



South Australian Expert Advisory Committee on Antimicrobial Resistance (SAAGAR)

Annual Report 2020 - 2021

Foreword

The South Australian expert Advisory Group on Antimicrobial Resistance (SAAGAR) was established in 2008 to provide strategic direction for antimicrobial stewardship in South Australia. For more than a decade SAAGAR has led antimicrobial stewardship (AMS) initiatives in SA hospitals and healthcare organisations, providing advice and promoting the safe and appropriate use of antimicrobials.

Representation on SAAGAR is multi-sector, with committee members from both the public and private health sectors. A key function of SAAGAR is the development and review of AMS resources, including antimicrobial guidelines for state-wide use. The committee reviews antimicrobial use in SA healthcare facilities and responds to consultation regarding antimicrobial use from all sectors within SA. Executive support for SAAGAR is provided by the Antimicrobial Programs division of the Communicable Disease Control Branch (CDCB), Department for Health and Wellbeing (DHW) and is accountable to the Minister via the South Australian Medicines Advisory Committee (SAMAC).

This annual report of SAAGAR is intended to provide an overview of the activities and achievements of the committee over the 2020-2021 financial year.

Disclaimer: While the Department uses its best endeavours to ensure the quality of the information available in this report, it cannot guarantee and assumes no legal liability or responsibility for the accuracy, currency or completeness of the information.

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Executive summary

The 2020-2021 financial year is the thirteenth year of operation for SAAGAR and membership continues to be strong as the risks of antimicrobial resistance (AMR) increase. The COVID-19 pandemic has highlighted the importance of public health resourcing to tackle significant health risks at a population level. Increasing AMR continues to pose a risk to healthcare nationally and internationally, and the World Health Organization has highlighted the importance of engagement of all levels of government in the approach to managing AMR. SAAGAR is a working committee, with members from different hospital and community sectors contributing to the development of resources for use within South Australia (SA). SAAGAR plays an important consultative role for other SA Health committees, the Local Health Networks and other independent organisations. The scope of the committee is expansive and includes out-of-hospital areas of clinical practice, including representation from the SA Ambulance Service (SAAS) and the Drug and Therapeutics Information Service (DATIS) who provide educational support to General Practitioners in primary care. Ensuring that AMR is considered in future planning at a state level and advocating for resources to manage AMR across SA continues to be an important focus of SAAGAR.

A handwritten signature in black ink, appearing to read 'Morgyn Warner', enclosed in a thin black rectangular border.

Dr Morgyn Warner

Chair, SAAGAR

Abbreviations / acronyms

AAW	Antimicrobial Awareness Week
ACHS	Australian Council on Healthcare Standards
AMS	Antimicrobial stewardship
ASA	Australian Society for Antimicrobials
BHFLHN	Barossa Hills Fleurieu Local Health Network
BSAC	British Society for Antimicrobial Chemotherapy
CALHN	Central Adelaide Local Health Network
CAP	Community acquired pneumonia
CAR	Critical antimicrobial resistance
DATIS	Drug and Therapeutics Information Service
DHW	Department for Health and Wellbeing
DTC	Drug and Therapeutics Committee
ECCMID	European Congress of Clinical Microbiology and Infectious Diseases
EFNLHN	Eyre and Far North Local Health Network
FAST	Flinders Antimicrobial Stewardship Training
FUNLHN	Flinders and Upper North Local Health Network
GPs	General Practitioners
HAP	Hospital acquired pneumonia
ICCU	Intensive and Critical Care Unit
ICU	Intensive Care Unit
ID	Infectious Diseases
LCLHN	Limestone Coast Local Health Network
LMH	Lyell McEwin Hospital
MIC	Minimum Inhibitory Concentration
MPH	Modbury Hospital
NAPS	National Antimicrobial Prescribing Survey
NSQHS	National Safety and Quality Health Service
RAH	Royal Adelaide Hospital
RMCLHN	Riverland Mallee Coorong Local Health Network
SAAGAR	South Australian expert Advisory Group on Antimicrobial Resistance
SAAS	South Australian Ambulance Service

