



Hunter
Medical
Research
Institute

Shallow budgets, deep impact:

Repurposing REDCap for digital intervention research

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In partnership with our community



Hunter New England
Local Health District

I would like to acknowledge the Traditional Custodians of the land we are meeting on today, the Turrbal and Jagera peoples, and also acknowledge the Awabakal and Worimi peoples, the traditional custodians of the land on which Hunter Medical Research Institute is located.



Hunter Medical Research Institute

- Australia's largest regional medical research institute.
- Partnership between Hunter New England Local Health District, University of Newcastle and the community.
- 1700+ research affiliates across 10 research programs.
- 1m+ population across the Hunter & New England region of NSW.
- Full-service research support.



Research Support

- Data Management & Health Informatics
- Biostatistics
- Health Economics
- Clinical Trials Support Unit
- Research Impact
- Grants Development
- Corporate services:
 - Marketing
 - Philanthropy
 - Event management

Data Management & Health Informatics

- Data extraction and merging.
- Clinical data management.
- Dashboards and visualisation.
- Research training.
- REDCap administration, development, and support.

Background

- Very active Hunter New England Population Health Department.
- Strong track record of delivering digital health intervention.
- Traditionally engaging traditional software and web developers, but it is difficult finding developers with research, health, and technical knowledge.
- Using different platforms for information delivery and data collection.
- Increasing costs, decreasing funds.

Requirements

Researchers	Consumers
<p>Functionality:</p> <ul style="list-style-type: none">• Information delivery via text, audio, video• Data collection of current and changed behaviours• Immediate feedback delivery to participants• Reminders and invitations to participants <p>Technical</p> <ul style="list-style-type: none">• Data security• Flexibility & scalability• Value for money <ul style="list-style-type: none">•and whatever the consumers want	<p>Functionality</p> <ul style="list-style-type: none">• Works on phone and laptop/desktop• Accessible from multiple devices (e.g. their children's phones)• Ask questions <p>Content</p> <ul style="list-style-type: none">• Credible resources – in-app and external• Mixed-modality information• Personalised <p>Design</p> <ul style="list-style-type: none">• “Look pretty, but professional”

 **REDCap**

- Licensed product from Vanderbilt University Medical Centre
- 8000+ instances worldwide (350+ across Australia & New Zealand).
- “Free” – but self-managed.
- Designed specifically for secure research data collection.
- Primarily used for researcher-entered data collection and surveying research participants.

REDCap is ugly?

RECOVERSupport

Thank you very much for participating.
We have a number of questions about you and your health.
Please answer all of the questions yourself by filling in the circle that best describes you.

	Not at all	A little	Quite a bit
This first section will ask you questions to see if you are eligible			
What is your age (in years) today? <small>* must provide value</small>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you consider yourself to be (check all that apply) <small>* must provide value</small>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you have any trouble doing strenuous activities, like carrying a heavy shopping bag or a suitcase?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you have any trouble taking a <u>long</u> walk?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you have any trouble taking a <u>short</u> walk outside of the house?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you need to stay in bed or a chair during the day?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you need help with eating, dressing, washing yourself or using the toilet?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

CONTINUE

RECOVERSupport

Home Module 1 My Qns Resources

MODULE 1: INTRODUCTION

Our approach to recovery

We're sorry that you're having to have cancer surgery. It's common to feel overwhelmed. However, there are important things that you can do to take control of your recovery. **Did you know that around 30% of surgical recovery is in your hands?** You can be an active participant, and speed up your recovery and reduce your pain.

HOW TO USE THIS PROGRAM

Surgeons recommend that you:

Use this program:

- At home: before your surgery to help you prepare
- In hospital: to do the **5 Recover E's** to improve your recovery
- At home after your surgery: to continue your recovery journey

View the videos and information in each module, then complete the quiz. We will also send you SMS/email reminders to do certain things, and while in hospital we will provide a daily checklist each day so you can check off these things as you do them.

RECOVERSupport



Preparing for and recovering from your breast cancer surgery



Module 1:
Program overview



Module 2:
Preparing for surgery



Module 3:
The operating theatre



Module 4:
The 5 Recover E's



Module 5:
Discharge



Module 6:
Physio exercises

Please remember that this program provides general advice only. In the first instance, always follow the individual advice you receive from your medical team.

Want to learn more about your treating team?

MY TEAM

Find links to resources to help you here

RESOURCES

Have any questions about your surgery?

MY QUESTIONS

Links to 'timepoint pages' - contain questionnaires (ask), information (advice) and suggested support options/referral pathways (help) linked to specific stage of development and upcoming antenatal appointments. Includes capacity for users to record notes/questions to raise with antenatal care team (saved to 'Notes for my Antenatal Visits' page)

Resources and links to support options/referral pathways related to each SNAP-W factor

Resources and links to support options/referral pathways relevant to postpartum (e.g. mental health/wellbeing, breastfeeding), including resources for partners/family

MyPregnancy

At 20 weeks, your baby is now approximately the size of a mango!



- Initial Visit
- 20-25 weeks
- 26-29 weeks
- 30-33 weeks
- 34-37 weeks
- 38+ weeks

Notes for my Antenatal Visits

Resources & Services - During Pregnancy

Resources & Services - After Pregnancy

MyProfile

Help

Fruit/veg images corresponding to baby's approximate size

Summary of recorded notes from the MyPregnancy timepoint pages

Links to MyProfile questionnaire (basic demographic information)

Overview of the key features of the tool, navigation support and FAQ.

