Overcoming Radiation Therapy Language Barriers with the use of an Instant Translation Device for Culturally and Linguistically Diverse Patients

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Introduction: A Nation of Nations

- 26% born overseas
- 21% prefer a non-English language
- 1 in 40 speak Mandarin
- 48% born overseas
- Home to 1.5MILL migrants
- 8% cannot speak English
Background: Literature Review

- Reduced Information Acquisition (3-15)
- Restricted Access to Care (4, 6, 7, 9, 13, 16-20)
- Unmet Psychosocial Needs (4, 16, 17, 21, 22)
- Healthcare Professional Implications (15, 18, 20, 23, 24)
Background: **ORBIT Study Development**

**RESEARCH QUESTIONS**

1) How can we provide equitable provision of information, patient experience, optimal care and psychosocial support for non-English speaking patients presenting for radiotherapy treatment?

2) Is there a solution that adheres to patient and staff satisfaction, whilst cost-effective and easy to implement?

**HYPOTHESIS**

An instant translation device (ITD) will provide a suitable, reliable and inexpensive platform for daily communication between radiation therapists (RTs) and non-English speaking patients.
Background: *Travis the Translator*

- 12HR BATTERY LIFE
- 2-WAY COMMUNICATION
- TOUCH SCREEN
- WIFI & 3G ENABLED
- 80 LANGUAGES ONLINE
- 20 LANGUAGES OFFLINE

"Hello, I am Travis"
Methodology: ORBIT Study Overview

**STAGE 1 VALIDATION** Completed

**STAGE 2 PILOT STUDY** In Progress

**PRIMARY OBJECTIVES**

1. Patient & staff satisfaction, comfort and limitations
2. Suitability for daily use – improved communication/engagement
3. Feasibility for a Stage 3 RCT – cost-benefit, compliance & ancillary care
Methodology: ORBIT Stage 1

<table>
<thead>
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<th>Score</th>
<th>Explanation</th>
<th>Example</th>
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<tbody>
<tr>
<td>0</td>
<td>Complete mismatch, wrong meaning</td>
<td>Cairns in leash</td>
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<tr>
<td>1</td>
<td>One or few correct words, wrong meaning</td>
<td>Cans are English</td>
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<tr>
<td>2</td>
<td>Impartial match, ambiguous</td>
<td>Will discuss English?</td>
</tr>
<tr>
<td>3</td>
<td>Impartial match, same meaning</td>
<td>Can you talk in English?</td>
</tr>
<tr>
<td>4</td>
<td>Complete match</td>
<td>Can you speak English?</td>
</tr>
</tbody>
</table>

CONVERSATIONAL LANGUAGE
COMMON ENQUIRIES
SIMPLE IDENTIFIERS
TREATMENT INSTRUCTIONS
### Results: *ORB\^IT Stage 1 – Demographics*

#### Participants

<table>
<thead>
<tr>
<th>Participant</th>
<th>Age</th>
<th>Gender</th>
<th>Ethnicity</th>
<th>Birth Nation</th>
<th>Qual</th>
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#### Interpreters

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<td>China</td>
<td>Level 3 - Adv Dip</td>
</tr>
<tr>
<td>2</td>
<td>34</td>
<td>Female</td>
<td>Chinese</td>
<td>China</td>
<td>Level 3 - Adv Dip</td>
</tr>
</tbody>
</table>
Results: ORBIT Stage 1 – Pass Rate (Score >3)

- Conversational Language: 76.6%
- Simple Identifiers: 84.9%
- Treatment Instructions: 60.5%
- Common Enquiries: 85.0%
Discussion: Current & Future States

JUSTIFICATION & CLINICAL NEED

INDEPENDENT VALIDATION

FEASIBILITY & IMPLEMENTATION

OUTCOME MEASURES

COST-BENEFIT ANALYSIS

COMMERCIAL PARTNERSHIP
Project Timeline

CONCEPT DESIGN & LIT REVIEW
- OCT 2017

PMCC LNR ETHICS APPROVAL
- DEC 2017

STAGE 1 VALIDATION COMPLETED
- JULY 2018

STAGE 2 PILOT COMPLETED
- AUG 2018

STAGE 2 PILOT COMMENCED
- OCT 2018

STAGE 2 PILOT COMMENCED
- DEC 2018

COMPLETE STAGE 2 PILOT
- Q3 2019

COMPLETE STAGE 3 RCT
- Q4 2019

AWARDED VMRPET GRANT FUNDING
- Q4 2020

MONASH HREC APPROVAL

STAGE 3 RCT

COMMENCE STAGE 3 RCT
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References


