

# New measure shows antibiotics prescribed for children in hospitals around the world

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A new measure has identified for the first time whether the most suitable antibiotics are being used to treat newborns and children in hospital on a national basis.

The measure will be a crucial tool in combating antimicrobial resistance

worldwide, allowing countries to benchmark themselves both internally and internationally and highlighting where improvements can be made.

The measure classifies all [antibiotics](#) according to the World Health Organisation's Access, Watch and Reserve Index ('AWaRe'), which classifies antibiotics into three groups with the aim of improving access and facilitating appropriate prescribing. The three groups comprise: 'Access' which should be used as first choice for most infections; 'Watch' for use as a second choice, and to be used sparingly; and 'Reserve' for use as a last resort.

The WHO has recently recommended that Access group antibiotics should account for at least 60 percent of every country's total antibiotic use.

To develop this new way to measure antibiotics, researchers at St George's, University of London used two point prevalence surveys data—GARPEC and Global PPS—studying patterns of antibiotic use in 23,572 [children](#) in 56 countries. The data included high income, upper middle income and low middle income countries across 6 WHO regions. The data also provided insight into what antibiotics were typically used to treat common childhood conditions.

Dr. Yingfen Hsia of St George's, who led the survey, said: "We haven't had this data on patterns of paediatric antibiotic use from the perspective of the AWaRe classification before and it's an important first step in seeing what needs to be done globally."

Researchers found wide variations in patterns of antibiotic use in hospitalised children using the AWaRe classification. In children 'Access' antibiotic use ranged from 7.8 percent in China to 61.2 percent in Slovenia; and 'Watch' antibiotic use ranged from 23.0 percent in Finland to 77.3 percent in Iran. Prescribing standards for common

childhood conditions such as neonatal sepsis and chest infections showed wide variation.

There are many reasons for the variation of prescribing patterns between countries. These include the prevalence of infections caused by highly resistant bacteria; local healthcare service issues including infrastructure and staffing; and the pricing or affordability of antibiotics.

Professor Mike Sharland of St George's said: "Although there are many reasons why there are these variations, from a clinical perspective there is no justification for using such a wide variation of broad spectrum antibiotics—including 'Watch' antibiotics such as azithromycin—to treat pneumonia in young children, , for example. "

"This measure will allow health authorities to identify areas of concern and is an important starting point in the simple stewardship interventions that are crucial on a national and global level. Since the WHO has now called for the 60 percent Access ambition, it is most important that we encourage improved access to Access antibiotics to treat infections in children globally if we are to tackle the problem of antibiotic resistance."

"Using the WHO Access/Watch/Reserve classification to define patterns of hospital antibiotic use; analysis of paediatric point prevalence survey data from 56 countries" was published in *The Lancet Global Health* on 12 June 2019.

**More information:** Yingfen Hsia et al. Use of the WHO Access, Watch, and Reserve classification to define patterns of hospital antibiotic use (AWaRe): an analysis of paediatric survey data from 56 countries, *The Lancet Global Health* (2019). [DOI: 10.1016/S2214-109X\(19\)30071-3](https://doi.org/10.1016/S2214-109X(19)30071-3)

Provided by St. George's University of London

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