Under the hood

- REDCap External Modules
- Calculated fields (numbers, dates, text)
- Branching logic
- HTML
- CSS injection
- Javascript injection

We're taking healthy further

Under the hood

Calculation Equation [How do I format the equation?](#) [Learn how to use](#) [Special Functions](#)

```
datediff('today', [baseline_arm_1][edd][last-instance], 'd')
```

Calculation Equation [How do I format the equation?](#) [Learn how to use](#) [Special Functions](#)

```
rounddown((280 - [baseline_arm_1][gestation_days][first-instance]) / 7)
```

Field Name: baby_size_37wk Branching logic: [gestation_days] <= '21'

At [gestation_weeks] weeks, [baseline_arm_1][name_calc_text][last-instance] [baseline_arm_1] [baby_babies_calc_text_3][last-instance] now approximately the size of a watermelon!



```
@CALCTEXT(
if([nickname] = '' AND ([single_multi_preg] = '2' OR
[single_multi_preg] = '3'),
'your babies',
if([nickname] = '' AND ([single_multi_preg] = '1' OR
[single_multi_preg] = '97'),
'your baby',
if([nickname] <> '',
[nickname],
'your baby'))))
```

```
@CALCTEXT(
if([single_multi_preg] = '2' OR
[single_multi_preg] = '3', "Are", "Is"))
```

Source code

Initial Visit 20-25 weeks

```
<div class="text-box">
```

```
<p style="text-align: center;"><a href="[first_appointment_arm_1][survey-url:initial_visit][new-instance]">
```

```
<input style="background-color: #441170; border: none; font-weight: bold; border-radius: 30px; box-shadow: 5px 5px 5px grey;
```

```
padding: 25px 10px; color: #ffffff;" type="button" value=" Initial Visit "></a></p>
```

```
</div>
```

Healthy Pregnancy Support Tool

MyPregnancy

At 20 weeks, your baby is now approximately the size of a mango!



Initial Visit

20-25 weeks

26-29 weeks

30-33 weeks

34-37 weeks

38+ weeks

Notes for my Antenatal Visits

Resources & Services - During Pregnancy

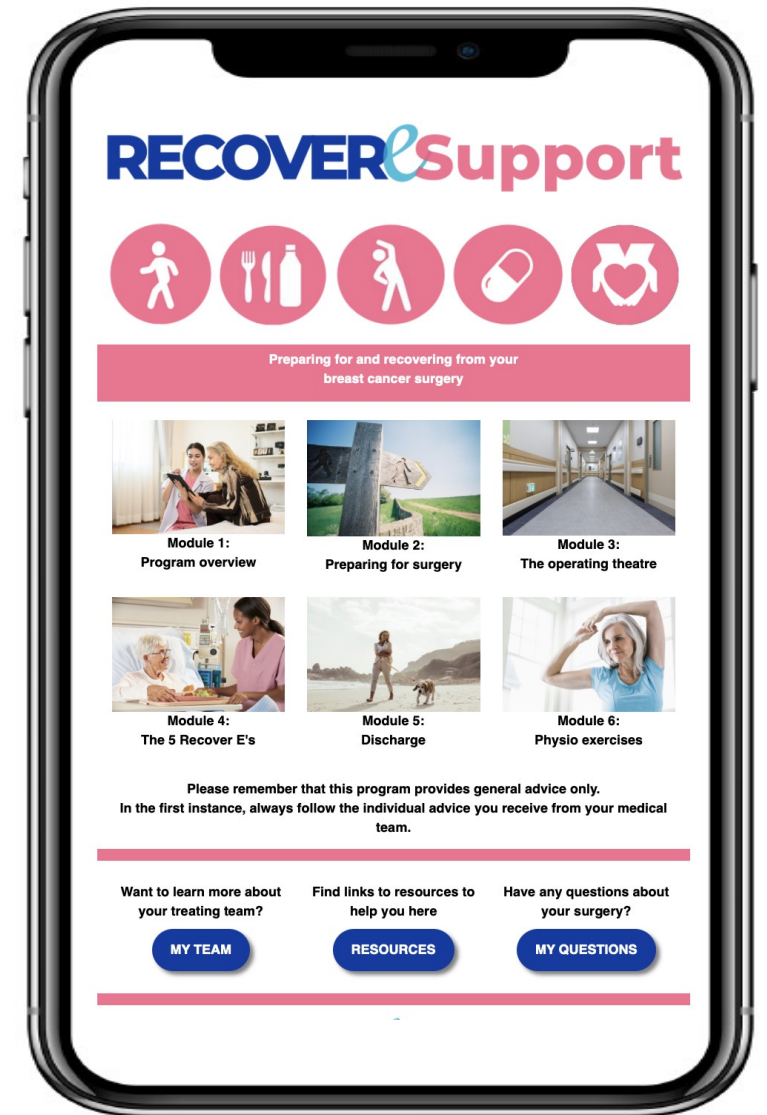
Resources & Services - After Pregnancy

MyProfile

Help

Outcomes

- Participant engagement and activity has increased across all major metrics:
 - Tool access
 - Module/activity completion
 - Information consumption
- Increased data collection from participants
- Increased activity and engagement data collection
- Development cost <50% of external providers





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Thank you



Play with an example project



Our training catalogue



Email me

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