SAB	<i>Staphylococcus aureus</i> bacteraemia
SALHN	Southern Adelaide Local Health Network
SAMEP	South Australian Medicines Evaluation Panel
SAS	Special Access Scheme
SNAPS	Surgical National Antimicrobial Prescribing Survey
TQEH	The Queen Elizabeth Hospital
UTI	Urinary Tract Infection
WCH	Women's and Children's Hospital
WCHN	Women's and Children's Health Network
YNLHN	Yorke and Northern Local Health Network

SAAGAR membership

SAAGAR is comprised of members with infectious diseases, pharmacy and clinical microbiology expertise, and includes representation from each of SA Health's Local Health Networks (LHN) antimicrobial stewardship (AMS) committees and private hospital organisations. Other members include representatives from the SA Ambulance Service (SAAS), the National Antimicrobial Utilisation Surveillance Program (NAUSP), SA Formulary Committee (SAFC), the Drug and Therapeutics Information Service (DATIS) and members with public health policy expertise.

SAAGAR welcomed the following new members over the 2020-2021 financial year:

- > Tanja Gustafsson (SAAGAR Executive Officer, DHW)
- > Dr Kavita Rasiah (Infectious Diseases Consultant, DHW)

Dr Morgyn Warner continued as Chairperson, and Dr Rory Hannah continued as Deputy Chairperson of SAAGAR.

SAAGAR met on four occasions between July 2020 and June 2021. It was agreed that going forward the number of SAAGAR meetings per year would be increased from four to five meetings due to the increase in volume of items on the agenda. SAAGAR membership and attendances are provided in Appendix 1.

SAAGAR outcomes and projects

Antimicrobial Prescribing Guidelines

SAAGAR's aim is to ensure the widespread availability of tailored, evidence-based and user-friendly antimicrobial prescribing guidelines for all sectors in SA.

In general, SAAGAR guidelines are congruent with recommendations in the latest online version of the *Therapeutic Guidelines: Antibiotic*[®] wherever possible, differing only where more specific state-wide recommendations are preferable (rather than multiple options), or local epidemiology indicates different therapy.

All SAAGAR guidelines are available at: <https://www.sahealth.sa.gov.au/antimicrobials>.

New guidelines / position statements / factsheets

Newly developed position statements include:

- > Use of oral antibiotics prior to colorectal surgery (developed in anticipation of a pending Formulary listing for oral neomycin)

Revised guidelines / policies

Guidelines and policies that were reviewed and updated include:

- > Aminoglycosides: Recommendations for Use, Dosing and Monitoring Clinical Guideline
- > Community Acquired Pneumonia (Adults) Clinical Guideline
- > Antimicrobial Stewardship Policy Directive

Website resources

SAAGAR contributes to the content and maintenance of the following SA Health webpages:

- > SAAGAR home page

- > Guidelines page (for prescribers)
- > Antimicrobial stewardship page
- > Antibiotics – what you should know (for consumers)
- > Antibiotic Allergies, which includes information on:
 - The extent of inaccurate labels
 - The consequences of inaccurate allergy labels
 - Recording of antibiotic allergies in patient notes (including an Adverse Drug Reaction reporting form)
 - Choosing an antibiotic in a patient with a history of allergy
 - Penicillin and cephalosporin allergies
 - Other antimicrobial allergies

Consumer Information leaflets

Newly developed consumer information leaflets include:

- > Use of neomycin prior to colorectal surgery (developed in anticipation of a pending Formulary listing for oral neomycin)

Responses to consultation / Provision of expert advice

As SAAGAR is the peak advisory committee on antimicrobial prescribing and use in SA, the group provides ongoing expert advice in response to consultations.

SA Antimicrobial Resistance Action Plan during the 2020-2021 financial year - SAAGAR has contributed to the development of a state-wide AMR Action plan which included; conducting a gap analysis of the National AMR Strategy – 2020 and Beyond and the initiation of a steering committee to guide the SA AMR Action Plan.

