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Innovation, Readiness, Education



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Clinical Value and The Power of Standards

with **Professor Bernie Bissett**

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DISTINCTIVE BY DESIGN



CLINICAL VALUE OF DIGITAL DATA – HOW DATA ACCESS SHAPES EVIDENCE-BASED PRACTICE

A clinician researcher perspective

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CONFLICTS OF INTEREST

I have no conflicts to declare and no affiliation with any of the devices or products featured in this presentation



ACKNOWLEDGEMENTS

Patients and staff who have given
permission to share the photos and videos
in this presentation

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JOINT PROFESSOR OF ALLIED HEALTH RESEARCH



INTENSIVE CARE PATIENTS



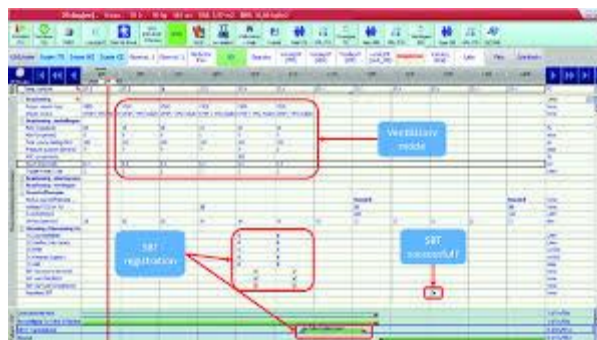
STRENGTH TRAINING FOR BREATHING MUSCLES



MULTICENTRE RCT OF INSPIRATORY MUSCLE TRAINING FOR ICU PATIENTS

DATA SOURCES:

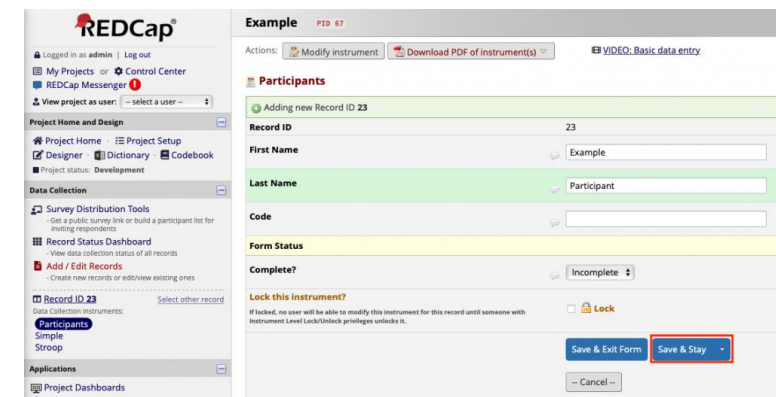
- Metavision (ICU data)
- Electronic Medical Record
- App-based training data



DATA POINTS INCLUDE:

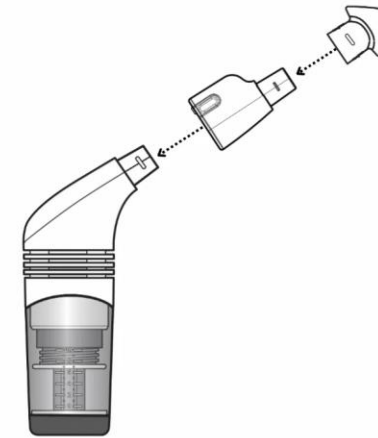
- Demographics, Co-Morbidities and Frailty
- Ventilator data
- Observations (Heart Rate, Respiratory Rate, Oxygen saturation, Blood Pressure)
- Training data (repetitions, sets, intensity)
- Outcomes:
 - ☐ Quality of Life (EQ-5D)
 - ☐ Disability (WHODAS)
 - ☐ Maximum Inspiratory Pressure
 - ☐ Exercise tolerance (Sit to Stand in 30 seconds)
 - ☐ Breathlessness (Borg & Dyspnoea 12 scores)

