

# New treatment strategy could bring children with pneumonia home from hospital earlier

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Children who are recovering from severe pneumonia could safely switch from injectable to oral antibiotics earlier, allowing them to come home from hospital sooner. This is according to new results from the [PediCAP clinical trial](#), presented April 29 at the [ESCMID Global conference](#) in Barcelona.

The current World Health Organization (WHO) guidelines recommend that children with severe community-acquired pneumonia are treated for five days with an injectable antibiotic. This means children must stay in hospital for the full five days, even if they get better sooner.

Longer hospital stays are more expensive, affect the well-being of children and their families, and place a higher burden on health care facilities. Keeping children in hospital also increases their risk of developing antibiotic resistant infections.

The [PediCAP clinical trial](#) found that children recover just as well if they switch from injectable to [oral antibiotics](#) once a health care worker confirms that they are improving. This would allow children to finish their treatment at home and leave hospital sooner.

PediCAP included 1,100 children aged 2 months to 6 years old with pneumonia that had developed at home but was severe enough to require treatment in hospital. The trial took place in hospitals across South Africa, Uganda, Zambia, Zimbabwe and Mozambique.

## **Informing future guidance**

"Going home sooner is important for children and families. It will expose children less to hospital acquired infections, while also having significant cost savings. About 10 million children are admitted to

hospital with pneumonia each year globally, and this study can help to inform future national and WHO guidance on their management," says Professor Mike Sharland, Principal Investigator of the PediCAP trial at St George's.

PediCAP is the first large MAMS-ROCI clinical trial, a new approach developed by the MRC Clinical Trials Unit at UCL. This innovative trial design allows researchers to test different antibiotic options taken over different durations.

All children in the trial began treatment with a WHO-recommended injectable antibiotic. Some were assigned to switch to either oral amoxicillin or oral amoxicillin-clavulanate when their condition had improved, as confirmed by a health care worker. Researchers compared these children to those who received the WHO-recommended hospital treatment for the full five days.

The trial found that switching children in hospital with pneumonia to oral antibiotics when their health improves is safe and works just as well as staying on injectable antibiotics for five days.

Both oral antibiotics were equally effective, but amoxicillin is a better choice as it is more affordable and readily available.

## **Shortening treatment**

PediCAP also compared how well children recovered with different lengths of antibiotic treatment, ranging from four to eight days in total. They found that all shorter lengths were just as good as eight days of treatment. Generally, four days of treatment was enough for most children.

On average, children who switched to oral antibiotics had a shorter

hospital stay by one day compared with those who stayed on injectable antibiotics. This strategy could establish a more convenient and equally effective alternative to the WHO's current treatment recommendations, meaning [children](#) can return home from hospital sooner.

**More information:** PediCAP clinical trial: [projectpedicap.org/](https://projectpedicap.org/)

Provided by St. George's University of London

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