

## **Effectiveness of weekend allied health services on acute medical/surgical wards: Two randomised controlled trials.**

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### Background:

Provision of allied health services over the weekend is common, though more so in acute wards than subacute. There is need to understand their impact to justify their ongoing provision. No randomised trials have investigated the effectiveness of these services on acute wards. This study involves the world's first application of a novel "disinvestment randomised trial" design which has allowed disinvestment from existing weekend allied health service delivery on acute medical/surgical wards while simultaneously developing the evidence that was missing.

### Methods:

**Design:** Two stepped-wedge cluster randomised trials with "roll-in" (of the previous service) and "roll-out" (of a new, stakeholder-developed service) phases

**Participants & setting:** Admissions to 12 acute medical and surgical wards across two metropolitan teaching hospitals in Melbourne, Victoria over a 14 month period across 2014/2015.

**Intervention:** 1) Existing weekend allied health services examined during the roll-in trials. This was inclusive of physiotherapy and occupational therapy at both sites, with speech pathology, dietetics and social work at one site, 2) A new, stakeholder-driven model of weekend service designed to be tailored to the individual needs of wards in the trial. This was examined during the roll-out trials.

**Control:** No weekend allied health service

**Primary outcomes:** Proportion of patients staying longer than expected length of stay, rate of adverse events, rate of readmission within 28 days.

### Results:

The two trials have been completed in April 2015 with over 13,000 patients involved. Interim safety analyses have demonstrated no adverse impact of removing the current weekend allied health service on patient length of stay, readmission or adverse event outcomes (all multi-level, generalised linear models p-values >0.05).

### Discussion:

Removal of the weekend allied health services from acute medical and surgical wards did not affect patient flow or safety outcomes indicating need to re-design or reallocate these resources.