Australia has a high rate of antimicrobial use (AU) compared with many other countries, and increasing rates of some types of antimicrobial resistance (AMR). A nationally coordinated and comprehensive surveillance system for AU and AMR will enable a better understanding of the drivers of AMR in Australia; will further inform antimicrobial stewardship; and, minimise the threat that AMR poses to health care delivery.

The AURA Program is funded by the Australian Government Department of Health.

**OBJECTIVE**

To establish a comprehensive coordinated surveillance system for AU and AMR in Australia, in collaboration with existing surveillance programs. The results of surveillance will enable high-quality information and data for practice improvement, health program and policy development, and to support research priorities.

**METHODS**

The Australian Commission on Safety and Quality in Health Care (the Commission) undertook wide-ranging consultation, planning and development activities to review current AU and AMR surveillance systems, identify the requirements of the national system, and negotiate with a range of stakeholders to build and improve surveillance infrastructure. The planning phase for the Antimicrobial Use and Resistance Australia (AURA) Surveillance System confirmed the key elements required for a comprehensive approach to surveillance in Australia. These streams focus on AU and AMR from the community and acute sectors, through the use of passive and targeted data collections. These streams are illustrated in Figure 1.

First National Report on Antimicrobial Use and Resistance in Australia (AURA 2016)

AURA has consolidated the information from these collections, as well as a range of other data sources (Box 1) to develop AURA 2016: First Australian report on AU and AMR in human health. This report describes rates and patterns for AU in hospitals, residential aged care facilities and the community, as well as data on appropriateness of use. Results demonstrate a relatively high use of antimicrobials in Australian hospitals compared to similar countries (Figure 2).

The report also provides resistance rates for a set of 13 priority organisms, and discusses key emerging issues for AU and AMR. For example, in comparison to other countries, Australia has a notably higher rate of vancomycin resistance in Enterococcus faecium.

These streams focus on AU and AMR from the community and acute sectors, through the use of passive and targeted data collections. These streams are illustrated in Figure 1.

A collaborative approach was the basis for harnessing existing knowledge and expertise to improve the coverage, capture and quality of existing data collections and to inform the development of new collections where there were identified gaps. The key data collections coordinated through AURA are in Box 1. As these collections have developed and been enhanced, AURA has published a range of national reports providing the results of analysis.

The reports include:


The foundation of a comprehensive national surveillance system for AMR is planned, particularly focusing on increasing passive resistance and hospital antimicrobial use surveillance components.

**RESULTS**

The establishment of the AURA Surveillance System focused on identifying and sourcing data which covered eight information streams. These streams focus on AU and AMR from the community and acute sectors, through the use of passive and targeted data collections. These streams are illustrated in Figure 1.

Once the types of data needed were confirmed, AURA engaged with established programs, experts and key stakeholders. A collaborative approach was the basis for harnessing existing knowledge and expertise to improve the coverage, capture and quality of existing data collections and to inform the development of new collections where there were identified gaps. The key data collections coordinated through AURA are in Box 1. As these collections have developed and been enhanced, AURA has published a range of national reports providing the results of analysis.

The reports include:


The foundation of a comprehensive national surveillance system for AMR is planned, particularly focusing on increasing passive resistance and hospital antimicrobial use surveillance components.

**CONCLUSION**

The Australian Commission on Safety and Quality in Health Care (the Commission) undertook wide-ranging consultation, planning and development activities to review current AU and AMR surveillance systems, identify the requirements of the national system, and negotiate with a range of stakeholders to build and improve surveillance infrastructure. The planning phase for the Antimicrobial Use and Resistance Australia (AURA) Surveillance System confirmed the key elements required for a comprehensive approach to surveillance in Australia. These streams focus on AU and AMR from the community and acute sectors, through the use of passive and targeted data collections. These streams are illustrated in Figure 1.

Once the types of data needed were confirmed, AURA engaged with established programs, experts and key stakeholders. A collaborative approach was the basis for harnessing existing knowledge and expertise to improve the coverage, capture and quality of existing data collections and to inform the development of new collections where there were identified gaps. The key data collections coordinated through AURA are in Box 1. As these collections have developed and been enhanced, AURA has published a range of national reports providing the results of analysis.

The reports include:


The foundation of a comprehensive national surveillance system for AMR is planned, particularly focusing on increasing passive resistance and hospital antimicrobial use surveillance components.

The AURA Program is funded by the Australian Government Department of Health.