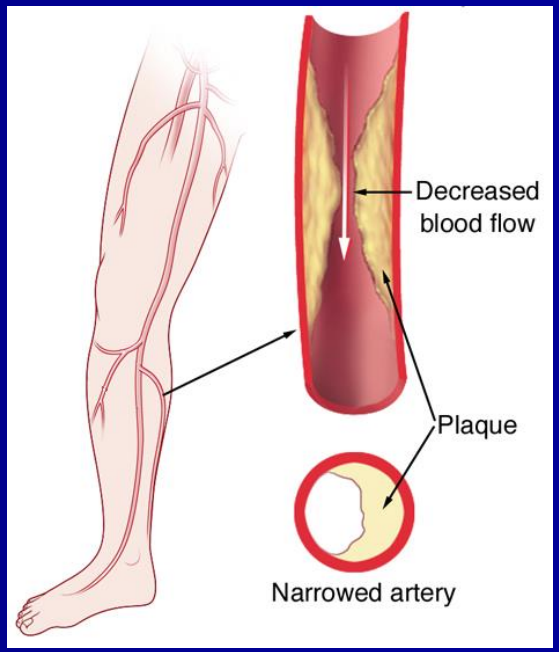
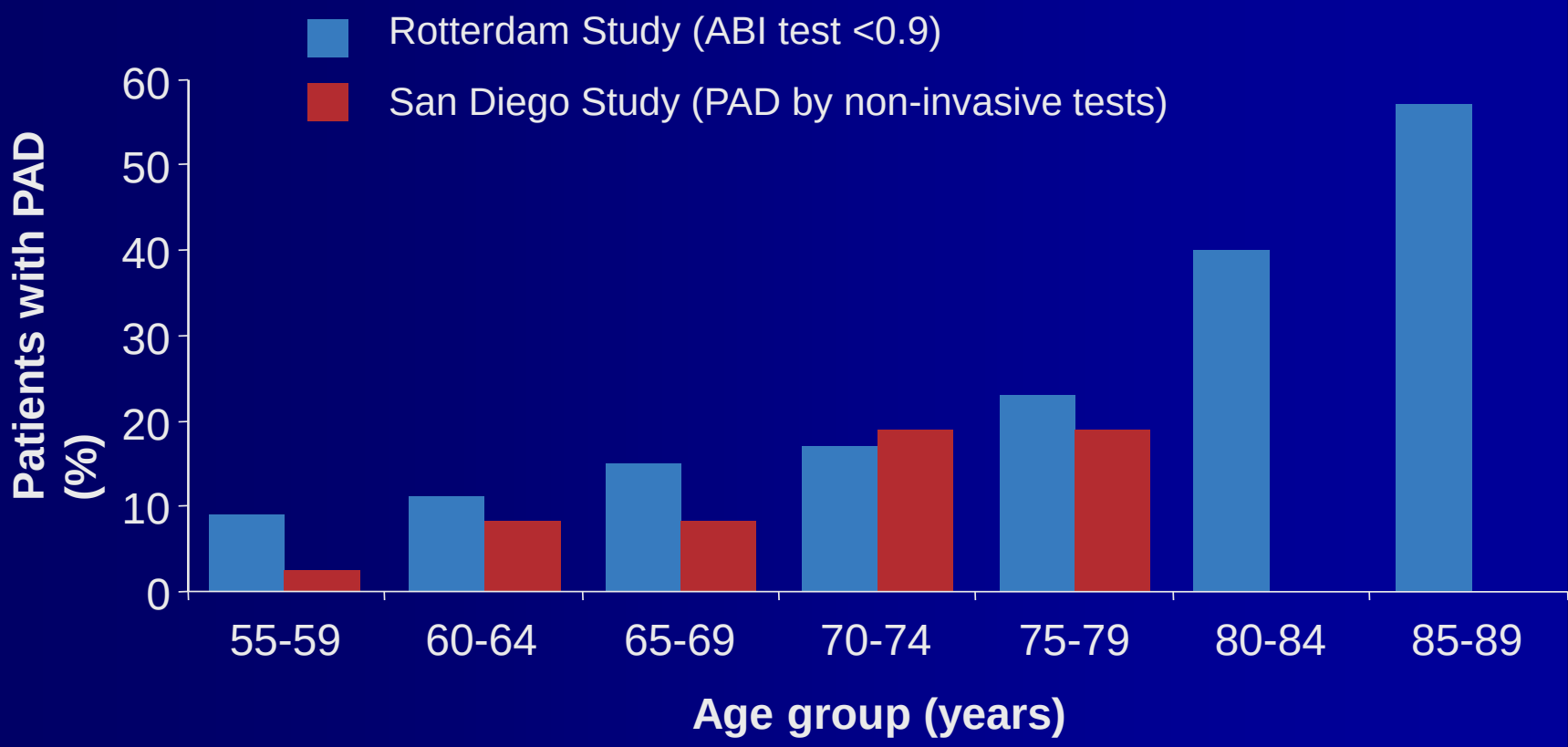
Lower limb artery blockage

