

The key to standardising antimicrobial monitoring: The Universal Indications List

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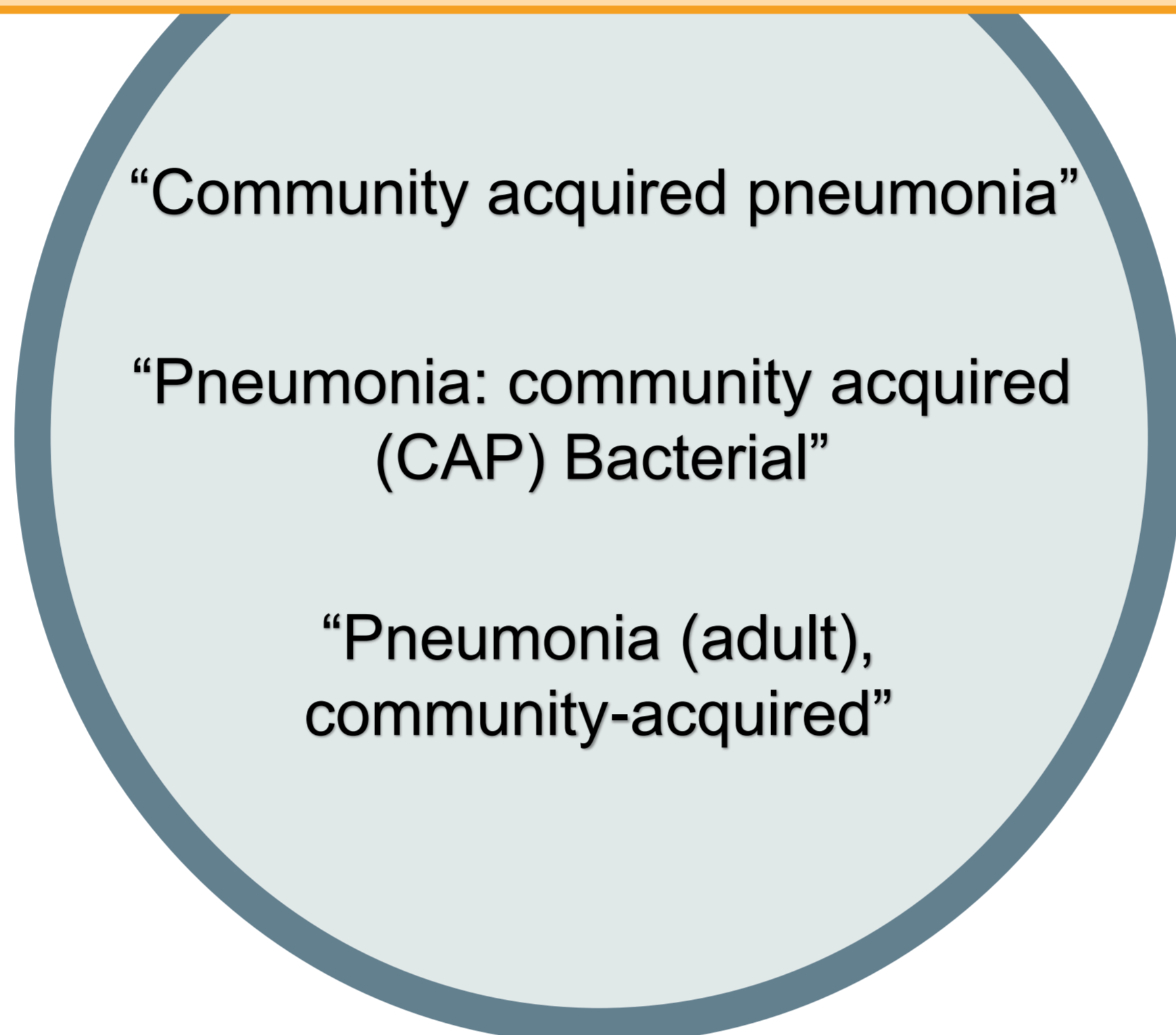
Background

Monitoring the quality of antimicrobial usage forms part of Australia's National Antimicrobial Resistance Strategy and a core aspect of antimicrobial stewardship (AMS). The volume of inappropriate antimicrobials prescribed is evident across all healthcare sectors, this includes in hospitals, general practice, aged care and animal health. A whole systems approach to monitoring quality of antimicrobial use is therefore required, and a key component lies in the ability to standardise indications for prescribing.

Description

The Universal Indication List (UIL) was developed in recognition of the gap in ability compare and unify indication nomenclature across sectors. Our work began in 2015 when we found the inability to map indications used across our decision support and approval systems, the Therapeutic Guidelines and in the National Antimicrobial Prescribing Survey (NAPS) making it difficult to link the data together.

