	4	5
I welcome the sign-out including iAE recording (ClassIntra®).	1	2	3	4	5

Appropriateness (IAM)	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely Agree
The sign-out including iAE recording (ClassIntra®) **seems fitting.**	1	2	3	4	5
The sign-out including iAE recording (ClassIntra®) **seems suitable.**	1	2	3	4	5
The sign-out including iAE recording (ClassIntra®) **seems applicable.**	1	2	3	4	5
The sign-out including iAE recording (ClassIntra®) **seems like a good match.**	1	2	3	4	5

Feasibility (FIM)	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely Agree
The sign-out including iAE recording (ClassIntra®) **seems implementable.**	1	2	3	4	5
The sign-out including iAE recording (ClassIntra®) **seems possible.**	1	2	3	4	5
The sign-out including iAE recording (ClassIntra®) **seems doable.**	1	2	3	4	5
The sign-out including iAE recording (ClassIntra®) **seems easy to use.**	1	2	3	4	5

FILL IN

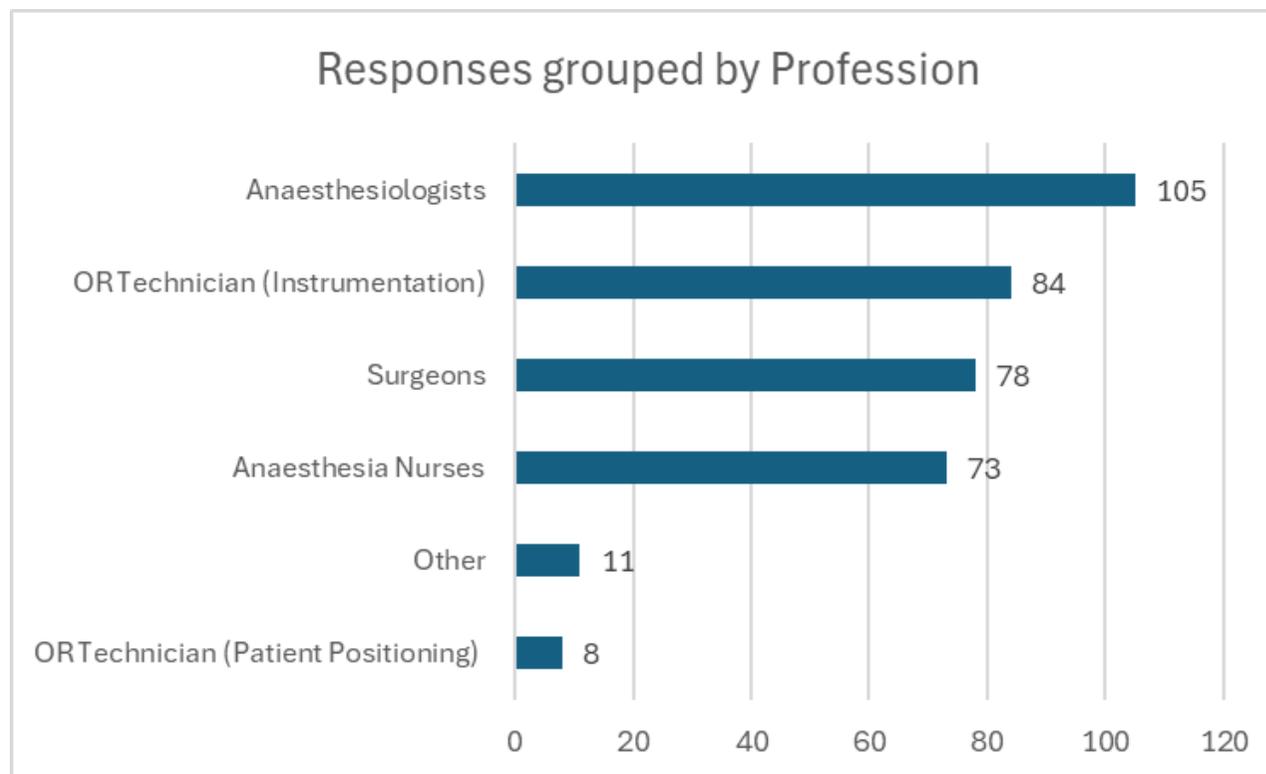**SIGN OUT** ☑

Weiner et al. Psychometric assessment. *Imp Science.* 2017

Sample

Visceral surgery (37%)

30-50 years old (69%)

5-10 years practice (40%)

Lecture (51%)

E-Learning (63%)

Sim Training (25%)

