

The interest in current health related research among the general population in North Queensland

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Background

Feeling informed about research seems to correlate with positive attitudes towards researchers and greater trust in researchers (See [[Public attitudes to science 2011](#)]). However, many people feel they are not informed enough about ongoing research (See [[Public attitudes to science 2011](#)]). 86% of the Australian population seems to be somewhat or very interested in health and medical research (See [[Opinion poll about research](#)]) suggesting that the population would be rather receptive if we present the information in an acceptable way. Formal peer reviewed publications are lacking in this topic.

Recruitment of participants to research projects depends on a reasonable interest for research among the general population. The interest for research among the general population in north Queensland is not yet elucidated. Furthermore, any activity that may increase the general populations' interest in health care related research might have a positive influence on recruitment to future research projects.

Aim

This project aim to estimate:

- 1) What proportion of patients in an ED waiting room in North Queensland express an interest in knowing about current health and medical research in their surroundings?
- 2) Do patients express any appreciation of being informed about current health and medical research in the surroundings by an automated information presentation?
- 3) What is the potential effect on interest in health related research by actively presenting information to the general public using large TV screens?

Question 1 and 2 are primary research questions while question 3 is a secondary research question.

Methods

Design

Research question 1 and 2 are answered by distributing surveys. However, research question 3 requires using a cluster randomised trial design. It would use a step wedge design in five phases:

Hospital	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Hospital A	Survey	Mount TV	Survey		Survey
Hospital B	Survey		Survey	Mount TV	Survey

The study would use the ED in Cairns and Mackay hospital (randomised to be hospital A or B).

Sampling of participants

All patients attending the ED at Mackay and Cairns hospitals meeting the inclusion criteria:

- Walking in (excludes patients transported to ED in ambulance).
- Deemed by the ED reception staff to be able to sit in the waiting room for their turn (excludes patients with an illness requiring immediate attention).
- Being at least 18 years of age.
- Deemed by the reception staff to have a reasonable understanding of English.
- Deemed by the reception staff to have enough vision to be able to read the survey

Sampling frame

We intend to sample approximately 1500 visits from 100,000 annually expected visits (1.5%) to Cairns and Mackay ED. These will represent patients aged at least 18 years not having an illness requiring immediate attention. This sampling frame is not a direct sample of the population in the

area. It is rather representing patients with an over-representation of frequent attenders. However, using this sampling frame is convenient and may inform about the behaviour of the information system in an ED setting.

Sample size calculations for each research question

- 1) Accepting a margin of error of 2.5% with a 95% confidence level and assuming that 80% are positive to medical research requires 938 responses.
- 2) Accepting a margin of error of 2.5% with a 95% confidence level and assuming that 50% are positive to the automated information system for medical research requires 1428 responses.
- 3) Assuming a level of significance of 0.05, 95% power, a two tailed test and assuming that the proportion of patients being positive to medical research increases from 80% to 90% requires 341 surveys before and 341 surveys after introduction of the automated presentation system.

We aim to collect surveys for two days during phase 1, 3 and 5. We expect approximately 500 answered surveys in each phase, in total 1500.

Group allocation

The two hospitals are randomised to be hospital A or B. Hence, patients are cluster randomised into its group.

Intervention

The 60-70 inch TV screen is put up in the waiting room at the ED during phase 2 or 4. It is linked to a mini-Mac presenting an extract from a project database of current health or medical related research in the Cairns or Mackay area. A software presents [one project at the time rotating with a 3D-like graphics](#) and the information displayed is automatically updated hourly. Thus, all new projects entered in the project database (<http://au.researchweb.org/is/jcu/help/project-database>) will automatically appear on the screen.

We currently have an acceptance from Queensland Health to put up the equipment in Cairns and Mackay ED. Furthermore, Queensland Health IT organisation accept that we link the equipment to their computer network and they will assist us in this in doing so while maintaining sufficient IT security.

It is the plan to let the equipment for automated information about current research stay in the ED waiting room after completion of the study (given that staff at the ED does not mind). Thus, one consequence of the study would be an ongoing information service in the ED waiting room informing patients about current health and medical related research in Cairns or Mackay with surroundings.

Data collection

A simple survey with the following questions will be handed out:

- A. Your gender? (Response alternatives: female, male)
- B. Your age? (Asked to state their age in years)
- C. Where do you live? (Asked to state postal code enabling retrieval of socioeconomic index)
- D. How interested are you in health and medical research? (Response alternatives: Not at all, somewhat, very).
- E. This waiting room has a TV displaying information about current health related research in the surroundings. How interesting do you find the information? (Response alternatives: Not at all, somewhat, very).

Question E will be added to the survey in the phases after mounting the presentation unit.

Data analysis for each research question

- 1) Proportions with 95% confidence interval will be calculated. We will use logistic regression to further describe the typical patient being interested in medical research.
- 2) Proportions with 95% confidence interval will be calculated. We will use logistic regression to further describe the typical patient appreciating the automated information presentation.
- 3) The correlation between patients interested in health and medical research (question D) and if the patient visited before or after introduction of TV screens will be analysed in a random effect model using hospital as a random effect and intervention (before-after TV screens) as a fixed effect. Gender and age will be included as covariates if they differ between before-after TV screens.

Contingency plan

The main problem that may occur is if fewer patients than expected answer the surveys. If this would occur the plan is to increase the number of days where surveys are collected.

Budget

\$8,142 is approved from James Cook University and \$2,956 is approved from the Cairns hospital foundation research grants.

Time frame

	2015			2016		
	July - Aug.	Sept - Oct.	Nov.- Dec.	Jan.- Febr.	March - April	May- June.
Planning & ethics approval						
Practical preparations						
Data collection						
Analysis & writing						
Submission of manuscript						