Antimicrobial shortages

Shortages of antimicrobial drugs continue to be an ongoing challenge for prescribers. SAAGAR disseminated information on and provided expert advice to prescribers regarding suitable alternatives when antimicrobial shortages or recalls occurred for the following antimicrobials:

- > Pristinamycin
- > Tenofovir disoproxil phosphate

SA Formulary applications or amendments

SAAGAR was consulted for advice on Formulary applications or amendments (including suggested restrictions) to the state-wide Formulary, for the following medicines:

- > Boric acid vaginal pessaries
- > Ritonavir oral solution
- > Posaconazole oral liquid
- > Darunavir 800 mg + cobicistat 150 mg + emtricitabine 200 mg + tenofovir alafenamide 10 mg tablets
- > Bedaquiline 100mg tablets
- > Valaciclovir 500mg tablets
- > Famciclovir 250mg and 500mg tablets

SAAGAR reviewed Formulary listings for restricted antimicrobials:

- > Amoxicillin-clavulanic acid 500mg-100mg, 1000mg-200mg, 2000mg-200mg injections

- > Ceftriaxone 1g injection
- > Moxifloxacin 400mg tablets and 1.6mg/mL injection
- > Piperacillin-tazobactam 4000mg-500mg injection

Other advice

Other expert advice or feedback provided by SAAGAR in response to consultation included:

- > Neomed Guidelines Working Group monographs:
 - Cefepime
 - Aciclovir 200mg tablets and 25mg/mL injection
 - Azithromycin 500mg injection and 40mg/mL oral mixture
 - Trimethoprim 10mg/mL oral mixture
 - Trimethoprim-sulfamethoxazole 16mg-80mg injection and 8mg-40mg oral mixture
 - Amoxicillin-clavulanic acid 1000mg-200mg injection and 80mg-11.4mg/mL oral mixture
 - Meropenem 500mg injection
 - Cefepime 1g injection
 - Nystatin oral drops
- > AMS Clinical Care Standards
- > CALHN ED – Sunrise Sepsis order set
- > SA Paediatric Clinical Practice Guideline: Sepsis in Children
- > SA Paediatric Clinical Practice Guidelines: UTI in Children
- > SA Perinatal Practice Guideline: UTI in Pregnancy
- > SAAGAR-led consultation with Medstar, SAAS, regional LHNs – Antimalarial stock holdings in rural and remote healthcare settings
- > SAAGAR-led consultation with SA ID physicians and Colorectal surgeons – Use of oral antibiotics prior to colorectal surgery

Antimicrobial Awareness Week 2020

Antimicrobial Awareness Week (AAW) is an initiative led by the World Health Organization in November each year to highlight the global problem of antimicrobial resistance. In 2020 the theme of AAW was “Handle with care: United to preserve antimicrobials”. The SAAGAR executive worked in collaboration with the SA Health media and communications team to promote the week on social media. Local resources and links to national resources were made available on the SA Health [website](#). An online daily quiz was made available to SA Health staff, testing knowledge on antimicrobials. AMS committees in the LHNs coordinated activities across SA Health to promote the safe and judicious use of antimicrobials in hospitals and in the community. Posters, PowerPoint presentations, pocket cards, and screensavers were some of the resources disseminated. A colouring and poster competition was conducted across SA schools. Prizes were awarded to one winner of the colouring competition and one winner of the poster competition. Chief Public Health Officer, Professor Nicola Spurrier, presented the prizes to each winner via Microsoft Teams.