- Very common: estimated up to 20% of people >50 years (200 million people worldwide)
- Impaired lower limb function
- Increase mortality and CV events



Prevalence of PAD



Norman PE *et al. Med J Aust* 2004; 181: 150-4; Hirsch AT *et al. JAMA* 2001; 286: 1317-24; Meijer WT *et al*. *Arterioscler Thromb Vasc Biol* 1998; 18: 185-92; Criqui MH *et al*. *Vasc Med* 2001; 6: 3-7; Belch JJF *et al*. *Arch Intern Med* 2003; 163: 884-92. AIHW 2004; Figure adapted from Creager M, 2000.

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The pandemic of artery disease

Comparison of global estimates of prevalence and risk factors for peripheral artery disease in 2000 and 2010: a systematic review and analysis F Gerald R Fowkes, et al. Lancet 2013; 382:1329-40.

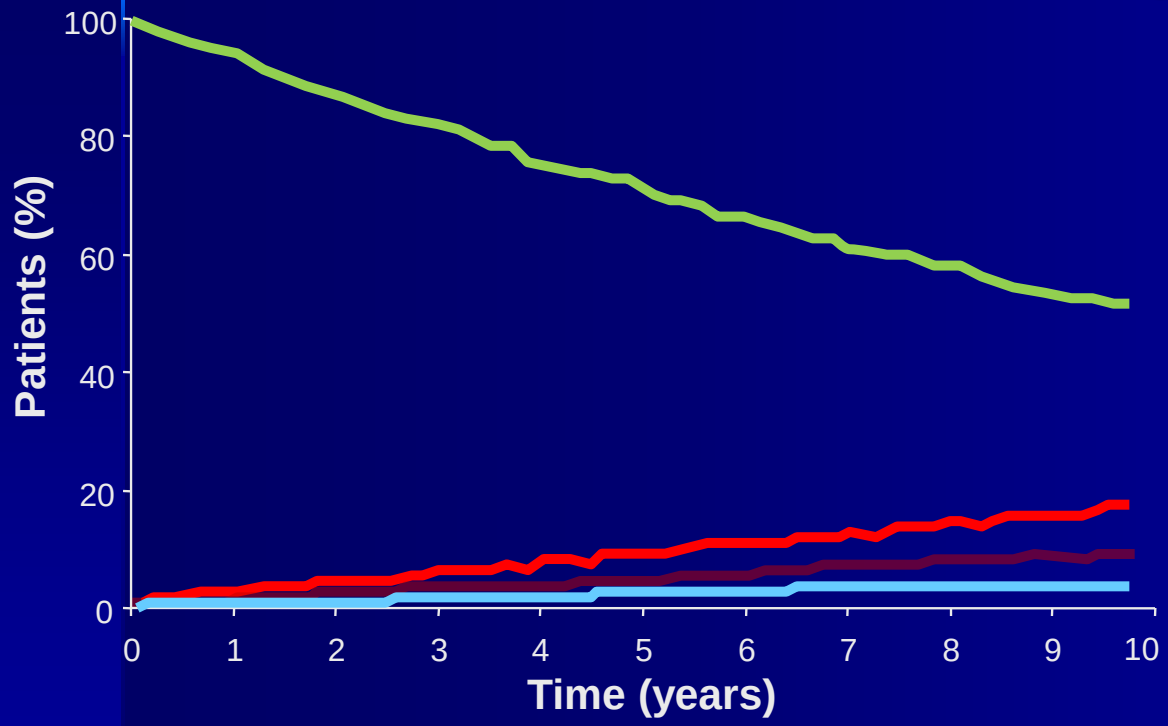
During the last decade the number of people with PAD increased by:

29% in low or middle income countries;

13% in high income countries.

202 million people estimated to have PAD in 2010.

Risk of CV event or death versus amputation in PAD



Causes of death:

- 55% coronary artery disease
- 10% cerebrovascular disease
- 25% non-vascular
- <10% other vascular

Patients with PAD are at greater risk of CV events and death than amputation

Ouriel K *Lancet* 2001; 358: 1257-64.