TIME POINTS: ICU, hospital discharge, 6 weeks, 6 months, 12 months

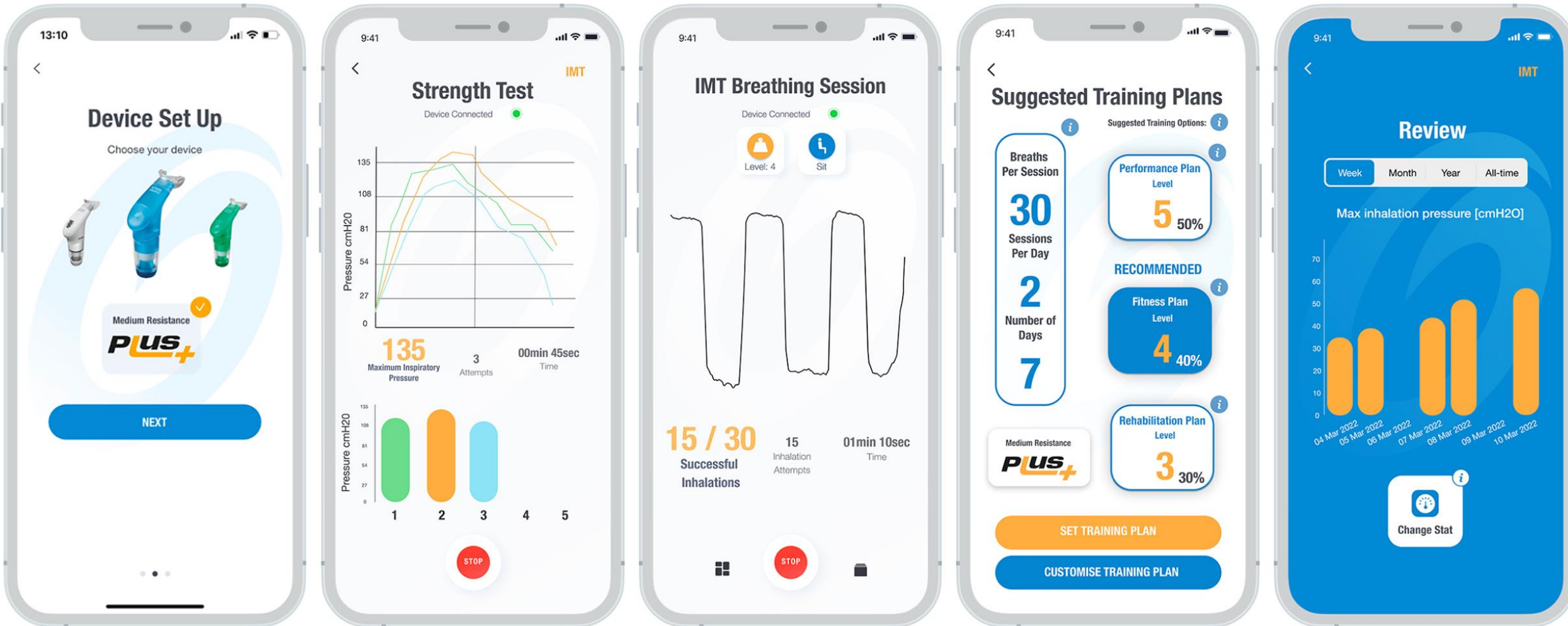


BLUE TOOTH – SMART ADAPTOR - APP

Using MedicPlus IMT + Smart Adaptor Bluetooth to
ActiBreathe App on phone
Up to 30 breaths / session



ACTIBREATHE APP ON PATIENT'S PHONE

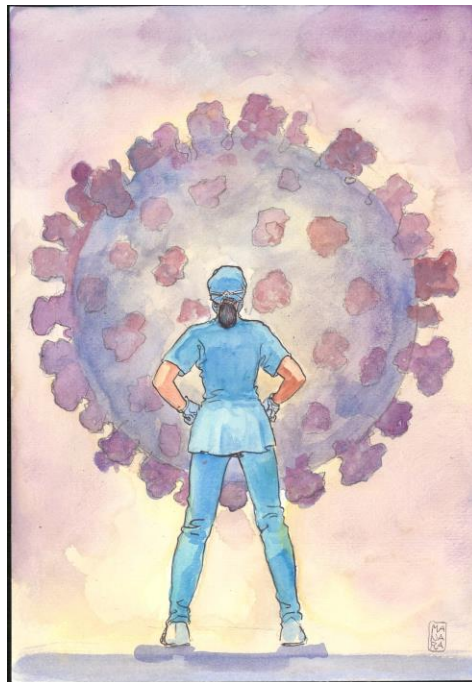


LESSONS LEARNED SO FAR

1. Access to data drives research design
2. Electronic medical records aren't yet designed for research outputs
3. Variation around the country makes research much harder! (and expensive)



