

# INTERIM PROSTHESIS PILOT TRIAL

AN UPDATE FEB 2008

## AIMS OF TRIAL

- Pilot trial to integrate acute prosthetic service delivery using private and public prosthetic services.
- Compare the cost and outcomes of private and public prosthetic services of fabricating mechanical interim prosthesis.
- Determine relevant and practical outcome measures for amputee rehabilitation services.

## BACKGROUND OF TRIAL

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- Two Sites
  - JHH/RPC  
Employ additional onsite public prosthetist to make mechanical interims.
  - WESTMEAD  
Contract services from private company (APC) to make mechanical interims.

*Reflects current / possible service provision*

## BACKGROUND OF TRIAL

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- Trial began in February 2006 at Westmead hospital and May 2006 at John Hunter/Rankin Park.
- Public prosthetist used existing onsite facilities located next to the rehabilitation gym at Rankin Park.
- Private Prosthetic “on call” service at Westmead hospital. Prosthetist attend rehabilitation gym to see patients.

## OUTCOME MEASURES

- Basic demographic data
  - Age
  - Gender
  - Co-morbidities
  - Insurance status
  - Milestone dates
- Functional Scales and measures (see over)
- Variance

## FUNCTIONAL OUTCOME MEASURES

SCALE / MEASURE	WHEN MEASURED
FIM	Rehab – Admission and discharge
MMSE	Point of interim casting
AMPnoPRO AMPPRO	Point of interim casting Point of definitive casting
K-Classification	Point of interim casting Point of definitive prescription
Timed up and go Test	Point of definitive casting
10 metre walk	Point of definitive casting
2 minute walk test	Point of definitive casting
Locomotor Capability index (LCI)	Point of definitive prescription
SATPRO	On acquittal of definitive
SMAF	On acquittal of definitive

## COMPARISON OF DATA

- Numbers
- Demographics
- Milestone Dates
- Functional Outcome Measures

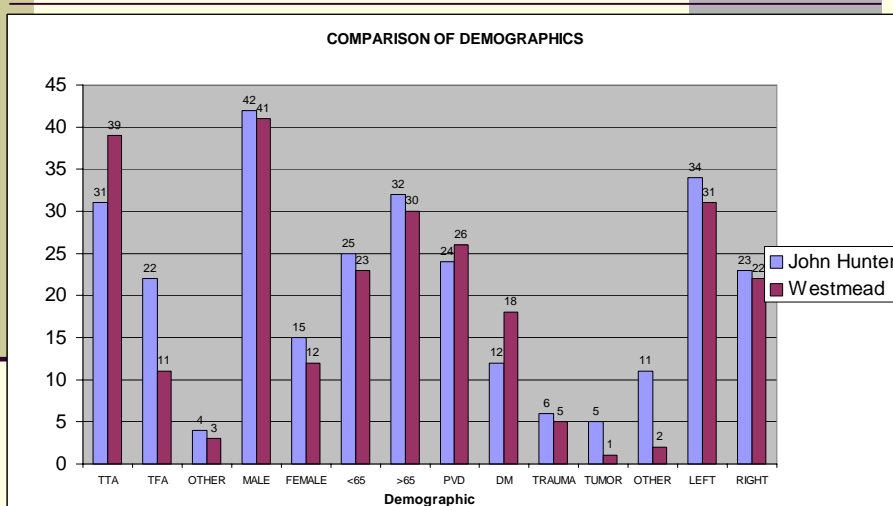
## PATIENT NUMBERS

	John Hunter/ Rankin Park	Westmead
Total Patients	61	55
Have Definitive	31	31
Have Interim	19	12
Deceased	5	1
Drop out	5	10
Re amputation	1	1

## DEMOGRAPHICS

- Similar in age, sex and side of amputation.
- Differences in level of amputation. Higher rate (38.6%) TFA at JHH compared with Westmead (20.8%)
- Higher percentage of cause being PVD or DM at Westmead (83%) compared to JHH (62%)

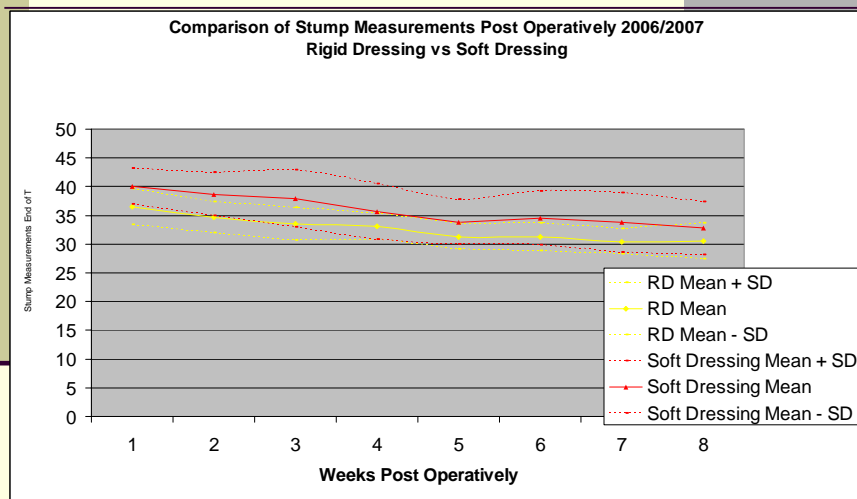
## DEMOGRAPHICS



## RRD PROGRAMME

- Both sites have found that the application of RD or RRD postoperatively **does** impact on stump volume and interim fitting
- At Westmead it was found that those who were not fitted with a RD immediately postoperatively started at a higher stump volume and took longer to stabilise in size than those who were.