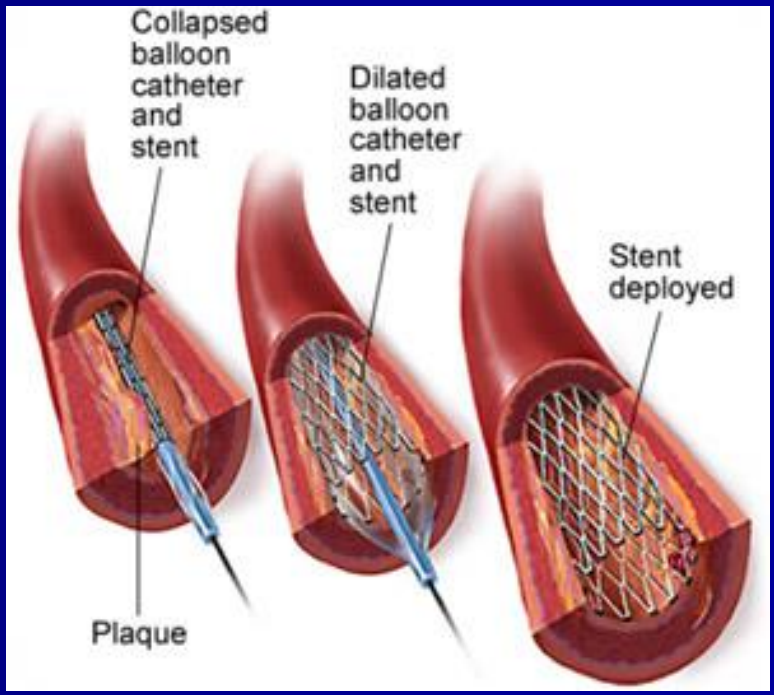
Treatment

- Medical management of PAD central:
  - Aspirin/ clopidogrel
  - Statins
  - BP control
  - Smoking cessation
  - Exercise program

- Critical ischemia and selected IC revascularisation: angioplasty/ stent or surgery

Stents

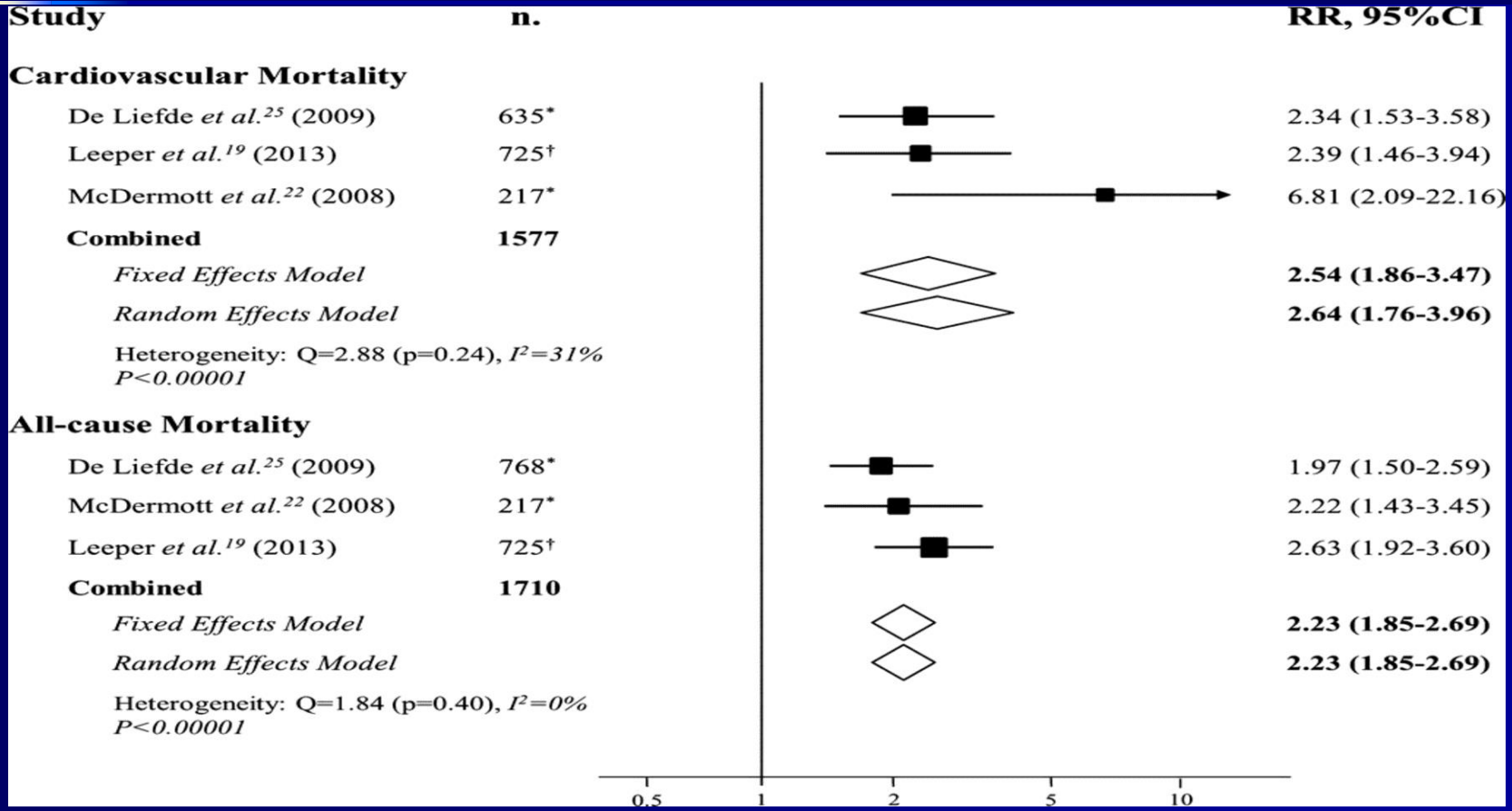
- Complication of procedure e.g. atheroma embolises/ clot
- Other blockage/ narrowing up or downstream limits benefit
- Stent “restenoses”
- Progression of artery disease elsewhere