COVID



Journal of Physiotherapy 66 (2020) 73–82



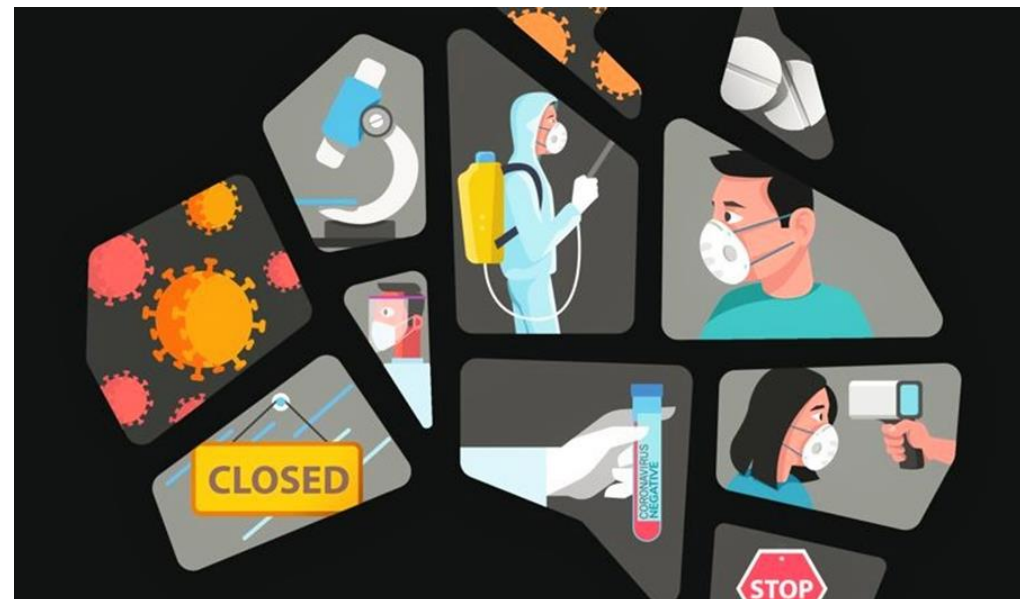
Journal of
PHYSIOTHERAPY

journal homepage: www.elsevier.com/locate/jphys

Invited Topical Review

Physiotherapy management for COVID-19 in the acute hospital setting: clinical practice recommendations

Peter Thomas^a, Claire Baldwin^b, Bernie Bissett^{c,d}, Ianthe Boden^e, Rik Gosselink^{f,g},
Catherine L Granger^h, Carol Hodgsonⁱ, Alice YM Jones^{j,k}, Michelle E Kho^{l,m,n}, Rachael Moses^o,
George Ntoumenopoulos^p, Selina M Parry^q, Shane Patman^r, Lisa van der Lee^s



LONG COVID




Health Expectations

WILEY

ORIGINAL ARTICLE **OPEN ACCESS**

Consumer Experience of an Australian Multidisciplinary Long COVID Clinic That Incorporates Personalised Exercise Prescription: A Qualitative Analysis

Tanya Buettikofer^{1,2}  | Allison Maher¹ | Veronica Rainbird² | Michelle Bennett¹ | Nicole Freene² | Imogen Mitchell^{1,3} | Hsin-Chia Carol Huang^{1,3} | Philip Gaughwin^{1,2} | Mary Johnson¹ | Jenny Paratz^{4,5} | Bernie Bissett^{1,2}

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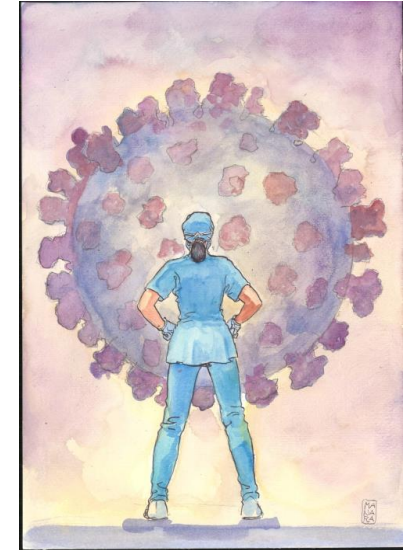
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Received: 18 July 2024 | **Revised:** 29 January 2025 | **Accepted:** 30 January 2025



LESSONS LEARNED SO FAR

1. **Still** relying mostly on manual data extraction from electronic records – SLOW!
 - Delays impact to change practice
2. Lack of connection between hospital and community data – follow up of long term conditions challenging
3. Collaborative research across jurisdictions – local site governance often has different data requirements, even if you have ethical approvals



WHAT WOULD I HAVE WITH A MAGIC WAND?

In my imaginary world, researchers would ideally be able to:

1. Run reports on selected patient data from electronic medical records ACROSS THE COUNTRY
2. Easily import outputs into data management software (e.g. RedCAP) without manual entry
 - Skip straight to data cleaning phase
3. Option to integrate patient-based health app data (where the patient has consented to share this)



CLINICIAN RESEARCHER PERSPECTIVE:

- Data access shapes clinical research design
 - If we can't easily access it, we probably won't measure it
- Coherent national data definitions are crucial to multicentre studies
- Obstacles in data access → research delays → slower practice change
- PLEASE prioritise research functionality of electronic medical records now
- Bottom line: Research data access is actually about improving patient care.

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