National Antimicrobial Prescribing Survey, Decision Support or Approval Systems



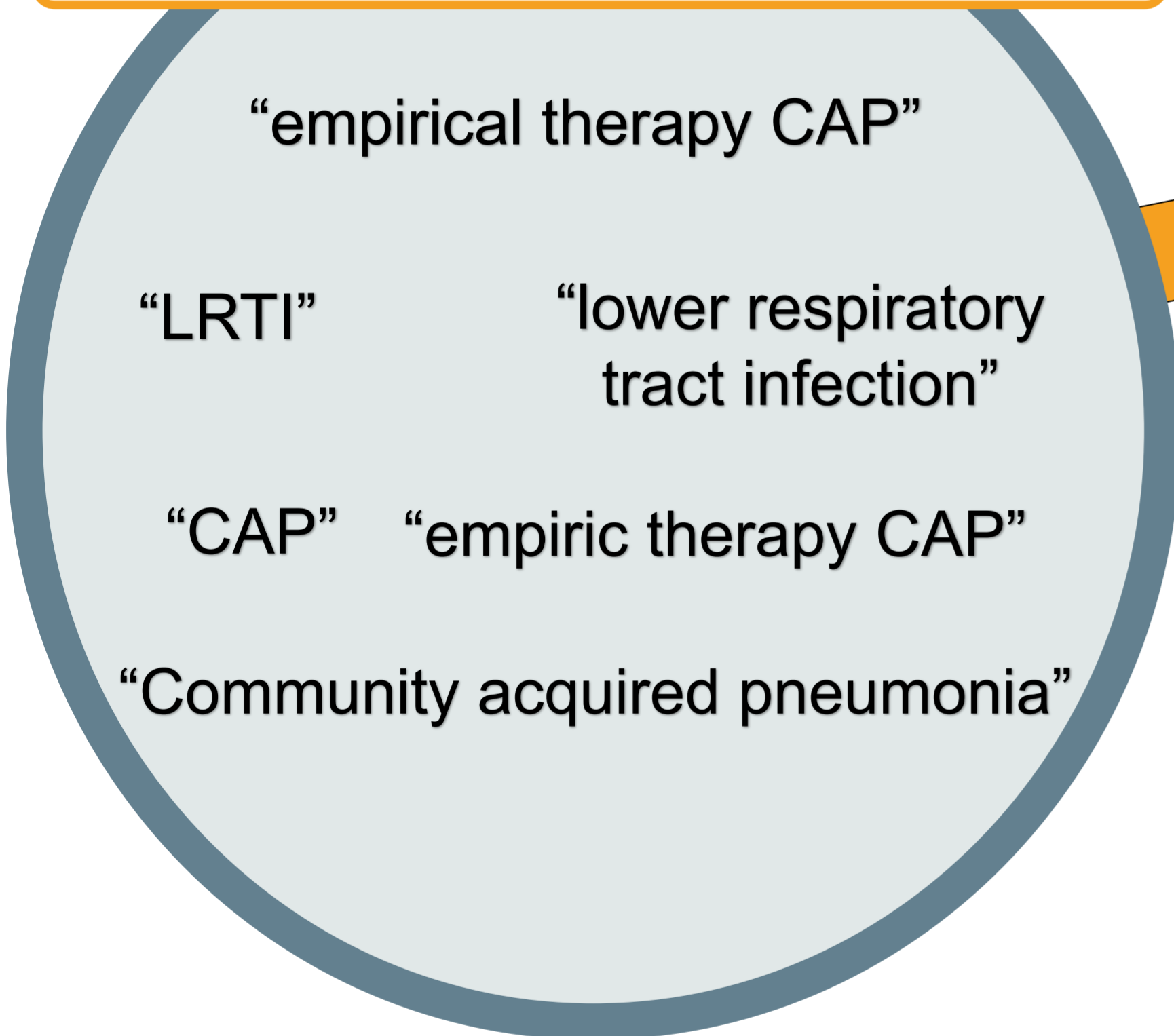
Action

We curated a list of indications for antimicrobial use and infections, mapped indications to national SNOMED CT codes, and included tag-words to improve searching of the list. A UIL web portal was developed to cloud host the database and enable interoperability between clinical systems. The content is managed by an expert panel of AMS pharmacists, microbiologists and infectious diseases physicians within the National Centre for Antimicrobial Stewardship (NCAS).