More durable treatments for PAD are needed

Six minute walk test

The better your walking performance with blocked arteries the longer you live



Lowest performance quantile compared to highest performance quantile

Morris D R et al. J Am Heart Assoc 2014;3:e001105

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Supervised exercise

- Attend 3 times per week
- Walk under supervision or do other exercise to maximum tolerance for 40 minutes
- Training period minimum of 3 months, usually longer 6-12 months

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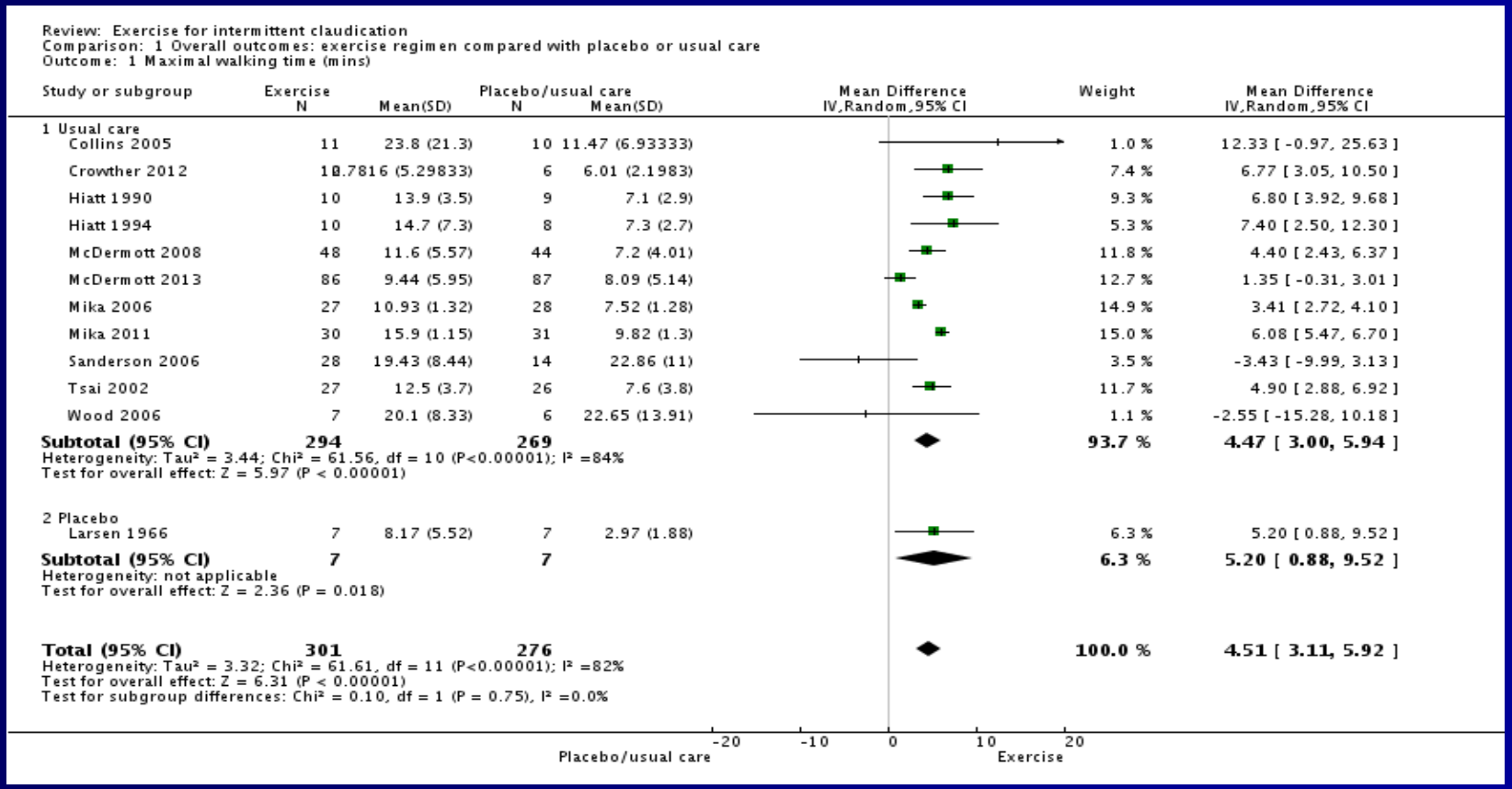
Supervised exercise improves walking