Activities of LHN Antimicrobial Stewardship Committees

The following summaries highlight the activities of the AMS committees within the LHNs during the 2020-2021 financial year:

Central Adelaide Local Health Network (CALHN)

- > Newly developed guidelines:
 - Fosfarnet dosing, administration and monitoring guideline

- Cytomegalovirus (CMV) Infection and Disease – Guideline for prevention and treatment after HSCT
- > Updated guidelines:
 - Antifungal prophylaxis guidelines for immunosuppressed adult patients
 - Community acquired pneumonia treatment guideline for immunocompetent patients
 - Aspiration pneumonia treatment guidelines
 - Antifungal treatment guidelines for immunosuppressed adult patients
 - Colistin IV dosing and monitoring guideline
 - Meningitis prophylaxis for intubated patients with base of skull or complicated facial fractures
 - Hepatitis B virus screening and management guideline for immunosuppressed adult patients
 - Aminoglycosides dosing and monitoring guidelines for adult patients
 - IV to oral antibiotic switch guideline
 - Ganciclovir (IV) dosing and administration in the initiation of treatment of CMV infection
 - Gynaecological and obstetric surgical antibiotic prophylaxis
 - Febrile neutropenia initial management and treatment guideline
- > Audits completed:
 - Hospital wide vancomycin audit
 - Surgical prophylaxis audits:
 - Breast/splenectomy/infusaport/oncology
 - Oral and Maxillofacial surgery
 - Otorhinolaryngology and Head and Neck
 - Gynaecologic surgery
 - Vascular surgery
- > Formulary submissions: valaciclovir, levofloxacin, tigecycline (for TB/mycobacterial infections)
- > Submitted an improvement request to Sunrise to have 'microbiology results' and 'antimicrobials prescribed' available as separate tiles in the clinical summary tab, which would eliminate the need to move between multiple screens and improve efficiency
- > Distributed new lanyard cards for sepsis and CAP/HAP/aminoglycoside dosing/IBW
- > Trialled a new smartphone app by CALHN medical staff and pharmacists which provides access to key guidelines and procedures (including all antimicrobial guidelines)
- > Explored vancomycin TDM dosing software and considered how AUC-guided dosing can be applied into practice
- > NAPS completion

Southern Adelaide Local Health Network (SALHN)

- > Updated guidelines: Vancomycin Dosing and Monitoring Guideline, Gentamicin Dosing and Monitoring Guideline, Invasive Fungal Infection Guideline
- > Initial development of a local SALHN HIV post-exposure prophylaxis guideline
- > Completion of annual NAPS audit at both FMC and NHS. Inclusion of the new wards at the Rehab Health Precinct (RV and SADU) into the FMC data. Noticed an increase in review/stop date documentation. Results will allow the development of an audit plan to focus on areas/units of improvement for late 2020 and 2021.
- > Completion of neurosurgery SNAPS audit

- > Audits completed: Inhaled colistin use in the outpatient population, vancomycin dosing and monitoring guideline compliance, IV to oral switch audit, appropriateness of amoxicillin/clavulanic acid discharge prescriptions
- > Gap analysis completed to assess SALHN compliance to the updates to Standard 3 (3.18 + 3.19) and the AMS Clinical Care Standard
- > Ongoing education to junior prescribers around appropriateness of prescribing of ceftriaxone after noticing an increase in use via NAUSP reporting
- > Formulary request for oral neomycin for colorectal surgical prophylaxis

Northern Adelaide Local Health Network (NALHN)

- > Updated guidelines:
 - Hospital Acquired and Ventilator Associated Pneumonia (Adult Patients)
 - *Staphylococcus aureus* Bacteraemia Management Guideline (Adult)
 - NALHN Antimicrobial Restrictions Procedure
 - Gentamicin Dosing and Monitoring Procedure for Adult patients
 - Vancomycin Dosing and Monitoring Guideline for Adults
 - NALHN Emergency Department Sepsis Pathway (Adults)
 - Intravenous to oral antimicrobial switch guideline for adult patients – can antibiotics S.T.O.P?
- > Audits completed:
 - Audit of Post Exposure Prophylaxis after Non-Occupational Exposure to HIV/Hep B Management at NALHN Emergency Departments
 - Audit of after-hours access to medicines across NALHN Pharmacy
 - An audit of NALHN surgical antimicrobial prophylaxis in major knee and hip joint replacement surgery
 - National Antimicrobial Prescribing Survey
- > Developed new documents to support administration of nebulised pentamidine and use of pre-filled ganciclovir bags
- > Gap analysis completed with the updated AMS Clinical Care Standard
- > Collaboration with the Division of Medicine on an initiative to encourage prescribers to review antimicrobials and self-audit review/stop dates
- > NAPS completed for the Lyell McEwin Hospital and Modbury Hospital. Noted a decline in indication and review/stop date documentation compared to national rates, likely attributed to the roll out of EMR.
- > Conducted an analysis into amoxicillin use during the benzylpenicillin shortage

