## The PACKMaN trial:



What is the best drug to treat severe pain following acute trauma, Ketamine or Morphine?



Paramedics worked with 449 patients to compare two strong pain killers: Ketamine and Morphine administered by injection

Average age of patient: 63.6 years

Age range of patients: 16 to 96 vears

46.3% Male 53.7% Female Patient injuries sustained: 90% of cases included fracture/dislocation

31% cases included soft tissue injury

13% of cases included wound/laceration

#### KETAMINE



Ketamine worked as well as Morphine in alleviating moderate to severe pain Reduction in pain score measured as the

summary of pain intensity difference (mean)

15 mins Minutes to significant pain relief (mean) 23 mins

18 mins 25 mins Minutes to peak pain relief (mean) 35 mins 42 mins Duration of pain relief (mean)

41% Experienced adequate pain relief (% of participants) 38%

Incidence of side effects (% of participants) 10% 1% Became agitated or confused 7% 16% Oxygen levels dropped Blood pressure dropped 3% 10%

### MORPHINE



# completed this

Of participants who received a 6-month questionnaire

#### Chronic pain:

No difference in pain observed for either drug 6 months after

Costs to the NHS:

Ketamine was cost-effective compared to morphine when reviewing the use of hospital resources from completed patient questionnaires

Despite receiving ketamine or morphine, many patients are left in pain on arrival at hospital, highlighting the need for

Whilst ketamine is not superior to morphine in reducing pre-hospital pain it provides a safe alternative analgesic for **UK** paramedics

randomisation

further research.