Lane R, et al. Cochrane Database Syst Rev 2014;7:CD000990

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Problems with supervised exercise

- Unpopular with patients
  - They experience pain on walking
  - Cost and time commitment
  - Gradual benefit
- Not available on the public health system
- Typically low recruitment when offered and can have high drop out rates

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Home or unsupervised exercise

- Can be hard to get motivation;
- Advice to walk alone has been reported to have limited effect
- In interviews patients reported that:
  - They felt they had an acute problem that could be fixed by surgery;
  - They appeared to have poor understanding of the disease mechanisms and available treatments;
  - They avoided exercise as they believed it worsened the problem

Cunningham MA, et al. J Cardiopulm Rehab Prev 2014;34:195-201.

A brief behaviour intervention

- A BBI developed to modify illness and walking beliefs and develop a personalised walking plan
- RCT 58 IC patients usual care vs usual care plus BBI delivered by a single psychologist (2x1hr sessions in patients home)
- Walking behaviour estimated by pedometer improved substantially (mean difference 1374 steps per day 1 year & 1630 steps per day 2 years)
- Also improvements in QUOL at 4months but not 1 and 2 years
- Reduced surgical interventions in the BBI group (39% vs 67%)

Cunningham MA, et al. BJS 2013;100:756-60.

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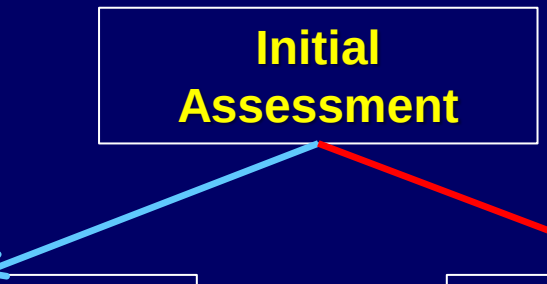
BIP



	Intervention Group	Control Group
Week 1	Face to Face Session (Assess, Advice, Agree)	Phone Call (Check up)
Week 2	Face to Face Session (Assist, Arrange)	Phone Call (Check up)
Week 6	Phone Call – Review 5A's	Phone Call (Check up)
Week 12	Phone Call – Review 5A's	Phone Call (Check up)
Month 4	Follow-up Assessment	Follow-up Assessment
Month 12	Follow-up Assessment	Follow-up Assessment
Month 24	Follow-up Assessment	Follow-up Assessment