Women's and Children's Local Health Network (WCHN)

- > Audit of antibiotic usage for uncomplicated appendicitis
- > Audit of surgical antimicrobial prophylaxis for lower segment caesarean section patients
- > NAPS completion

Regional LHNs (BHFLHN, EFNLHN, FUNLHN, LCLHN, RMCLHN, YNLHN)

- > The Regional LHN AMS Forum continues to support the Regional LHNs AMS program
- > Ongoing focus on AMS capacity building
- > Surgical prophylaxis audits (SNAPS) occurring at relevant sites
- > Incorporation of revised national AMS Clinical Care Standards into AMS Action Plans
- > Ongoing participation in the Antimicrobial Awareness Week activities
- > Increased uptake of NAPS - period prevalence audits has enabled more sites to participate and access benchmarking amongst peer sites

- > Review and update of AMS Action Plans

Private hospitals

The Adelaide Community Healthcare Alliance (ACHA) group:

- > Ashford Hospital and Flinders Private Hospital completed NAPS (full hospital audit)
- > Ashford Hospital and Flinders Private Hospital completed reviews of SAP prescribed for bariatric and TURP procedures

Community / primary care (DATIS) / SA Ambulance Service

- > SAAS completed AMS training for Medstar and extended care paramedics
- > Drug and Therapeutics Information Service (DATIS):
 - DATIS continues to deliver the DATIS Medicines Optimisation Service (MOS) to regional health professionals. DATIS gratefully acknowledges the financial and other support from the Country SA PHN for this service. Antimicrobial stewardship remains a standing item on all agendas at the seven regional MOS steering committees which spans all Country SA PHN local health clusters. Awareness of AMS publications, webinars, updates in antimicrobial/infection practices, resources for antimicrobial awareness week and sharing of consumer resources have been provided.
 - Support for ACNAPS is featured for regional aged care providers. DATIS MOS AMS education sessions were held in aged care facilities in the Limestone Coast, with specific follow-up provided covering UTI management in aged care.
 - DATIS clinical support services provide advice to general practitioner enquiries, including appropriate use, choice and suitability of antimicrobials around antibiotic allergies and antibiotic prophylaxis.

Discussion

Future Direction

The activities of SAAGAR are in alignment with [Australia's National AMR Strategy 2020 and beyond](#). Strategies to increase awareness and public understanding of AMR and implications for the community and the environment is a documented objective in the [State Public Health Plan 2019-2024](#). SAAGAR acknowledges that the education of the general public, patients and caregivers will be important in achieving this aim. Cross-sector educational strategies during AAW and the development of consumer-targeted information will be an important medium to spread this messaging.

SAAGAR continues to advocate for Decision Support Tools that can be interfaced with prescribing software. These IT tools have been shown to assist with stewardship in other Australian states, particularly in settings where there is limited access to Infectious Diseases expertise such as in more rural or remote areas.

Going forwards, SAAGAR will be represented on the steering committee to develop the State-wide AMR Action Plan.

Challenges

Managing the risks of AMR requires a cross-sector approach which provides strategic and resourcing challenges. Continued engagement is required from the private and public sectors, and collaboration between the human, animal and environmental sectors. Ensuring all relevant stakeholders are

included, and continue to engage in the development of a One Health action plan for SA will be important in its success.

Additionally, the COVID-19 pandemic has brought many challenges to AMS. The re-allocation of key healthcare staff to COVID-19 or other duties has reduced the AMS activities and initiatives of hospitals and community healthcare settings. There is potential, through the inappropriate prescribing of antimicrobials and non-compliance to guidelines, for detrimental consequences, including increasing AMR, to develop. It is important that these settings be supported in returning to their AMS initiatives.