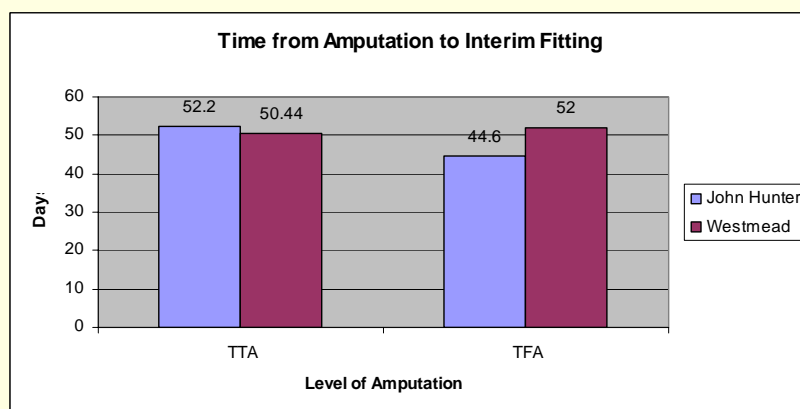
## RRD PROGRAMME



## RRD PROGRAMME

- At JHH those patients who had an RRD applied within 7 days were fitted with an interim prosthesis on average 9 days sooner than those who were not.
- Furthermore, their stump had matured to be ready for a definitive on average 3 months sooner than those who had soft dressings.

## MILESTONE DATES



## EARLY PROSTHETIC FITTING

- At both Westmead and JHH it has been evident that fitting of mechanical interim prosthesis made by a prosthetist has allowed earlier fitting for some patients
- At Westmead 2004/2005 mean time from amputation to fitting of plaster temporary = 86 days compared to 51 days for interim legs in 2006/2007. 37 days difference.
- At JHH some patients with significant wounds were fitted with a interim prosthesis.

## EARLY PROSTHETIC FITTING



## MILESTONE DATES

	Average Admission Motor FIM	Average D/C Motor FIM	% Change	Rehab LOS
JHH April 2004-April 2006	50.88	65.94	29.60	46.57
JHH May 2006-present	56.08	75.83	35.22	47.05
Westmead 2006/2007	77.31	91.68	18.59	39.96

## MILESTONE DATES

- Slightly shorter rehabilitation LOS at Westmead hospital.
- Large difference between sites regarding admission and discharge motor FIM scores.
- Large difference between FIM scores due to patient population or ? different calculation of motor component of FIM between sites.
- Improved % change in motor FIM score for JHH compared to 2 years prior to interim programme.

## MEAN FUNCTIONAL OUTCOME MEASURES AT DEFINITIVE

Outcome Measure	John Hunter/ Rankin Park (n=31)	Westmead (n=31)
TGUAG (s)	18.56	22.14
10m Walk (s)	15.11	19.3
2min Walk (m)	106	75.2
LCI ( /56)	40.44	39.85
SATPRO (%)	80.5	86.1

## COMPARISON OF FUNCTIONAL OUTCOME MEASURES

- Significant difference between mean TGUAG, 10m walk and 2min walk between sites.
- Nil difference on the LCI between sites, despite differences in above measures.
- SATPRO slightly higher at Westmead.
- ? reason for the difference in outcome between sites:
  - Patient population
  - Rehabilitation process
- Requires more detailed statistical analysis.

## EXPERIENCE WITH OUTCOME MEASURES

- Numerous outcome measures were used in this pilot trial
- The therapists felt that some were easier to administer and gave more relevant and useful information than others.

## EXPERIENCE WITH OUTCOME MEASURES: AMP<sub>no</sub>PRO/AMPPRO

- The AMP<sub>no</sub>Pro and AMPPRO were relatively easy to administer, however its predictive capacity was questioned by both sites
- At JHH it was found that 39% of the time the predicted K classification by the AMP<sub>no</sub>PRO did not match the clinicians prediction.
- The AMPPRO did not match the observed K classification 29% of the time.
- At Westmead an identical result was found with 39% of the time, the AMP<sub>no</sub>Pro failed to predict the final K classification
- Discrepancy may be due to the fact the co-morbidity score should have been factored in, however it was not clear how this should be done.

## RECOMMENDATIONS FOR USE OF OUTCOME MEASURES

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- The LCI, SATPRO and TGUAG were quick and easy for the therapist to administer and gave a fair indication of the patients functional ability.
- It is therefore recommended that these should be used as standard measurements at clinics to assess change of function when prescribing new prostheses.
- The 2min or 6min walk takes longer to administer but is a useful indicator of endurance and ability to community ambulate.

## SUMMARY

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- Further analysis of data to determine causes/reasons for differences in outcome measures between the two sites
- Use the extensive data collected to develop more specific research projects in the future.
- Recommendations regarding implementation at other sites.

QUESTIONS/COMMENTS