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**Embedding robust research into real world settings**

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**Objectives/aims**

While the internal validity of randomised trials (RCTs) is considered strong their generalisability may be poor due to sampling issues and high non-consent. This is particularly the case for understanding the effectiveness for up-scaling interventions. Recruitment difficulties also mean traditional RCTs not efficient limited feasibility to evaluate interventions embedded in real world services. This presentation will showcase an example of robust and rapid embedded research activities embedded into outpatient services at the John Hunter Hospital, Hunter New England Local Health District.

**Methods**

This presentation will describe the background, research methods, and results for an adaptive embedded evaluation process, including a cohort multiple randomised controlled aiming to: i. understand the impact of a range activities designed to address long waiting time for specialist medical appointments, and ii. assess the effectiveness of preventative care support strategies for patients waiting for consultation with an orthopedic or neurosurgeon for osteoarthrosis or spinal pain. Sampling and consent rates, recruitment time frame, patient outcomes and health service impact will be detailed.

**Main findings**

Administrative audits, triage guidelines, referral templates and additional clinics were implemented to address waiting time. Overall activities have reduced waiting time by between 30 and 70%. 780 were enrolled in a cohort study to understand health concerns and needs. Three RCTs of guideline recommended preventative care have been embedded into the cohort activities. Recruitment for two completed trials (n=280 patients) was achieved in 12 and 16 weeks respectively. The preventive care approaches had varying effects on patients which informed adaptation of routine services provided.