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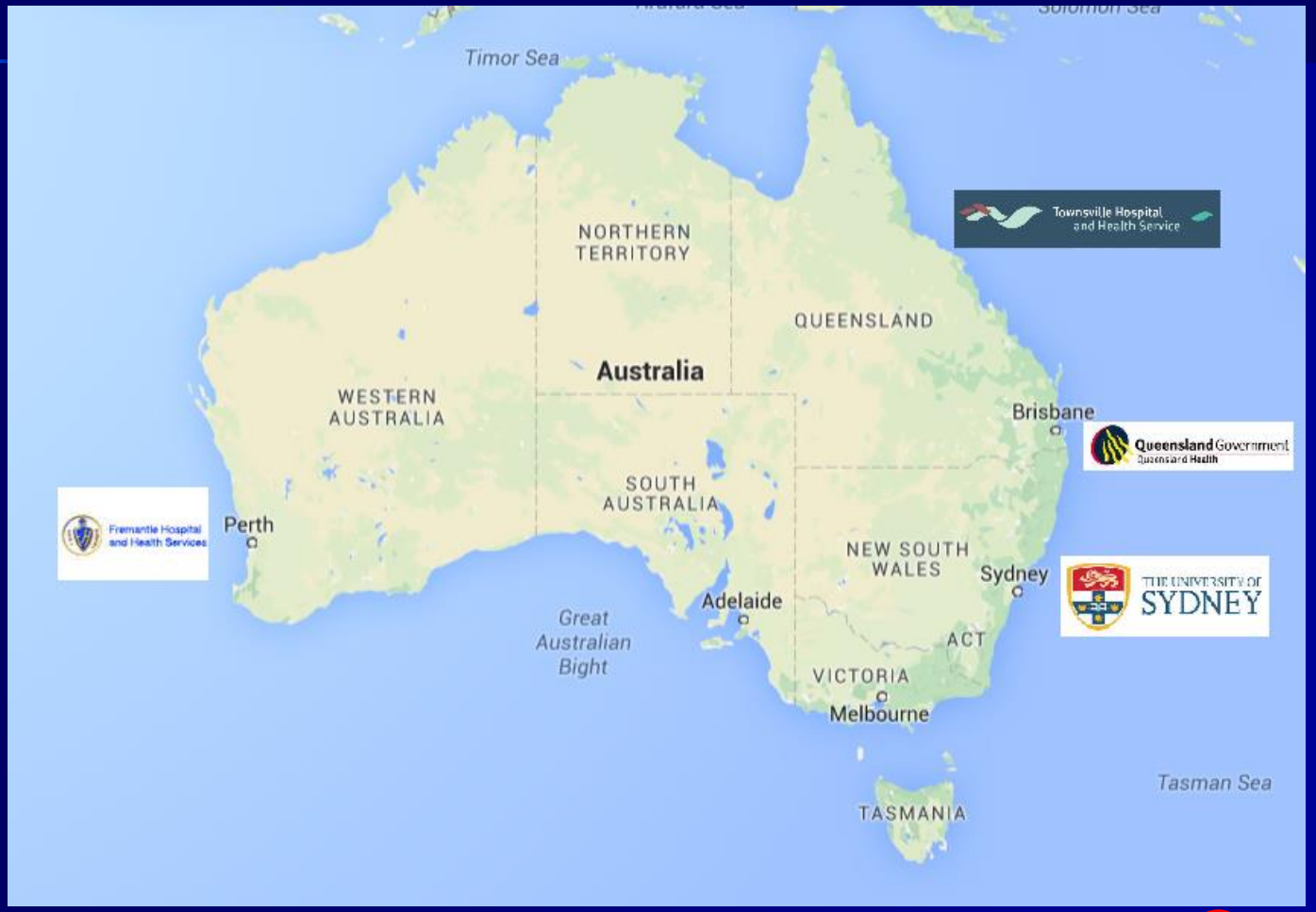
Study Locations



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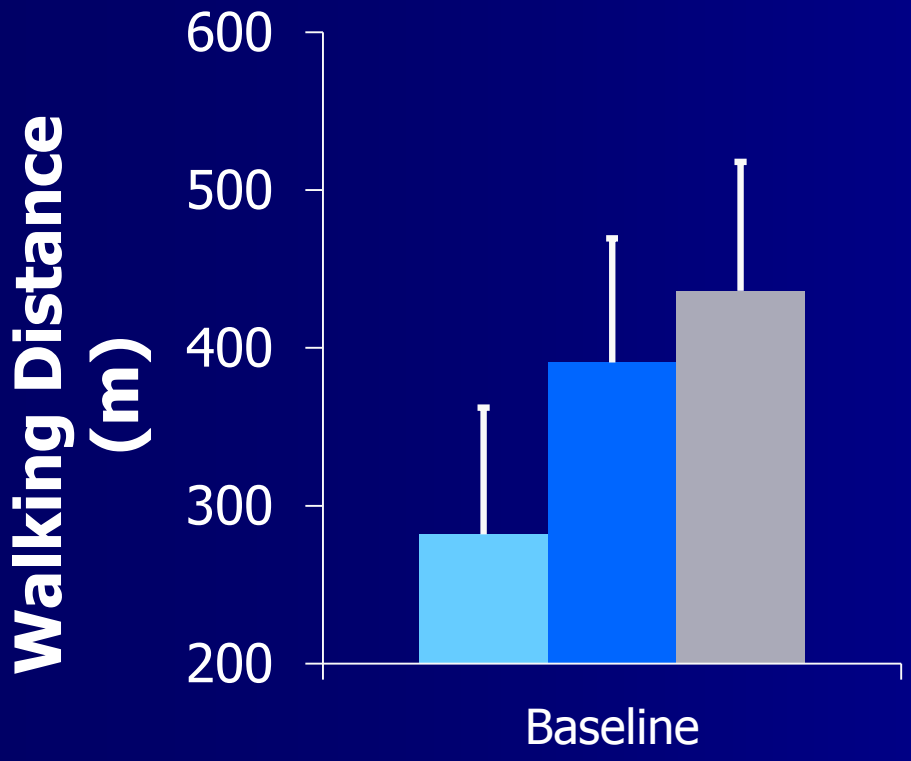
Patient Recruitment

