Biomedical engineering projects
Vacation experience

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Outline

• Vacation Student projects

• Vacation Student experience

• Opportunities
CAP home-based cardiac rehabilitation program
Main problem in cardiac rehabilitation

- There is a significant underutilisation of Cardiac Rehabilitation programs. Only 16% of all eligible patients complete a program in QLD.
  I.A.Scott et.al. “Utilisation of outpatient cardiac rehabilitation in Queensland", MJA 2003; 179(7)

- Principals Reasons:
  - self-care preferred
  - negative perception of gym-based group exercise
  - travel, work, cost, time issues and complex enrolment process

Alternative care models are required
**CAP technology setup**

**Home**
- Self observations and measurements entered in Wellness Diary software
  - Weight
  - Blood Pressure
  - Movement activity
  - Heart Rate

**Web portal**
- Daily motivational SMS, educational video and relaxation audio

**Service Provider**
- Wellness Diary Connected
  - Diary data
  - Measurement data
  - Health Reports
  - Educational material
  - Discussion, messaging

**Community Care Team**
- Patient mentoring and goal setting via the phone

**CAP technology setup**

Daily motivational SMS, educational video and relaxation audio

Web portal access for self management

Data synchronisation and messaging

Service Provider

Wellness Diary Connected

Data

Educational material

Discussion, messaging

Community Care Team

Patient mentoring and goal setting via the phone
Comparison of the number of steps counted by the mobile phone with the Omron pedometer

- Number of counted steps
- Linear regression $y = 0.88x + 320$ with $r^2 = 0.91$
- 95% confidence
Vacation Student experience
Australian E-Health Research Centre

- Good work atmosphere
- Many different projects
- Great opportunities
Big Day In : Student conference
Example of Opportunities with AeHRC
Think about a PhD...
AeHRC
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Thank you