Responses grouped by Profession

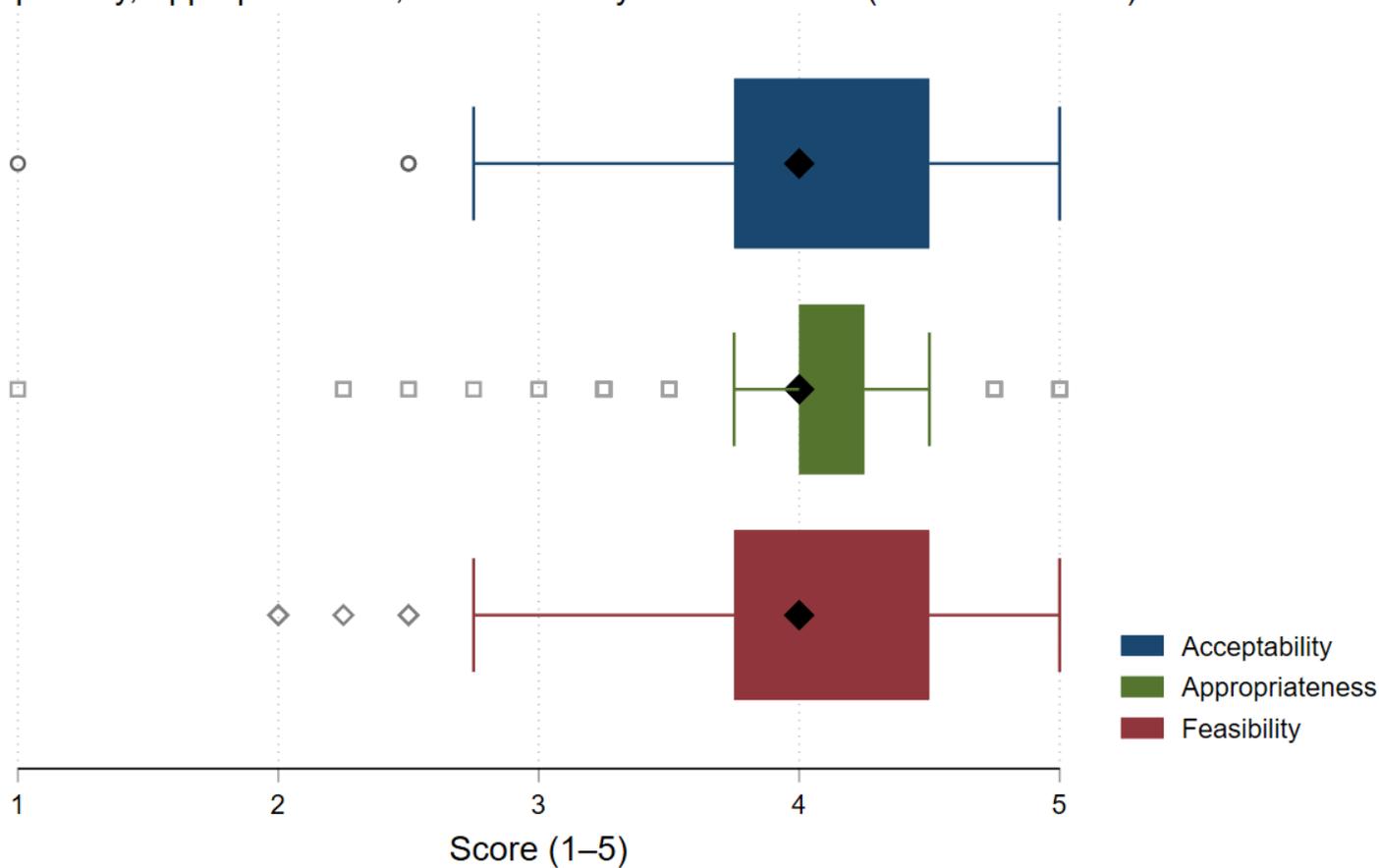| Profession	Count
Anaesthesiologists	105
ORTechnician (Instrumentation)	84
Surgeons	78
Anaesthesia Nurses	73
Other	11
ORTechnician (Patient Positioning)	8

N(participants)=359, N(sites)=5, 29.4.25-31.12.25

Quantitative Results

Acceptability, Appropriateness, and Feasibility of intervention (Median und IQR)

N(participants)=359, N(sites)=5, 29.4.25-31.12.25

Qualitative Results

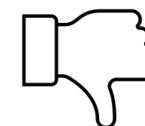| 👍		👎
Long and complex procedures	**Acceptability**	Not all are engaged
Adaptable	**Appropriateness**	Short procedures
"Yes, with the right organizational and educational support!"	**Feasibility**	Not digital, Not integrated in existing processes

N(participants)=359, N(sites)=5, 29.4.25-31.12.25

Implementation is a marathon, not a sprint

- One-time implementation according to 12 steps works

- Adherence ≠ Quality

- The intervention is appropriate

- Educational and organizational support are needed

- Self-sustainment over time