Appendix 1: SAAGAR members and attendance 2020 – 2021

NAME	11/08/2020	10/11/2020	09/02/2021	11/05/2021
BUTENKO, Samantha <i>DHW - Infection Control Service</i>	A	-	-	-
CHEH, Rachael <i>SA Formulary Committee (SAFC)</i>	✓	✓	✓	✓
CONNOR, Erin <i>DHW - Infection Control Service</i>	✓	✓	✓	✓
CONOLAN, Sarah <i>SALHN - Flinders Medical Centre</i>	✓	✓	✓	✓
COOPER, Dr Celia <i>WCHLN - Women's & Children's Hospital</i>	-	A	A	A
COULSON, Leanne <i>SAAS - SA Ambulance Service</i>	A	A	A	A
DANIEL, Dr Santhosh <i>SALHN - Flinders Medical Centre</i>	A	✓	✓	A
FLOOD, Louise <i>DHW – Communicable Disease Control Branch</i>	A	A	✓	A
GORDON, Prof David <i>SALHN - Flinders Medical Centre</i>	A	-	-	-
HANNAH, Dr Rory <i>NALHN – Lyell McEwin Hospital</i>	✓	✓	✓	✓
HILLOCK, Nadine <i>DHW – Communicable Disease Control Branch</i>	✓	✓	✓	✓
KENNEDY, Dr Brendan <i>DHA – Communicable Disease Control Branch</i>	A	-	-	-
KOEHLER, Dr Ann <i>DHA – Communicable Disease Control Branch</i>	-	-	✓	A
LARCOMBE, Rebecca <i>SALHN – Flinders Medical Centre</i>	A	-	-	-
LEE, Dr PC <i>Private, Clinpath Laboratories</i>	✓	✓	✓	✓
LORENZEN, Ulrik <i>WCHLN – Women's & Children's Hospital</i>	A	✓	✓	✓
MCCONNELL, Dr Matthew <i>Rural Support Services, Regional LHNs</i>	✓	✓	✓	A
PENSA, Corinne <i>DHW – Communicable Disease Control Branch</i>	✓	✓	✓	✓
PARADISO, Lisa <i>CALHN – Royal Adelaide Hospital</i>	✓	✓	✓	✓
PINK, Jennifer <i>Country Pharmacy Services, SA Pharmacy</i>	A	A	A	A
ROWE, Dr Emily <i>CALHN – Royal Adelaide Hospital</i>	✓	A	✓	A
ROWLAND, Dr Karen <i>ACHA</i>	A	A	A	A
SCANDRETT-SMITH, Daniel <i>ACHA – Ashford Hospital</i>	✓	✓	A	✓
TUCKER, Dr Emily <i>SALHN – Flinders Medical Centre</i>	✓	✓	✓	✓
VONG, Ms Sal Ging <i>NALHN – Lyell McEwin Hospital</i>	✓	✓	✓	✓
WAGNER, Tasma <i>FUNLHN, Port Augusta Hospital</i>	✓	✓	✓	A
WARNER, Dr Morgyn (CHAIR) <i>CALHN - Queen Elizabeth Hospital</i>	✓	✓	✓	✓
WIERENGA, Ms Lauren <i>Drug and Therapeutic Information Service (DATIS)</i>	✓	✓	A	✓
WILSON, Courtenay <i>DHW – Infection Control Service</i>	✓	-	-	-

ADDITIONAL ATTENDANCE / GUESTS				
DEBONO, Ian <i>Attended as proxy for Leanne Coulson</i>	-	✓	A	-
POTTS, Simon <i>ICU Pharmacist – Flinders Medical Centre</i>	-	-	-	✓

For more information

Antimicrobial Programs
Communicable Diseases Control Branch
Department for Health and Wellbeing
L13/25 Grenfell St
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www.sahealth.sa.gov.au/saagar



Interpreter



www.ausgoal.gov.au/creative-commons

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