Site	Patients
Townsville	45
Brisbane	24
Sydney	10
TOTAL	**79**

6 Minute Walk Test



Group 1 (<0.5)
Group 2 (0.5-0.69)
Group 3 (0.7-0.89)

Walking Distance: p<0.001

Group 1 – Group 2: p<0.001
Group 1 – Group 3: p<0.001
Group 2 – Group 3: p=0.130

Measuring Physical Activity

activPAL

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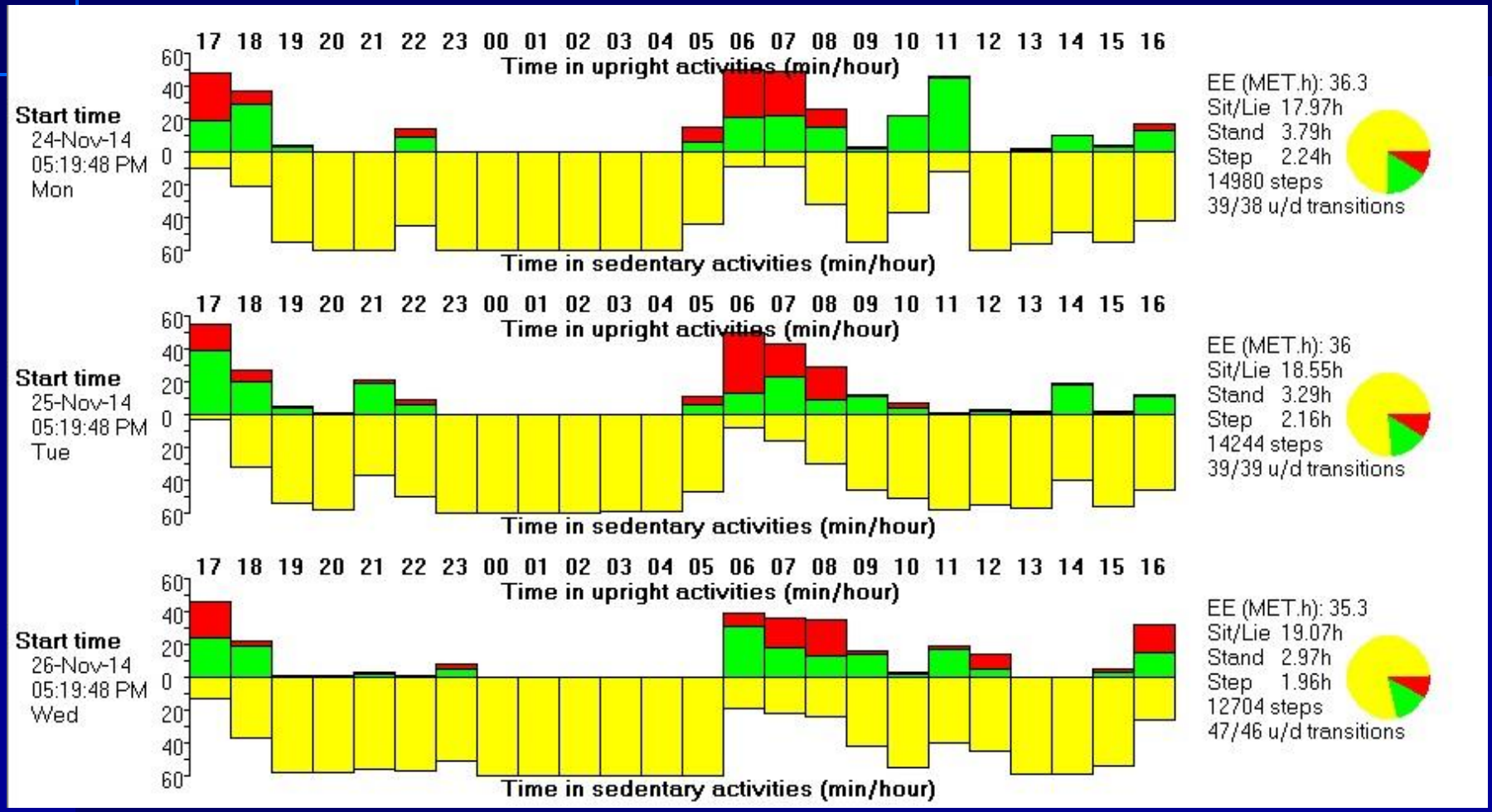
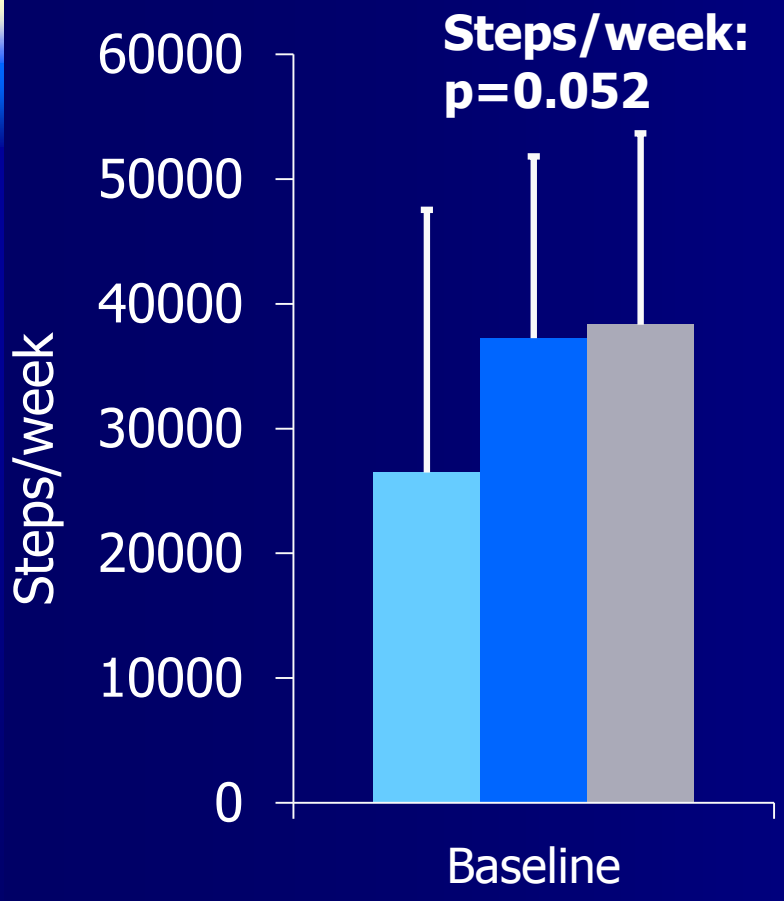
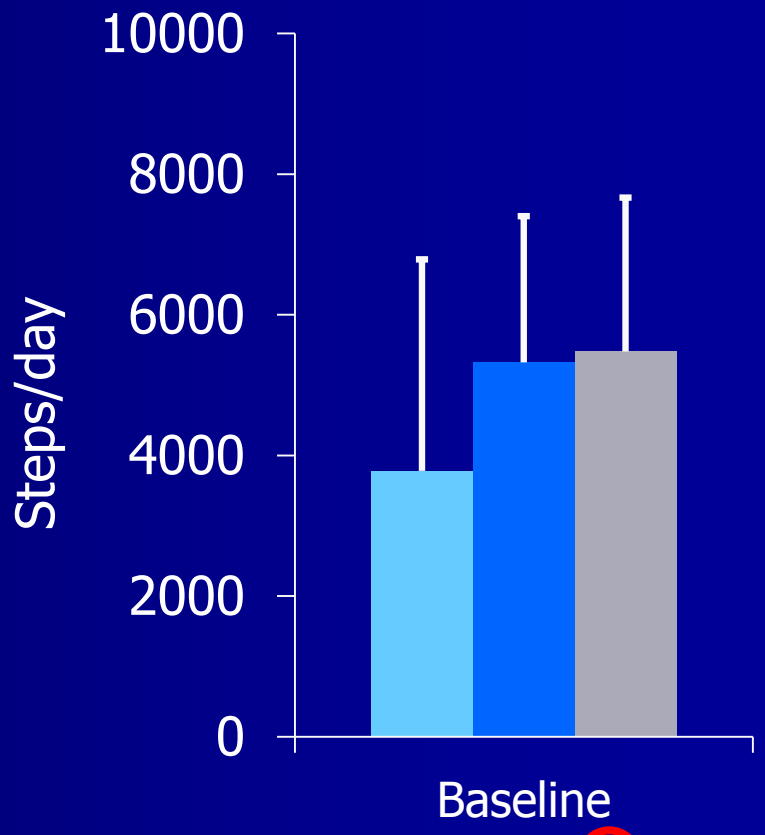
Measuring Physical Activity



7 Day Physical Activity (Steps)





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Dr Michael Bourke – Gosford

Dr Bernie Bourke – Gosford

Professor Paul Norman – UWA

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How you can help

- If you have AAA or PAD take part in trials;
- If you are healthy older person with no history of vascular disease take part as a control;
- Alert friends and neighbors to the studies and the potential to get involved.

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