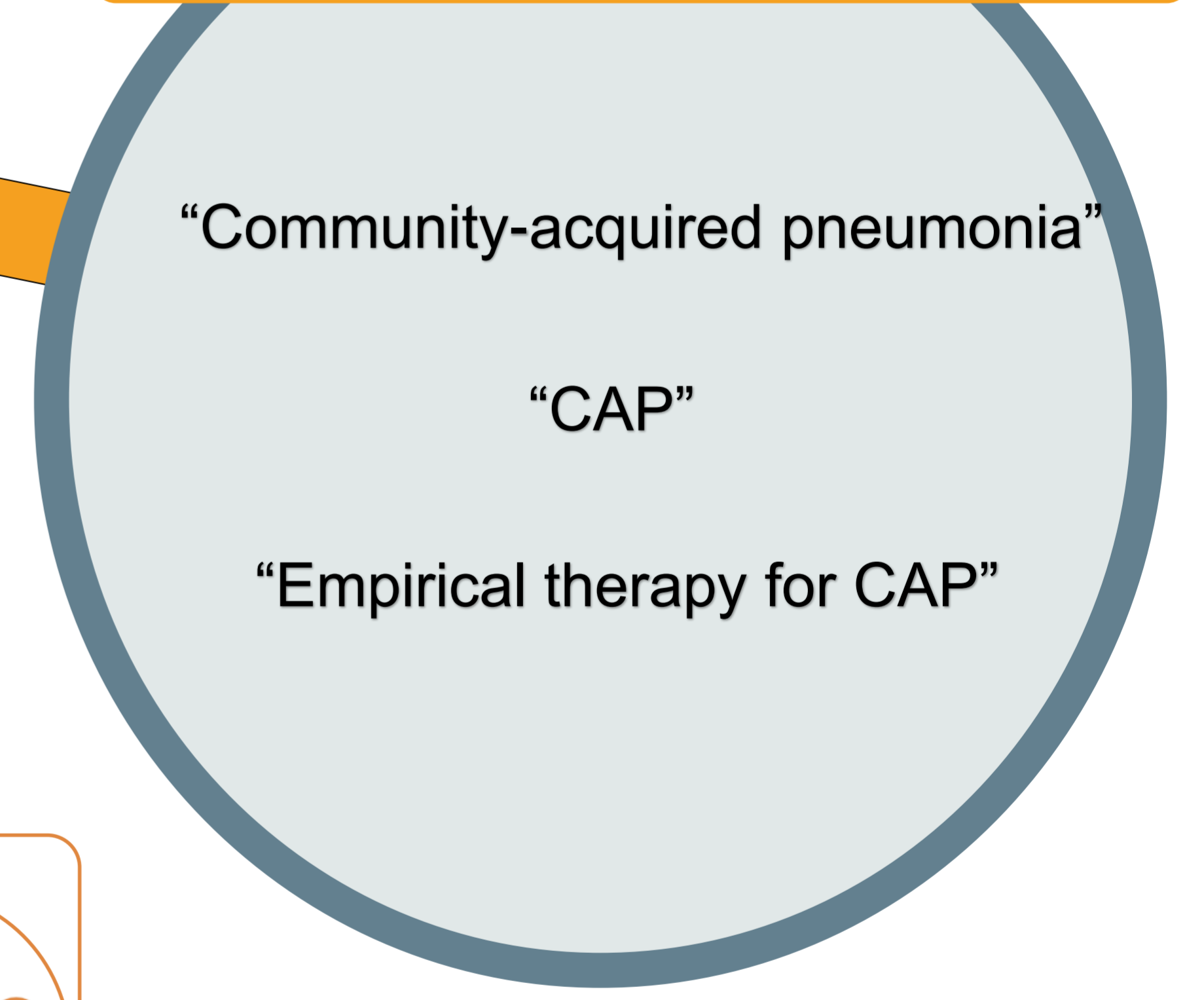
Evaluation

The UIL has been piloted with the Hospital NAPS in Australia, New Zealand, Canada and Malaysia. The major benefit noted has been in the significant reduction of non-auditable indications and more standardised indication-based reports. It has also been implemented in selected hospital systems to improve data extraction for reporting and auditing.

Medical Record (e.g. eMR)



Therapeutic Guidelines



UIL Universal Indications List

"Pneumonia, community acquired, pathogen unknown"

