

# Patient-reported quality of life following peri-prosthetic joint infection: a prospective observational study

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## BACKGROUND

Joint replacement improves overall quality of life in patients with chronic joint pain. Few prospective data describe patient-reported outcome measures (PROMs) in patients with peri-prosthetic joint infection (PJI). Utilising the Short Form Health Survey version 2 (SF-12v2), quality of life (QoL) was measured prospectively for participants.

The aim of this study was to describe the patient-reported physical and mental health scores at the time of PJI diagnosis and for 2-years.

### WHO & HOW



Participants in the Prosthetic joint Infection in Australia and New Zealand Observational (PIANO) cohort who had complete SF-12v2 data across baseline, 3, 12 and 24 months: n = 522



SF-12v2 is a validated survey of quality of life that scores against age-adjusted population norms on

- Physical component summary (PCS)
- Mental component summary (MCS)

### DEFINITIONS

**Clinical cure:** patient alive, absence of clinical &/or microbiological evidence of infection and no ongoing use of antibiotic for the joint

**Late acute PJI:** infections presenting >30 days from joint implantation, symptoms ≤7 days and no sinus tract

**Chronic PJI:** diagnosed >30 days from joint implantation, with a sinus &/or symptoms of >30 days

**Population norm:** a US general population norm for SF-12v2 data; a score of 50

## FINDINGS

### Physical Component Summary



Baseline: ↓ than population norm  
36.9 (30.1 – 45.6)  
12 months: median ↑ 3.1 points (n.s)  
24 months: no further improvements

### Effect of Joint Location



The joint location did not predict PCS and MCS scores at any time point

### Mental Component Summary



Baseline: ↓ than population norm  
47.9 (37.5 – 57.4)  
12 months: median ↑ 3.4 points (n.s)  
24 months: no further improvements

### Effect of Infection Presentation

#### At Baseline

Chronic PJI	versus	Late acute PJI
↓ PCS 34.0		↑ PCS 39.5
↓ MCS 41.2		↑ MCS 51.2

### Effect of Clinical Cure



Clinical cure at 12 months:

- ↑ PCS 43.8 vs. 37.9, P<0.0001
- ↑ MCS 55.4 vs. 50.0, P<0.0001

These baseline differences were significant for PCS (P= 0.007), but not for MCS

## CONCLUSIONS

- At baseline participants have impaired QoL, especially for those with chronic PJI compared to late acute PJI
- At 12 months, despite some improvement, QoL is still less than population norms
- Achieving clinical cure significantly improves QoL