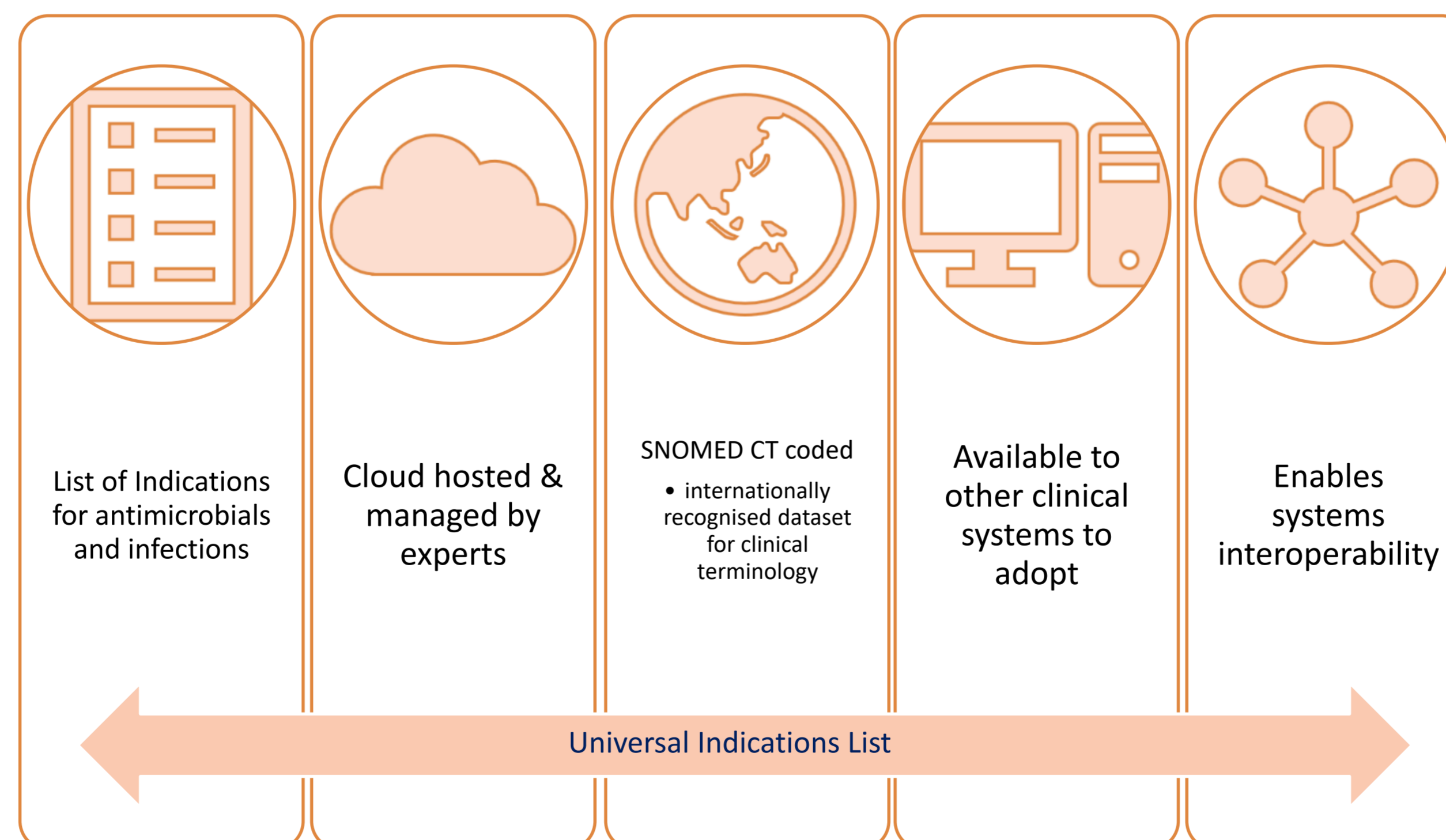


Figure 1.

The Universal Indications List is a standardised live list of indications managed by an expert panel. Its purpose is for ensuring the consistency of indication meaning across health services, while allowing enough flexibility for its users to customise the list where possible. The result is more standardised national benchmarking reports and ease of data flow between clinical systems.

References

- Her Majesty's Government. Tackling antimicrobial resistance 2019-2024. 24 January 2019
- Australian Government Department of Health. Implementation Plan: Australia's First National Antimicrobial Resistance Strategy 2015-2019

Acknowledgements

- Hospital NAPS users for their valuable feedback
- Facilities with UIL integrated into their systems

Implications

The Australian National Antimicrobial Resistance Strategy Implementation Plan specifies the need "to develop tailored, evidence-based resource to support the implementation of AMS programs". The UIL was cited in this document for eHealth systems to adopt to support reporting and for clinical research due to its SNOMED CT mapping capacity. This strategy is consistent with international models such as The United Kingdom's Antimicrobial Resistance Strategy for 2019 to 2024. This UK strategy specifies that consultations should be recorded with an appropriate diagnostic code, subject to audit and that hospitals require electronic systems that support and drive good AMS (by coding, auditing and providing feedback for surveillance).

The UIL enables the *universal* vision of integrated eHealth systems to support standardised reporting for audits and clinical research to be used across health sectors nationally and internationally, especially given the challenges of carrying out antimicrobial surveillance in a globalised world.